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The specificity of selected water sports and the importance of motor skills

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Abstract

Motor abilities are human movement abilities. They characterize the level of motor skills. Athletes present a particularly high level of these abilities. It results from individual predispositions of the body as well as proper training. Each sport discipline has its own specificity and requires the athlete to develop particular skills specifically.

Key words: water sports; motor skills

Motor skills

For athletes, the appropriate level of developing motor skills determines the achievement of sports success. Looking at every athlete in general, regardless of what sport discipline he trains, he must show high physical fitness. However, the type of sport discipline and its specificity force the athlete to develop specific motor skills that are of particular importance in a given sport competition.

Motor abilities describe the movement possibilities of a given individual who, without using a movement technique, can at any time demonstrate such a level of strength, speed, endurance and agility as he can afford. Motor features do not develop at the same time and at the same level, each of them has a slightly different rate of development. The development of motor skills is affected by: sex, age, body structure, specific stimuli, environment [1,2]. Raczek believes that motor skills reflect the specific dynamics of ontogenetic and environmental changes in the scope of the possibility of performing motor activities [3]. According to the concepts of Szopa, Mleczko and Żak, motor skills are biological and motor predispositions that have been shaped by genetic and environmental factors [4]. Together with the motor skills, they determine the body's readiness to effectively perform various types of movement tasks. Raczek divides motor skills into two groups:

1. human conditioning abilities,

2. human co-ordination skills [3].

Kayaking

Canoeing is one of the most popular disciplines in Poland, thanks to the uncomplicated technique, the possibility of practicing this sport in different conditions, general accessibility and a wide range of sport competition. Discipline belongs to the so-called technical sports, which means that it is not enough for human strength to practice it, but also certain technical measures, ie a boat and a paddle. In addition to the competitive advantages, canoeing allows for harmonious physical development and recreation.

In modern canoeing disciplines can be distinguished:

- classic kayaking (the oldest among Olympic kayaking disciplines),

- mountain kayaking,

- polo kayaking,

- freestyle kayaking,

- recreational kayaking,

- canoeing.

In classic kayaking, competitors swim in kayak and canoes. In a kayak, the competitor uses a two-armed oar and rows in a sitting position, while in a canoe a monopole paddle is used and rowing in a kneeling position.

Kayaking is classified as strength and endurance sports, so the competitor must develop all motor skills, both fitness and coordination. In kayaking distances are also distinguished: long (1000m) and short (500m and 300m), depending on the distance the importance of motor skills changes. Endurance plays a major role over long distances, while strength and speed are equally important over short distances [5, 6].

In kayaking, training is focused on developing the highest possible speed regardless of the distance, therefore the competitor must significantly increase his strength, i.e. the ability to overcome external resistance or counteract it at the expense of muscular effort. The rowing technique in both kayak and canoe requires a significant development of this motoric feature. Strength depends on the size of the physiological cross-section of the muscles, the ability to synchronous muscle fiber activity and the strength and frequency of nerve impulses responsible for stimulating the muscles to contraction. The key element in the training of canoeing riders is the development of a general force and it is only on its basis that a special force develops. However, other motor skills should also be developed to achieve appropriate sports results.

Stamina also plays an important role. It is the ability of the human body to perform long-term physical effort with a certain intensity, while maintaining the highest possible efficiency of work and maintaining an increased resistance to fatigue. Thanks to high stamina, the

competitor is able to rowing for a longer period of time with constant, high intensity, without reducing the effectiveness of his actions. This feature is the effect of increasing efficiency and is classified as non-specific, which means that training it in a specific sport will improve endurance in a different type of physical exercise. This is possible due to the involvement of the cardiovascular and respiratory systems during endurance efforts. The most important for maintaining high efficiency is a properly functioning ATP reconstruction system. During rowing, the athlete performs cyclic, repeatedly repeated symmetrical movements (classic kayak) or asymmetrical (canoe). During a race of 200 meters the competitor must perform 40-90 rowing cycles, while at a distance of 1000 meters the competitor performs 240-500 cycles. Therefore, stamina in canoeing is the ability to maintain power during rowing and is dependent on the capacity of the organism and the level of coordination abilities [6, 7, 8].

Another important feature in canoeing is speed, which is defined as the ability to perform a large number of movement activities in the shortest time possible under given conditions. The speed allows a high frequency of rowing and quick changes in the manifestation of force and its reduction, so it is possible to relax the muscles before the next sweep. In order to develop his speed, a competitor must rowing with the intensity close to the maximum, it means that every move must be made at high speed, but at the same time it is necessary to maintain the correct rowing technique.

Movement coordination is also an extremely important motor ability in kayaking. It plays a big role due to increasing fatigue and the need to maintain balance in an unstable boat and a changing water environment. Kowalski J. and Koch R. stress that the need to master the boat, move and control the paddle affects the development of motor coordination, sense of balance and agility [9, 10]. Coordinating skills enable comprehensive building of motor acts and manifest themselves in the ability to perform complex motion tasks with accuracy and speed despite changing conditions [7, 8].

Rowing

Rowing in Poland, however, is not one of the very popular sports disciplines and is grown by a limited number of people. It is slightly more popular in cities with sports clubs [11, 12].

