

**CHOICE OF GAME ROLE OF THE MIDFIELDERS AND MOVING
FORWARDS OF PLAYERS IN FEMALE WATER POLO**

Olga Pilipko

Alina Pilipko

Volodymyr Ashanin

*Kharkiv State Academy of Physical Culture,
Kharkiv, Ukraine*

Purpose: to develop and experimentally substantiate the method of choosing the game role of the midfielders and moving forwards of players in female water polo.

Material and Methods: analysis and generalization of literary sources, pedagogical observation, anthropometric and physiological measurements, testing of swimming performance, special and technical training, analysis of the game activities of water polo players using test game protocols, methods of mathematical statistics. The contingent of the surveyed were members of the team of the Kharkiv region on the female water polo.

Results: the authors determined the features of the structure of special preparedness of qualified female water polo players who perform functions as midfielders and moving forwards, investigated the relationship between physical development indicators, technical and special swimming training and efficiency of game actions of sportswomen of this game role, developed model characteristics of the most significant parameters of the structure of special preparedness of qualified female water polo players, which can serve as reference points to determine game role of the midfielders and moving forwards.

Conclusions: the definition of game role of players in women's water polo should be

based on a comprehensive analysis of indicators that reflect different aspects of preparedness of qualified sportswomen.

Keywords: water polo, sportswomen, midfielders and moving forwards, interconnection, model characteristics.

Introduction

The continuous growth of sport achievements in modern sport, high competition in the international arena require the relentless search for effective methodological, organizational and managerial solutions in the many-years preparation of athletes. An important place in this system is the process of improving the integrated control, selection and orientation at all stages of many-years preparation (V. N. Platonov, 2004; O. A. Shynkaruk, 2011 etc.).

Water polo is a situational sport that differs in terms of gaming, due to the aquatic environment (V. Y. Davydov, 2007; Ch. Ciccirella, 2000). Therefore, the requirements to representatives of this kind of sport is very versatile.

Obviously that efficient gaming action of water polo players determined by the level of physical development, swimming and technical training (O. A. Pilipko, A. V. Poproshaev, 1999; M. V. Ostros'kij, O. V. Poprpshaiev, M. M. Chaplins'kij, O. J. Sidorko, 2013). However, which of these components largely affects the performance of athletes who playing different roles, how in this regard correct accentuation of the training actions – these and other issues question require of specialists more attention and the holding relevant experimental studies.

Choise of the game role is one of the most important moments in the career of the water polo player. From the correct choice of narrow game specialization of the athlete depends largely on the achievement of tops of sports skill (I. F. Zemtsov, 2008; O. A. Pilipko, A. V. Poproshaev, 2007; A. V. Poproshaev, A. V. Chumakov, 2014; N. Rebytska, 2002; O. Pilipko, A. Pilipko 2019 etc.).

Review of current literature allowed to conclude that to date have been sufficiently studied questions which relate to the definition of the factors which

influence of the effectiveness and efficiency of competitive activity in water polo, Considered the method of sports training of qualified water polo players, defined the ways of optimization of competitive activity, etc (N. Evpak, 2015; I. F. Zemtsov, 1988; D. C. Karangozashvili, 1990; Y. V. Kolosov, 2003; V. M. Chernov, 2006; G. Balline, 2012; G. Melchiorri, A. Campagna, 2018). At the same time, the conducted researches mainly associated with the preparation of male athletes. Problems of female water polo still remain insufficiently illuminated, and thus require close attention and study.

Purpose of the study: to develop and experimentally substantiate the method of choosing the game role of the midfielders and moving forwards in female water polo.

Objectives of the study:

1. Identify the features of the structure of special preparedness of qualified female water polo players who serve as midfielders and moving forwards.

2. Investigate the relationship between indicators of physical development, technical and special swimming preparedness of qualified female water polo players selected game role.

3. To develop model characteristics of indicators of the structure of special preparedness of qualified female water polo players to determine the game role of the midfielders and moving forwards.

Material and Methods of the research

To solve the tasks, the following methods were used in the work: analysis and generalization of literary sources, pedagogical observation, anthropometric and physiological measurements, testing of swimming performance, special and technical training, and analysis of the game activities of water polo players using special protocols of control games, methods of mathematical statistics.

The experimental study was conducted on the basis of the NSC NTU "KPI" in the period from October 2017 to November 2018.

The surveyed group consisted of water polo players who had the level of sports qualification of master of sport and were members of the team of the Kharkiv region.

