



## MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

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## TECHNOLOGY FOR ANALYZING THE TECHNIQUE OF THROWING THE BALL AT THE GOAL BY HANDBALL PLAYERS IN COMPETITIVE CONDITIONS

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### ABOUT ARTICLE

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**Abstract:** This article examined the training and training process of handball players of the "OKMK" team of the region of Toshkent participating in the higher league. Recommendations were developed to improve Test scores and the level of physical fitness of handball players.

## **Introduction**

Today, the primary factor in promoting sports, especially among youth, in our country, regions, and district cities is the creation of favorable conditions. At the current stage of sports development, we observe characteristics that significantly influence the athlete development process, compelling coaches and athletes to strive for new, increasingly complex tasks and assignments, and to seek the most sophisticated forms of organizing the training process. To date, the level of modern handball development is characterized by performing the vast majority of game actions with high speed and precision under conditions of limited space and time [1].

Research Objective: To analyze the technical actions of throwing the ball at the goal by teams participating in the Republic of Uzbekistan Handball Championship. Based on identified shortcomings, to implement adjustments and improvements in the training process of the teams.

To achieve the above objective, the following tasks were identified and implemented:

1. Study the training process of the “OKMK” team from Tashkent Region participating in the Premier League.
2. Monitor the technical actions of throwing the ball at the goal during the games of the III round in 2024.
3. Begin implementing changes and adjustments to the training process of the “OKMK” team based on shortcomings identified after the III round.
4. Summarize the research results and provide recommendations aimed at improving the technique of throwing the ball at the goal.

Research Object: The technology for analyzing the technique of throwing the ball at the goal by handball players of the “OKMK” team from Tashkent Region in competitive conditions.

## **Materials and methods**

The research was conducted in three stages over the period of 2024–2025.

First Stage: In September 2024, the objectives of pedagogical experiments were studied, focusing on the standards for improving the technical and tactical skills of handball players during training and competitions. To this end, an experiment was conducted based on the analysis of games in the Premier League of the Uzbekistan National Championship.

Second Stage: In November 2024, the results were obtained by monitoring the technical actions of throwing the ball at the goal during the competitive activities of the “OKMK” team. At this stage, the results obtained during the research were analyzed, the technical actions of throwing the ball at the goal by handball players were evaluated, and practical recommendations were provided.

Third Stage: In March 2025, the final stage of the research was conducted during the first round of the Uzbekistan Championship in Tashkent. The obtained results were compared with those from previous stages, and conclusions were drawn.

#### Exercises to Improve the Technique of Throwing the Ball at the Goal

These exercises not only enhance technique but also improve quick decision-making, coordination, and accuracy.

##### 1. Throwing in Dynamic Situations (Fast Break)

Objective: Practice accurate throwing while moving quickly.

Procedure:

- o Three attackers and two defenders are on the court.
- o Attackers perform a fast counterattack.
- o The attacker’s task is to deceive the goalkeeper and throw the ball at the goal while in motion.

##### 2. Throwing Over Obstacles (With Defenders)

Objective: Develop the technique of throwing over defensive obstacles.

Procedure:

- o Defenders or artificial obstacles (cones, balls) are placed.
- o The player moves and throws at the goal from behind the obstacle.

- o The ball must be aimed primarily at the corners of the goal.

### 3. One-on-One Exercise with the Goalkeeper

Objective: Learn the technique of throwing based on the goalkeeper's movements.

Procedure:

- o Each player faces the goalkeeper in a 1x1 situation.
- o The player approaches the goal from various angles and throws the ball.
- o Emphasis is on deceiving the goalkeeper and varying the direction of the shot.

### Results

**The effectiveness of the technical actions in attack recorded by "OKMK" handball players in three games**

**Figure 1**



Analyzing the above figure briefly, the effectiveness of the right wing player's throws at the goal was 68% (including throws from 6 meters). The right half-back player's throw effectiveness was 51.6%, the center player's throw effectiveness was 61.3%, the left half-back player's throw effectiveness was 60%, the left wing player's throw effectiveness was 58%, and the pivot player's throw effectiveness was 46%.

During our research, to enhance the effectiveness of the "OKMK" team's technical actions in throwing at the goal and to enable them to demonstrate more effective gameplay, we incorporated the following set of exercises into the team's training program.

In addition, specialized group and individual training sessions focused on the handball players' physical preparation, group and individual sessions on technique and tactics, and two-sided games were conducted. Regular control tests were also held consistently.

The effectiveness of the technical actions of throwing the ball at the goal by the "OKMK" team in competitive conditions was re-evaluated and comprehensively analyzed during the first round matches of the Uzbekistan Championship, as part of the 2023 calendar plan of the Uzbekistan Handball Federation. The results are as follows (Table 2).

