

ADAPTED METHODOLOGY FOR BASIC TRAINING IN WATER SPORTS FOR CHILDREN WITH INTELLECTUAL DISABILITIES

Maya Nikolova, Vesela Treneva and Boyanka Peneva

National Sports Academy „Vasil Levski“, Sofia, Bulgaria

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Abstract

Recent trends require adapted physical activity and sport as a therapeutic, prophylactic, sports and animation tool. Water sports are included and versatile healing effect on the human body, which determines the relevance of their use in children with intellectual disabilities. Swimming and kayaking are used as an adapted physical activity for these children. The aim of this research work is to study the utilization of the learning contents of the attached adapted methodology in water sports for children with intellectual disabilities. An integrated methodology was implemented during the summer school water sports for 20 children with intellectual disabilities (autism, Down syndrome) based on the National Sports Academy „Vasil Levski“ in Nessebar for three consecutive years– 2009, 2010 and 2011. During the three year period were realized 180 training sessions (60 sessions each year). Learning algorithm for training in swimming and kayaking was prepared according to the psychological status and potential contingent of children with disabilities. Within the 12-day period of the Summer School on Water sports was held 12 sessions in swimming and 12 sessions in kayaking lasting 45 minutes. Studied group of children with intellectual disabilities have successfully mastered the learning materials included in adapted methodology for water sports. Training sessions in swimming and kayaking allow for psychological adaptation to the aquatic environment and learning basic skills in both water sports. The enclosed complex methodology ensures successful attaining of kayak and swimming technique, improvement of emotional status and achievement of social integration of children with intellectual disabilities.

Key words: swimming, kayaking, adapted equipment

Introduction

Intellectual disability is characterized both by the results below average IQ test, and with limited functions in everyday life such as communication, self-care, behavior in different social situations and school activities. Children with intellectual disabilities can master and perform new skills, but they develop more slowly than their peers with average intelligence and adaptive skills. In the course of initial training in swimming and kayaking for children with intellectual disabilities should be given to emerging problems that are associated with: recognized activities and therefore difficulties in mastering the art of swimming and paddling in kayak, possibilities of perception and they communication functioning of the vestibular apparatus, rhythm disturbances, growth and motor coordination. Recent trends require adapted physical activity and sport as a therapeutic, prophylactic, sports and animation tool. Water sports are excluded and versatile healing effect on the human body, which determines the relevance of their use in children with intellectual disabilities. Swimming and kayaking are used as an adapted physical activity for these children. At present it is still very limited number of literature and research related to the use of paddling in kayak as a means to improve physical development, psychological and social integration. (Nikolova, 2009; Treneva, 2010; Alexandrova, 2012; Bjerkefors et al., 2006). Hypothesis: The use of the positive effects of the complex methodology for swimming and kayaking will enhance physical and emotional status of children with disabilities.

The aim of this research work is to study the utilization of the learning contents of the attached adapted methodology in water sports for children with intellectual disabilities.

Research methods

In this study we used the following methods: • Analysis of the literature; • teacher observation; • expert valuation. An integrated methodology was implemented during the summer school water sports for 20 children with intellectual disabilities (autism, Down syndrome) based on the National Sports Academy „Vasil Levski“ in Nessebar for three consecutive years – 2009, 2010 and 2011. Prior participation in a course in water sports activities were planned swimming. Planned swimming sessions are held year-round swimming pool of the National Sports Academy „Vasil Levski“ twice a week. Depending on the individual abilities and levels of preparedness were formed two study groups: • Adaptation to the aquatic environment; • Education and training in swimming. The training in the first group (14 children) was aimed at preparation for learning of primary swimming skills. In the learning content was studied preparatory exercises for overcoming fear and getting used to the water. Training in the second group (6 children and young people) was aimed at reinforcing the technique of swimming. Learning content included exercises for elementary and deep study of applied swimming technique and swimming styles: freestyle, backstroke and breaststroke.