Results of the research

Features of the structure of special training of skilled water polo players that perform the functions of midfielders and moving forwards, determined on the basis of the study 29 parameters that reflect the level of physical, technical and special swimming preparedness of sportswomen. Among the indicators of physical development, we measured parameters such as length and weight, length of upper and lower extremities and their segments, the excursion of the chest, the hand power (right and left hand), arm circumference and thigh. Technical preparation was assessed in terms of: «15 m dribble the ball», «throw at a distance», «the basic technique of the throw from the place», «the processing time of the ball during the throw from the place», «the basic technique of the throw in stride», «the processing time of the ball during the throw with the go», «technique of hinged cast of the throw from the place», «technique of hinged cast of the throw with the go», «modernized 7 minute special test». Among the criteria of special swimming preparation were considered the results of the tests: «5x3 m in the gateway», «15 m front crawl», «10 m front crawl», «2x10 m front crawl», «10 m backstroke», «2x10 m trudgen on the back», «30 m frontcrawl», «10 jumping», «7-minute special test». Based on the obtained digital material was built averaged profiles, which describe characteristics of physical development, technical and special swimming preparedness of the representatives of this game role (Figure 1 - 3).

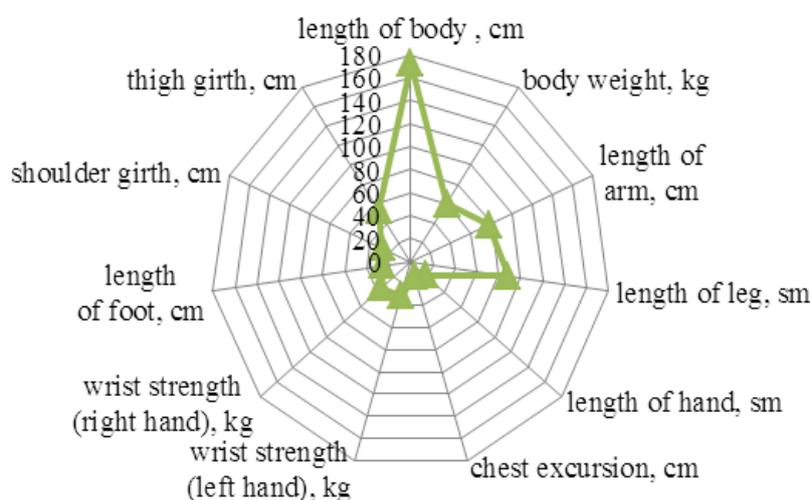


Fig. 1. The profile of physical development of qualified water polo players who perform the functions the midfielders and moving forwards

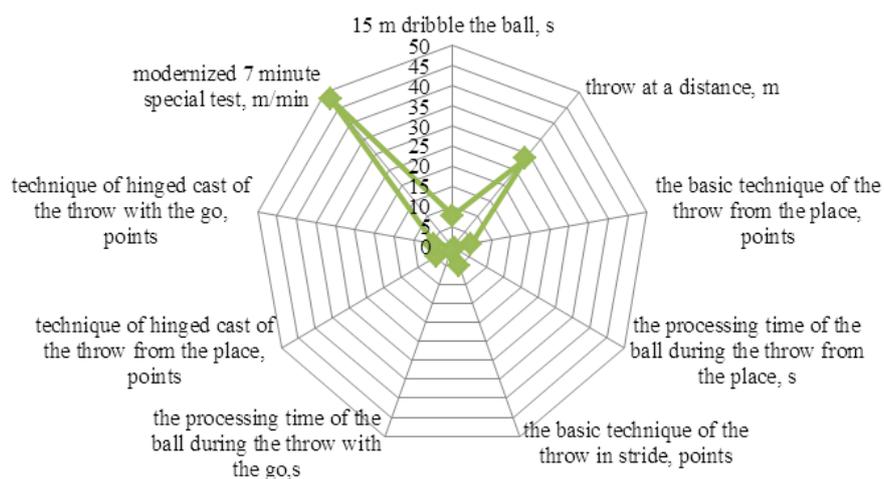


Fig. 2. The profile of technical preparation of qualified water polo players who perform the functions the midfielders and moving forwards

