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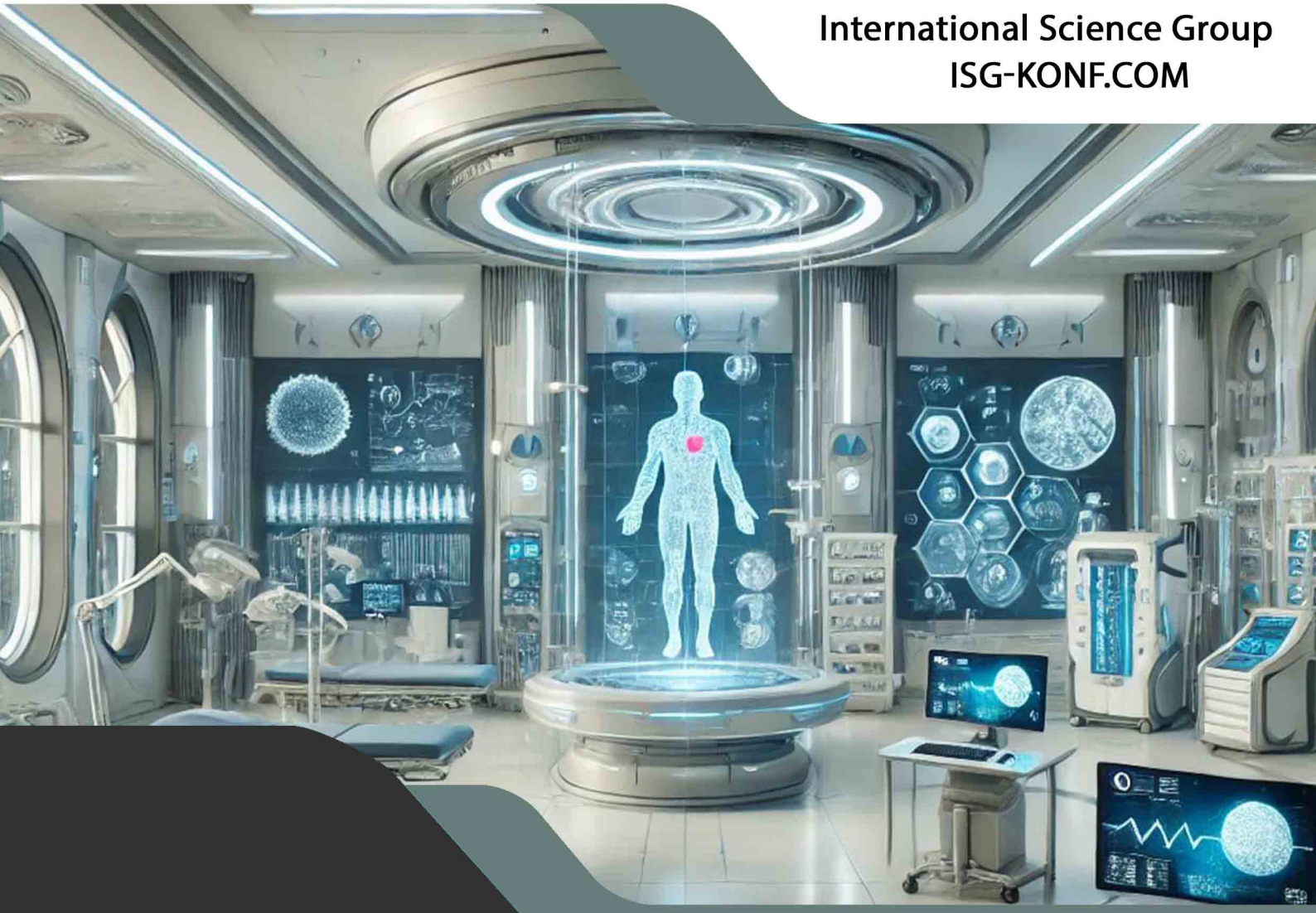

MEDICINE, BIOLOGY AND PHARMACY: DEVELOPMENT TRENDS AND CURRENT PROBLEMS

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2.1.1. A retrospective analysis of scientific research on the medical and psychological adaptation of people with visual impairments in Ukraine and the world: challenges and prospects

2.1.1.1 Rehabilitation of people with visual impairment around the world: a systematic approach

As part of the WHO Global Plan of Action on Disability (2017), guidelines were developed for the provision of rehabilitation services to people with visual impairment at all levels of health care: primary, secondary and tertiary. It is especially important to introduce rehabilitation at the primary health care level, as many people in need may not receive specialized care, but will need long-term rehabilitation in their communities. Primary care rehabilitation is consistent with the principle of comprehensive lifelong care, contributes to improving the quality of life, and is the most effective and cost-efficient approach for any country.

At the same time, in many countries, including Ukraine, such services are mostly available in secondary and tertiary care facilities that are concentrated in cities and regional centers, leaving rural and remote areas underserved [62-65].

To draw attention to the importance of rehabilitation, the WHO initiated the Rehabilitation 2030: A Call to Action campaign, emphasizing that rehabilitation is necessary not only for people with disabilities, but also for all those who have lesser capacities and functionality, in particular for the prevention of disability. In 2020, as part of this initiative, the Rehabilitation Competency Framework was published, which guarantees everyone access to quality rehabilitation services provided by a multidisciplinary team of specialists for timely and comprehensive care [66].

The WHO Guidelines for the Rehabilitation of Persons with Visual Impairment

(VIP) are based on the principles of accessibility, comprehensiveness and integration of rehabilitation services into the health care system:

1. **Accessibility of rehabilitation services** is enshrined in the UN Convention on the Rights of Persons with Disabilities (2006), which guarantees their support and prevention of disability among people with functional limitations.

2. **The WHO Global Plan of Action on Disability** for the first time emphasised the importance of preventing blindness, restoring vision and including rehabilitation services in eye care.

3. **The European Standards** for the Rehabilitation of Visually Impaired Persons were developed by the European Union of the Blind in 2015 as part of the implementation of the WHO General Plan of Action. In the same year, the Standards for the Rehabilitation of Sight were adopted at an international conference in Rome.

4. **The organisation of the rehabilitation process** was clearly defined in 2017, when the WHO emphasised the importance of integrating rehabilitation services into the healthcare system, ensuring inter-sectoral cooperation between social, educational and other services.

5. **The 2030 goal**, set by the United Nations General Assembly in 2021, envisages global prevention of visual impairment and calls on member states to ensure effective measures to preserve residual vision.

6. **The International Standards for Vision Rehabilitation**, developed by WHO in collaboration with the Italian National Centre for the Prevention of Blindness in 2022, regulate the provision of rehabilitation services at three levels of care, involving specialists from different fields.

7. **The WHO recommendations** include key documents such as the Eye Care Package, the WHO Eye Care Competency Framework and the corresponding manual, which provide a comprehensive and interdisciplinary approach to eye care at all levels of the healthcare system, taking into account the age of patients and the degree of visual impairment [67-72].

The WHO concept of rehabilitation care in the healthcare system defines the main types of rehabilitation services and their optimal combination. According to these

provisions, rehabilitation of people with visual impairments is provided at different levels of medical care and in different settings. The experience of the United States, Germany and the United Kingdom shows that such services are provided in outpatient clinics, primary health care centres, specialised rehabilitation centres, hospitals, relevant departments and units, educational institutions, workplaces, within territorial communities, as well as in the form of independent rehabilitation or informal support. They can be provided by both public and private institutions working in the field of rehabilitation of people with visual impairments. In accordance with the International Standard for the Rehabilitation of Sight, the process of providing care involves narrowly focused specialists who are part of a multidisciplinary team. These include ophthalmologists, optometrists, rehabilitation therapists, orientation and mobility specialists, specialists who help develop skills for everyday life, as well as psychologists and psychotherapists. Depending on the age of the patient and the level of their functional capabilities, other specialists may be involved, including teachers, vocational counsellors and social workers [73].

The American Academy of Ophthalmology notes that the composition of the rehabilitation team varies depending on the age group of patients. For adults with visual impairments, the team includes an ophthalmologist, occupational therapist, rehabilitation teacher, orientation and mobility specialist, adaptive technology specialist, social worker, counsellor and other necessary specialists. This approach ensures comprehensive rehabilitation and helps improve the quality of life of visually impaired people and their effective integration into society [74].

The provision of rehabilitation services for people with visual impairments is based on a number of important principles. In particular, the approach to rehabilitation should be individualised, based on a detailed examination and assessment of each person's condition. The main goal of such services is to improve the quality of life, increase the level of satisfaction, provide opportunities for learning, communication, mobility, self-care, active participation in everyday life, social interaction and community activities. This is especially important for people with irreversible or progressive visual impairments. The implementation of such services includes medical,

social, educational, vocational, psychological and pedagogical, and physical and sports rehabilitation. The International Standard of Vision Rehabilitation (ISVR), based on the experience of the United States, Germany and the United Kingdom, provides for an interdisciplinary approach to rehabilitation implemented at different levels of the healthcare system. It covers primary healthcare, specialised secondary and tertiary care, and community-based support. In particular, it includes home care, organisation of self-help groups, provision of social and educational services, leisure and recreational programmes, and psychological counselling. All these levels function in a single electronic communication system, which allows the use of tele-rehabilitation services for each patient. The WHO and the ICRC consider the rehabilitation of people with visual impairments as a continuous interdisciplinary process that lasts throughout life, regardless of age or degree of visual loss (Table 1) [75].

Table 1.

Levels of rehabilitation services provided for VIPs

Levels	**Levels of service provision**	**Specialists**	**Services involved in providing rehabilitation**
Primary level	provision of non-optical rehabilitation aids and training in their use in everyday activities, informing and providing referrals for tracking the rehabilitation services used	health care professors ophthalmologists; rehabilitation therapists, instructors, teachers and others who are able to assess needs and provide basic rehabilitation and rehabilitation	ophthalmological and medical facilities, maternity and child care facilities, schools, social services, community-based rehabilitation facilities and other NGOs

Continuation of Table 1

Secondary level	selection and training in the use of additional rehabilitation aids (there is an approved list for this level), training in the use of vision with and without correction aids, training in everyday skills, orientation and mobility; Braille's code and environmental changes, training in the use of additional technologies (Braille's code, audio, etc.), psychosocial support, case management, telephone /internet communication for consultations referral to other levels of rehabilitation	specialists in the field of ophthalmology, allied health professionals, rehabilitation specialists, instructors, teachers, psychologists, counsellors, self-help organisations, social workers	ophthalmological and medical institutions, schools, rehabilitation centres, NGOs
Tertiary level	prescription and provision of optical correction devices, training in the use of visual skills, including optical correction devices in everyday activities, orientation and mobility, during environmental changes, training using additional technologies (Braille's code, audio, etc.), psychological support, professional counselling referral to other levels of rehabilitation, medical specialists, other services and institutions	ophthalmologists, allied health professionals, rehabilitation specialists, O&M instructor, education specialists, psychologists or trained staff, vocational counsellor, rehabilitation staff	specialised eye and medical centres, district hospitals, rehabilitation centres, schools, workplaces, home environments and community organisations

One of the key elements of rehabilitation is the provision of inclusive education, which includes services in professional (technical), pre-university and higher education institutions, and is an important aspect in creating an accessible educational environment and providing psychological and pedagogical support for people with special educational needs [76-78].

