

Original Article

Use of art therapy, garden therapy, and swimming in the psychological rehabilitation of children in Ukraine

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ABSTRACT

The article is devoted to the use of garden therapy and swimming in the framework of the social and psychological rehabilitation of children affected by the war in the territory of Ukraine. The article addresses the problem of socialization disruption and psychological trauma experienced by children during the Russian-Ukrainian war in the period of 2022-2023 in the territories of Eastern and Southern Ukraine. The article examines the mechanisms underlying the emergence of socialization problems among children who left the territory of active hostilities in Zaporizhzhia, located 30 kilometers from the front line. The article discusses the psychological problems faced by children who witnessed active hostilities during the Russian-Ukrainian military conflict. The paper analyzes the results of the experiment, which revealed a positive trend in the use of art therapy, garden therapy, and swimming in the framework of the program of social adaptation and psychological rehabilitation of children who were subjected to social and psychological disorders during the Russian-Ukrainian military conflict. The article proposes the author's method of social and psychological rehabilitation of children affected by military conflicts and technological and natural disasters.

Keywords: Social rehabilitation, Psychological rehabilitation, Natural therapy, Swimming, Garden therapy

Introduction

Children, regardless of age, experience a stage of social and psychological development through socialization and other forms of active interaction with social institutions and individuals, including communication within large and small social groups.

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At that time, any negative life practices can lead to a distortion of the social and psychological reality of the child. Children may self-isolate due to psychological trauma and communication deviations. And it is precisely the prevention and overcoming of these mentioned consequences that social workers, social educators, teachers, and psychologists actively work on. War is an atypical practice in the modern civilized world, and therefore, there are no social and psychological safeguards in society that would allow for a painless adaptation to wartime conditions for all age groups, especially for children, as their mental development and the formation of socio-psychological mechanisms for reacting to natural, technological, and military emergencies are in progress. Therefore, children who have spent some time in areas of active hostilities need recovery through the

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application of social and psychological rehabilitation techniques. The research results by Shevlin, M. [1] confirm significant negative impacts of the war in Ukraine on the mental well-being of the local population. The research by Lyla Schwartz [2] highlights numerous negative impacts of the military actions in Ukraine, and this study was conducted in Polish shelters where Ukrainian migrant families reside. At the same time, the extent of psychological trauma, social maladjustment, and social isolation of children currently within the territory of Ukraine cannot be fully assessed due to the large scale of military operations and the presence of territories not controlled by Ukrainian authorities [3-9]. A significant number of children affected by the war currently live in regions of Ukraine where there are no active hostilities, but they still face rocket attacks, daily air raid sirens, and mobility restrictions due to curfews. Moreover, they cannot attend schools or preschool institutions because of the lack of bomb shelters and the absence of an effective public safety system in Ukraine during wartime. All this forms a whole block of reasons, which, in addition to the psychological trauma endured during the war, social isolation, and maladaptation, which require comprehensive research on the basis of which new technologies of social and psychological rehabilitation should be created. According to our research team, these technologies should be based on high-specific-gravity, biologically [10, 11] and environmentally friendly materials with physiotherapeutic effects. Therefore, in our opinion, it is necessary to concentrate our efforts within the framework of the social and psychological rehabilitation of children affected by the war on "natural therapy" and "garden therapy". It is rational to use these technologies together with art therapy and sports.

Literature review

Over the past 80 years, Europe has become unaccustomed to war, and apart from the military conflict in the Balkans, there were no hot phases of war; therefore, European scientists, like their American colleagues, did not have significant opportunities to study the problem of the rehabilitation of children who experienced psychological trauma, social isolation, and maladaptation. Therefore, most studies on this issue were based on materials from military conflicts in Asia and Africa, which enabled the development of theoretical approaches to the social and psychological rehabilitation of children affected by war and their testing in practice. We consider the studies of Cardozo, B. L., "Factors affecting mental health of local staff working in the Vanni region, Sri Lanka" [12] to be one of the important ones in this direction. This work allows us to assess the factors of social and psychological tension within Sri Lankan society, which has a low standard of living and pays little attention to preventing social maladjustment and psychological trauma and to overcoming their consequences across all categories of the population, including children. A research by a team of authors led by Bürgin, D. Impact of war and forced displacement on children's mental health—multilevel, needs-oriented, and trauma-informed approaches [13] is one of the best comprehensive studies of the impact of military action on

