
Translated from the original in spanish

Test to evaluate the technical-tactical development in beach volleyball players in initial stage

Prueba para evaluar el desarrollo técnico-táctico en jugadores de voleibol de playa de iniciación

Orestes Griego Cairo

Universidad Central "Marta Abreu" de Las Villas. Las Villas, Cuba. E-mail: ogriego@uclv.cu

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ABSTRACT

Cuban beach volleyball currently does not yet have its Integral Athlete Preparation Program, so the coaches have adapted the evaluation forms of Volleyball to Beach Volleyball without taking into account the differences between both modalities. The objective of the present research is to establish a test to evaluate the technical-tactical development achieved by beach volleyball players, thus responding to one of the current technological demands of the Cuban Volleyball Federation. Theoretical research methods (synthesis, inductive-deductive and documentary analysis) and empirical (interviews) were used. Methodological workshops were carried out with beach volleyball trainers, which allowed the design of the test, its conformation and, later, its evaluation through specialist criteria. A test that takes into account the characteristics that identify the beach volleyball game is conceived. The specialists consulted consider that the test developed is adequate, on the basis of its relevance, the parameters of formal quality and practical usefulness that it possesses. The results obtained from the design and structuring allowed to conclude that the essence of this result permits to evaluate the technical-tactical development reached by the players of this sport in the initiation, from the indissoluble link between technique and tactics.

Keywords: technical-tactical development; initial stage, test, beach volleyball.

RESUMEN

El voleibol de playa cubano, en la actualidad, aún no cuenta con su programa integral de preparación del deportista, por lo que los entrenadores han adaptado las formas de evaluación del voleibol, al voleibol de playa, sin tomar en consideración las diferencias entre ambas modalidades. La presente investigación tiene como objetivo establecer una prueba para evaluar el desarrollo técnico-táctico alcanzado por los jugadores de voleibol de playa de iniciación, dando así respuesta a una de las demandas tecnológicas actuales de la Federación cubana de voleibol. Se utilizaron métodos de investigación teóricos (análisis síntesis, inductivo-deductivo y

documental), empíricos (entrevistas). Se realizaron talleres metodológicos con entrenadores de voleibol de playa, lo cual permitió el diseño de la prueba, su conformación y, posteriormente, su valoración mediante criterios de especialistas. Se concibe una prueba que tiene en cuenta las características que identifican el juego de voleibol de playa. Los especialistas consultados consideran adecuada la prueba elaborada, a partir de su pertinencia, los parámetros de calidad formal y utilidad práctica que la misma posee. Los resultados obtenidos del diseño y estructuración permitieron concluir que la esencia de este resultado permite evaluar el desarrollo técnico-táctico alcanzado por los jugadores de este deporte en la iniciación, a partir de la indisoluble vinculación entre técnica y táctica.

Palabras clave: desarrollo técnico-táctico, iniciación, prueba, voleibol de playa.

INTRODUCTION

Unlike other sports games, beach volleyball is composed of technical-tactical actions that are developed sequentially, forming the so-called typical phases. Greek, (2016). Each one has incidence in the later action and the final result of the game. Jiménez Olmedo, 2015; Medeiros, Marcelino, Mesquita and Palao, (2017). One of the aspects, which contributes to obtaining positive results in the process of sports training in beach volleyball, is a technical-tactical development, optimal game actions, in a dialectic unit between technique and tactics. Navelo, (2001); López, Palao, Ortega and García de Alcaraz, (2018). To this end, an adequate control of the technical-tactical development allows a more objective assessment of the evolution of the players Palao, Lopez and Ortega, (2015). Therefore, it is necessary to constantly improve the work of the coaches in relation to the controls of the technical-tactical performance. Greek, (2014).

In this sense, it is important to consider that technical-tactical control tests must take into account the specific characteristics of the competitive activity. López, Palao, Ortega y García, (2018); Palao, Hernández, López, Manzanares, Valades and Ortega, (2018). However, the reality regarding the control of beach volleyball players is that more work has been done on physical development controls than on the technical-tactical component. The ways of developing it in beach volleyball are extrapolated to beach volleyball, without taking into consideration the differences between the two modalities. It is for this reason, that the formation of players with technical-tactical wealth is the aspiration of every coach and the ideal thing to develop a competitive game. Greek (2014); Mamani, Huayanca, Mamani-Quispe, Manzaneda, Casa, Nina and Fuentes, (2018); Ibáñez, Feu, Cañadas, González and García, (2016). Although it is possible to find tests developed and validated for the technical and tactical actions of the beach volleyball game, these have focused on the highest level of competition, Palao, Lopez, and Ortega, (2015) and there are few tools that allow effective control in the initiation of sport. Collet, Nascimento, Folle, Ibáñez, (2018).

