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## BOCCE AS AN EFFECTIVE MEANS OF SOCIALIZATION AND MENTAL DEVELOPMENT

### FOR CHILDREN WITH SPECIAL NEEDS

*The article outlines the importance of physical education and sports for children with special needs and describes the personal experience of using bocce as a means of mental development of children and their active socialization, because adaptation to life in real conditions is the main goal of the educational process for this category of pupils.*

*We found that exercises and tasks while studying bocce game that involved the development of psychological stability and emotional endurance, as well as active interaction with each other and the coach, were the most effective for improving the psycho-emotional state of children with inclusion, as well as building skills establishing social relations with other participants of the educational process.*

*The results of the presented research allow us to declare the effectiveness of bocce classes as a means of increasing motor capabilities and improving rehabilitation and integration of children with special needs.*

**Keywords:** *inclusion, people with special needs, bocce, psycho-emotional state, training process, socialization, mental development.*

**Степанюк С., Гараненко К., Коваль В., Городинська І., Грабовський Ю., Руденко В. Бочча як ефективний засіб соціалізації та ментального розвитку дітей з особливими потребами. В статті окреслено значення фізичного**

виховання і спорту для дітей з особливими потребами, зокрема описано власний досвід використання бочкі як засобу ментального розвитку дітей та їх активної соціалізації, адже саме адаптація до життя в реальних умовах є головною метою виховного процесу для даної категорії вихованців. Аналізуючи сучасну літературу доведено, що наразі відсутня достатня теоретична база та дієвий досвід розв'язання означеної проблеми. Існують лише окремі дослідження, що містять аналіз загальних підходів до реабілітації дітей та молоді з особливими потребами. Визначено, що власне фізичному вихованню і спорту належить важлива роль в інтегруванні дітей з особливостями психофізичного розвитку в загальноосвітній простір України, і є одним із напрямів гуманізації всієї системи освіти, що відповідає пріоритетам державної політики.

Виявлено, що на початок експерименту в дітей, що брали участь у дослідженні, спостерігався пониклий настрій та низький морально-емоційний фон. Саме тому було серед інших ігрових видів адаптивної рухової рекреації було обрано саме бочку, адже вона вже знайома вихованцям даної групи, наявною є матеріальна база, також даний вид фізичної активності є доступним для кожного з учасників виховного процесу.

Під час складання представленої програми враховувалася емоційний стан дітей, їх морально-вольові якості, індивідуальні особливості та нюанси взаємодії одне з одним та з тренером. Нами було виявлено, що вправи та завдання, які передбачали розвиток психологічної стійкості та емоційної витривалості, а також вправи на спілкування та ефективну взаємодію одне з одним та тренером, були найбільш ефективними для покращення психо-емоційного стану у дітей з інклюзією, а також формування навички встановлення соціальних відносин з іншими учасниками виховного процесу задля досягнення спільної мети.

Результати представленої дослідження дозволяють заявити про ефективність занять з бочка як засобу підвищення рухових можливостей та покращення психоемоційного стану дітей з інклюзією та є успішним інструментом запровадження соціальної адаптації, оздоровлення та інтеграції дітей з особливими потребами.

**Ключові слова:** інклюзія, люди з особливими потребами, бочка, психоемоційний стан, тренувальний процес, соціалізація, ментальний розвиток.

**Formulation of the problem.** Inclusion is the process of real inclusion in the active life of society of people with difficulties in physical development, including those with disabilities or mental characteristics [2]. Research in this direction consists in finding the most universal means and methods of physical education and sports that affect the effectiveness of the process of socialization of the individual.

We believe that physical education and sports have an important role in the integration of children with special psychophysical development into the general educational space of Ukraine, and is one of the directions of humanizing the entire education system, which corresponds to the priorities of state policy [4, 7].

Playing bocce is an accessible game sport even for children with musculoskeletal disorders and delayed psycho-emotional development.

**The purpose of research** was to investigate the effectiveness of playing bocce as a means of socialization and mental development of children with special needs.

**Analysis of recent research and publications.** The analysis of the literature led to the conclusion that there is a need to update the modern content of adaptive physical education and therefore today it is especially relevant, due to the fact that now almost 80% of children have one or more diseases, and only 15-20% are born completely healthy, and each deviations in physical or mental development are recorded in the third child. Cerebral palsy (CP) ranks first among the causes of disability due to neurological diseases in childhood [3]. This disease causes significant moral and economic damage to society, as it leads to a decrease in adaptation potential, limitation of the opportunity to study and acquire a profession, disruption of social ties, loss of individual's household in dependence. It is obvious that the problem of developing and correcting the physical and mental capabilities of such children is gaining social significance in our time.