During the three year period were realized 180 training sessions (60 sessions each year). Swimming classes are conducted by Prof. Maya Nikolova and masters in Adapted physical activities (APA). Learning algorithm for training in swimming and kayaking was prepared according to the psychological status and potential contingent of children with disabilities. Within the 12-day period of the Summer School on Water sports was held 12 sessions in swimming and 12 sessions in kayaking lasting 45 minutes. Swimming activity was held in the morning hours of the day. Paddling a kayak was modified and adapted according to the type of damage that required relevant changes relating to: the timing of practicing kayaking – in the late afternoon hours, proper equipment adapted rowing equipment, lifejackets, simplifying the technique and methods of training in rowing technique. To master the kayak technique used the below methodical sequence of exercises: 1) *First stage*: Training in the paddle grip, stance and basic starting position for stroke. a) Preparatory exercises performed by kayak paddle designed to address the posture and the grip, b) Simulation rowing on land with use of auxiliary-engine method with APA Masters, c) Preparatory exercises for studying entry into and exit from the boat and the starting position for the stroke (on land and water). 2) *Second stage*: Learning the technique of the rowing cycle: a) Preparatory exercises for the development of vestibular stability, b) Simulation exercises aimed at mastering the art of the rowing cycle kayak with paddle and balancing, c) Entry and exit in double kayaks (using the Master of APA, which is on the second place in the boat), d) Entry and exit in single kayak (which follow from the Master of APA); 3) *Third stage*: Consolidate the technique of the rowing cycle (on water): a) Rowing in kayak double, b) Special exercises for reinforcement of technique: - phases of the rowing cycle; -the rowing cycle as a whole, c) Rowing on longer distances. To analyze the degree of rowing technique will consider the elements of the kayak technique on a six-point scoring system: a) Poor – 2 – The main element is not observed; b) Average – 3 - The main element is observed in the majority of the time, c) Good – 4 - The main element is observed, but still requires some attention, d) Very good – 5 - The main element is constantly monitored, e) Excellent – 6 - The main element is a constant and high quality. For the purpose of analysis will consider the following elements: • properly grip the paddle; • posture in the boat; • entering of the blade in the water; • pull to the perpendicular plane to the imaginary line of the keel of the boat; • pull after the plane perpendicular to the imaginary line of the keel of the boat; • exit of the blade out of the water; • coordination as a whole; • entry and exit from the boat; • maintaining a balance

Results

After analyzing the mastery of each element individually and overall coordination of all respondents, we can conclude that the average

score for mastering the art is „good“. This assessment relates to the implementation of rowing technique kayak double with master student. Five of the respondents held training in single kayaks, but it happened after the initial sessions of the kayak double. These five persons were lowest degree of disability. They were also evaluated in the opinion of experts kayaking to conduct training and earned an „excellent“. Control of the training is done by evaluating the acquisition of rowing technique. The diagrams are expert estimates of the technique in three consecutive years of application of complex methodology.

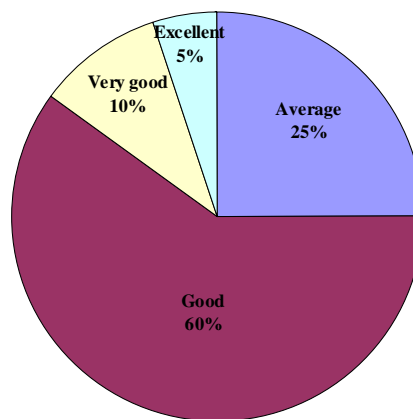


Figure 1 Results of the expert valuation of kayak technique in 2009



Figure 2 Results of the expert valuation of kayak technique in 2010

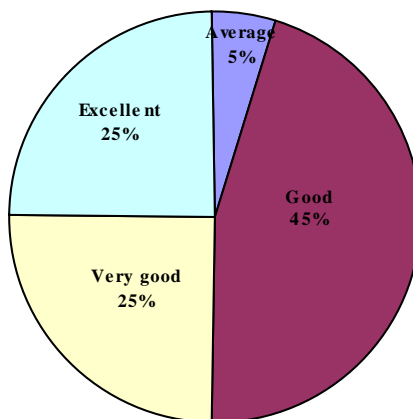


Figure 3. Results of the expert valuation of kayak technique at the end of training