This absence makes it difficult for coaches to control the technical-tactical development that players reach during the preparation process or the competition, since the variable character, in the execution of game actions, determines the search for more effective ways to achieve it. López, Palao, Ortega y García, (2018). Taking into consideration what has been expressed above, dealing more vehemently with the indissoluble link between technique and tactics in the technical-tactical controls of beach volleyball is a priority.

It becomes necessary to establish tests in correspondence with the characteristics of the category, the players and competitive activity in general sense. Therefore, the objective of this research was: to design a test to evaluate the technical-tactical development of beach volleyball players in the initiation stage of sport, and thus temper the control to the characteristics of training and current competition.

MATERIALS AND METHODS

For the research, we worked with the 16 beach volleyball coaches of the teams participating in the National High Performance School Games (JENAR) 2017. They were given an interview consisting of nine open-ended questions, which focused on the demands and criteria that, in their opinion, should have the controls of the technical and tactical development of beach volleyball players, in the initiation, in addition to checking the characteristics of the tests used by them for the control of their players. Within this framework, there is also a documentary review of articles on the technical and tactical elements of beach volleyball, made by authors of other nationalities.

At a second stage of the research, two methodological workshops were held with the coaches. The first one to update them with respect to the thematic; the characteristics of the sport games were analyzed in relation to the technical-tactical preparation. It was deepened in the characteristics of the technical tests that are carried out in the JENAR and the criterion of the insertion of companions and opponents in the development of the tests was valued as a factor of great importance. In the second methodological workshop, the characteristics and content of a possible technical-tactical test are determined, which considers both components (technical and tactical) for the evaluation of the development of beach volleyball players, initiation.

In a third moment, with the information provided by the coaches, we proceeded to work with eight specialists to obtain the theoretical validity that supports the test and to issue their assessment with respect to it. These specialists were selected intentionally because they met the following requirements:

To have at least eight years of experience as a beach volleyball coach, to hold the scientific categories of Master or Doctor in Physical Culture Sciences, to have investigative experience in the subject of elaboration of tests, to have worked with beach volleyball, of basic initiation or to have been linked to it in some way, for at least five years, and to belong or to collaborate with research projects, associated to the Center of Study "Physical Culture and Sport" of the Central University "Marta Abreu" of Las Villas.

RESULTS AND DISCUSSION

The application of the interviews made it possible to determine the need for coaches to have tests and elements that would allow them to more effectively control the technical and tactical development of beach volleyball players in the school categories, corresponding to sports initiation. It was evidenced the lack that they present as for the conception of the technical-tactical control, already the tests that they make are extrapolated of the volleyball to the beach volleyball.

It could be seen that the research carried out, in this sense, value isolated aspects of the game, such as the serve, Jiménez, Penichet, Martínez, Andreu and Pérez Turpin, (2014), which contradicts the structural characteristics of the game.

As a result of the workshops carried out, it was possible to elaborate a test version for the evaluation of the technical-tactical development of the players of beach volleyball, of initiation, and at the same time it was related with the way of evaluating the pedagogical objectives in the JENAR. In the initial evaluation with the specialists about the test, they raised that it meets the requirements for which it was established, but that it was necessary to deepen in the postulates of Zatsiorski (1989) and in the methodology for the presentation of tests. With these criteria and evaluations, a table work was carried out among the researchers to finally establish the test in the following way:

Name of the test: test to evaluate the technical-tactical development of beach volleyball players initiation.

Objective: to evaluate the technical and tactical development of beach volleyball players in accordance with the pedagogical objectives of the school categories.

Methodology of the test: to start the test, the players choose the side of the field where they want to perform the actions contained in the exercise that composes it. A receiving formation is placed on the opposite side, for which players from the remaining teams participating in the competition are taken, they wait to be evaluated or have already completed the test. (All players participating in the competition will be in the development of the test from the beginning until the end of it).

The test begins with the players placed in formation for receipt. Your coach performs a serve (behind the final edge of the field) directed to the first player who will be evaluated in the receipt, spike, defense and displacements. His teammate is evaluated for passing and blocking. The player receives, his team-mate passes him (he must indicate the uncovered area for the attack) so that he can carry out his first shot against the action of the players of the opposite terrain.