According to the US Rehabilitation Service, about one million veterans have visual impairments, and this number is growing every year due to age-related diseases, including macular degeneration, diabetic retinopathy and glaucoma. In the United States, rehabilitation services for people with visual impairments are provided in a wide range of settings: outpatient clinics, hospitals, inpatient facilities, community-based institutions, workplaces, educational institutions, and homes. In addition, there are

local care centres, regional clinics for visually impaired people at various levels, VISOR outpatient programmes, inpatient training programmes at rehabilitation centres for the blind, and vocational rehabilitation centres. Each state has a Department of Rehabilitation for the Visually Impaired, which is managed by the Territorial Services for the Blind. These services provide a wide range of specialised and comprehensive rehabilitation services in Orientation Centres for the Blind. Here, patients are trained in household skills for independent living, the use of assistive technology and spatial orientation. The decision to apply for such services is made jointly between a person with a visual impairment and their rehabilitation consultant at the Department. At the outpatient level, ophthalmologists, rehabilitation specialists and other professionals work as part of an interdisciplinary team to provide a wide range of services. These include training in orientation and mobility skills, low vision care, assessment and training in the use of assistive computer technology, and the development of skills needed for everyday life. This comprehensive approach ensures effective adaptation of visually impaired people to the social environment and facilitates their integration into society [79].

In Germany, the Federal Working Group on Rehabilitation, which is subordinated to the Federal Ministry of Labour and Social Affairs, coordinates the rehabilitation of visually impaired persons (VIPs). It is responsible for creating a common regulatory framework for rehabilitation processes across the country. The German social security system has a large number of organisations and institutions involved in the rehabilitation of VIPs. These include rehabilitation centres, clinics, vocational rehabilitation facilities, organisations for people with disabilities and self-help associations. All these structures interact with each other to ensure a comprehensive approach to rehabilitation. The list of services provided as part of rehabilitation is approved by representatives of health insurance funds, after which a contract is concluded between the visually impaired person and the service provider. The German Association for the Training and Employment of Blind and Visually Impaired Persons is also involved in the process of approving rehabilitation measures. In the UK, responsibility for rehabilitation services for VIPs lies with local authorities

acting under the National Health Service (NHS) Care Act. This system has been in place for almost 70 years and provides free, reliable support for people with visual impairments. The main aim of such services is social and psychological rehabilitation, development of daily living skills and mobility training, enabling people with visual impairments to feel like full members of society. Rehabilitation services can be provided either directly by local authorities through specialised rehabilitation teams or through external providers, including the NHS, charities working in the field of support for the disabled and private institutions. An important element of the UK rehabilitation model is the state social policy based on respect for people with visual impairments and providing strong psychological and social support. The basis of rehabilitation in this country is a multidisciplinary approach, which involves the involvement of specialists in various fields to provide comprehensive care (Table 2) [75, 80].

Table 2.

Comparative characteristics of the levels of organisation of rehabilitation assistance to the VIPs in different countries

Levels of rehabilitation care organisation according to WHO	**USA**	**Germany**	**UK**	**Ukraine**	
				The Ministry of Health of Ukraine	**Ministry of Social Policy of Ukraine**
Specialised, highly effective rehabilitation	provided	provided	provided	provided	not provided
Rehabilitation services integrated into tertiary	provided	provided	provided	provided	not provided
Rehabilitation services integrated into primary	provided	provided	provided	not provided*	not provided
Community-based rehabilitation services	provided	provided	provided	not provided	provided**
Self-rehabilitation and informal rehabilitation	provided	provided	provided	not provided	not provided

* dispensary monitoring

** One rehabilitation centre for VIPs, funded from the local budget; the centre is funded, not the services provided

While analysing rehabilitation services in Ukraine, the Uniform Clinical Guidelines for glaucoma (primary and secondary levels) and cataracts (at all levels of care - primary, secondary and tertiary) were chosen. This is due to the fact that both diseases are chronic, progress over time, can lead to significant visual impairment or even blindness, and therefore require long-term and comprehensive rehabilitation [81, 82].

According to the International Standard on Visual Rehabilitation (ISVR), the process of providing rehabilitation care to people with visual impairments involves various specialists. They include ophthalmologists, optometrists, VI rehabilitation specialists, orientation and mobility specialists, and experts who help to develop life skills. In addition, depending on the age and level of functional capabilities of the VIPs, the rehabilitation team involves teachers, vocational counsellors and social workers [83].

The training of specialists to provide rehabilitation services in the US, Germany and the UK is carried out in accordance with international and regional standards that meet the requirements of the ISVR. It includes mandatory certification in specific areas of rehabilitation, such as orientation and mobility, rehabilitation of people with visual impairments, education of children with visual impairments, life skills, low vision therapy and work with assistive technologies.

For adults with visual impairments, the multidisciplinary rehabilitation team usually includes an ophthalmologist, low vision specialist, occupational therapist, rehabilitation teacher, mobility and orientation expert, adaptive technology specialist, social worker and counsellor. As for children, their rehabilitation support involves an ophthalmologist, a low vision specialist and a typhlopedagogue.

The list of social rehabilitation services provided in the United States, Germany and the United Kingdom almost fully complies with the requirements of the ISVR, providing a comprehensive approach to supporting people with visual impairments (Table 3) [75].

Table 3.

Provision of rehabilitation services to VIPs in countries around the world

№	Country	Name of the rehabilitation facility	Services provided
1	USA	The Territorial Service for the Blind	orientation and mobility, development of skills necessary for everyday life, cooking, shopping, Braille's code comprehending and communication skills, computer access technologies, management of personal resources banking and methods of paying bills and tracking), preparation for vocational rehabilitation, psychological support, information consultations on rehabilitation services, organisation of mutual support groups health classes in the fitness room
2	Germany	The Frankfurt Foundation for the Blind and Visually Impaired (Polytechnic Society)	social and psychological support, Braille's code, IT basics and electronic aids, use of rehabilitation aids, spatial orientation and mobility, life skills lessons, creative design in an art workshop, consultations on the use of optical aids, visual function assessment, language integration courses for refugees vocational reintegration
3	UK	PrioritEyes	mobility and independent living skills training, assessment and training in the use of visual aids, independent mobility training, IT assessment and training for people with visual impairments, dual sensory skills assessment, information accessibility advice, training in visual impairment, professional care and case management, telephone support service

In 2016, the World Health Organization (WHO) developed a list of priority assistive devices. It includes the 50 most important assistive devices selected on the basis of their prevalence and impact on quality of life. The WHO emphasises that this list is not exhaustive and can be used as a guide for the development of a national list, taking into account the specifics of the country and available resources.

Among the auxiliary aids recommended by WHO for people with visual impairments are:

- Braille displays;
- Braille typewriters;
- various types of magnifying devices (digital and manual);

- magnifying glasses;
- glasses according to ophthalmological indications;
- canes for the visually impaired.
- audio players that support the DAISY format;

In Ukraine, the provision of auxiliary aids and medical devices is carried out in accordance with the list provided for in the Individual Rehabilitation Programme for Persons with Disabilities. The procedure for its formation is regulated by Order of the Ministry of Health of Ukraine No. 623 of 2007, as well as its update by Order No. 2067 in 2024 [84, 85].

The main principles of providing vision rehabilitation services in accordance with ISVR are defined as follows**:**

1. The rehabilitation process should be multidisciplinary and person-centred, not institution-centred.
2. It is important to ensure close cooperation between all professionals involved in the rehabilitation process.
3. Interventions should have a multi-level structure, taking into account the patient's personal goals and possible risks.
4. Data on the patient's condition is collected at the initial stage of rehabilitation, and then refined, analysed and transferred between levels of rehabilitation.
5. The earlier rehabilitation measures are started, the more effective the result will be.
6. Rehabilitation services and support should be evaluated [75].

2.1.1.2. Ways to overcome and prospects for medical and psychological rehabilitation of Ukrainian people with visual impairments

Ukrainian legislation defines rehabilitation of persons with disabilities as a comprehensive, interdisciplinary assistance. It covers a system of medical, psychological, pedagogical, physical, professional, labour, physical culture and sports, and social and household activities aimed at restoring or compensating for impaired

body functions. The main goal of rehabilitation is to promote social and material independence, labour adaptation, integration and reintegration into society. It also provides for the provision of auxiliary rehabilitation equipment and medical devices to persons with disabilities [86].

In Ukraine, rehabilitation functions are distributed among various government agencies, including:

- The Ministry of Healthcare of Ukraine (MoH) — is responsible for medical rehabilitation;
- The Ministry of Social Policy of Ukraine (MoSPU) — provides social rehabilitation;
- The Ministry of Veterans Affairs of Ukraine — coordinates medical care and rehabilitation of veterans.

Despite the existence of relevant structures, the legislation does not clearly define the mechanism of responsibility for the rehabilitation of persons with visual impairment (VIP). There is a lack of coordination between ministries responsible for different areas of rehabilitation.

At the level of the Ministry of Health, there is the Directorate of Medical Services, which deals with the regulatory and legal regulation of rehabilitation issues in the healthcare sector. The Ministry of Social Policy has an expert group on rehabilitation, and the Ministry of Veterans Affairs has a Department of Rehabilitation and Medical Services. Although other ministries are involved in the rehabilitation sector, there is no established mechanism for information exchange between them, which makes it difficult to address problems in a coordinated manner and hinders the development of rehabilitation programmes.

According to unofficial data from 2020, there were about 144,000 visually impaired people in Ukraine, including 40,000 with profound visual impairment. As a rule, for every million people, there are about 1,000 people with complete vision loss who have the status of a person with a disability. More than 10,000 children in Ukraine have disabilities due to visual impairment, and every year about 12,000 more people are recognised as persons with disabilities due to visual impairment.

The growth in the number of children with visual impairments is an alarming trend - every year their number increases by about 250,000, and over the past 10 years the rate of childhood visual disability has increased by 2.5 times. Blindness and severe visual impairment rank 4th among the causes of childhood disability in Ukraine.

According to the National Health Service of Ukraine (NHSU), in 2021, 17,478 people were diagnosed with a visual impairment, and in 2022, this figure increased to 19,551 people. This represents an increase in the number of cases by almost 1.1 times, which is largely due to military operations - missile strikes, kamikaze drone attacks and mine-blast injuries. Despite the severity of the problem, the exact number of people with visual impairments in Ukraine remains unknown, as the Ministry of Health does not keep formal statistics on these indicators. The lack of detailed statistics makes it difficult to plan rehabilitation measures and provide the necessary support to visually impaired persons [87].

According to the UNDP monitoring (2023), the system of comprehensive medical, psychological and social care for persons with visual impairment (VIP) in Ukraine has a number of unresolved problems. First of all, the legislation does not contain clear provisions on the list of rehabilitation services, their scope and the qualifications of specialists who should provide them (ophthalmologist, optometrist, rehabilitation vision therapist, orientation and mobility specialists, psychologist, vocational counsellor, social worker, etc.) The sources of funding for rehabilitation services are not defined, and rehabilitation activities at home and in the community are not enshrined in the Law ‘On Rehabilitation of Persons with Disabilities in Ukraine [87].

The absence of a national standard for the rehabilitation of VIPs significantly complicates the organisation of this sector. Without a single regulatory document that would regulate the planning and implementation of rehabilitation measures, interaction between government agencies, ministries and other stakeholders remains inefficient. This, in turn, does not ensure the continuity of rehabilitation services.