#### **Effectiveness of the technical actions of highly skilled handball players**

**Figure 2**

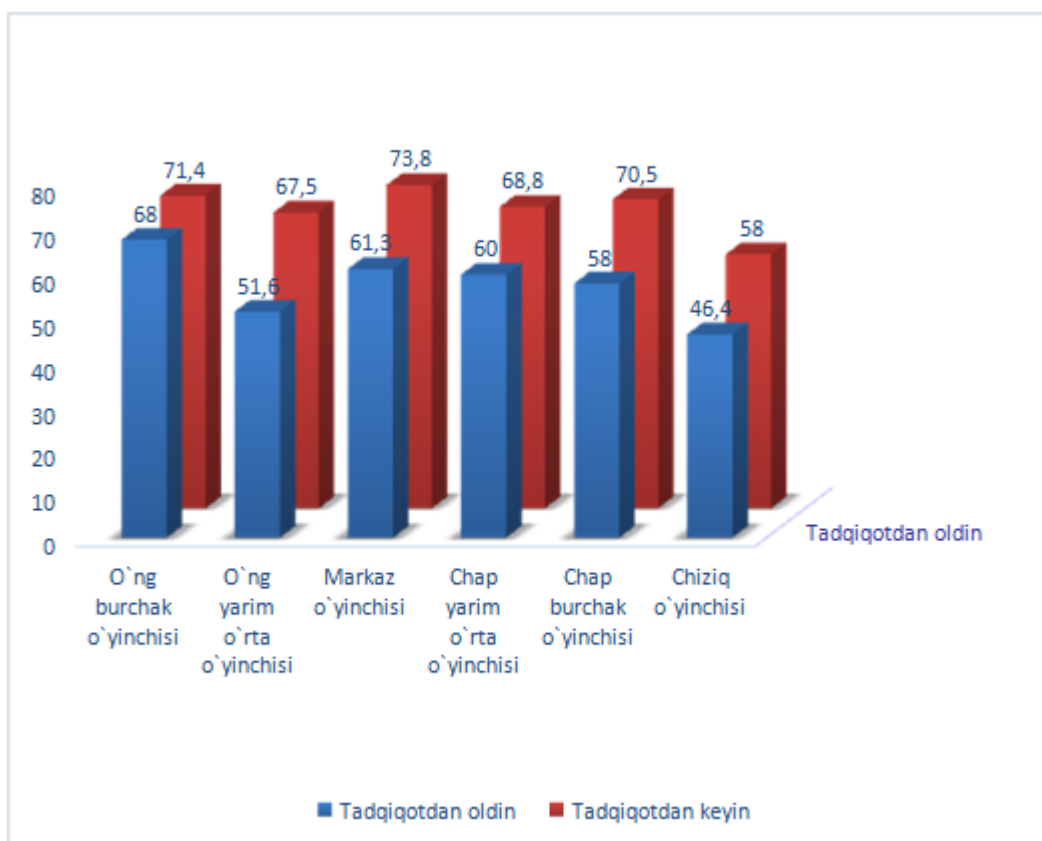


## Discussion

Briefly analyzing the above table, the effectiveness of the right wing player's throws at the goal was 71.4% (including throws from 6 meters). The right half-back player's throw effectiveness was 67.5%, the center player's throw effectiveness was 73.8%, the left half-back player's throw effectiveness was 68.8%, the left wing player's throw effectiveness was 70.5%, and the pivot player's throw effectiveness was 58%. When comparing the recorded results, it can be observed from the table that there is a significant improvement in effectiveness after the study.

## Results of the "OKMK" team handball players before and after the study

Figure 3



## Conclusion

The research was conducted with the “OKMK” team handball players, and their technical actions of throwing the ball at the goal were monitored and the results were compared.

In the first round of the Premier League games of the Uzbekistan Championship planned for 2024, we completed the final stage of our research with the “OKMK” team. When comparing the results obtained at the beginning of the study, it can be observed that the effectiveness of the right wing player’s technical actions in throwing at the goal increased by 3.4%, the right half-back player’s by 16.5%, the center player’s by 12.5%, the left half-back player’s by 8.8%, the left wing player’s by 20.5%, and the pivot player’s by 11.6% after the study.

The research results indicate that, as a result of the exercises applied during training, the technical-tactical preparation of the “OKMK” team’s pivot player in attack improved

compared to pre-study indicators. The effectiveness of the pivot player's technical-tactical actions in attack was 73.1% before the study, and it reached 77.4% after the study. When comparing these results, it can be seen that the effectiveness increased by 4.3% after the study.