The spike must be executed, trying to look for some uncovered space in the opposite terrain. There will be blocking action of the opposing team and preparation to defend, although there will be no continuity of actions (Figure 1).

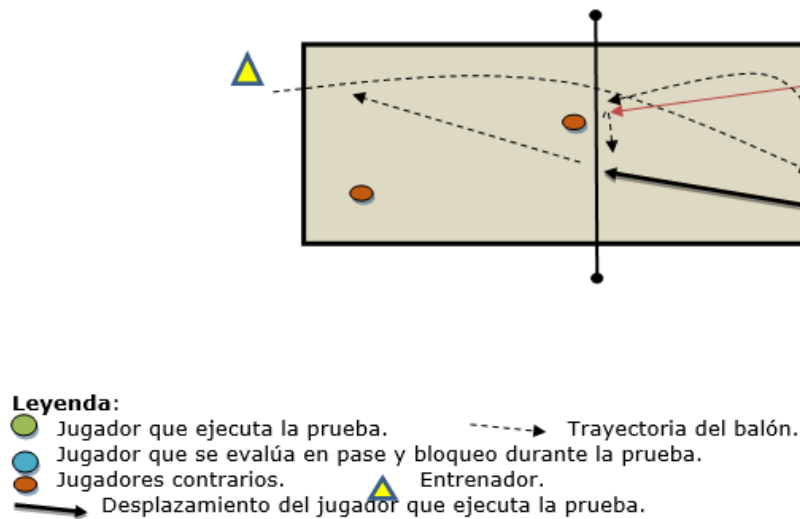


Fig. 1. - Receive and the first spiking action of the players in the execution of the technical-tactical test.

Subsequently the same player who executed the action of receiving will go to take the serve, his partner will be in blocking position. Before taking the serve, you must define to the evaluators the place where you intend to take it or the player to whom you intend to direct the serve, depending on the characteristics of the opponents and the formation of receipt they do in the opposite court.

The player who is going to serve, before doing so, must explain to the evaluators the reason for the place they selected to perform the serve, and give a logical explanation of the decision taken. This analytical, reasoned and logical response constitutes the tactical evaluation of this action. (Figure 2).

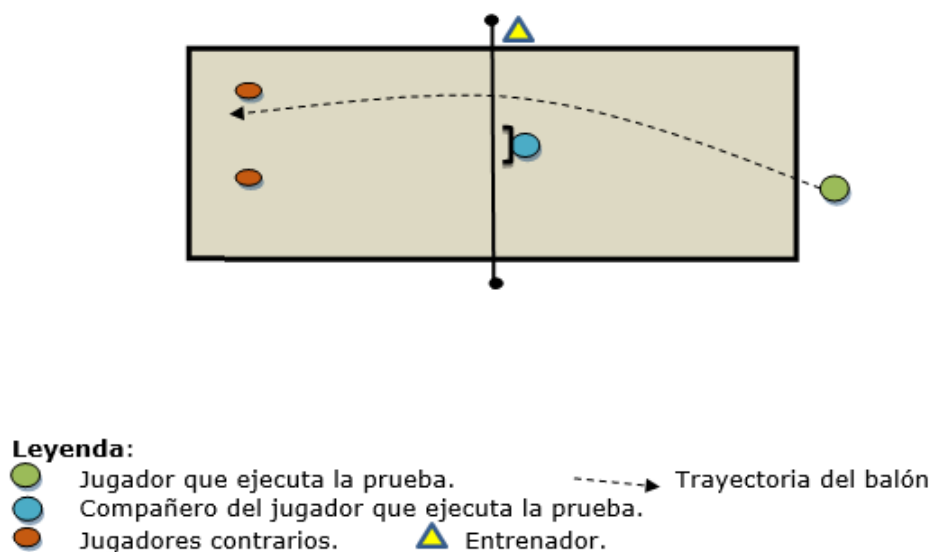
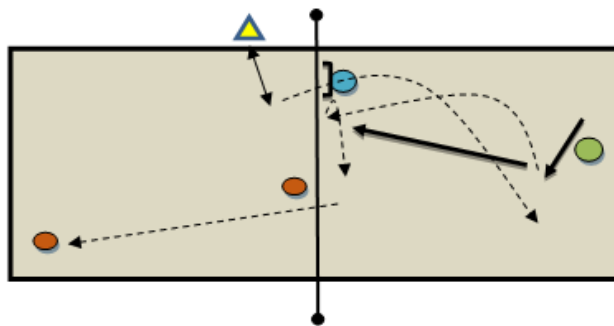


Fig. 2. - Execution of the serve during the technical-tactical test.