Currently, there is no single mechanism for monitoring the quality of rehabilitation services in Ukraine. Their effectiveness is assessed on the basis of

reporting indicators based on the International Classification of Functioning, Disability and Health. However, there is a problem of data dispersion: in the healthcare sector, data is entered into the electronic healthcare system, while information on the rehabilitation of persons with disabilities is entered into the centralised disability data bank. The lack of a unified framework complicates coordination between providers of medical, psychological and social rehabilitation. In addition, the Clinical Guideline 'Comprehensive Eye and Vision Examination' does not contain specific provisions for the rehabilitation of impaired vision. Although the document contains general recommendations for vision therapy and rehabilitation, it does not specify the meaning of the concept of 'vision rehabilitation', the types of services and specialists who should provide them.

An analysis of the educational programmes for occupational therapists shows that they are not sufficiently prepared to work with VIPs. According to the regulations on the multidisciplinary rehabilitation team, occupational therapists are supposed to carry out rehabilitation activities for visually impaired people, but their training does not include proper training in this area. In addition, the multidisciplinary team does not include an optometrist, which is contrary to international standards for vision rehabilitation, as this specialist is responsible for preventing the loss of visual functions, restoring or compensating for them.

There are also no components in the educational programmes for optometrists that address the ethics of working with VIPs. There is no training for vision therapists that meets international standards, and educational programmes for physical therapists and occupational therapists lack mandatory disciplines dedicated to working with ophthalmological diseases. There are also serious gaps in the field of typhlopedagogy: Ukraine does not train specialists who would specialise in the rehabilitation of visually impaired people, including teaching spatial orientation, Braille, the use of technical rehabilitation equipment, etc. In addition, the National Classification of Professions of Ukraine does not include the position of "typhlopedagogue", although there is a "rehabilitation teacher", but its competences are not detailed. This creates confusion about the training and role of such specialists.

Ukraine lacks programmes to improve the qualifications of social workers working with visually impaired people, even though they play a vital role in the social adaptation process. The inadequate training of these specialists can lead to breaches of ethical standards and poor-quality rehabilitation services. Ophthalmologists who specialise exclusively in vision rehabilitation are not trained in Ukraine. The absence of this profession in the National Classification of Professions limits the provision of quality vision rehabilitation services. At the same time, the existing list of rehabilitation services in the field of social rehabilitation, approved by the Resolution of the Cabinet of Ministers of Ukraine 'On Approval of the State Model Programme for the Rehabilitation of Persons with Disabilities' (No. 1686 of 08.12.2006), is outdated and needs to be updated in line with international experience (USA, Germany, Great Britain) [88].

Currently, Ukraine does not have a formalised reporting system on the effectiveness of medical, psychological and social rehabilitation services for persons with disabilities. Existing lists of rehabilitation aids, although they do exist, remain incomplete. There is also no clear definition of what technical aids should be available in rehabilitation centres or in the arsenal of specialists providing rehabilitation services. Until Ukraine resolves these structural and regulatory issues, adults with visual impairments will not receive the necessary and high-quality assistance in full. This negatively affects their safety, level of independence, quality of life, social integration and opportunities for professional adaptation [89].

Based on the results of the analysis and with the support of the United Nations Development Programme (UNDP), a new model of medical, psychological and social rehabilitation for people with visual impairments (VIP) was proposed to countries around the world. The main goal of this model is to meet the urgent needs of people with visual impairments, improve their quality of life and ensure access to necessary medical, psychological and social rehabilitation services. Key areas include vision rehabilitation, development of necessary physical skills, medical and social assistance, etc.

Pilot models have already begun operating in Lviv (Centre for the First Territorial Medical Association) and Vinnytsia (Podillya Centre for Comprehensive Rehabilitation of People with Disabilities). They have moved on to the long-term rehabilitation stage, focusing on life skills training and the work of multidisciplinary teams to ensure a comprehensive approach to rehabilitation.

The model, developed by Ukrainian experts in collaboration with the United Nations Development Programme, consists of five stages:

- mastering mobile technologies – using special programmes for object recognition and communication;
- orientation – learning how to use a white cane indoors and outdoors;
- developing life skills – becoming independent in everyday tasks;
- psychological support – helping to accept change and find new opportunities for self-fulfilment;
- learning Braille (optional).

Scientists, including Butkin G., Gudonis V., Kantor V., Morgulis I., Sinyova E., and Fedorenko S., have studied the socio-psychological aspects of adaptation of VIPs. According to Sinyova E. (2020), adaptation depends on the microenvironment that influences personality development. Age and social environment create a special situation for adaptation and learning [90].

Current problems of socio-psychological adaptation of VIPs require consideration of the degree of vision loss and the age stage of adaptation. Effective solutions to these problems are possible through the work of a multidisciplinary team that promotes social and material independence, labour adaptation and integration into society [91, 92].

In a study on the psychological adaptation strategies of the Ukrainian population to the conditions of military conflict, the author notes that adaptation is a process of selecting optimal behavioural strategies that enable people with visual impairments to find effective ways to overcome difficulties. Korobka emphasises the importance of

cognitive and emotional adaptation mechanisms that help people maintain psychological balance in difficult life situations [93].

Research into the psychosocial adaptation of people with visual impairments, analysing the key stages of their integration into social life, has identified the main components of successful adaptation as the development of social and everyday skills, involvement in active community life and the formation of a strong motivation for self-fulfilment. The author emphasises the need to create special social support programmes to provide assistance at every stage of the adaptation process. [94].

The researcher identifies two key approaches to the social rehabilitation of persons with visual impairments: social and domestic rehabilitation, which aims to develop self-care and independent living skills, and social and environmental rehabilitation, which helps persons with visual impairments adapt to an open social environment. The author pays particular attention to providing persons with visual impairments with specialised technical aids: walking sticks, orientation systems, adapted household appliances, and typhlotechnical devices for learning and working [95].

The importance of social and psychological adaptation of visually impaired people in Kharkiv during military operations creates additional challenges for people with visual impairments, as vision is the main source of information about danger. The study showed that 22% of respondents have a high level of stress resistance, and 26% use adaptive emotional strategies to cope with stress. At the same time, the cognitive strategies used by visually impaired people can complicate their adaptation to stressful situations. Thus, the social and psychological adaptation of visually impaired people is a complex process that requires a comprehensive approach, the participation of multidisciplinary teams and the implementation of specialised rehabilitation programmes to ensure the successful integration of visually impaired people into society [96].

Ukrainian legislation and regulations identify two main areas of rehabilitation: health care (HC) and rehabilitation for persons with disabilities. Despite the declared principle of continuity of rehabilitation services, this division creates significant obstacles to the coordination of rehabilitation measures between different levels and

sectors, and also complicates the integration of the rehabilitation system for people with visual impairments (VIP).

The current regulations contain two lists of rehabilitation aids: one is contained in the State Standard Programme for the Rehabilitation of Persons with Disabilities, and the other in the Procedure for Providing Assistive Rehabilitation Devices (Technical and Other Rehabilitation Devices) to Persons with Disabilities, Children with Disabilities and Other Specific Categories of the Population and for Paying Cash Compensation for the Cost of Such Devices Purchased Independently, and the List of Such Devices. The existence of two separate lists creates certain difficulties in the process of providing rehabilitation services for persons with disabilities.

At the local community level, there is no comprehensive, multidisciplinary, and inter-sectoral rehabilitation for people with disabilities. Most rehabilitation measures set out in the Unified Clinical Protocols for the Provision of Medical Care are divided into mandatory (monitoring compliance with recommendations, lifestyle changes, medical check-ups, frequency of follow-up examinations) and desirable (sanatorium-resort treatment in specialised institutions for ophthalmic patients). However, in practice, such measures are not fully implemented, nor are they carried out by all the necessary specialists, which makes it impossible to develop an effective rehabilitation pathway for people with visual impairments and violates the principle of a comprehensive approach.

The existing list of rehabilitation measures in the field of healthcare includes such areas as physical and rehabilitation medicine, physical therapy, occupational therapy, speech therapy, psychological assistance, prosthetics and orthotics, as well as the provision of rehabilitation aids. However, the lack of a single standard for rehabilitation of persons with disabilities prevents the effective development and implementation of individual rehabilitation plans in accordance with rehabilitation pathways [75].

Current legislation does not contain clear rules on the provision of rehabilitation services outside specialised institutions, in particular at home or within local communities. In theory, such services can be provided within the healthcare system,

but due to the lack of relevant regulations, the mechanism for their implementation remains unregulated. In addition, regulatory provisions concerning the rehabilitation of persons with disabilities do not actually provide for rehabilitation services within local communities. This significantly limits the access of persons with disabilities to necessary services and requires that this problem be addressed at the state level.

The rehabilitation system for persons with disabilities lacks a sufficient number of specialised rehabilitation centres that meet the needs of adults with disabilities in accordance with International Standards for Vision Rehabilitation (ISVR). In particular, comprehensive, multidisciplinary and inter-sectoral rehabilitation measures for adults with disabilities are limited and do not meet current international standards. Currently, social rehabilitation is mostly limited to social and domestic care, occupational therapy and social skills training. However, this approach does not contribute to achieving the key goals of rehabilitation – the development of independence, financial independence, occupational adaptation and social integration of people with disabilities [75].

The absence of psychological rehabilitation measures in the list of rehabilitation services for people with visual impairments is a significant problem. Currently, the emphasis is mainly on psychological and pedagogical rehabilitation, which does not cover the comprehensive resolution of issues related to the psychosocial adaptation of people with visual impairments to changed life circumstances.

2.1.1.3. Medical and psychological rehabilitation: an analytical review of scientific information sources on the quality of life and adaptation possibilities of people with visual impairments

Irreversible vision loss significantly affects a person's quality of life and mental state. VIP's psychological reactions may include high levels of stress, anxiety, panic attacks, feelings of loneliness, low self-esteem, depressive disorders, and in some cases even suicidal thoughts. Depression is one of the most common mental disorders among people with visual impairment, along with anxiety and somatoform disorders [91, 94].

According to the study, more than 80% of people with complete vision loss have concomitant mental disorders or experience severe emotional distress. Psychological dissatisfaction in this category of people is often associated with a reduced ability to live independently, limited opportunities for social interaction, difficulties in professional fulfilment, and reduced access to familiar leisure activities [97].

The quality of life of people with visual impairments is significantly lower than that of people without such impairments, which is explained by limitations in daily activities, reduced physical activity and difficulties in adaptation. To improve physical and mental health, it is necessary to raise awareness of the benefits of physical activity, balanced nutrition and healthy sleep patterns. It is important to develop effective mechanisms for accessing relevant recommendations tailored to the needs of people with visual impairments. Specialists play a central role in the rehabilitation process and should develop specialised programmes that take into account the level of physical activity, psychological and cognitive characteristics, and socio-economic status of patients. It should be borne in mind that many people with visual impairments have coexisting chronic diseases, which further complicates their adaptation. Effective work requires coordination of a multidisciplinary team, which should include an ophthalmologist, vision therapist, occupational therapist, rehabilitation teacher, orientation and mobility specialist, adaptive technology specialist, social worker, psychologists, and physiotherapists. Only a comprehensive approach will ensure long-term improvement in the quality of life of people with visual impairments [98].

The study highlights the importance of investigating the relationship between visual impairments and the level of social activity. Its results contribute to the improvement of rehabilitation services aimed at social integration and improving the overall health of people with visual impairments. The study found that 29.5% of respondents with visual impairments participated in a survey of their satisfaction with their daily lives and social activity. One of the key factors influencing social interaction was job satisfaction: people who felt confident in their work were much more likely to participate actively in social life. Moreover, those who had stable employment and higher income levels demonstrated more pronounced social integration. These findings

once again confirm that economic stability and professional support are important elements for increasing the level of social participation of people with visual impairments [99].

