

OPINIONS ON THE IMPORTANCE OF USING SWIMMING AS A COMPLEMENTARY SPORT IN HANDBALL

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Abstract: Nowadays we are seeing a heady increase in sports performance due to knowledge from different fields of science that have penetrated the science of training athletes; thus, the entire instructive-educational process is conducted at a higher and higher level, considering the biological substrate of the organism, the possibilities of adaptation, the biomechanics of movement and restoration. Handball practiced at competitive level involves high physiological and neuromuscular demands, respectively with high aerobic and anaerobic needs. However, the activity profile of the handball player differs depending on the position of the game and the level of competition. The athletes having to face new and always increased demands imposed by the evolution of sports technique and tactics in high performance handball. Lately, it has been found that the extremely elevated level of sports performance requires increasing efforts. Also, swimming, practiced as a "leisure", aims to support, and improve the state of health or to compensate for demanding activities on the whole organism or on certain segments.

This study involved the application of a questionnaire survey on current teachers, coaches, performance athletes, but also on former performance athletes of even international status, summing up 87 respondents, with an average age of 34 years, 55% of them are female. The main object pursued by this investigation is to show the opinions of specialists on the importance and significance of swimming as a complementary sport. As a conclusion, it is pointed out that most respondents (95.4%) consider it necessary to practice swimming as a complementary sport, to a large and very large extent, for handball players.

Keywords: handball, swimming, performance sports, complementary sport

Introduction

Handball is a dynamic game and requires from the athletes an intense physical effort but also a great mental commitment (Ghețu et al., 2017). It can be said that nowadays we are witnessing an impetuous increase in sports performance due to knowledge from different fields of science that have penetrated the science of training athletes. It is in a continuous change and evolution, both in the game and in the training, there are many elements of progress, of improvement, some being novelties and others updates and adaptations to the higher parameters. Thus, the entire instructive-educational process is conducted at a higher and higher level, considering the biological substrate of the organism, the possibilities of adaptation, the biomechanics of movement and a faster recovery after effort. Handball practiced at competitive level involves high physiological and neuromuscular demands, respectively with high aerobic and anaerobic

needs. However, the activity profile of the handball player differs depending on the position of the game and the level of competition. One of the most pleasant and recommended by all specialists is aquatic activity that can be found in several forms: swimming, water gymnastics, hydrokinetic therapy, etc. Swimming, "complete sport, sport of all ages", has positive effects both health and mentally (Dumitru, 1997). For an efficient approach in the general physical training of the juniors in handball, having as primary objective the education of the functional, general resistance by requesting the three basal, aerobic, lactic and alactacid energy systems, among other means of training, swimming is recommended as a complementary sport. (Mihăilă, 2006) Sustaining and restoring after effort brings together a series of natural or artificial means coming from the internal or external environment, which, applied rationally, have the purpose of restoring the state of balance of the internal

environment and of the functional parameters at the level of the state prior to the effort (training or competition) and even exceeding them, by reaching a higher level, within the phenomenon of "overcompensation", which represents the moment of optimization of the recovery, when it indirectly becomes a phase of biological preparation for the competition (Ionescu & Anton, 2004).

Also, swimming, practiced as a "leisure", aims to maintain, and improve the state of health or to compensate for demanding activities on the whole organism or on certain segments. Swimming offers a wide range of exercises that can be performed from simple to complex or from easy to hard can be adapted to any person, depending on the possibilities of the subject, for an appropriate demand.

Several authors argue that, in general, activity in the aquatic environment after exertion can double the rate of lactate removal, thus reducing by half the time it takes for blood lactate to return to levels close to its original value compared to a passive recovery of rest after an effort (Denadai et al., 2000; Dodd et al., 1984; McMaster et al., 1989; Bonen et al., 1979). It is considered that the faster removal of lactate with active recovery after exertion is caused by greater oxidation of lactate as an energy source by the working muscle (Stanley et al., 1986). This activity maintains a greater flow of blood into the skeletal muscles (Gollnick et al., 1986), which can help transport lactate from previously worked muscles and distribute to less strained muscles during training and to tissues in the body, where it can be used for fuel or converted into glucose and restored back into muscle (Gaesser et al., 1984).