The analysis of modern literature proved that there is currently no sufficient theoretical base and effective experience in solving the given problem. There are only separate studies that contain an analysis of general approaches to the rehabilitation of children and youth with special needs (A.A. Kolupaeva, O.M. Taranchenko, etc.) [5].

In the modern literature, examples of physical development problems of practically healthy children are given, while people with special needs were almost not the subject of study, there are also no recommendations regarding this problem.

In Ukraine, the issue of a healthy lifestyle for children with special needs was considered by various scientists. To date, the works of Yu. Furman, N. Mukan, L. Kozibroda, O. Kizenko, and others are known. Researchers emphasize the motor activity of children with disabilities (Furman Yu.), the importance of physical education in the socialization of children with special needs (Mukan N., Kozibroda L.).

V. Vyshemyrskyi, V. Zasenka, I. Ivanova, Shcherbakova carried out basic research on this problem among domestic scientists. In particular, V. Bondar, A. Kolupaeva, T. Yevtukhova, V. Lyashenko, O. Savchenko and others devote their works to researching the problem of involving children with special needs to study in general educational institutions, their rehabilitation and socialization to social norms.

Although the interest in this problem is significant, the problem of the impact of bocce on the socialization and psycho-emotional development of children with inclusion has not been studied.

**Methods of research:** analysis of scientific-methodical and medical literature, Internet network data, functional diagnosis of "SAN", testing, mathematical processing of research results, classification, systematization, generalization of material.

**Presentation of the main material of the study.** According to the research of Y. Filatova in 2014, L. Bilyakova in 2016, every year the number of children with various mental and musculoskeletal disorders is increasing. There are still many unanswered questions in improving the physical and mental development of children with inclusion. Researchers point to the relationship between cognitive development and motor activity, which determines the expediency of using such a system of training and education, which

provides an integrated health effect. Therefore, it will be positive to develop various programs of physical education not only for strengthening health, but also for full mental development.

Bocce is a precision sports game that belongs to the family of ball games, close to bowling, pétanque, and bowls, which have common origins in ancient games common on the territory of the Roman Empire. Created in its current form in Italy (which translates as "4 balls"), the game is spread throughout Europe and other continents, where it was brought by Italian migrants [1].

Bocce is a sport for people with disabilities who move in wheelchairs. This game is non-traumatic, available to everyone as an example of a healthy lifestyle and leisure activities. Bocce is an actively developing sport for players with severe forms of damage to the central nervous system and spine injuries, affects the physical development and condition of the players' bodies, affects their mood and self-awareness [8].

During the research, we developed a Bocce training program for children with inclusion, which was designed for six months and included theory, general physical training, special training, technical and tactical training, and competitions. During the classes, the main safety aspects of the game itself, the equipment, the premises, and the technical serviceability of the children's carts were checked. During the preparation of the program, the emotional state of children, their moral and willpower qualities in the competitive and training process were taken into account. Most of all, attention was paid to psychological stability and endurance, which are the main components in achieving a positive result, namely, increasing physical abilities and improving the psycho-emotional state of children with inclusion.

Bocce lessons were held regularly for six months from January to September, 3 times a week for two hours. To begin with, the children remembered the rules of the game, then lined up, warmed up, did physical training and began the training process, namely special and technical-tactical exercises. At the end of the lesson, a game was played: individual, pair or team.

We conducted a study to evaluate the effectiveness of using bocce game to improve the psycho-emotional state of children with inclusion. The study took place in the city of Oleshki, KZHOR Oleshkiv children's boarding house with inclusive children from 12 to 18 years old, in the period from January to September 2022.

A group of 10 people participated in the study. To assess the condition of the children, the diagnosis-survey "San" was conducted.

In order to monitor the dynamics of the emotional state of children with inclusion, testing was conducted in two stages (January, September).

During the diagnosis of the psycho-emotional state of children with inclusion, the "SAN" questionnaire was used, which means well-being, activity, mood. A group of children was given a questionnaire with 30 questions, which they had to answer, as they feel at the present time. It is necessary to note the numbers from 3 to 1 and from 1 to 3 in the positive or negative direction. Scores of more than 4 points indicate a positive state of the subject, scores of less than four points indicate the opposite. The normal state corresponds to 5.0-5.5 points (the maximum indicator is seven). When analyzing the functional state, both the values of its individual indicators and their ratio are important. In a rested person, assessments of activity, mood and well-being are usually approximately equal. As fatigue increases, the ratio between them changes due to a relative decrease in well-being and activity compared to mood. After the survey, the children's scores were calculated and presented in the figure.