An analysis of physical activity and overall quality of life among working-age people with visual impairments revealed key factors influencing the effectiveness of rehabilitation services. The results showed that regardless of the degree of vision loss, people with visual impairments have a lower quality of life. At the same time, physical activity, particularly sports, has been shown to be highly effective in improving physical, psychological, emotional and social well-being [100].

The study highlighted the significant impact of physical activity on health-related quality of life, accounting for approximately 6% of the variation in this indicator. The study also found gender differences in the relationship between physical activity levels and overall quality of life. This suggests that physical activity affects men and women with visual impairments differently. People with visual impairments generally report a significantly lower quality of life compared to people without such limitations. Regular physical activity and reducing the amount of time spent sitting have a positive impact on health and overall well-being. This further confirms the need to develop specialised programmes and rehabilitation services aimed at increasing physical activity among people with visual impairments [101].

The study also found that low levels of physical activity are a significant problem for people with visual impairments, directly affecting their overall health. In a cross-sectional analysis of adults aged 18 to 95, only 60.0% of participants reported engaging in moderate or vigorous physical activity for at least 30 minutes per day. It was found that individuals with complete vision loss exhibited lower levels of physical activity, spending more time in a seated position and participating less frequently in sports activities. In contrast, those who had partial vision impairment or were able to move around without assistance demonstrated higher levels of physical activity, spending more time on light or moderate physical activity. In addition, the study found that the key factors contributing to low physical activity among people with visual impairments were total blindness and dependence on assistance for mobility.

Individuals with lower visual acuity and who moved with support were in the group with the lowest level of physical activity. This confirms the need for a targeted approach to rehabilitation that includes adaptive physical activity programmes for such individuals.

Low physical activity among people with visual impairments remains a serious problem worldwide. Therefore, specialised institutions and government agencies should develop effective programmes aimed at promoting physical activity among people with visual impairments. In particular, attention should be focused on high-risk groups with low activity levels in order to develop effective rehabilitation measures aimed at improving the overall level of physical activity and social integration of persons with visual impairments. Research findings confirm the need to improve rehabilitation services to enable these individuals to lead full and active lives in society [102].

Based on recent studies, it has been found that adolescents with uncorrected refractive errors or non-refractive visual impairments do not demonstrate a higher level of sedentary lifestyle, nor do they have reduced levels of moderate and high-intensity physical activity compared to their peers with normal vision. Similar patterns are observed among adults aged 20 to 49, where no significant association between vision and high-intensity physical activity has been found.

However, data analysis shows differences between men and women. In particular, women aged 20–49 with non-refractive visual impairments spend significantly more time sitting than women with normal vision. As for people aged 50 and older, their level of physical activity decreases significantly, especially among women, who on average show an 82.0% lower level of physical activity than their peers without vision impairments. These findings highlight the need to develop and implement measures aimed at increasing physical activity and reducing the time spent in a seated position. It is particularly important to focus on adults with visual impairments, especially women, who need additional support to engage in an active lifestyle [103].

People with visual impairment have a higher prevalence of chronic diseases and significantly lower levels of physical activity compared to people without visual impairment. The study identified several key components of physical activity that have a positive impact on the physical performance of people with visual impairment:

- exercises that help prevent falls and improve balance;
- walking as a basic form of activity;
- yoga and dance exercises that improve coordination;
- aerobics and strength training to maintain muscle activity.

The results show that involving people with visual impairments in physical activity not only improves their physical characteristics but also contributes to overall health, increased mobility and quality of life. Thus, yoga, dancing and other exercises can be an effective means of rehabilitation and physical fitness for people with visual impairments [104]. Rehabilitation programmes for people with visual impairments are aimed at optimising the use of residual vision, developing compensatory skills and improving functioning in everyday life. According to an analysis of scientific studies conducted in different regions of the world (Australia, North America, Europe and Asia), there are several approaches to rehabilitation [75].

1. **Psychological support** – helps adapt to changes in life after vision loss, reduces anxiety and depression.

2. **Vision improvement methods** – use of optical and electronic devices to maximise the use of residual vision.

3. **Multidisciplinary programmes** – combination of medical, psychological, social and educational methods to provide comprehensive assistance to people with visual impairments.

Studies have shown that compared to individuals who did not participate in rehabilitation programmes, people who received psychological support demonstrated a 7.3% improvement in quality of life, while vision improvement methods contributed to a 6.8% increase in this indicator. More comprehensive approaches, including multidisciplinary programmes, had an even greater positive effect [105].

People with visual impairments are more vulnerable to traumatic events in emergency situations, which significantly increases the risk of developing post-traumatic stress disorder (PTSD). Studies [106] show that the prevalence of PTSD among people with visual impairments is significantly higher than in the general population. In particular:

- among men, the rate is 9.0% (compared to 3.8% in the general population);
- among women, the rate is 13.9% (compared to 8.5%).

The main factors contributing to the increased rate of PTSD among people with visual impairments are:

1. **Young age** – the younger the person, the higher the risk of developing PTSD, as they have less experience of traumatic events.
2. **Female gender** – women with visual impairments are more likely to be victims of sexual violence, which significantly increases the risk of developing PTSD (17.4% compared to 10.0% in the general population).
3. **Loss of vision due to trauma or illness** – is a serious psychological factor that influences the risk of developing PTSD.

To reduce PTSD and improve the mental health of persons with visual impairments, it is necessary to:

- develop medical and psychological assistance programmes;
- implement universal design principles to create a safe environment;
- strengthen measures to prevent physical and sexual violence;
- raise public awareness of the needs of persons with visual impairments.

Research confirms that physical activity, effective rehabilitation and mental health support measures are important components of improving the quality of life of people with visual impairments. Particular attention should be paid to at-risk groups, such as women, young people and people who have lost their sight due to trauma. An integrated approach that includes rehabilitation, physical activity and psychological support will promote social adaptation and improve the well-being of people with visual impairments [107]. He analysed in detail the range of emotional, behavioural,

physical and cognitive manifestations that can arise as a result of traumatic events. The researcher found a close relationship between the nature of traumatic experiences and the development of mental disorders. According to the data obtained, the prevalence of mental disorders among people with visual impairments is 4.0%, depression – 21.2%, substance abuse – 32.0%, and dysthymia – 0.9%. The scientist emphasises that people with visual impairments are vulnerable to traumatic events that have a significant impact on their mental health. In this regard, particular attention should be paid to ensuring access to specialised medical and psychological care, including the services of psychologists and psychiatrists. Another important aspect is the creation of a safe environment in communities, including the development and implementation of universal design principles in public places [108].

In a follow-up study, Brunes A. (2021) found that among people with visual impairments, 68.0% had experienced at least one traumatic event in their lifetime, which exceeds the corresponding figure for the general population (60.0%). This statistically significant difference indicates that such individuals are more vulnerable to traumatic events and emergencies. Among the most common traumatic events experienced by people with visual impairments are fires, explosions (including those resulting from armed conflicts), serious accidents, sexual violence, life-threatening illnesses and serious physical injuries. These results confirm that people with visual impairments are at higher risk of experiencing events that can lead to significant mental and emotional consequences [109].

Research by scientist [110] shows that the incidence of post-traumatic stress disorder (PTSD) among people with visual impairments varies from 4.0% to 50.0%. The main factors contributing to the development of this disorder are traumatic events associated with vision loss due to illness or injury, physical and sexual abuse. A distinctive feature is that the very fact of visual impairment creates additional barriers to the perception and processing of information during traumatic events, which complicates adaptation to new circumstances and contributes to the development of PTSD. People with visual impairments have limited ability to orient themselves in stressful situations, which can significantly complicate their timely response to danger.

In addition, visual impairment affects the nature of PTSD symptoms: altered types of intrusive memories, increased avoidance symptoms, and more pronounced hyperarousal may be observed.

Depression and anxiety disorders are common among people with visual impairment, but often go unnoticed or underdiagnosed. According to the study participants, the main reasons for this include a focus on daily difficulties, low awareness of mental health issues, and misinterpretation of symptoms of depression and anxiety as consequences of other life circumstances.

During the discussions, participants emphasised that feelings of vulnerability and inequality that accompany living with visual impairment prevent them from acknowledging mental health issues. They also stressed that social support and assistance from healthcare professionals are critical in addressing these issues. However, many noted that doctors and psychologists lack the specialised knowledge and skills to work effectively with such patients. Therefore, a key area for action is the training of healthcare professionals to improve the diagnosis and treatment of depression and anxiety disorders in people with visual impairments.

Research shows that a significant proportion of people with visual impairments face financial difficulties that hinder their access to necessary assistive technologies. In particular, 60.0% of respondents have low incomes, which limits their ability to purchase such devices, and 40.0% are not even aware of the existence of modern assistive devices. At the same time, over 70.0% of those who use assistive technologies note their effectiveness in increasing independence and improving quality of life. The study also found differences between users depending on when they lost their sight. People who have had visual impairments since birth are more likely to adapt to using modern technologies, while those who lost their sight later in life may face difficulties in learning how to use them. The main barriers remain the high cost of equipment and a lack of awareness about available solutions [112].

In today's world, assistive technologies play a key role in ensuring a fulfilling life for people with visual impairments. They are becoming more than just tools; they are true helpers that open doors to independence, education, professional fulfilment

and social integration. Professionals working with this community must not only be knowledgeable about these technologies, but also understand their impact on each individual's life.

A study conducted in 2020 clearly demonstrates the positive assessment of assistive technologies by both people with visual impairments (72.2%) and professionals (92.6%). These figures emphasise that technology does not simply make everyday tasks easier, it gives people the opportunity to feel like full members of society, capable of achieving their dreams.

However, there are serious obstacles on the road to full accessibility of technology. The biggest one is the high cost of assistive devices, which is noted by 75.0% of people with visual impairments and 96.3% of specialists. This creates inequality and limits opportunities for many who need these technologies.

To overcome these barriers, a comprehensive approach is needed, including:

- **Improving social policies**: The government and community organisations should create programmes that provide financial support and access to assistive technologies.
- **Development of affordable technologies:** Innovative solutions must not only be effective, but also affordable for a wide range of users.
- **Raising awareness**: Information campaigns and educational programmes will help dispel myths and stereotypes associated with visual impairments and raise awareness of available technologies.
- **Cooperation**: Technology developers, experts, people with visual impairments and their families should work together to create solutions that meet real needs [113].

The study identified a critical lack of information needed to develop products and environments that meet the needs of people with visual impairments. The lack of data on their travel routes and specific needs creates significant barriers to inclusive design. The aim of the study was to identify the information needs of this group, including: performing daily tasks, navigating complex urban environments, using

sensory cues (texture, noise, smell), detecting cues that impede movement or create hazards, and perceiving safety while moving [114].

People who have experienced complete or significant vision loss have found that they rely on tactile sensations, such as changes in surface texture and level differences, as well as non-visual cues, such as sounds and smells, to navigate their environment. Unfortunately, information presented in Braille has proven to be ineffective due to its limited availability in everyday environments.

In terms of safety, crossing the street is one of the most serious sources of risk for this group of people. Auditory, olfactory and tactile signals have been identified as key to obtaining information while moving around.