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Table 1

| №  | Technical-tactical actions                 | Positioning of players by role |     |     |                        |     |     |               |     |     |                       |     |     |                  |     |     |              |     |     |
|----|--|--------------------------------|-----|-----|------------------------|-----|-----|---------------|-----|-----|-----------------------|-----|-----|------------------|-----|-----|--------------|-----|-----|
|    |  | Right wing player              |     |     | Right half-back player |     |     | Center player |     |     | Left half-back player |     |     | Left wing player |     |     | Pivot player |     |     |
|    | Performed action                           | ubh                            | abh | nbh | ubh                    | abh | nbh | ubh           | abh | nbh | ubh                   | abh | nbh | ubh              | abh | nbh | ubh          | abh | nbh |
| 1. | Jumping throw with one step                | 3                              | 2   | 1   | 6                      | 4   | 2   | 12            | 7   | 5   | 10                    | 6   | 4   | 4                | 2   | 2   | 6            | 3   | 3   |
| 2. | Jumping throw with three steps             | 13                             | 10  | 3   | 9                      | 5   | 4   | 9             | 6   | 3   | 13                    | 9   | 4   | 17               | 12  | 5   | 4            | 1   | 3   |
| 3. | Supported throw                            | 2                              | 1   | 1   | 7                      | 3   | 4   | 10            | 6   | 4   | 8                     | 3   | 5   | 6                | 3   | 3   | 6            | 4   | 2   |
| 4. | Supported throw while leaning to the right | 4                              | 2   | 2   | 4                      | 1   | 3   | 6             | 4   | 2   | 9                     | 6   | 3   | 4                | 2   | 2   | 7            | 3   | 4   |
| 5. | Supported throw while leaning to the left  | 3                              | 2   | 1   | 5                      | 3   | 2   | 7             | 4   | 3   | 5                     | 3   | 2   | 3                | 1   | 2   | 5            | 2   | 3   |
| 6. | Total                                      | 25                             | 17  | 8   | 31                     | 16  | 15  | 44            | 27  | 17  | 45                    | 27  | 18  | 34               | 20  | 14  | 28           | 13  | 15  |
| 7. | Overall effectiveness                      | 68                             |     |     | 51,6                   |     |     | 61,3          |     |     | 60                    |     |     | 58               |     |     | 46,4         |     |     |

**Note:** Effectiveness is shown as a percentage, where ubh - total actions performed, abh - accurately performed actions, nbh - inaccurately performed actions.

**The effectiveness of the technical actions in attack recorded by “OKMK” handball players in three games (after the research)**

*Table 2*

| №  | Technical-tactical actions                        | Positioning of players by role |     |     |                        |     |     |               |     |     |                       |     |     |                  |     |     |              |     |     |
|----|---|--------------------------------|-----|-----|------------------------|-----|-----|---------------|-----|-----|-----------------------|-----|-----|------------------|-----|-----|--------------|-----|-----|
|    |   | Right wing player              |     |     | Right half-back player |     |     | Center player |     |     | Left half-back player |     |     | Left wing player |     |     | Pivot player |     |     |
|    | Performed actions                                 | ubh                            | abh | nbh | ubh                    | abh | nbh | ubh           | abh | nbh | ubh                   | abh | nbh | ubh              | abh | nbh | ubh          | abh | nbh |
| 1. | <b>Jumping throw with one step</b>                | 4                              | 3   | 1   | 8                      | 6   | 2   | 12            | 9   | 3   | 10                    | 7   | 3   | 4                | 2   | 2   | 6            | 4   | 2   |
| 2. | <b>Jumping throw with three steps</b>             | 15                             | 14  | 1   | 12                     | 9   | 3   | 10            | 8   | 2   | 13                    | 10  | 3   | 17               | 14  | 3   | 7            | 5   | 2   |
| 3. | <b>Supported throw</b>                            | 3                              | 2   | 1   | 8                      | 6   | 2   | 8             | 6   | 2   | 8                     | 5   | 3   | 6                | 4   | 2   | 6            | 4   | 2   |
| 4. | <b>Supported throw while leaning to the right</b> | 3                              | 2   | 1   | 4                      | 1   | 3   | 7             | 4   | 3   | 9                     | 6   | 3   | 4                | 3   | 1   | 7            | 3   | 4   |
| 5. | <b>Supported throw while leaning to the left</b>  | 3                              | 1   | 2   | 5                      | 3   | 2   | 5             | 4   | 1   | 5                     | 3   | 2   | 3                | 1   | 2   | 5            | 2   | 3   |
| 6. | <b>Total</b>                                      | 28                             | 20  | 6   | 37                     | 25  | 12  | 42            | 31  | 11  | 45                    | 31  | 15  | 34               | 24  | 10  | 31           | 18  | 13  |
| 7. | <b>Overall effectiveness</b>                      | <b>71,4</b>                    |     |     | <b>67,5</b>            |     |     | <b>73,8</b>   |     |     | <b>68,8</b>           |     |     | <b>70,5</b>      |     |     | <b>58</b>    |     |     |

**Note:** Effectiveness is shown as a percentage, where ubh - total actions performed, abh - accurately performed actions, nbh - inaccurately performed actions.