children's mental health, taking into account the factor of internal displacement. This work was carried out on the basis of a study of the problems of mental health of Ukrainian children. Such studies are a breakthrough in assessing the needs of children displaced by war. The research by Brita Elvevåg and Lynn E. DeLisi The mental health consequences on children of the war in Ukraine: A commentary [14], is important in terms of interpreting the social and psychological problems of children affected by the Russian-Ukrainian war. According to the authors, there is currently a significant number of psychological problems among children affected by the war in Ukraine, however, there are no universal methods and technologies to overcome the consequences of social and psychological maladjustment resulting from the war and therefore, it is essential to approach social adaptation and psychological rehabilitation for children and other risk groups affected by the consequences of the Russian-Ukrainian war with a highly individualized approach. A study by Kamali, M., Munyuzangabo, M., Siddiqui, F.J., Delivering mental health and psychosocial support interventions to women and children in conflict settings: a systematic review [15] is devoted to the systematization of social practices that can be applied for psychological assistance to children and women during military conflicts. The prioritization of women and children for the provision of psychological assistance during armed conflicts is due to the fact that these specific social-demographic categories constitute a risk group that is more likely to experience significant social losses and psychological issues during emergencies, including armed conflicts. A study by Betancourt TS, Thomson D, Vander Weele T. War-related traumas and mental health across generations [16] showed a significant impact of children's social and psychological problems at the generation level. That is to say, because of the scale of the war and the fact that tens and hundreds of thousands of children suffer in such wars, we can talk about the social and mental defeat of an entire generation. Theresa S. Betancourt, with a group of colleagues, in her study on the intergenerational impact of war on mental health and psychosocial well-being: lessons from the longitudinal study of war-affected youth in Sierra Leone [17]. This study was conducted on the territory of Sierra Leone and is an example of the successful development of a model for the reintegration of children who survived the war into a peaceful life. The developed model was based on a study of both qualitative and quantitative indicators of the urgent needs of Sierra Leonean children, with a focus on medical, social, and psychological assistance. Studies by Zamelyuk, M.I., & Mahdysiuk, L.I. The mastery of art therapy in working with preschool children [18] demonstrates the effectiveness of various art therapy approaches with children experiencing difficult emotional states. Considering that during military events, children experience intense emotional periods, we can talk about the expediency of using art therapy in working with children who require social adaptation and psychological rehabilitation. The study by Mykhailo A. Anishchenko, Ellina G. Pozdniakova-Kyrbiatieva, and Yurii Volodymyrovych Mosaiev, "Use of technology in the framework of social and psychological rehabilitation of the elderly" [19], is devoted to the use of natural

therapy technology for the social and psychological rehabilitation of older people. According to the research team, natural therapy comprises animal therapy, agrotherapy, and garden therapy, which are highly environmentally friendly and can be used with various client groups, including in rehabilitation work with children. The work of Alexa Knuth and Lindsay Ross Stewart [20] raises the question of the use of physical exercise in the context of psychological rehabilitation and the readiness of coaches to engage in professional rehabilitation activities with non-athletes and other categories of the population in need of rehabilitation. This problem is very important because sports coaches and physical rehabilitation specialists struggle with skills within the framework of children's rehabilitation. Research by Ellina G. Pozdniakova-Kyrbiatieva, Denys Silantyev, and Yurii Mosaiev. Socio-psychological rehabilitation of children through swimming, as demonstrated by the social project "physical rehabilitation through swimming" [21], shows the effectiveness of swimming in social and psychological adaptation of children displaced from the combat zone to regions outside the front line.

Materials and Methods

Within the framework of our work, an empirical study of an author's program for the social and psychological rehabilitation of children affected by the war in Ukraine was conducted. The experiment involved 50 children between the ages of 8 and 13 who were residing in a shelter for internally displaced persons (IDPs) in the city of Zaporizhzhia. These children had been relocated to Zaporizhzhia, a city located 30 kilometers away from the intense combat zones. The children who participated in the experiment had been in the occupied cities of the Zaporizhzhia, Donetsk, and Kherson regions during the onset of the hot phase of the Russian-Ukrainian military conflict. The methodology was based on our own author's technique, which can be described by the following formula.

$$D = A + B + C \quad (1)$$

A - art therapy sessions;
B - garden therapy sessions;
C - sports activities;
D - rehabilitation program.

The block of art therapy sessions consisted of 16 classes in drawing and modeling. These classes were conducted in 4 groups. Children were united by age in order to feel comfortable working with their peers, and this factor should increase the effectiveness of art therapy sessions. The art therapeutic component of the rehabilitation program is aimed at overcoming post-traumatic syndrome and its physiological and mental manifestations.

The block of garden therapy sessions consisted of 16 classes. These classes were divided into theoretical and practical, since garden therapy is not only an alternative method of rehabilitation, but also a separate direction of environmental socialization [22]. Therefore, theoretical and practical classes in

garden therapy were held in a 1/3 ratio. That is to say, a third of the classes were theoretical in nature, and two-thirds were practical. The theoretical part of garden therapy classes focused on mastering the rules and philosophy of garden therapy. As part of practical classes, children took care of plants and were engaged in other garden therapy practices. Within the framework of this block, we planned to increase the level of social unification of children and psychological rehabilitation.