This study highlights the critical importance of a thorough analysis of existing tactile signals and their location in space. Strategies and technologies need to be developed that effectively use these cues to improve the safety and independence of people with visual impairments. This requires a multidisciplinary approach that includes the development of innovative technologies, improvements in urban planning and raising public awareness of the needs of this group of people.

According to the study, a meta-analysis of the effectiveness of rehabilitation services without the use of assistive devices was conducted, involving people over 55 years of age (over 80%). The results of rehabilitation interventions were evaluated, both separately and in combination with the use of technical aids, with a focus on the emotional state, functional ability, self-efficacy and social activity of the participants. The meta-analysis covered 14 studies divided into two groups: 43% involved people with hearing impairments and 57% with visual impairments. The results showed that rehabilitation services that did not involve the use of devices did not demonstrate a statistically significant effect on improving the emotional state, functional ability, self-efficacy or social activity of the participants. However, the analysis found that the method of problem solving can have a positive effect on improving the emotional state of participants [115].

The study conducted examined in depth the needs of people with visual impairments in mastering assistive technologies, including smartphones and

specialised applications. The results revealed a noticeable difference in the availability of formal education between Australia and Singapore: 55.9% of Australian participants had access to formal training, compared to only 32.3% in Singapore. However, self-learning remained the most common method in both countries, with 85.0% of Australians and 64.7% of Singaporeans relying on self-study. Participants rated both types of training highly, but expressed a clear preference for one-to-one sessions with experienced and patient trainers. They also emphasised the importance of accessible training materials, including flexible online formats and group sessions with peers, which create a supportive learning environment. The researcher recommends that occupational therapists use a combination of formal and informal approaches, actively raise awareness of formal training opportunities, and ensure that training is tailored to the needs of each person with visual impairments. This will significantly improve smartphone and app skills, opening up new opportunities for independent living and social integration [116].

Smartphones have become the primary assistive devices for people with visual impairments around the world. Most research in this area (48.0%) focuses on creating interfaces and applications that better meet the needs of users with limited vision. However, only a small proportion of work (5.0%) is dedicated to training and support in the use of these technologies. Effective training plays an important role in this process, enabling people with visual impairments to use smartphones to actively participate in social life, increase their independence and improve their quality of life. Smartphones and applications can be convenient and effective tools for people with visual impairments, and new technologies open up additional opportunities for their use. However, the lack of training and support programmes limits the full use of these opportunities. In order for smartphones to become a real assistive tool, additional courses and support need to be introduced. It is important to take a personalised approach that takes into account the degree of visual impairment, age and experience with new technologies. Particular attention should be paid to the difficulties that people may encounter when switching from mobile phones with physical buttons to touch screens. Healthcare professionals should take these difficulties into account and

provide appropriate assistance to facilitate the process of adaptation to modern technologies [117].

2.1.2. Changes in the psycho-emotional state of military personnel after participation in combat actions who are undergoing medical and psychological rehabilitation

The modern living conditions of military personnel are subject to powerful influences from numerous psycho-emotional and informational stresses, rapid socio-political changes, moral and psychological distortions, and other negative factors of everyday reality. Psychosocial risks, along with their detrimental impact on mental health, are becoming one of the most pressing and complex problems. They not only directly affect individuals, but also indirectly harm the overall combat capability of military units: they weaken collective cohesion, coordination, morale and the ability to effectively perform combat tasks. Prolonged stay in a combat zone, high probability of traumatic situations and constant exposure to extreme physical and psychological stress beyond the limits of normal human experience create a fertile ground for the development of professional burnout. In today's world, which is in a state of global military and political instability, especially against the backdrop of the armed conflict in Ukraine, the issue of ensuring and rehabilitating the mental health of military personnel is becoming critical. Emotional burnout is one of the key issues in military structures that is actively analysed in scientific literature. According to scientific research conducted by C. Maslach in 2016, emotional burnout can cause significant long-term consequences that affect various aspects of human life. In particular, it can cause serious psychological disorders, physical problems and negative changes in behaviour, which together impair the overall quality of life of the individual. In addition, these consequences have a significant impact on their professional activities, reducing productivity and efficiency. Emotional burnout thus becomes a risk factor not only for personal well-being but also for professional stability and development. At the same time, most studies tend to take a generalised approach or focus on male military personnel, ignoring the specific characteristics of other categories of military

personnel. At the same time, women in military service face difficult and often unique challenges that significantly influence the development of emotional burnout, determining its nature, dynamics and consequences. These specific conditions and stress factors create a special environment that shapes not only psychological responses but also the associated long-term recovery and adaptation to new realities [118-120].

Emotional burnout is a complex psycho-emotional phenomenon that occurs due to prolonged professional stress that is not balanced by sufficient resources for psychological recovery. According to the classic definition formulated by American researchers Christine Maslach and Susan Jackson in 1981, emotional burnout is described as a syndrome consisting of three key components:

- Emotional exhaustion manifests itself as a feeling of depletion of internal resources, lack of energy and motivation to act.
- Depersonalisation, or impersonalisation, is characterised by the emergence of negative, cynical or emotionally detached attitudes towards people who are part of professional interactions, such as clients, patients or colleagues.
- A decline in personal achievements manifests itself through feelings of professional ineffectiveness, a drop in self-esteem and a decrease in the subjective importance of one's own work.

Modern scientific concepts presented in Schaufeli's work consider the phenomenon of professional burnout as a complex process arising from an imbalance between the demands of the work environment and the resources available to the employee to meet those demands. These approaches pay particular attention to the multidimensional nature of this condition, where various factors interact: individual psychological characteristics, specific working conditions, and the broader social context in which the individual functions [121].

Emotional burnout is not a mental disorder in the narrow medical sense, but the problem of professional burnout is discussed in the section ‘Factors influencing health status or contact with health services ’in the 10th edition of the International Classification of Diseases (ICD-10). On 20 May 2019, the World Health Organisation (WHO) presented the updated 11th edition of the ICD at the World Health Assembly

in Geneva. In this edition, the concept of professional burnout has been given a broader interpretation. According to the ICD-11 classification, QD85 burnout is defined as a syndrome that develops under the influence of prolonged chronic stress related to professional activities that has not been successfully managed [122]. The diagnostic criteria include the following signs:

- feelings of energy depletion or fatigue;
- increasing mental detachment from work, the emergence of negative or cynical attitudes towards professional activities;
- decreased professional performance [123].

The growing number of women serving in the Armed Forces of Ukraine during the full-scale war with Russia creates an urgent need for a comprehensive study of their psycho-emotional state. This analysis aims to examine key aspects of the impact of stress factors on their professional activities and overall well-being. In addition, it is important to develop effective strategies to ensure psychological resilience, prevent emotional burnout while maintaining high performance, and provide medical and psychological rehabilitation when necessary. After all, stability and motivation are critical for the performance of combat tasks in such difficult conditions. As of 1 January 2025, the number of women in the Armed Forces of Ukraine exceeds 70,000 [124]. Research shows that female military personnel are much more likely than their male counterparts to face serious challenges such as chronic stress, depression, anxiety disorders and emotional burnout [125, 126]. These problems not only affect their physical and mental health, but also have a significant impact on their professional activities and overall quality of life. Women in military service face challenges that are significantly different from those faced by men. These differences influence the development of emotional burnout, determine its dynamics and consequences [127]. The process of emotional burnout in female military personnel occurs gradually, passing through three key stages:

- stage of increased emotional stress: constant stress due to service and gender adaptation, the emergence of psycho-emotional tension due to role conflict;

- stage of chronic emotional exhaustion: decreased energy levels, loss of motivation, physiological symptoms appear, increased social isolation;
- stage of professional destruction and personal alienation: apathy, depression, cynicism towards service, loss of meaning in work, psychosomatic disorders, high risk of suicidal thoughts.

High levels of stress in the closed military environment and the specific nature of military service affect the condition of military personnel, predisposing them to health problems and emotional burnout [128]. In combatants, emotional burnout syndrome can manifest itself as a protective subconscious mechanism in the form of partial or complete emotional shutdown in response to psychotraumatic influences. Emotional burnout syndrome (EBS) is part of occupational personality deformation [129].

The survey was conducted among 35 female military personnel who sought inpatient care for somatic diseases, aged 21 to 58 years. The length of stay in treatment ranged from 5 to 24 days. The questionnaire for diagnosing emotional burnout developed by V. V. Boiko was used. The study found that 20.0% of female military personnel scored above 183 points in the emotional burnout zone, in the balance zone up to 108 points in 42.9%, in the zone of formation of EBS with a range of responses from 109 to 183 points in 37.1% of respondents (Fig. 1).

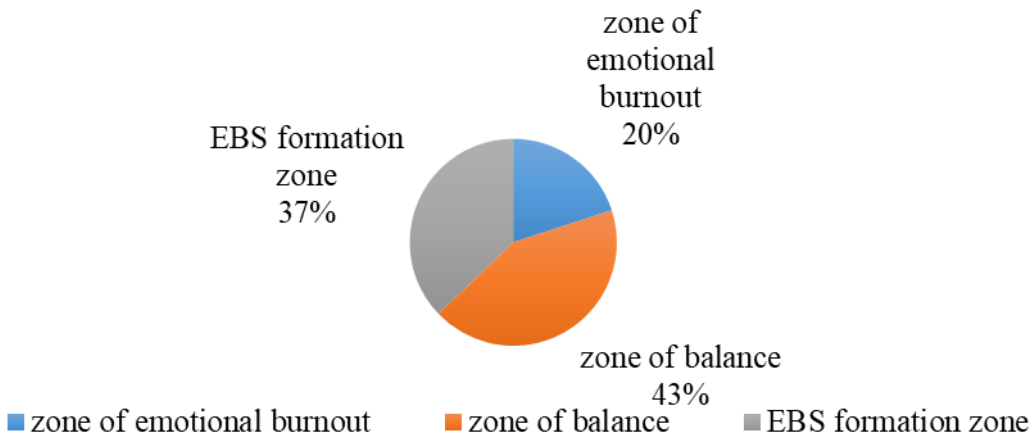

Fig. 1. Distribution of balance zones, formation of EBS, emotional burnout in female military personnel, %

The highest scores were obtained for the emotional burnout zone – 289 points, for the balance zone – 105 points, and for the EBS formation zone – 183 points. The lowest scores were recorded for emotional burnout (210 points), balance (16 points) and the formation of EBS (119 points). The data are shown in Fig. 2. The range of the sample was 273 points, the average value of the indicators was 133.2 points, and the median was 180 points.

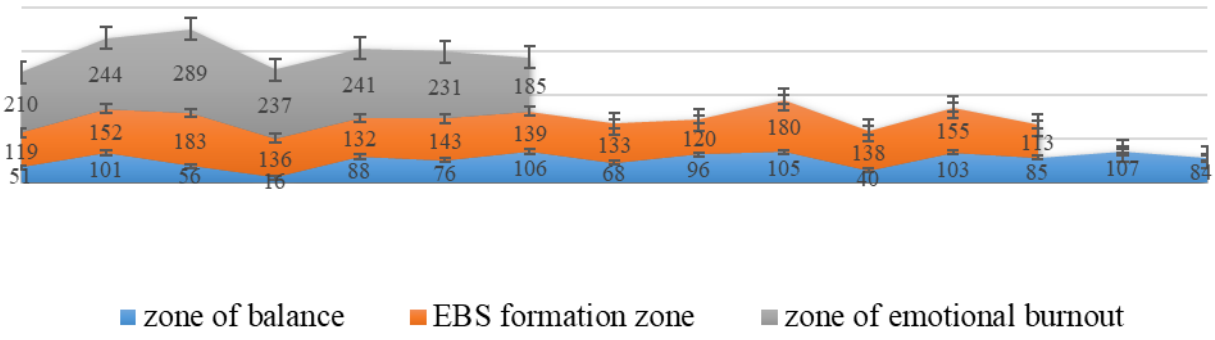

Fig. 2 Distribution of zones by scores: in the balance zone, formation of EBS, emotional burnout.