The serve will not be received by the opposing players, they simply capture the ball (there will be no continuity of actions). After the serve, the defense must be quickly located, starting from the center of the court and carry out his action depending on how the action occurs from the opposite court. His partner is blocking and must do it towards the band. He must defend (starting from the center of the court) a spike performed by the coach, from the opposite field, towards the diagonal.

In the blocking the hands must protrude from the upper edge of the net and close the area provided, making the corresponding communication with his defender. If the player is small and can not do it, anyway, has to jump, but can not receive a good evaluation. The defender will defend the spike, will receive a second pass from the teammate, but this time he must spike the ball trying to circumvent the blocking opponent and seeking to direct the ball, specifically to an opponent player (Figure 3).

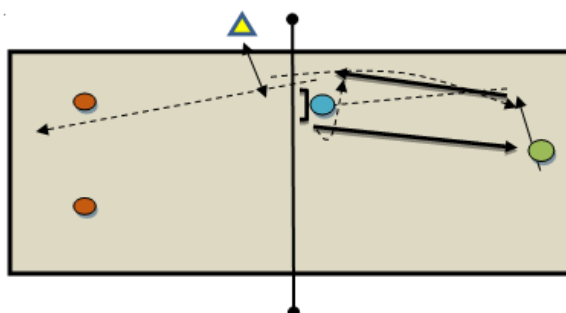


Leyenda:
 ● Jugador que ejecuta la prueba. - - - - - Trayectoria del balón. ▲ Entrenador.
 ● Compañero del jugador que ejecuta la prueba. ● Jugadores contrarios.
 → Desplazamiento del jugador que ejecuta la prueba.

Fig. 3. - Second spike and action of the players in the execution of the technical-tactical test.

He will then quickly move back to the back of the court to defend a second spike by his coach (without a specific definition), who again enters the court to do so and retires. His teammate blocks and must make another pass, but this third spike is at the player's free choice of tactical action to perform (if the spiker failed one of the previous spikes as to its intention and achieves it, in the latter, it is considered effective for the purposes of evaluation).

The passing team-mate may indicate the uncovered area for the attack (Figure 4). Subsequently, the other member of the duo performs the test to conclude the test.



Leyenda:
 ● Jugador que ejecuta la prueba. ● Jugadores contrarios. ▲ Entrenador.
 ● Jugador que se evalúa en bloqueo y pase durante la prueba.
 → Desplazamiento del jugador que ejecuta la prueba. - - - - - Trayectoria del balón.

Fig. 4. - Displacement back and third spike of the player in the execution of the technical-tactical test.

The information is collected, taking into consideration the technical and tactical aspects that are evaluated. In relation to the spike, it is necessary to differentiate the touch and powerful spike. The first is a softer gesture, which can be executed by knuckles or by hitting with the palm of the hand, the second is a powerful gesture, thereby subtracting reaction time to the players who defend.

Due to the characteristics of the competitive level, the player who performs the test can use either of two ways to meet the objective, depending on the situation at the time of evaluation.

Means and instruments: conditioned ground and three balls.

Standardisation conditions of the test: the test will always be carried out after a joint warm-up and with balls.

The serve of the players is made behind the final band, from where the player deems appropriate, depending on weather conditions at the time of the test.

Evaluators: in the test, evaluate three members of the National Volleyball Commission who are at the forefront of the competition and at least four coaches of participating teams (always odd number).

Form of qualification: twenty (20) points will be awarded in the evaluation of the test. These points will be distributed according to each technical-tactical element of the game.

For the serve two (2) points, one for the evaluation of the technical execution (ETE) and one for the tactical evaluation criterion (ETA). For receiving two (2) points, one for the ETE and one for the ETA. For the pass four (4) points, two for the ETE and two for the ETA evaluation. For the spike five (5) points, three for the ETE and two for the ETA evaluation. For the blocking three (3) points, one for the ETE and two for

the ETA evaluation. For the defense two (2) points, one for the ETE and one for the ETA evaluation. For the move back two (2) points, one for ETE and one for ETA.