The block of physiotherapeutic and sports classes consisted, like other blocks, of 16 swimming classes. These classes were organized by the silver medalist of the Olympic Games in 2000 in Sydney, Australia. The mentioned classes had the goal of both developing and improving swimming skills and achieving effects in the sphere of social and psychological rehabilitation.

In general, it should be noted that our experiment consisted of 48 sessions, which were divided into three blocks. Classes for each block were specially selected, taking into account the needs of children in both the fields of social and psychological rehabilitation. These classes were held in parallel from August to October 2022 within a shelter where families of IDPs were living and within one of the professional swimming pools in Zaporizhzhia. The mentioned location is the center of the Zaporizhzhia region, 70% of which is occupied, and active hostilities are ongoing on a significant part of its territory during 2022-2023. More than 400 thousand people left the occupied territories through the territory of Zaporizhzhia, and most of these people remained to live in the city with their children. These families witnessed the hot phase of military events.

The effectiveness of the rehabilitation program for the patient. The research results were assessed using the following formula.

$$R = \frac{K_{(1+2+\dots+n)} + F_{(1+2+\dots+n)}}{N} \quad (2)$$

$K_{(1+2+\dots+n)}$ - clinical indicators,

$F_{(1+2+\dots+n)}$ - instrumental indicators,

N - the number of indicators taken into account.

After which, the effectiveness of treatment and rehabilitation measures is evaluated based on the obtained number:

<1,0 - worsening condition,

1.0-1.4 - unchanged state,

1.5-2.0 - slight improvement,

2.1 - 3.0 - significant improvement.

Results and Discussion

The results of our research after conducting an experimental cycle of sessions showed its effectiveness. Both each individual block of sessions and the cumulative effect of the entire cycle of sessions were found to be effective. In our opinion, the greatest rehabilitation effect was achieved through garden therapy classes. According to the research results, we saw that each of the blocks of classes has a positive effect on one of the aspects of rehabilitation. Thus, garden therapy classes had the most positive impact on the social and psychological rehabilitation of war-

affected children (**Figures 1 and 2**). While swimming has the most positive effect in the field of physiotherapy, it allows IDP children not only to gain swimming skills and improve their own physical functionality (**Figure 3**).

Efficiency indicators in achieving the effects of social rehabilitation are 46% garden therapy, 42% art therapy, and 26% swimming (**Figure 1**). In this case, we witnessed high rates for both garden therapy and art therapy, while swimming rates were significantly lower.

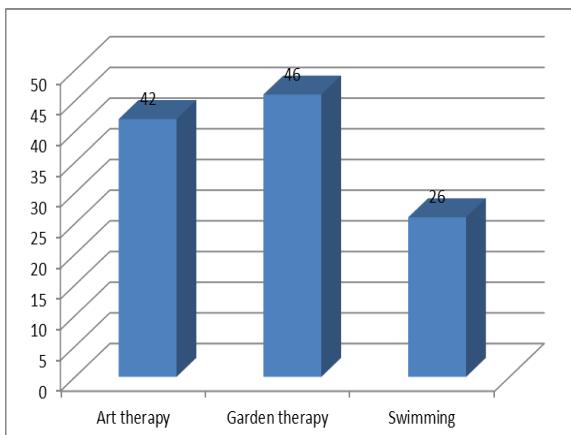


Figure 1. The effect of social rehabilitation (%)

The indicators of application are 52% garden therapy, 46% art therapy, and 34% swimming within the framework of psychological rehabilitation (**Figure 2**). That is to say, the indicators of all components of the session cycle increased.

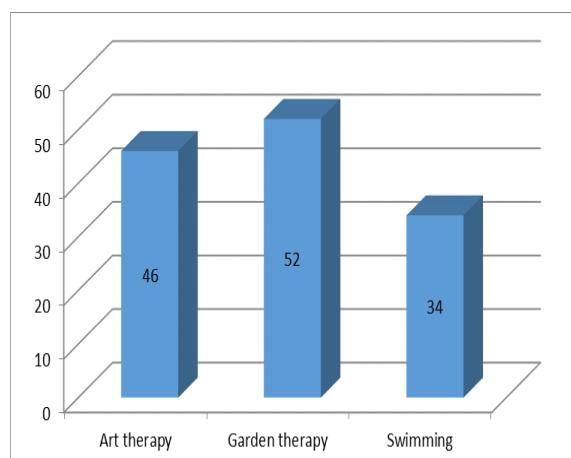


Figure 2. The effect of psychological rehabilitation (%)

The indicators of application of garden therapy 32%, art therapy 38%, and swimming 44% within the framework of psychological rehabilitation (**Figure 3**). As we can see, swimming has shown significant positive effects on health. Garden therapy and art therapy showed positive indicators in this area.