Neric FB., and col., (2009) following a study showed that 20 minutes of swimming at a speed of 65% of the best time achieved over 200 meters would be the best option, since it reduces blood lactate the most.

Menzies P., and Col., (2010) also investigated the influence of the intensity of active recovery on the release of lactic acid from the blood; thus, the operating intensities during active recovery were compared with passive recovery, and it emerged

that lactic acid was lower after higher intensities (60-100% of the lactate threshold) than the lower intensities (0-40% of the lactate threshold). The maximum release of lactic acid occurred during active recovery at intensities close to the lactate threshold.

Materials and methods

The research was conducted on a number of 87 respondents, aged over 18 and an average of 34 years, most of them being members of the CSM Bucharest, Rapid Bucharest and Steaua Bucharest teams. 55% of them are female, most of them are current or former performance athletes (67%) while 33% are current technicians, another basic condition is to have played at least in the national championship.

The research data were collected through a structured questionnaire-based survey, with most of the predetermined answers, comprising both closed and open-ended questions. The questionnaire was conducted in google form, being applied online, by mail or WhatsApp.

The purpose of the investigation is to investigate the opinion of specialists on the importance and significance of complementary training for handball athletes.

Microsoft Excell and IBM SPSS Statistics 23 software were used for data analysis.

The main objective pursued by this investigation is to identify the opinions of specialists on the importance and significance of swimming as a complementary sport.

The certainty of validating answers provided by respondents is given by the level of sports performance reached by them at the time of the survey. It highlights that 49% have benefited from some of the best preparations both nationally and internationally.

Results

Here are the survey results statistics at the level of the sample of respondents.

In this respect, it is highlighted that 95.4% of respondents consider it necessary to promote swimming as a complementary sport, to a large extent, for handball players.

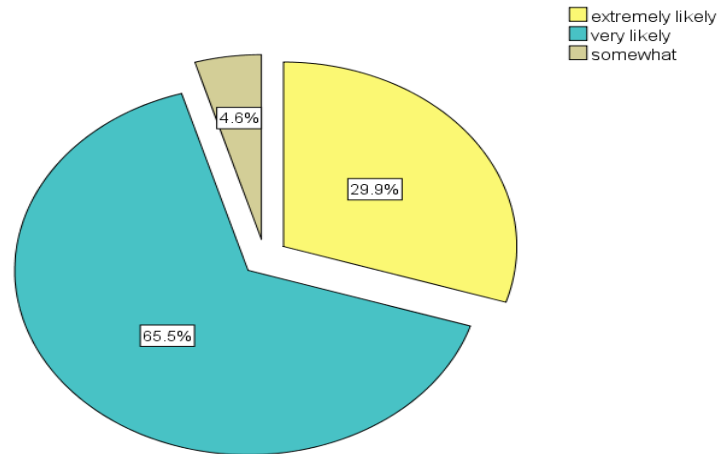


Figure 1. The share of variants of response to the item "Consider it necessary for athletes in general and handball players to practice swimming as a complementary activity, especially? "

The answers of specialists, regarding the use of swimming as a complementary sport, highlight that over 95% consider it necessary to hold swimming sessions in the specific training program (figure 1). According to the respondents' opinion, only 4.6% consider that swimming, as a complementary sport, for athletes in general and handball players, is necessary to some extent to be interspersed in the training program.

