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DOI <https://doi.org/10.30525/978-9934-26-513-6-2>

**DEVELOPMENT OF COORDINATION ABILITIES  
OF YOUNG BADMINTON PLAYERS THROUGH  
THE INTERNATIONAL BWF SHUTTLE TIME PROGRAM  
(PROBLEM AND WAYS TO SOLVE IT)**

**РОЗВИТОК КООРДИНАЦІЙНИХ ЗДІБНОСТЕЙ ЮНИХ  
БАДМІНТОНІСТІВ ЗАСОБАМИ МІЖНАРОДНОЇ ПРОГРАМИ  
BWF SHUTTLE TIME (ПРОБЛЕМА ТА ШЛЯХИ ЇЇ ВИРІШЕННЯ)**

**Ohnystyi A. V.**

*Ph. D. in Physical Education  
and Sports, Associate Professor,  
Head of the Department of Physical  
Education and Rehabilitation  
Ternopil Volodymyr Gnatyuk National  
Pedagogical University  
Ternopil, Ukraine*

**Огнистий А. В.**

*кандидат наук з фізичного виховання  
і спорту,  
доцент кафедри фізичного виховання  
та реабілітації  
Тернопільський національний  
педагогічний університет  
імені Володимира Гнатюка  
м. Тернопіль, Україна*

**Ohnysta K. M.**

*Ph.D. in Physical Education and Sports,  
Associate Professor at the Department  
of Physical Education  
and Rehabilitation  
Ternopil Volodymyr Gnatyuk National  
Pedagogical University  
Ternopil, Ukraine*

**Огниста К. М.**

*кандидат наук з фізичного виховання  
і спорту,  
доцент кафедри фізичного виховання  
та реабілітації  
Тернопільський національний  
педагогічний університет імені  
Володимира Гнатюка  
м. Тернопіль, Україна*

**The urgency of the problem.** Badminton is a non-cyclical, coherent and complex sport, which is characterized by high accuracy and speed of execution of various tactical techniques, fast and accurate location

in the space of the field, great variability in the direction, speed, flight trajectory of the shuttlecock and other conditions. The flight of the shuttlecock, the movement of the opponent, the need to hit the shuttlecock with the racket in different positions, the location and execution of the shot in combination with the player's movements on the court, maintaining stable balance when moving forward, and the fine muscle strength of the muscles with high accuracy of differentiation [2] all this characterizes badminton as a sport.

In badminton, there are very few conditions that allow technical actions to be performed according to standard procedures. Hitting the racket from above requires flexibility and strength to execute the shot correctly, instant reaction and hand movements, the rotation of the hand determines the direction of the shuttlecock and controls the speed of the shot. Playing at the net requires dexterity and accurate measurements. To win, you need to direct the steering wheel to the farthest point from the opponent. To hit a shot, you need to move freely and quickly on the field, and after each shot you need to return to the center of the field in time. The player must be able to hit the shuttlecock from any position on his own court to any of the seven points on the opponent's court. Shots in badminton are executed from the most incredible positions, almost every second involves a hit to the net, a change of position and a hit again [1].

For the competitive activities of badminton players, not only the speed of reaction to the opponent's actions is important, but also the speed of defense and attack during the game, changes in body position, and performance of sports actions in general.

In badminton, there is never enough time to make tactical decisions. Before hitting the shuttlecock, a badminton player must determine the direction and speed of the shot. If necessary, the player can change the decision even in the middle of the preparation time for hitting the shuttlecock. Therefore, a high level of game thinking development is also necessary for success in badminton. When playing badminton, complex choice reactions are interconnected with the reaction to a moving object (shuttle) and the choice reaction (hitting the shuttlecock), and fixing the shuttlecock with the eyes takes a significant part of the reaction time to the moving object. [1].

Movement skills are very important in badminton. Each shot is performed with different speed and power (short, long shots), so badminton players must clearly differentiate the strength of their muscles. The power, accuracy and direction of the shot depend on the movement of the hand and racket. A feature of competitive badminton is the performance of behavioral actions in constantly changing conditions. The accuracy of differentiated spatial efforts depends on the performance of kicks, movement, jumps,

lunges, combining steps, turns, returning to the center of the field after each kick, etc.

Motor memory (accuracy of reproduction of muscle force) is related to the ability to accurately distinguish different parameters of movement (time, force, space). This coordination ability is very important for badminton players to achieve successful competitive performances, because the accuracy of badminton shots is affected by many factors: the angle of rotation of the hand when hitting the shuttlecock, the grip strength of the racket handle.

Spatial orientation is very important when moving around the court, seeing the boundaries of the court, when serving, hitting, performing a long shot or hitting a "candle" into the opponent's court.

The ability to balance is manifested in the execution of shots (standing, cutting to the net), side shots, jumps, catching the shuttlecock from the left (right-handed), catching the shuttlecock from the right (right-handed), crossing the court from the side, taking a step to the side (it is necessary to return to the center of the court from any what position on the court) and get the shuttlecock that flew far behind the head.

The rhythm of strokes and the rhythm of the game depends on the level of development of rhythmic ability, but, according to many badminton experts, this ability does not have a great impact on the success of game actions, therefore it is not important in badminton [3, 4]

It can be seen that coordination abilities play an important role in ensuring the effectiveness of competitive badminton activities. Such coordination abilities as the speed of simple reactions, the speed of complex reactions of choice and probabilistic predictions, the speed of reaction to moving objects, the ability to skillfully reproduce and differentiate temporal, spatial and force parameters of muscle efforts, the ability to orientate in space, store equilibrium [1, 3, 4].

**Research tasks.** Through the international project BWF Shuttle Time, methodological recommendations on the development of coordination abilities will be developed for teachers and coaches who train and teach children to play badminton.

**Scientific novelty.** The types of coordination skills most important for success in competitive badminton will be revealed.

**Theoretical significance of the obtained results.** The essence of the study is that the obtained material complements the content of the theoretical and methodological section of sports for children and adolescents, including knowledge about the types of coordination abilities important for successful competitive badminton activities; research using BWF Shuttle time international programs and means of development of coordination abilities at the initial stage of training.

**Practical significance of the results.**

- Tests will be developed as part of the methodology aimed at determining the level of development of the most important coordination abilities in badminton, including normative assessment criteria;

- Methods will be adapted for international BWF Shuttle time programs to develop coordination abilities of young badminton players.

**Importance and potential practical impact.** In contrast to existing methods, the technology of teaching technical techniques according to the program BWF Shuttle Time at the stage of initial training, it provides a clear focus on the development of coordination abilities important for badminton: orientation in space and maintaining balance.

The use of methods developed by us for the use of international teaching tools during the educational and training process of badminton players at the stage of initial training will ensure a significant increase in the speed of development of the general coordination ability of children and special coordination abilities, which will positively affect the development of children's physical fitness and contribute to their development and the growth of competitive performance indicators activity.

**Prospects for further research.** It will include an experimental verification of the use of methods of development of coordination abilities within the framework of the implementation of international programs BWF Shuttle Time was created to improve the process of preparing young badminton players for competitions.

In summary, we note that the results of the research will be implemented in specialized universities, ordinary universities and educational institutions for the training of coaches that prepare sports professionals, to update the content of the professional badminton subject and will be used as a basis for further scientific research on the development of coordination abilities of badminton players.

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