Discussion

On the last day of the course was held improvised relay race. Couples „child with a disability – master” were divided into two equal teams. Each team consisted of ten crews. Couples who started together were selected so as to have equal competition and be more emotionally. The purpose of the relay race was all to participate and have fun, not to determine a winner. At a special ceremony all participants received medals. Tasks, which focused on physical appearance, were performed successfully. Each participant was able to present his own person and to feel like a member of the sports team and presenting it in the best way. Tasks related to social behavior of children with disabilities were also performed. In summary, the analysis we can say that we achieved substantial educational integration of children with disabilities through activities adapted for swimming and kayaking.

Conclusions

1. Studied group of children with intellectual disabilities have successfully mastered the learning materials included in adapted methodology for water sports.
2. Training sessions in swimming and kayaking allow for psychological adaptation to the aquatic environment and learning basic skills in both water sports.
3. The enclosed complex methodology ensures successful attaining of kayak and swimming technique, improvement of emotional status and achievement of social integration of children with intellectual disabilities.

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PRILAGOĐENA METODOLOGIJA ZA TEMELJNI TRENING U VODENIM SPORTOVIMA DJECE S INTELKTUALNIM POTEŠKOĆAMA

Sažetak

Najnoviji trendovi zahtijevaju ulogu adaptirane tjelesne aktivnosti i sporta kao terapetsko, profilaktičko, sportsko i animirajuće sredstvo. Vodeni sportovi su uključeni i imaju svestran ljekoviti učinak na ljudsko tijelo, koje određuje važnost njihovog korištenja kod djece s intelektualnim teškoćama. Plivanje i kajak se koriste kao prilagođena tjelesna aktivnost za djecu. Cilj ovog istraživanja je proučiti iskorištavanje učenja sadržaja uz priloženu prilagođenu metodologiju u sportovima na vodi za djecu s intelektualnim poteškoćama. Integrirana metodologija je provedena tijekom sportske ljetnje škole na vodi za 20 djece s intelektualnim poteškoćama u razvoju (autizam, Downov sindrom) u skladu s planom National Sports Academy "Vasil Levski" u Nessebar za tri uzastopne godine 2009, 2010 i 2011. Tijekom razdoblja od tri godine ostvareno je 180 treninga (60 sesija svake godine). Algoritam učenja obuku u plivanju i kajaku je pripremljen u skladu s psihološkim stanjem i potencijalnog kontingenta djece s teškoćama u razvoju. U roku od 12 dana od Ljetne škole u sportovima na moru je održano 12 sesija u plivanju i 12 u kajaku trajanja po 45 minuta. Praćena je skupina djece s intelektualnim teškoćama koja je uspješno savladala didaktički materijal uključen u prilagođenu metodologiju za sportove na vodi. Pripreme na plivanje i kajak omogućuju psihološke prilagodbe na vodi i učenje osnovnih vještina u oba sporta na vodi. Priložen kompleks metodologije osigurava uspješno savladavanje kajak i plivačkih tehnika, poboljšanje emocionalnog stanja i ostvarivanje socijalne integracije djece s intelektualnim teškoćama.

Ključne riječi: plivanje, kajak, prilagođena oprema

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Correspondence to:

Prof. Maya Nikolova, PhD

National Sports Academy „Vasil Levski“

1700 Sofia, Studentski grad, Bulgaria

Phone: +3592 898 77 66 87

E-mail: maya_neycheva@yahoo.fr