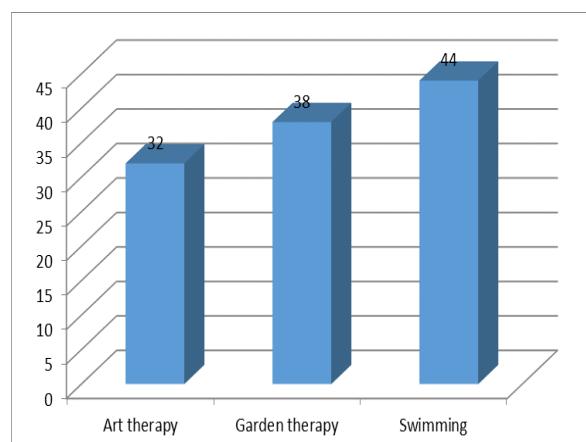


Figure 3. Positive physiotherapeutic effects (%)

In our opinion, the results of the research showed that the cycle of classes we developed was successful and can be used in work aimed at the psychological and social rehabilitation of children affected by the war.

The need for rehabilitation and social adaptation is one of the urgent needs among residents of the front-line territories of Ukraine [23]. This need is confirmed by the parents of children living in a shelter on the territory of the Khortytsia National Academy. These specific facts motivated us to develop a series of rehabilitation sessions aimed at helping children affected by the war. The main aspect of the sessions aimed at social rehabilitation contributed to the development of communication between children who, while living in the same shelter or in other premises within a zone of 1-2 km from each other, could not communicate, and this contributed to their social isolation. Therefore, sessions in art therapy, garden therapy, and sports were aimed at children, expanding their social functionality. Participating in these sessions encouraged children to practice self-discipline, self-control, and the expansion of social connections and social responsibility. These were the qualities they had lost after relocating to Zaporizhzhia, and therefore, the entire developed program contributed to their social rehabilitation. A continuation of social adaptation was the positive psychological changes that occurred in children due to the fact that they were able to overcome their own social isolation and socially adapt to live in new conditions. Garden therapy classes were important for the entire cycle, as they provided an additional socialization effect. Therefore, in our opinion, the role of garden therapy practices in our course was dominant, and, in our opinion, garden therapy practices should become the basis for the social and psychological rehabilitation of children affected by the war. At the same time, it is important to acknowledge the significance of swimming practices, as children who have experienced wartime events often lack physical activity and sports that play a supportive role in enhancing the rehabilitation effect. Therefore, besides swimming, other types of sports can also be incorporated within the framework of the rehabilitation program we have developed.

Practice implication

According to the results of research by Shcherban S [24], families who were evacuated from a zone of direct combat operations need services in the field of social and psychological rehabilitation. Today in Ukraine, the first attempts are being made to form this infrastructure. Therefore, today it is necessary to develop and test the maximum number of new technologies for the social and psychological rehabilitation of children affected by the war in Ukraine. Particular attention should be paid to children located in the front-line Ukrainian territories. We proposed and successfully tested a cycle of rehabilitation sessions based on garden therapy, art therapy, and sports. After conducting experimental research in which 50 children who suffered from the war in Ukraine took part, we came to the conclusion that our cycle of sessions was effective, since it showed a significant increase in both social and psychological rehabilitation fields. A bonus from the introduction of a cycle of sessions was the improvement in the physical well-being of children. In our opinion, this set of rehabilitation activities should be introduced as part of the work of rehabilitation centers engaged in the social and psychological rehabilitation of children affected by the war.

Conclusion

Thousands of children affected by the war in Ukraine need social and psychological rehabilitation. One of the settlements in Ukraine with a high rate of children in need of rehabilitation services is Zaporizhzhia. Therefore, we, being supporters of the rehabilitation concept of "natural therapy" and "garden therapy", came to the conclusion that it is necessary to develop and implement a comprehensive cycle of rehabilitation activities for children affected by war and in need of social and psychological rehabilitation. Our course of rehabilitation sessions consisted of 48 sessions divided into three blocks (art therapy, garden therapy, and swimming). The classes were applied to 50 children aged 8 to 13 years old. The results of the research showed positive dynamics in the framework of social and psychological rehabilitation in an average of more than 40% of children. Therefore, in our opinion, our cycle of rehabilitation sessions could be actively used in the social and psychological rehabilitation of children affected by the war, both in Ukraine and in other countries of the world.

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