Analysis of scientific sources shows that Emotional Burnout Syndrome is considered a natural protective mechanism of the body, which manifests itself through emotional alienation, loss of empathy and a general decrease in performance. It performs an important adaptive function among combatants, helping to reduce the impact of stress factors and maintain stability under conditions of high psycho-emotional stress. However, this mechanism also has a downside: it can lead to the development of long-term negative consequences that significantly impair mental and physical health.

2.1.3. Ways to solve problems in the field of medical, psychological and social rehabilitation in Ukraine for military personnel and persons with visual impairments

In order to establish adequate, high-quality, multidisciplinary, and interdisciplinary rehabilitation care in Ukraine, a number of comprehensive measures

covering various aspects of the rehabilitation system must be implemented.

1. Consolidation of management and coordination:

- **Establishment of interdepartmental working groups:** For the successful implementation of the national rehabilitation strategy, permanent working groups should be set up to develop and implement a nationwide strategy for the rehabilitation of military personnel who have been in combat zones and persons with visual impairments. This will help ensure coordination between various ministries and agencies, such as the Ministry of Health, the Ministry of Social Policy, the Ministry of Veterans Affairs, the Ministry of Education and Science of Ukraine, civil society organisations and other stakeholders. The main goal is to ensure effective communication and cooperation between them.
- **Developing a national strategy:** It is important to develop a comprehensive strategy that takes into account the needs of individuals at all stages of rehabilitation. The strategy must be backed up by clear goals, objectives and implementation mechanisms to ensure its effective implementation and the achievement of the desired results.
- **Development of regulatory documents:** It is necessary to develop and approve regulatory acts governing the provision of rehabilitation services at the local community level. This will help ensure the accessibility and quality of rehabilitation services for all persons in need of medical and psychological rehabilitation, guaranteeing a unified approach to their provision.

2. Legislative framework:

- **Adoption of a single law on rehabilitation:** For the proper development of the rehabilitation system, it is important to adopt a law of Ukraine that establishes clear legal norms ensuring the continuity, accessibility and quality of rehabilitation services for all persons with disabilities. The law should define the rights and obligations of persons with disabilities and those who provide rehabilitation services, creating a legal basis for the effective implementation of the rehabilitation system.

3. Development of state standards:

- **State standard for the rehabilitation of persons with disabilities:** It is important to develop a national rehabilitation standard for all persons that complies with international norms and is adapted to the specificities of the Ukrainian reality. Representatives of all stakeholders should participate in the development of the standard: scientists, practitioners, organisations working with persons with disabilities.
- **Model regulations for rehabilitation centres:** Clear regulations are needed to define the requirements for the organisation and operation of specialised rehabilitation centres for persons with disabilities. This will establish social standards for such institutions and ensure an adequate level of service.

4. Strengthening the system for providing rehabilitation aids:

- **Cooperation with WHO:** The current situation in Ukraine regarding assistive technologies for persons with disabilities needs to be assessed and integrated into the national rehabilitation strategy. This will ensure that assistive devices for persons with disabilities are relevant and effective.
- **Improving the list of assistive devices for rehabilitation:** Taking into account international WHO recommendations and rehabilitation standards, the existing list of assistive devices should be improved by adding new and most effective technologies for persons with disabilities.
- **Information campaigns:** Active information campaigns should be conducted to raise public awareness of the latest methods of rehabilitation for persons with disabilities. This will not only improve access to rehabilitation services but also stimulate demand for them among citizens.

5. Improvement of rehabilitation service packages:

- **Analysis and improvement of existing services:** It is important that the Ministry of Health, the National Social Security Service, the Ministry of Social Policy, the Ministry of Education and Science, and other responsible authorities conduct a comprehensive analysis of existing rehabilitation service packages for persons with disabilities. It is necessary to identify problems and limitations that have arisen during

their implementation and develop measures to improve the effectiveness and accessibility of these services.

- **Expanding the list of rehabilitation aids:** Given the individual needs of persons with disabilities, it is important to review and expand the list of aids provided to them. This will ensure more accurate and personalised services.
- **Funding rehabilitation services:** Introducing the principle of 'money follows the patient' will allow for more transparent funding of rehabilitation services, increase their accessibility and ensure the effective use of budget funds.

6. Ensuring human resource capacity:

- **Training qualified specialists:** In order to provide effective rehabilitation services, it is important to train occupational therapists, psychotherapists, rehabilitation specialists, psychologists, physical therapists, social workers, orientation and mobility instructors, etc.
- **Advanced training for specialists:** Regular advanced training for specialists such as occupational therapists, physical therapists, psychologists, social workers and others is necessary to ensure the provision of high-quality services. This will allow practices to be adapted to the latest standards and technologies.

7. Collection of statistical data:

- **Inclusion of questions in the census:** Including data on the functioning of persons with disabilities in the census will enable accurate statistics to be collected. This will contribute to effective planning and evaluation of the effectiveness of rehabilitation programmes.

8. Creation of a unified information system:

- **Single electronic system:** It is important to create an integrated information system that will provide convenient access to data on rehabilitation services and help reduce information gaps between government agencies, medical and social services, and other services.

9. Expanding access to rehabilitation services:

- **Provision of services regardless of the severity of disability:** Rehabilitation services must be made accessible to all persons, regardless of the severity of their disability.
- **Establishment of specialised rehabilitation facilities:** For more effective service delivery, specialised rehabilitation facilities and centres should be established at the regional or interregional level, with the necessary infrastructure and specialists to provide assistance [75].

The main principles of providing high-quality, qualified rehabilitation care are as follows:

1. Adaptation and application of the international model of rehabilitation for persons with disabilities:

- The International Standard for Rehabilitation of Persons with Disabilities is a basic model for creating a high-quality rehabilitation process that takes into account the unique capabilities of each region and country as a whole. This model helps to streamline all stages of rehabilitation, focusing on the accessibility and effectiveness of assistance to persons with disabilities.

The key aspects of the model are:

Subordination of rehabilitation facilities: determining who rehabilitation facilities report to in order to ensure the clear organisation of their work.

Material and technical support: availability of necessary resources to ensure the proper functioning of rehabilitation facilities.

Staff qualifications: importance of highly qualified specialists working with persons with disabilities.

Network of rehabilitation facilities: availability of a well-developed network that ensures access to assistance in different regions.

- This model emphasises the importance of **close cooperation** between healthcare professionals, education specialists, medical professionals and rehabilitation specialists working with persons with disabilities. This multidisciplinary approach allows rehabilitation services to be better tailored to the individual needs of patients.

2. Three-level vision rehabilitation system:

- The vision rehabilitation system should consist of a clear **three-level structure:**

Primary level: at this stage, an initial assessment is carried out and basic assistance is provided.

Secondary level: more specialised services are provided here, requiring qualified specialists.

Tertiary level: this is highly qualified assistance for people with complex disabilities, where complex treatment and rehabilitation methods must be used.

- All these levels must be **interconnected**, ensuring effective information exchange and coordination between specialists in different fields.
- Such a system allows rehabilitation to be organised in conditions where each stage interacts with the others, thereby improving the quality of services provided and taking into account the individual needs of each patient.

3. Individual approach and constant monitoring:

- Within the framework of European standards, it is important to understand that rehabilitation periods may vary for each person depending on the severity of their disability. Therefore, an **individual approach** is the fundamental principle on which the rehabilitation process is based.
- To achieve maximum results, it is necessary to conduct **ongoing monitoring** of the services provided. This allows for regular assessment of the effectiveness of rehabilitation measures and adjustment of programmes to ensure they meet the changing needs of patients.

4. Improving patients' quality of life through rehabilitation services:

- Rehabilitation should be aimed at **improving the quality of life** of people suffering from irreversible and progressive disorders. The key objectives of rehabilitation include:

Prevention of loss of functions of the underlying disease: implementation of preventive measures.

Slowing the progression of disorders: using methods to reduce the rate of deterioration in the patient's condition.

Restoring functions: using techniques that can help improve or even restore impaired functions.

Maintaining the current condition: providing assistance to preserve the existing state of vision so that the patient can continue to lead an active life.

Development of self-care and mobility skills: teaching patients spatial orientation, communication and independence in performing everyday tasks.

Active participation in social and civic life: promoting the integration of persons with disabilities into society through participation in various aspects of life.

- All these services should be coordinated by medical institutions, educational establishments, social services and community organisations to ensure a comprehensive approach to rehabilitation.

5. Comprehensive list of rehabilitation services for adults:

- In order to provide comprehensive assistance to persons with disabilities, it is necessary to create a clearly defined **list of rehabilitation services**, which includes:

Provision and training in the use of assistive devices: providing the necessary tools and training patients in how to use them.

Orientation and mobility training: helping to develop mobility and spatial orientation skills.

Development of visual perception and compensatory mechanisms: helping to develop other senses to compensate for vision loss.

Te-rehabilitation services: providing services via remote technologies for those who cannot visit rehabilitation facilities.

Organising self-help groups: creating support groups for sharing experiences and mutual assistance.

Training in the use of technical rehabilitation aids: ensuring the mastery of special technical devices to facilitate everyday life.

Home management training: developing the skills needed to run a household independently.

Adaptation of living and working environments: assessing and adapting living and working conditions to ensure safety and comfortable functioning.

Social and educational services: access to education and social services to improve integration into society.

Leisure and recreation programmes: promoting active leisure and supporting physical health.

Psychological counselling: providing support to overcome psychological difficulties.

Career counselling: assistance in career choice and professional orientation.

Monitoring of rehabilitation services: assessment of the effectiveness of services provided to adjust rehabilitation programmes to the needs of patients.

6. Specialists involved in providing rehabilitation services must hold relevant certificates obtained after completing ISVR programmes to ensure that services are provided at all stages of the rehabilitation process [75]. The main objective of the study was to examine key aspects that need to be considered when adapting mental and mental health treatment for persons with disabilities. The author highlights several important factors that influence the effectiveness and quality of therapy:

1. **Features of visual impairments:** The degree and nature of visual impairments have a significant impact on the choice of treatment methods. Therapeutic approaches should be individualised, as different types of visual impairments require different treatment approaches.

2. **Environment:** The space in which therapy is provided should be as accessible and comfortable as possible for people with disabilities. It is important that this space does not create additional difficulties and is adapted to the specific needs of clients.

3. **Stress factors:** All external and internal factors that may cause stress or negatively affect the mental state of patients must be taken into account. These can be both physical and psychological aspects of a person's life, which should be considered during treatment.

4. **Emotional state of the patient:** People with disabilities often face emotional difficulties due to limitations in their perception of the world around them, which can lead to depression, anxiety or feelings of isolation. These emotional aspects must be taken into account when developing therapeutic strategies.

5. **Role of the specialist:** Specialists working with patients with disabilities must be particularly attentive to their needs. They should create an atmosphere in which the patient does not feel uncomfortable due to insufficient or incorrect visual information. It is important that the specialist understands and supports the patient at every stage of therapy.