As a result of conducting game types of adaptive motor recreation, it is possible to draw a conclusion about the effectiveness of using bocce game to improve the psycho-emotional state of children with inclusion. During regular physical exercises, the mood and general well-being of the children in the group improved significantly.

**Results of the research.** The task of playing bocce is to more actively involve patients in rehabilitation activities using the means of physical culture and sports, which will provide an opportunity to prevent muscle atrophy, contracture and spastic phenomena, to promote the development of compensatory motor skills and skills, to form a positive didactic-rehabilitation motivation for systematic physical exercises.

Since 1984, bocce has been included in the program of the Paralympic Games. The game is played according to BISFed (Bocce International Sports Federation) rules. It was developed for the rehabilitation of people with cerebral palsy, later it was played by players with other serious diseases, such as myopathy, cervical spine injuries, multiple sclerosis, etc.

At the same time, the athlete's special physical training is aimed at developing physical qualities and abilities specific to bocce. Its tasks are directly related to teaching the technique and tactics of the game. The main means of special physical training are special (preparatory) exercises and games. Some exercises develop the qualities necessary for mastering the technique, namely strengthening the hands and increasing their mobility, uniform muscle contraction, development of the muscles of the arms and legs, others are aimed at the formation of tactical skills: development of reaction speed and orientation, speed of movement in boxing, reaction to the referee's gestures.

Rehabilitation using the game of bocce corresponds to the principles of mobilizing gymnastics, which is aimed at improving existing and forming new motor functions, achieving more perfect forms of movement and mastering important skills. This applies equally to patients with a non-cerebral origin of the disease, who experience insufficient muscle strength, fatigue and the inability to keep the back in a vertical position after the end of the throw.

Since the game of bocce is the ability to control movements, hit the target with the ball, concentrate, calculate your move, manage your breathing and emotions, all classes must be conducted in silence so that unnecessary stimuli do not arise.

So, from the conducted research, it can be concluded that active rehabilitation is a complex of activities with the use of physical culture and sports exercises, which are aimed at self-care, maximum independence in everyday life and everyday life, integration and public activity of a person with lesions of the musculoskeletal system or sensory body functions as a result of trauma, injury and disease. The main components of the process of active rehabilitation of patients are physical, psychological and social rehabilitation. Bocce is an effective method of rehabilitation of disabled people with impaired locomotor functions, and can be recommended as a method of rehabilitation of patients with cerebral palsy in rehabilitation and sports institutions. Our studies have confirmed that thanks to this game, it is possible to ensure positive dynamics of the development of the physical and mental state of patients.

**Conclusions/ discussion.** So that, physical culture and physical education have great opportunities in the process of improving the psycho-emotional state of children with inclusion. A large number of physical exercises and the variability of their performance make it possible to improve the psycho-emotional state of children with inclusion. The indicators of "SAN" improved significantly. So, well-being at the beginning of the experiment was 4.1 points, at the end 6.1 points. Activity changed from 2.3 points to 6.2 points. Mood improved from 3.5 points to 6.3 points. All this forms the basis for the effective organization of physical education during the inclusive education of children with special educational needs.

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#### ОЦІНКА ВЛАСТИВОСТЕЙ НЕРВОВОЇ СИСТЕМИ У ЮНИХ СПОРТСМЕНІВ-ЄДИНОБОРЦІВ

Стаття присвячена проблемі оцінки властивості нервової системи юних спортсменів-єдиноборців. Мета – дослідити властивості нервової системи юних спортсменів-єдиноборців для підвищення ефективності тренувального процесу та зростання рівня їх спортивної майстерності (на прикладі боксу). Дослідження проводились на базі КПНЗ «Комплексна дитячо-юнацька спортивна школа з боксу та єдиноборств» ДМР протягом вересня-листопада 2022 року. У дослідженнях брали участь 37 юних спортсменів, які займались у групах початкової підготовки з боксу. Методи дослідження: аналіз літературних джерел, методика експрес діагностики властивостей нервової системи за психомоторними показниками (теппінг-тест) Є.П. Ільїна та методи математичної статистики. Встановлено, що рівний тип нервової системи мали 8,1% юних спортсменів, спадаючий – 32,4%, проміжний – 18,9%, увігнутий – 40,6%. Представників з випуклим (сильним) типом виявлено не було. Понад 83,8% юних боксерів мали слабку нервову систему 16,2% – сильну. Дуже високу виразність слабкості нервової системи мали 59,5%, високу виразність сили нервової системи – 2,7%, високу виразність слабкості нервової системи – 5,4%, середню виразність сили нервової системи – 5,4%, середню виразність слабкості нервової системи – 13,5%, невелику виразність сили нервової системи – 5,4% та середню нервову систему мали 8,1%.