Protocol: The evaluators make a description of the result of the players in the execution of the test (Table 1). The result of the evaluation of the possible actions constituting errors or successes is recorded. With (X) the execution is marked if it is correct and with (I%) if it makes the error. In addition, a tactical evaluation is carried out based on criteria determined for each action to be evaluated. The evaluation of each player is recorded, on one side those of the female sex (F) and on the other those of the male sex (M). The name and surname of each player with the corresponding number will appear on the form. In the square on the left, player 1 and on the right, player 2.

In the case of a serve, the tactical evaluation will be positive if the player offers a logical tactical answer as to why he chose the place to serve. If his answer does not contain an adequate logic, the evaluation will be negative and he does not receive a score in this evaluation, i.e. he gets the answer right or not. In the receipt the tactical evaluation will be positive if it achieves that the ball is in a comfortable position for the pass.

In the execution of the pass over the top, the tactical evaluation will be positive, if the quality of the pass allows the finisher to be in a good position to make his shot and warns the area of the shot; otherwise, the evaluation will be negative. In the execution of the spike, the tactical evaluation will be positive if the player manages to direct the first shot to a specific player and the second if he manages to look for an uncovered area; otherwise, the evaluation will be negative. It could happen that the player achieves success in only one of the shots; in that case, the evaluation will be negative, but the distinction is made to identify where their individual difficulties are.

Table 1. - Protocol of the result of evaluation in the technical-tactical test of beach volleyball for players of initiation.

| Provincia: | (Femenino) | | Jugadores | | (Masculino) | | | | | |
|-------------------------|------------|-----|-----------|-----|-------------|-----|-----|---|-----|---|
| | (1) | (2) | (1) | (2) | (1) | (2) | | | | |
| Saque | (ETE) | | | | (ETA) | | | | | |
| | SUC | | GBR | | SZE | | CGB | | RL | |
| | F | M | F | M | F | M | F | M | F | M |
| Recibo | LCB | | LMC | | PCR | | CM | | BCP | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |
| Pase por arriba | DDS | | CDB | | AMB | | PAA | | IZR | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |
| Remate | AUP | | FR90° | | ORR | | GBR | | RDP | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |
| Bloqueo | CFB | | SMA | | CZB | | CAM | | CC | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |
| Defensa | AAR | | LCB | | BCP | | FM | | DIR | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |
| Desplazamiento Atrás | SLC | | MVR | | HDA | | FAM | | CDE | |
| | F | M | F | M | F | M | F | M | F | M |
| | | | | | | | | | | |

Legend: (M) Male. (F) Female. (ETE) Evaluation of technical execution. (ETA) Tactical Evaluation. (SUC) It is correctly located. (GBR) Strikes with straight arm. (SZE) Pull out the chosen area. (CGB) Correct hit of the ball. (RL) Logical Response. (LCB) Comfortable to the ball. (LMC) Receives midline of body. (PCR) Comfortable position for spike. (CM) Coordination of Movements. (BCP) Comfortable pass ball. (DDS) Displacements when the serve is defined. (CDB) Placed well under the ball. (AMB) Proper handling of the ball. (PAA) Passes with adequate height. (IZR) Indicates the shooting area. (AUP) Adequate last step. (FR90°) Knee flexion H "90°. (ORR) Watch opponent to spike. (GBR) Straight arm hit. (RDP) Spike in the intended direction. (CFB) Position in front of the ball. (SMA) Jumps properly. (CZB) Closes blocking area. (CAM) Correct hand action. (CC) Communication with partner. (AAR) Anticipates finishing action. (LCB) Comes comfortably to the ball. (BCP) Ball is comfortable to pass. (FM) Fluidity of movement. (DIR) Detects the intention of the spiker. (SLC) Correct side exit. (MVR) Keeps an eye on the net. (HDA) Has ability to move in the sand. (AAM) Anticipation for motor action. (CDE) Quality of movement and shipment.

In relation to the blockade, the tactical evaluation will be positive if you achieve good communication with your partner, indicating the area to be covered in your actions. For the defense, the tactical evaluation will be positive, if it is able to detect the intention of the finisher, which allows the anticipation. In the execution of the move back, the tactical evaluation will be positive if the player achieves quickly, a good location that guarantees to reach the ball in a comfortable position, with economy of efforts and make a correct sending.

Standard: It is composed by the result of the technical execution and the tactical evaluation, which gives a unique evaluation of the test, although it could receive positive evaluation of one of the two evaluations. As far as the technical evaluation is concerned, if you make a mistake automatically, you lose the score corresponding to that evaluation, because in order to achieve it you must not make mistakes.