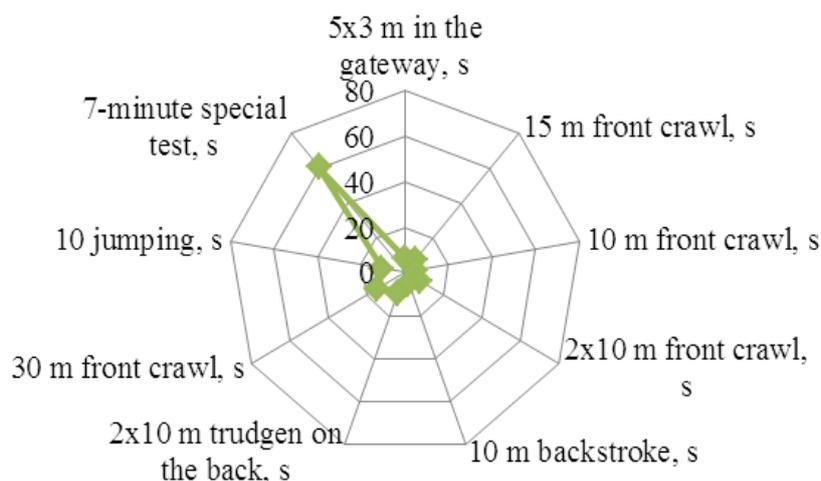


Fig. 3. The profile of special swimming preparation of qualified water polo players who perform the functions the midfielders and moving forwards

The efficiency of the game actions of the midfielders and moving forwards was assessed according to 7 indicators: the number of shots on goal, number of goals scored, the number of earned deletions, the performance of pass, passing accuracy, number of removals from the field, time spent in the game.

After analyzing the degree of correlation between the indices of structure of special preparation and the efficiency of the game actions of the midfielders and moving forwards we get the next data.

Close correlation with the number of goals scored is noted in such parameters

of physical development of athletes as arm length ($r = 0,74$), leg ($r = 0,76$) and foot length ($r = 0,71$).

Among the representatives of this game role in close correlating relationship with the parameters of efficiency of gaming action are the indicators of technical skill as the number of shots on goal - shot on the range and upgraded special test ($r = 0,71$ and $0,78$ respectively); the number of goals scored - upgraded special test, technique of hinged cast of the throw from the place and the technique is a basic throw on the move ($r = 0,91$, of $0,86$ and $0,86$, respectively); the amount earned deletes - upgraded special test ($r = 0,87$), the result of the pass – «15 m dribbling» and upgraded special test ($r = -0,82$ and $0,77$); the time spent in the game - throw range and upgraded special test ($r = 0,83$ and $0,89$ respectively).

Close correlation relationship with the efficiency of the game actions show the next indicators of special swimming preparation of water polo players: «15 m front crawl» and the result of the throw and the time spent in the game ($r = -0,76$ and $-0,76$ respectively); «10 m front crawl» and earned deletions, the performance of the pass and the number of deletions from the field ($r = -0,75$; $-0,83$ and $0,72$ respectively); «2x10 m front crawl» and earned deletions, the performance of the pass and the number of deletions from the field ($r = -0,90$; $-0,82$ and $0,78$ respectively); «10 m backstroke» and earned deletions, the performance of the pass and the time spent in the game ($r = -0,94$; $-0,88$ and $-0,85$ respectively); «2x10 m trudgen» and the number of shots on goal, goals scored, number of earned penalties, the performance of the pass and the time spent in the game ($r = -0,80$; $-0,72$; $-0,86$; $-0,90$ and $-0,94$ respectively); «30 m front crawl» and the number of shots on goal, goals scored, efficiency of passing and the time spent in the game ($r = -0,76$; $-0,70$; $-0,88$ and $-0,87$ respectively); «10 jumping» and the number of shots on goal, goals scored and the performance of the pass ($r = -0,83$; $-0,93$ and $-0,88$ respectively); «7-minute special tests» and the number of shots on goal, goals scored, efficiency of passing and the time spent in the game ($r = 0,91$; $0,78$; $0,90$ and $0,95$ respectively).

The analysis allowed to conclude that the efficiency of game actions of water polo players of this game role is under the predominant influence of the level of

speed-power qualities.

At the same time, the number of shots on goal due to the level of swimming efficiency of the athletes (Figure 4).