Rowing, like kayaking, belongs to technical sports, that is, appropriate technical means, ie a boat and oars are necessary. The rowing boat sits back to the direction of movement in a specially adapted boat. The paddles are placed in specially adapted places at the ends of the

outrigger attached to the sides of the boat. The boat has a special mobile trolley, on which the player sits, while his feet are based on a fixed footrest. The seat moves on rails attached to the bottom of the boat. This specific construction of the boat causes that during the rowing, apart from the shoulder muscles, legs and torso muscles also work, which makes rowing the most efficient and fastest way to navigate the water among individuals powered by the strength of human muscles [13].

Rowing is divided because of the type of oars:

- long oars (single) - when using this kind of oars, each rower has one oar; then a single boat must have at least two competitors.
- short oars (double) - when using this kind of oars, each rower has two oars; thanks to which it is possible to paddle individually [14].

In addition to rowing riders, the rowing compound can also include a helmsman. He is sitting in front of the direction of the boat's movement, his place can be in the fore or aft part. The helmsman is tasked with keeping the boat in the fairway, informing the rowers about the situation during the run, as well as encouraging and motivating to fight [13].

Rowing is a strength and endurance sport, which requires the athlete to develop all motor skills, ie fitness and coordination skills.

This discipline requires considerable muscular strength to set the boat in motion and give it the right speed.

High durability is also necessary, which allows the desired speed to be maintained along the entire length of the track [15]. During the race, depending on rowing competition and atmospheric conditions, the competitor performs over 200 cyclic movements in 5-8 minutes, which gives the rate of about 36-42 movements per minute [16]. In turn, other studies indicate that depending on the type of boat and conditions on the track, the athlete performs 220-250 strokes with paddles in 5.5-7.5 minutes.

Another important motor feature is well-developed balance and coordination. As in kayaking, a competitor must be able to maintain balance in an unstable boat and be prepared for various conditions that may occur during the competition. In addition, the rowing technique is described as a set of cyclical, deliberate movements that give the possibility of obtaining the maximum average speed of a boat [15]. The style of rowing used by rowing men is called natural and consists in the coordinated work of the torso muscles and upper and lower limbs.

The requirements of the correct rowing technique require the player to significantly develop his coordination.

The rowing technique is considered to be the main factor in achieving the world level in rowing. Technical teaching of rowing begins at the first training and is carried out until the rowing perfection is achieved, which is expressed by optimizing movements and the ability to use maximum strength regardless of weather conditions and boat type [17]. However, despite the great importance attached to the rowing technique, it has not yet been possible to create one universal and optimal rowing technique [15].

The specificity of the rowing effort requires careful and thoughtful training planning, as it is necessary to improve many motor skills in parallel. Therefore, the appropriately planned annual cycle (macrocycle) training is of key importance. During its planning, individual possibilities and needs of all members of a rowing village should be taken into account. In addition, the training cycle should be modified on a current basis, taking into account the results of fitness tests and the athlete's medical examinations [17].

Kitesurfing

Kitesurfing is a relatively young water sport that combines surfing, windsurfing and wakeboarding. Kitesurfing varieties are several: kiterace, foilkiteboarding, wake, freestyle and new ones are constantly being created [18]. Kitesurfing appeared in the late twentieth century. It is a form that requires a lot of courage, efficiency and experience [19]. Standing on a special board, the force of the wind is used to propel the kite to which the athlete is attached. The kitesurf kite has an area from 4 to 16 m² and is fixed on ropes with a length of 17 to 30 m. Special boards with sizes from 125 to 150 cm are used. There are three basic types of kitesurfing boards, where each of them has a different purpose. Typically, the athlete chooses the type of board given the prevailing conditions and his own experience. The first type of board is called directional. This means that the maneuvers on this board are limited to one direction, because the player is in constant contact with the board by means of upsets, so-called straps. Each change of direction is made by changing the position of the board, which limits quick maneuvers. However, this board provides more displacement, which ensures greater safety in an emergency. The second type of board is called "Twin-up", beak and stern in this type of boards looks identical. It is shorter than the first board and has one or more fins on both sides, making it possible to change the direction of movement without changing the

position of the board. The third type is "wakeboard", it is the smallest board used in kitesurfing [20]. Flares boards adapted to develop very high speeds are getting more and more popular. Kitesurfer is clipped to the kite using a hook on the so-called trapeze (harness around the hips or waist), thanks to which a person floating on the kite does not have to use the power of hands almost at all [18]. An athlete using wind power can swim at speeds up to 35 knots, or almost 65km / h. Kitesurfers also jump, reaching a height of even 15 m and a length of 30 m. During the jump, various types of tricks are performed in the air [21]. He performs these maneuvers by changing his position relative to the kite or by changing the position of the kite in relation to the wind direction [20]. The athlete has to deal with the changing equilibrium conditions caused by the aquatic environment and wind power, which is why the better the balance control, the more effective the maneuvers can be performed and the better the sports results [18].

Summary

Each sport discipline has its own specificity and requires the athlete's specific predispositions and abilities. However, water sports have a common denominator in the form of equivalent capabilities. Unstable ground, the necessity to master water equipment and changing weather conditions force the athletes practicing water sports to work out a balance and coordination.

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