However, for the coach and the evaluators, it is clear where the player's difficulty is in the technical execution. As shown in table #2, it is possible to obtain the individual result of each player and of the team by sex, as well as the total evaluation of the players by provinces, being able to identify the individual and collective difficulties that will allow the coach the feedback for the training process, and to work in the solution of the technical-tactical difficulties, presented by their players. In this sense, the evaluators leave recommendations to the coaches of the provinces on aspects that should be improved with the future work. (Chart 2)

Table 2. - Summary of evaluation in the technical-tactical test for beach volleyball players in the initiation.

| Evaluación de los jugadores de la provincia: | | | | | | | | | | |
|--|----------------------|-----|-----|-----|-------|----------------------|-----|-----|-----|-------|
| Elemento Técnico | Femenino /# jugadora | | | | Total | Masculino /# jugador | | | | Total |
| | (1) | | (2) | | | (1) | | (2) | | |
| | ETE | ETA | ETE | ETA | | ETE | ETA | ETE | ETA | |
| Saque (2 puntos) | | | | | | | | | | |
| Recibo (2 puntos) | | | | | | | | | | |
| Pase por arriba (4 puntos) | | | | | | | | | | |
| Remate (5 puntos) | | | | | | | | | | |
| Bloqueo (3 puntos) | | | | | | | | | | |
| Defensa (2 puntos) | | | | | | | | | | |
| Desplazamiento atrás (2 puntos) | | | | | | | | | | |
| Puntos por Jugador | | | | | | | | | | |
| Puntuación total de las duplas | | | | | | | | | | |
| Recomendaciones a la provincia: | | | | | | | | | | |

Legend: (ETE) Evaluation of technical execution. (ETA) Tactical Evaluation.

The test is conceived, considering the specific characteristics that identify beach volleyball, of the school category, that is to say, it considers the internal logic of its game and the motor structure of the action. In the exercise that the players will carry out, it corresponds to the characteristics of the actions and respects the internal logic of the game. The fact that they determine the court in which they will perform the activity is due to the fact that, at the moment of the competition, the players have to have total independence to develop their actions and make their own decisions. This is an indication for the coach and the evaluators of the players' strengths, as they will always seek to execute the actions on their strongest side.

In the test, opposing players participate as a way to bring it closer to the reality of the game. Under the same precept, the teammate participates, who is also evaluated in the pass and block. The coach is actively involved in the performance of the test, because he is the one who conceives the preparation for the competition. The fact of carrying out the spike directed to a player and looking for free spaces, obeys to the characteristics of the technical-tactical foundation, because in the development of a match it is spiked from the tactical point of view, looking for directing the ball to a

specific player or looking for the spaces discovered in the opposite terrain. This analysis starts from the internal logic of beach volleyball.

It evaluates the ability in the displacements, fundamentally when it is carried out behind, since this is the most difficult to carry out and it becomes essential to have a high dominion of the same one. A good displacement means guarantee in game to reach successfully difficult balls, with rapidity and economy of effort. The player is required to give a logical explanation of his decision to serve, since he must learn that to execute the serve action is not to hit the ball for hitting it, but there must be an analysis of the situation that leads to a reasoned intention to search for the point. The execution of the spike, pass and block is given a higher score, because they are the most difficult actions to dominate by the players at this level.

The conceived test has the following characteristics that identify it:

- It considers the indissoluble union between technique and tactics in the beach volleyball game.
- Not only the technical aspect is evaluated, but also the tactical expression is evaluated according to the technical action carried out.
- It allows coaches to determine the main deficiencies of each player and the team, independently.
- It involves the coach in the evaluation of his players, as he is the one who must prepare them for the competition.
- Very valuable information is obtained, which must necessarily form part of the training of the players according to the future eradication of the presented deficiencies.
- It is possible to make more precise individual and collective evaluations of the teams, in order to have reference values in the preparation.
- The development of the player in his individual actions and in the relationship with his teammate is valued.

After the construction of the test, the process of checking its theoretical validity began. The specialists agreed that the proposed test is relevant and declare that it is of great importance for the future work of this sport in the country. They recognized that its formal and structural quality parameters improve the way of evaluating the technical and tactical development of the beach volleyball player in his initiation. They proposed that it has a great practical utility, because it meets the requirements to be used as an element of the evaluation of the pedagogical objectives in the JENAR. In order to continue perfecting the test, they recommended submitting it to a more rigorous validation process, based on quality criteria: reliability and level of information.

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