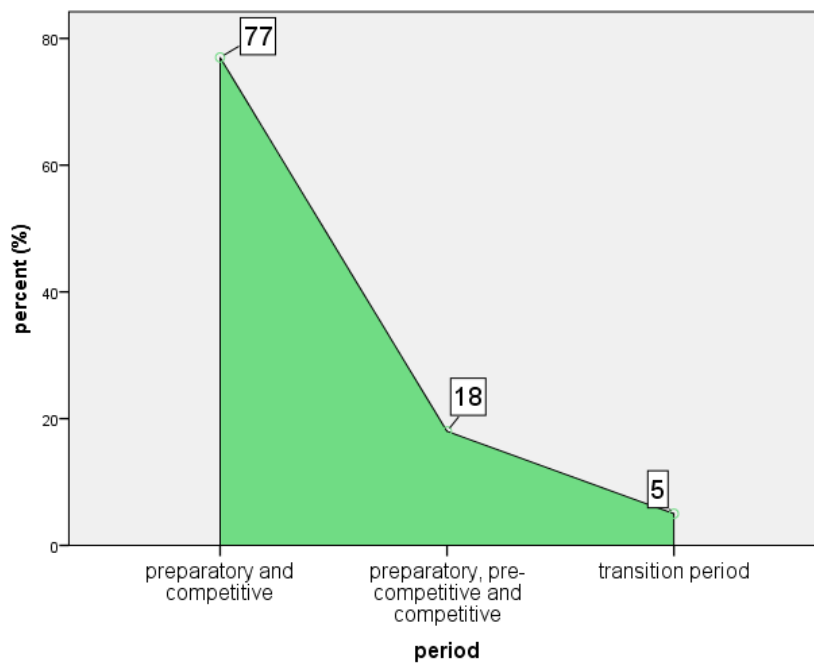


Figure 2. The share of the variants of the answer to item "In what period of training do you recommend the use of swimming as a complementary sport in the training of handball players? "

On this item (Figure 2), 77% of specialists believe that swimming can be used during preparatory and competitive periods, and 18% consider that in the three preparatory, pre-competitive and competitive periods, while only 5% consider that it should only be used during the transitional period.

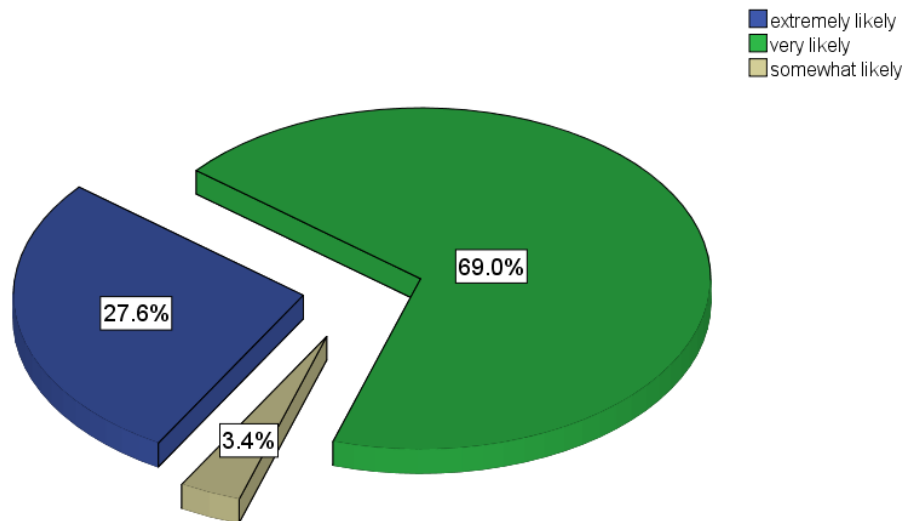


Figure 3. The share of the variants of the answer to item “Do you think that practicing swimming in various forms contributes to improving the ability to recover from effort?”

The graphic representation of the answers to the above item highlights that over 96% of the respondents consider that the specific elements of swimming, practiced in different forms, have an essential contribution to improving the ability to recover after effort.(figure 3).

Discussions

Compensatory and recovery activity, annexed to the training plans of athletes, is a process that has the task of achieving maximum athletic performance, and achieving the planned basic goals. Thus, the orientation of the training process should be considered as one of the decisive factors in achieving sports successes, technique, tactics, physical and psychological training.

Conclusions

The survey conducted through the questionnaire highlighted the opinion of the specialists by the fact that most respondents (95.4%) consider it necessary to practice swimming as a complementary sport, to a large and very large extent, for the handball players. As a period of interlacing in the training program of handball players, most specialists consider that the most relevant period is the preparatory and competitive period. Also, the answers, regarding the improvement of the capacity to recover after effort by practicing swimming in different forms, highlight that over 96% of the specialists, who practice or have practiced performance handball, consider that they have an essential contribution.

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