6. **Individualisation of treatment:** The approach to each patient should be personalised, taking into account their pathology. Treatment should be adapted to the individual needs of the person, which allows for increased effectiveness of therapy and greater comfort during the recovery process.

7. **Accessibility of information materials:** All information and therapeutic materials used in the treatment process should be accessible to persons with disabilities [75, 130].

2.1.4. Cinema-therapy as an innovative method of medical and psychological rehabilitation and social adaptation

In the context of full-scale war in Ukraine, the number of people with mental health disorders (anxiety, depression, suicidal attempts, PTSD) has increased significantly [131].

Due to the war, which has been ongoing since 2014 and escalated in 2022, many veterans of the Armed Forces of Ukraine and civilians are in need of psychological assistance. This is because they have experienced combat, occupation, loss of home, violence and destruction. Therefore, the development of effective methods for overcoming psychological trauma is extremely important.

Research has shown that film-therapy, i.e. the use of films for therapeutic purposes, can help reduce anxiety and improve emotional well-being. Audio description, which makes films accessible to people with visual impairments, is

particularly important. In Ukraine, audio description appeared in 2013, when a typhlo commentary was created in Lviv for the cartoon ‘Sunny Bread-Loaf’. Since then, the number of films with audio description has been growing, which indicates the development of this area [132].

The war in Ukraine, which has been ongoing since 2014, and especially its escalation since 2022, has caused widespread psychological trauma among the population. Physical and emotional violence, constant stress, loss of homes and loved ones are just some of the horrors faced by Ukrainians. The war not only destroys the environment and the economy, but also inflicts deep cognitive, emotional and psychological wounds. Post-traumatic stress disorder (PTSD) has become one of the most serious problems facing both military personnel and civilians.

In the search for effective methods of rehabilitation for people with PTSD, film therapy has emerged as a promising approach. This type of art therapy uses films and visual art as tools for emotional healing. Film therapy creates a safe space where patients can freely express their feelings, experiences and fears.

By watching films, patients can identify with characters who are going through similar traumatic events. This immersion in the film's story helps reduce anxiety and depression and promotes the restoration of internal resources to overcome traumatic experiences. Cinema-therapy allows patients not only to work through their fears, but also to find ways to recover emotionally and return to a full life [133, 134].

Cinema-therapy has become popular not only among specialists in the field of psychology and psychotherapy, but also among patients themselves, as it is accessible and effective for restoring cognitive, emotional and mental functions. This form of art therapy combines effective methods such as catharsis, identification with characters and reflection, which promotes a deeper understanding and processing of cognitive-emotional trauma and fears [135].

Mental health disorders, in particular post-traumatic stress disorder (PTSD), are serious conditions that arise as a result of a deeply traumatic experience and have a significant impact on a person's emotional and physical state. This disorder develops

under the influence of intense psychological stress and is accompanied by a wide range of symptoms that significantly impair normal functioning in everyday life [136].

One of the main manifestations of PTSD is intrusive memories of traumatic events, which can manifest as flashbacks — intense re-experiences of the event, during which the person feels as if they are reliving the trauma in real time. These memories can be triggered by certain triggers, such as sounds, smells or images that remind you of the events, and are accompanied by intense emotional and physiological distress [137].

Nightmares are a common symptom of post-traumatic stress disorder (PTSD). They cause intense feelings of fear, panic attacks, insomnia, headaches, rapid heartbeat, excessive sweating, and muscle tension. Sleep disturbances caused by nightmares are exhausting, lead to chronic fatigue and increase the risk of developing depression. People suffering from PTSD are often in a state of constant anxiety and tension, which manifests itself in increased sensitivity to external stimuli such as loud noises or sudden movements. These stimuli can trigger unexpected panic or defensive reactions.

One of the characteristic aspects of PTSD is nightmares that cause intense fear and panic, leading to insomnia and sleep disturbances, accompanied by physical symptoms such as headaches, rapid heartbeat, sweating, and muscle tension. Sleep disturbances worsen the overall condition of the body, causing chronic fatigue and depression. Another manifestation is increased anxiety and tension, manifested in hypersensitivity to external stimuli: loud noises or sudden movements can trigger panic or defensive reactions. A constant state of tension exhausts the nervous system [138].

Another characteristic feature of PTSD is emotional detachment and social isolation. People with this disorder may lose interest in activities that previously brought them joy and avoid communication with family, friends or colleagues. They consciously try to avoid situations that may remind them of the traumatic experience. For example, war veterans often avoid information about combat operations, as this can trigger painful memories. Military personnel also often experience problems with concentration, difficulty performing cognitive tasks and distractibility, which reduces their effectiveness in everyday life [139].

In the context of full-scale war, the issue of restoring the psychological health of both military personnel and civilians who have experienced traumatic events becomes particularly relevant. Effective medical and psychological assistance plays a key role in the process of returning to normal life, contributing to the improvement of emotional state and reintegration into society. Comprehensive methods combining traditional approaches, such as psychotherapy and medication, with modern psychotherapeutic techniques are used to treat post-traumatic stress disorder (PTSD). Among them, cinema therapy stands out as an important and effective tool [140].

Cinema-therapy is a psychotherapeutic technique that belongs to art therapy and is used in psychological assistance to improve the psycho-emotional state of individuals suffering from mental disorders or facing psychological difficulties that negatively affect their lives. This approach promotes emotional stability, self-reflection and the development of adaptive mechanisms through the viewing, analysis and discussion of cinematographic works [141].

Cinema-therapy, also known as directed film therapy, is an effective method of psychotherapeutic intervention that uses cinematographic works to achieve therapeutic results, particularly among individuals who have experienced physical, psychological or combined trauma. The basic principle of this method is to create psychological distance between the patient and their own experiences. This is achieved through identification with film characters, which allows the patient to indirectly process their traumatic experiences, minimising the risk of their psychological reprocessing and further traumatisation. In modern medical and psychological rehabilitation programmes for people who have suffered as a result of combat, physical trauma or loss of sensory functions, including vision, film therapy plays an important role in the recovery process. It not only helps to reduce the level of social isolation, but also actively stimulates social integration and adaptation to new life circumstances. Military trauma, including physical injuries or sensory impairments, significantly affects the psychological state of victims, reducing their ability to integrate and adapt to society. That is why, in the rehabilitation process, special attention should be paid to a comprehensive approach in which film therapy is an important but additional tool. It

plays an important supporting role in promoting the psycho-emotional recovery of patients by enabling them to relive traumatic experiences through safe identification with film characters, thereby reducing stress levels and helping to restore emotional stability. Recovery from trauma, especially those affecting physical and mental health, requires a multifaceted approach, and film therapy is an indispensable part of this process [142].

Cinema-therapy is an innovative method of psychotherapeutic intervention that helps improve emotional state and provides comprehensive psychological recovery and social reintegration for people who have experienced traumatic events. The process of medical and social adaptation of victims is complex and multifaceted, including both physical rehabilitation and psycho-emotional stabilisation, with a gradual return to an active social life [143].

In war, when people are exposed to the horrors of combat, psychological trauma, such as post-traumatic stress disorder (PTSD), is often combined with severe physical injuries, such as amputations, head injuries, concussions or loss of vision. This significantly complicates the adaptation process, exacerbating maladjustment and social isolation.

People with PTSD often exhibit the following symptoms:

- Impaired social communication: they avoid interacting with other people, experiencing difficulties in establishing and maintaining relationships.
- Emotional detachment: they may feel emotionally empty, lose interest in life, and have difficulty expressing emotions.
- Depressive disorders: they often feel sad, hopeless, and lose motivation.
- Increased anxiety: they are in a state of constant tension, fear and expectation of danger.
- Suicidal intentions: in severe cases, they may have thoughts of suicide.
- Tendency to be lonely: they avoid social contact, feeling misunderstood and isolated.

These symptoms require an individualised and comprehensive approach to rehabilitation that takes into account both the psychological and physical needs of the patient [144].

In this context, film-therapy acts as a powerful psychotherapeutic tool that helps to work with traumatic memories through identification with film characters and deep reflection on the plots. The main principle of this approach is catharsis, which allows patients to experience emotions while watching films, followed by cognitive and emotional reflection. This method allows you to create psychological distance between your own traumas and the content of the film, which helps reduce anxiety and develop healthy strategies for coping with stressful situations [145].

Cinema-therapy is an important tool when working with people with disabilities, particularly those with visual impairments, as participation in cultural and social life is a crucial factor in maintaining their psychological and emotional well-being. For people with partial or complete vision loss, audio description is used — a technology that makes visual content accessible through verbal descriptions of events on the screen, characters' actions, scene changes, facial expressions, gestures, etc. Audio description creates an inclusive environment that allows people with visual impairments to participate in cultural activities and promotes their social integration.

Cinema-therapy involves an individual approach to selecting films, focusing on the patient's emotional state, the thematic features of the films and the therapeutic effect. An important stage is the discussion of emotional reactions after viewing, which allows the patient to rethink their experiences, reduce emotional tension and gradually integrate the traumatic experience into the broader context of their life [145].

Cinema-therapy is an effective method of psychotherapeutic influence that uses cinematographic works to improve the psycho-emotional state of patients. This method combines watching films with in-depth analysis and reflection, allowing patients to better understand their emotional experiences and find ways to process them. The therapeutic effect of cinema therapy is based on several key mechanisms that promote self-understanding, emotional recovery and the development of adaptive strategies, which are important for overcoming traumatic experiences.

The main mechanisms of influence of cinema-therapy:

1. Identification with characters

One of the most important aspects of film therapy is the identification of the patient with film characters. This process allows the patient to identify with characters who are going through emotional experiences similar to their own. This allows the person to experience emotions that are difficult to express in words through the lens of someone else's experiences. Identifying with characters can be especially helpful for people suffering from post-traumatic stress disorder (PTSD). Watching films that depict combat, loss of loved ones or trauma allows patients to safely experience emotions that they are afraid to express in real life. It also allows them to understand their inner experiences and dare to work through them in the therapeutic process.

2. Catharsis — emotional cleansing

Catharsis is another important mechanism of film therapy, which involves emotional release through watching films that evoke strong feelings. While watching a film, patients may experience emotions ranging from sadness to anger or joy, which helps release suppressed emotions. People who have difficulty verbalising their feelings or face obstacles in expressing their emotions in everyday life can find relief through the catharsis that occurs while watching such scenes. This is especially important for people who have experienced traumatic events, such as military conflicts or violence, as catharsis helps to relieve emotional tension and stress that build up due to the inability to openly express feelings. This process of releasing emotions can be an important step on the path to mental recovery and acceptance of one's own experiences.

3. Reflection — contemplation and analysis

Reflection is an important stage of film therapy, allowing patients to comprehend what they have seen and apply this experience to their own lives. After watching a film, patients have the opportunity to discuss it with their therapist, analysing the behaviour of the characters, their decisions, and themes that may be related to their own emotional experiences. This allows the patient to see parallels between their own experience and what is happening in the film. For example, people who have experienced trauma may

begin to reflect on their reactions to events in the film that mirror their own experiences and thus find ways to overcome their emotions, either on their own or with the help of a therapist. Reflection helps patients rethink their emotional reactions, see new ways of adapting and accepting their experiences, allowing them to move towards psychological and emotional recovery.