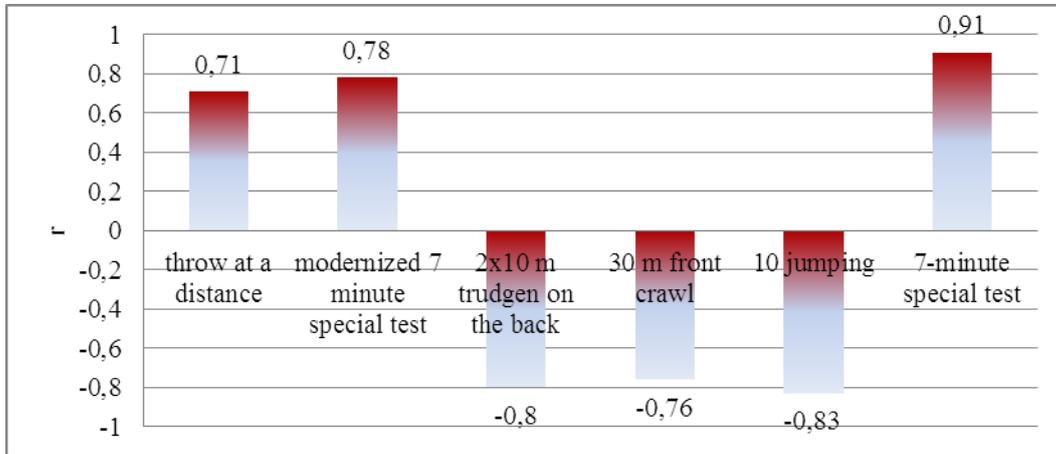


Fig. 4. Degree of correlations of the most influential indicators of the structure of special preparation of midfielders and moving forwards with the number of shots on goal

The ability to long-term performance of a large amount of swimming work in conjunction with the technique of possession of ball allows the sportswomen to show the best indicators on the number of goals scored (Figure 5).

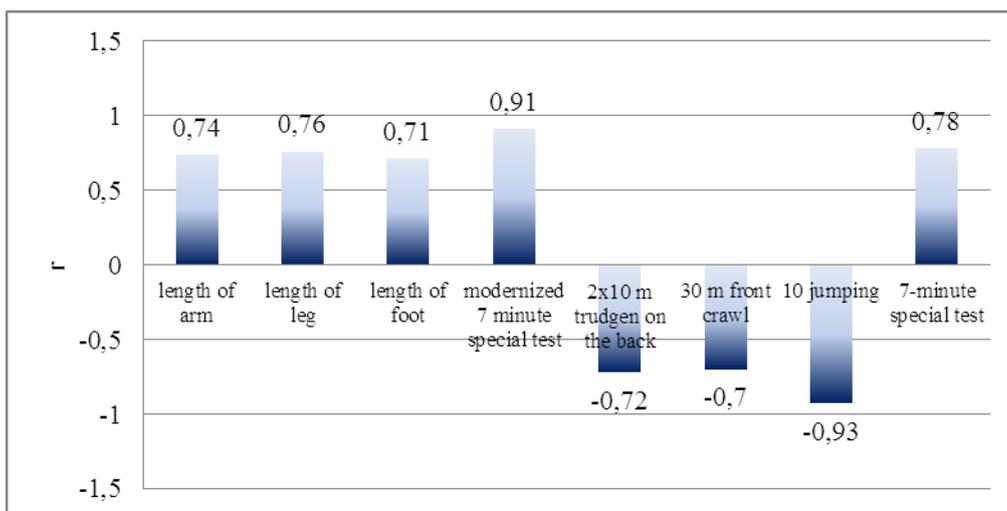


Fig. 5. Degree of correlations of the most influential indicators of the structure of special preparation of midfielders and moving forwards with the number of goals scored

In turn, the effectiveness of performance a pass due to the high level of swimming preparedness of water polo players of this game role (Figure 6).

