

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

(Preliminary communication)

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Abstract

Recent trends require adapted physical activity and sport as a therapeutic, prophylactic, sports and animation tool. Water sports have exclusively and versatile healing effect on the human body, which determines the relevance of their use within 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 on water sports programme for 20 children with intellectual disabilities (autism, Down syndrome) based on the National Sports Academy „Vasil Levski” in Nessebar for a three consecutive years – 2009, 2010 and 2011. During the three year period there were 180 training sessions (60 sessions each year). Special 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 enables 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.

Keywords: *swimming, kayaking, adapted rowing equipment, physical activity, psychological status, social integration, pedagogical observation, expert evaluation, preparatory exercises, simulation exercises, children with intellectual disabilities*

INTRODUCTION

Intellectual disability is characterized both by the results below average on the IQ tests, 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 their development is more slowly than of their peers with average intelligence and adaptive skills.

In the course of initial training in swimming and kayaking for children with intellectual disabilities an attention should be given toward emerging problems that are associated with: re-cognized

activities and therefore difficulties in mastering the art of swimming and paddling in kayak, possibilities of perception and their communication functioning of the vestibular apparatus, rhythm disturbances, growth and motor coordination.

Recent trends require adapted physical activity and sport as a therapeutic, prophylactic, sport and animation tool. Water sports are excluded from those adapted physical activity and of their 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 the present time it is still very

limited number of literature and research related to the use of paddling in kayak as a means toward improving the physical development, as well as the psychological and social integration.

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.

METHODS

In this study we used the following methods:

- Analysis of the literature;
- teacher observation;
- expert evaluation.

An integrated methodology was implemented during the Summer school of 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 some activities were planned with those children as the swimming. Planned swimming sessions were held year-round within the swimming pool of the National Sports Academy „Vasil Levski”, twice a week. Depending on the individual abilities and levels of preparedness there were formed two study groups:

- Group: adaptation to the aquatic environment;
- Group Two: education and training in swimming.

The training in the first group (14 children) was aimed toward 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 which have 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 as adapted rowing equipment, lifejackets, simplifying the technique and methods of training in rowing technique.

To master the kayak technique we used the below methodical sequence of exercises:

First stage: Training in the paddle grip, stance and basic starting position for stroke.

1. Preparatory exercises performed by kayak paddle designed to address the posture and the grip.

2. Simulation rowing on land with use of auxiliary-engine method with APA Masters.

3. Preparatory exercises for studying entry into and exit from the boat and the starting position for the stroke (on land and water).

Second stage: Learning the technique of the rowing cycle.

1. Preparatory exercises for the development of vestibular stability.

2. Simulation exercises aimed at mastering the art of the rowing cycle kayak with paddle and balancing.

3. Entry and exit in double kayaks (using the Master of APA, which is on the second place in the boat).

4. Entry and exit in single kayak (which follow from the Master of APA).

Third stage: Consolidate the technique of the rowing cycle (on water).

1. Rowing in kayak double.

2. Special exercises for reinforcement of technique:

- a) phases of the rowing cycle;
- b) the rowing cycle as a whole.
3. 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:

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

Poor	- 2 -	The main element is not observed.
Average	- 3 -	The main element is observed in the majority of the time.
Good	- 4 -	The main element is observed, but still requires some attention.
Very Good	- 5 -	The main element is constantly monitored.
Excellent	- 6 -	The main element is a constant and high quality.

for mastering the art is „good”. This assessment relates to the implementation of rowing technique kayak double with the 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 by lowest degree of disability. They were also evaluated in the opinion of experts kayaking to conduct the training and earned an „excellent”.

Control of the training is realized by evaluating

the acquisition of rowing technique. The diagrams are expert estimates of the technique in three consecutive years of application of complex methodology.

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

Table 1. Expert estimates

Years	Percent			
	Excelent	Very good	Good	Average
2009	5	10	60	25
2010	10	30	50	10
2011	25	25	45	5

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 a 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 enables possibilities 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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