Cinema-therapy helps patients restore social connections and improve self-esteem. During group film viewing sessions, patients have the opportunity to discuss their experiences and thoughts, which helps reduce feelings of loneliness and isolation from loved ones and society. This is important for those who feel that their feelings are not understood by others. Film therapy creates an opportunity for shared reflection and support, which strengthens social bonds and promotes better understanding between participants [145].

Cinema-therapy is an effective method of medical and psychological rehabilitation that allows patients to process their emotional experiences in a safe and controlled environment under the supervision of a psychotherapist. Through the use of cinematographic art as a therapeutic tool, patients are able to experience and analyse their own emotions, which promotes their awareness and further integration into their inner mental space. The main mechanisms of film therapy are the processes of identification, catharsis and reflection, which help patients express their feelings, release emotional tension and rethink difficult life situations [146].

Cinema-therapy occupies a special place among art therapy methods, as it combines the aesthetic influence of cinema with deep psychotherapeutic processes. It is used to improve the psycho-emotional state of individuals suffering from mental disorders, who have experienced traumatic events or faced social difficulties. Watching films allows you to create a certain emotional distance between the individual and their experiences, which greatly facilitates the process of reflection, adaptation to new realities and the development of new behaviour patterns. Thanks to the possibility of identifying with film characters, patients gain space for expressing emotions, developing empathy and self-awareness.

Audio description plays a special role in inclusive film-therapy, making cinematic content accessible to people with visual impairments. This ensures equal opportunities in cultural and social life, promoting the harmonious inclusion of such individuals into society. Cinema-therapy can be conducted in individual sessions or in groups, serving not only as a psychotherapeutic method but also as a means of social adaptation, which is particularly relevant for people with special needs [147].

The effectiveness of cinema-therapy in working with military personnel who have experienced combat and are dealing with the effects of post-traumatic stress disorder (PTSD) should be noted separately. Cinema-therapy sessions help veterans rethink their experiences by creating a safe environment for them to confront their traumatic memories. Watching films on military themes allows them to distance themselves from their personal pain by experiencing it through the stories of the characters. This facilitates the gradual processing of trauma, reduces emotional tension and improves psychological well-being.

The catharsis mechanism, which plays a key role in cinema-therapy, helps release suppressed emotions, contributing to emotional relief and clearing the mind. Thanks to the opportunity to revisit their own experiences through cinema, veterans can not only become aware of their emotions, but also find constructive ways to live with and overcome them. In addition, film-therapy is a powerful motivational tool: the stories of characters who overcome difficulties give hope and faith in one's own strength.

An important aspect of therapy for military personnel is its role in the process of social reintegration. After returning from war, many veterans experience alienation and difficulties in communicating with the civilian population. Group film therapy sessions create a space for discussing shared experiences, which helps build social connections, share experiences and gradually restore emotional communication. Such meetings contribute to the formation of a sense of support and mutual understanding, which reduces the level of social isolation and improves the psychological state of participants.

Comparing themselves to film characters who face similar difficulties helps veterans see their own problems from a different perspective. This facilitates emotional distancing from traumatic memories and allows them to assess their experiences more objectively. Cinema-therapy also promotes the development of reflective skills, helping patients to gain a deeper understanding of their internal processes and find effective ways to overcome psychological difficulties.

Scientific research confirms that the systematic use of cinema-therapy leads to a reduction in anxiety, depression and other manifestations of PTSD. Watching films activates emotional responses, allowing patients to release suppressed feelings, which is an important factor in their psycho-emotional stabilisation. Military personnel who have participated in film therapy sessions report a significant reduction in emotional tension, a decrease in aggression and an increase in adaptability.

In addition, film-therapy increases veterans' openness to other psychotherapeutic methods, helps them better cope with the difficulties of everyday life, and strengthens their communication skills. This has a positive effect on their relationships with their families, loved ones, and society as a whole. As a result, film-therapy is not only a powerful tool for alleviating psychological distress, but also a means of promoting deeper integration of veterans into social life, helping them find harmony in peaceful existence [148].

Cinema-therapy is an effective method of psychotherapeutic assistance for civilians who have suffered the effects of war, been caught up in conflict or survived captivity. Events such as the loss of loved ones, forced displacement, destruction of homes, witnessing violence and occupation can have a profound impact on the cognitive, emotional and behavioural levels of the individual. Recovery from such experiences is a complex process and requires the use of special therapeutic methods. Cinema-therapy provides a safe environment for processing trauma, helping patients to experience their emotions through watching films accompanied by a psychotherapist in a specially equipped art room. This allows a certain distance to be created between the person and their traumatic experience, promoting emotional release and psychological recovery [149].

Within the framework of art therapy, film-therapy provides an opportunity to work with painful memories in a controlled space, helping people to become aware of and reflect on their experiences. This is especially important for those who have gone through war or other catastrophic events, as watching films allows them to delve deeper into their experiences while minimising the risk of re-traumatisation. This approach provides the necessary level of protection and support to help people work through their emotions without becoming overwhelmed.

One of the most important mechanisms of film-therapy is the identification of the viewer with the characters in the film, whose experiences are similar to their own life experiences. This makes it possible to better process traumatic memories, integrate them into consciousness and regain control over one's emotional state. Films help to make sense of feelings that are difficult to express in words, which is especially important for children and adolescents who do not yet have sufficient experience in verbalising their emotions. Thanks to its visual and narrative context, film therapy becomes a means of recognising, understanding and expressing emotions, which helps to process and accept them.

Cinema-therapy also plays an important role in restoring the ability to express emotions that may have been suppressed after traumatic experiences. It can be a source of inspiration, as watching stories about overcoming difficulties and triumph helps patients believe in their own ability to recover. For those who have experienced difficult life challenges, films that show the path to healing can be a powerful motivator to change their lives for the better, even after serious losses.

In addition to an individual approach, film-therapy is effective in a group setting, as interacting with others who have had similar experiences promotes socialisation, empathy and the creation of a supportive environment. This is especially important for those who feel isolated because of what they have been through. Collective discussion of the material viewed allows patients to share their own experiences, reducing feelings of loneliness and promoting emotional support.

Cinema-therapy is particularly beneficial for people with post-traumatic stress disorder. According to the Ukrainian Ministry of Health, PTSD can develop in 20-30%

of people who have experienced traumatic events, including military personnel, volunteers, internally displaced persons and civilians who have been under occupation. Symptoms of this condition include flashbacks, intrusive thoughts, increased anxiety, depression, destructive behavioural reactions and hyperarousal, which significantly impairs quality of life. Watching films in a therapeutic context helps to release accumulated emotional tension, as patients can see their own difficulties reflected in the experiences of the characters. This promotes a deeper understanding of their own condition and facilitates the process of reflection, which helps to find ways to overcome psychological difficulties [150, 151].

Providing qualified psychological assistance to victims of military conflicts is an extremely important task. One of the newest but already proven methods of rehabilitation in Ukraine is film therapy, which helps restore emotional balance and overcome the effects of psychological trauma. Ukrainian specialists – psychotherapists, psychologists and social workers – actively use this approach to support various categories of victims. The use of cinema therapy combines the art of cinema with therapeutic methods, allowing people to safely address their traumatic experiences, analyse them and gradually improve their psycho-emotional state.

Films depicting the realities of war, the struggle for freedom, human dignity and moral values, which take on exceptional importance during military conflict, are of particular significance. Such films not only promote emotional cleansing, but can also become a source of hope and inner strength for people who have endured severe trials. Stories of heroism, indomitable spirit and the pursuit of justice help viewers find inspiration and faith in the future.

Cinema-therapy is effectively used when working with veterans, volunteers and internally displaced persons. It promotes emotional relief, creates space for mutual support and exchange of experiences, which plays an important role in overcoming the consequences of traumatic events. Group sessions help participants share their experiences, emotions and thoughts in a safe environment where there is no fear of judgement or misunderstanding. This format of therapy provides the necessary level of social support, which is key to the psychological recovery process.

The discussion of the film is equally important, as it allows participants to express their accumulated emotions, analyse them and find ways to heal emotionally. The feeling of belonging to a community and the understanding that their experiences are shared by others helps people overcome feelings of loneliness. This form of group work allows them to realise that the process of returning to normal life is not only a personal struggle, but also part of a joint effort for the future [152].

Film-therapy plays a special role in working with children and adolescents who have been affected by war, occupation or captivity. Due to their age, they find it difficult to verbalise their feelings and may hide their pain, fear and anxiety for their loved ones. In such cases, film-therapy helps them identify their emotions, become aware of them and gradually process them. Films that are appropriate for the age of children and adolescents promote emotional disclosure and reflection on their experiences [153].

Animated films or feature films that show the difficulties, losses or changes caused by war can help young viewers better understand their feelings and find inner resources to overcome difficulties [154].

In the context of the war in Ukraine, film-therapy is becoming an important tool for the rehabilitation of victims and contributes to the restoration of the mental health of society as a whole. War leaves a deep mark on people's psyche, so it is necessary to implement modern methods of psychological assistance that meet their needs. In the realities of full-scale conflict, this method becomes an important component of psycho-emotional support for those who have experienced loss, stress and traumatic situations. Films that show the realities of war, the struggle for freedom and universal human values help people to live through their traumatic experiences in a safe environment. This helps to restore inner balance, strengthen faith in one's own strength and rebuild social ties through shared emotional experiences.

4. Conclusions

1. In many countries, such as the United States, Germany and the United Kingdom, rehabilitation for persons with disabilities is provided through the health care system, which coordinates activities involving specialists from various fields,

including social services and education. It operates at several levels – primary, secondary and tertiary – ensuring close cooperation and accountability between specialists, which allows services to be provided effectively in accordance with the needs of each patient, taking into account their functional abilities.

2. Training of specialists in the field of medical and psychological rehabilitation abroad is carried out in accordance with the international classification of functioning, activity limitations and health, based on international and regional standards. After training, certification in the main areas of rehabilitation work is mandatory.

3. Ukraine is actively implementing regulatory and legislative documents governing the support of persons with disabilities in accordance with international standards, in particular those of the UNDP. The new state standards duplicate the European standard (EN 301 549), which contributes to the harmonisation of Ukrainian legislation with international requirements for web accessibility.

4. The network of centres for persons with disabilities under the Ministry of Health, the Ministry of Social Policy and the Ministry of Veterans Affairs of Ukraine is expanding. They are equipped with special modern medical equipment.

5. Comprehensive rehabilitation assistance involves specialists from various fields who have undergone special training under UNDP programmes in cooperation with the National Assembly of Persons with Disabilities. These include occupational therapists who help patients master social and daily living skills, psychologists who work with persons with disabilities, and digital literacy trainers who teach the use of specialised software, voice assistants and artificial intelligence for navigation and information retrieval.

6. Cinema-therapy is a modern method of psychological support used in both group and individual settings to overcome the effects of traumatic events related to war. This approach works effectively for military personnel, civilians, volunteers, internally displaced persons, as well as children and adolescents who may feel isolated or have communication difficulties.

7. The method of cinema-therapy helps restore emotional balance and mental health by creating conditions for the safe expression of feelings in specialised art therapy spaces or during psychological relief sessions. By watching and discussing films, participants can identify with the characters, which facilitates the process of psychotherapeutic recovery and social adaptation.

8. In addition, cinema-therapy can play an important role in raising public awareness of mental health issues, especially in times of war. It helps overcome stigma and promotes open discussion of traumatic experiences. Creating a supportive social environment is key to restoring mental health on a national level. Further research and the development of effective methodological approaches are needed to fully implement film-therapy in medical and psychological care.

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