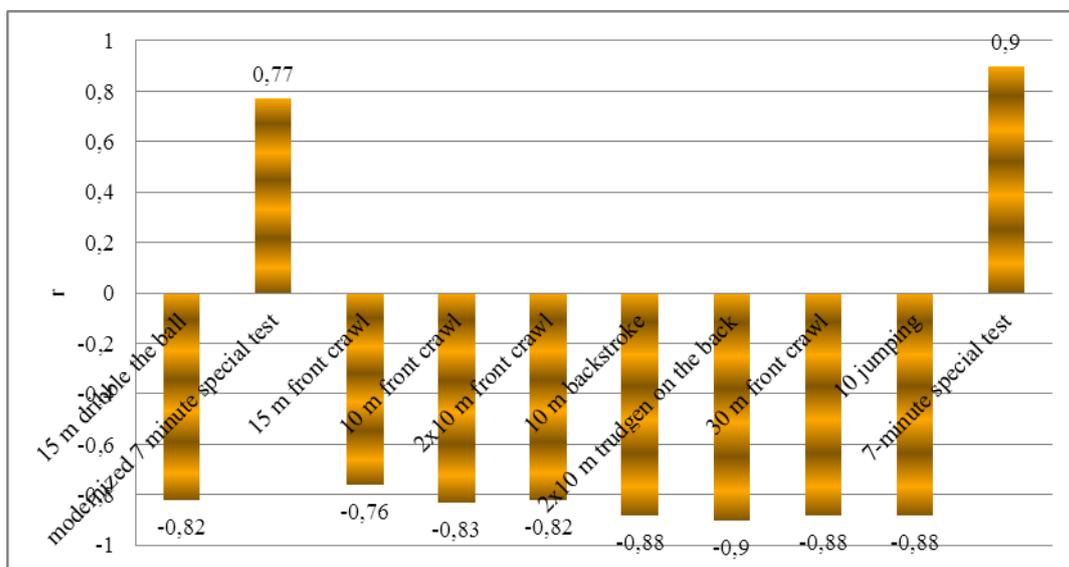


Fig. 6. Degree of correlations of the most influential indicators of the structure of special preparation of midfielders and moving forwards with the a pass

Thus, the efficiency of the game actions of the midfielders and moving forwards mainly determined by the level of development of swimming preparation and speed-strength qualities.

Based on the obtained digital material appeared the possibility to develop a model of the characteristics of the most significant indicators of the structure of special preparedness, compliance with which will allow to sportswomen choose the best way to realize themselves in the chosen playing position (Table 1).

Table 1

Model indicators of the most significant parameters of the structure of the special preparedness of the midfielders and moving forwards

Indicator	Model value	Standard deviation
modernized 7-minute special test, m/min	48,00	1,04
7-minute special test, m/min	60,31	1,05
10 jumping, s	10,40	0,18
10 m backstroke, s	5,01	0,16
2x10 m trudgen on the back, s	9,50	0,45
30 m front crawl, s	14,13	0,30

As can be seen from table 1, among the parameters that can be used as guidelines when we choose the game role of the midfielders and moving forwards are: 7-minute and modernized special test, 10 jumping, swimming on the distance 30 m front crawl, 10 m backstroke and 2x10 m trudgen on the back.

Thus, the definition of game role of players should be based on the basis of a comprehensive analysis of indicators which reflecting the various components of the structure of special preparedness of sportswomen who specialize in water polo.

Conclusions / Discussion

The results of the study confirm the existing opinion that the main components of the structure of special training of skilled water polo players that affect the effectiveness of their actions in the game, is physical, technical, and swimming preparedness. We have proved that sportswomen who perform the function of moving midfielders and moving forwards have high values of parameters of technical preparedness and the average values of the indicators of special swimming preparedness and physical development.

The obtained results confirm the assumption that some separate structure indicators of the special preparedness of water polo players have different degree of influence on the efficiency of game actions depending on the role. We found that the performance of the midfielders and moving forwards much due to the level of swimming preparedness and the development of speed-power qualities (r is in the range of 0,70 – 0,83 and 0,91 – 0,93).

It is confirmed that the definition of the game role of players should be based on a comprehensive analysis of parameters that reflect different sides of the structure of special preparedness of water polo players. A comparison of individual characteristics of the structure of special preparedness with model values will allow to the sportswomen to determine in what roles they will be able to better realize themselves.

Prospect of further research is to develop the model characteristics of the parameters of the structure of the special preparedness to determine the game role of qualified water polo players.

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Information about the Authors

Olga Pilipko: PhD (Pedagogical), Professor; Kharkiv State Academy of Physical Culture: Klochkivska 99, Kharkiv, 61058, Ukraine.

ORCID.ORG/0000-0001-8603-3206

E-mail: pilipkoolga@meta.ua

Alina Pilipko: graduate student; Kharkiv State Academy of Physical Culture: Klochkivska 99, Kharkiv, 61058, Ukraine.

ORCID.ORG/0000-0001-5637-9070

E-mail: alin4ik209@gmail.com

Volodymyr Ashanin: PhD (Physics-Mathematics), Professor; Kharkiv State Academy of Physical Culture: Klochkivska 99, Kharkiv, 61058, Ukraine.

ORCID.ORG/0000-0002-4705-9339

E-mail: ashaninv@mail.ru