

STUDY REGARDING THE FREQUENCY AND CONTRIBUTION OF THE CENTRAL BACK TECHNICAL-TACTICAL ACTIONS IN ATTACK, FOR THE REPRESENTATIVE HANDBALL SCHOOL TEAM

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Abstract: This research tried to bring concrete data that could beneficially influence the quality and the contribution of the central back players' attack actions.

In this sense, the following hypotheses have been formulated, on which this study is based:

In the current team handball, the contribution of central back's technical-tactical actions during the National School Championship could have an importance that only the competition can highlight.

Presumably, the study of frequency and contribution of the central back technical-tactical actions in attack, for the representative handball school team could lead to the completion of the game models for the representative middle school handball teams.

From the analysis of the results, one can see that each team's central back frequently use certain technical-tactical actions, in other words, each team has a certain characteristic in regards to the central backs' play. In this sense, one can say that the play of certain teams studied here is based very much around the central backs.

The official competition game is the most reliable source for real data regarding the contribution of the central back's technical-tactical actions. The evolution of team handball, noticeable mostly during the official competitions, is characterized mainly by the emergence of several new technical-tactical actions that permanently constitute the premises for the creation of new game models for all of the players, including the central backs.

Keywords: handball, school representative, central back, contribution

1. Introduction

This research tried to bring concrete data that could beneficially influence the quality and the contribution of the central back players' attack actions.

There is a general orientation to permanently take into consideration these particularities, selecting the most effective exercises, establishing the proportions of the effort, deciding the training stages, etc. (Alexandru E., 2003).

In this sense, this paper comprises information regarding the contributions of the player specializing as a central back.

Through its contents, this research advocates the following:

- the creation of a balance between theory and practice;
- a change in the thinking and acting of the teachers training the school representative team;
- the promotion of an instructional technology that would ensure the quality and contribution of the central backs' instruction (Şufaru C., 2006).

We believe that the practical application of this type of orientations could constitute an important step in increasing the performance skills in team handball.

Through this, we want to bring a small contribution to the optimization of the central back's training process, being a well-known fact that the main assessment criterion for a player's value is his contribution during a game, positive results during competitions, and how many of the set goals are reached.

2. Materials and Methods

Aims and tasks of the research

The research aimed to assess the effectiveness of the exercises structures used to model the pupils specialized in playing as central backs, following a set of goals, such as:

- Consulting the specialized literature for establishing the currency of this theme and the level of research in this field;
- Knowing, by studying the bibliography, and by discussing with the coaches and testing several players, how to choose the group of subjects for this research.
- Selecting and systematizing several effective technical-tactical actions that would lead to a quick progress resulting in increased game actions of the central back, which would lead to reaching the set aim and goals;
- Recording and interpreting the results to highlight the frequency and contribution of the central backs, in their dynamics;

- Emphasizing the recorded results and draw conclusions after conducting the study.

The following hypotheses have been formulated, on which this study is based:

In the current team handball, the contribution of central back's technical-tactical actions during the National School Championship could have an importance that only the competition can highlight;

Presumably, the study of frequency and contribution of the central back technical-tactical actions in attack, for the representative handball school team could lead to the completion of the game models for the representative middle school handball teams.

The research was conducted over the course of one year, 2012-2013, mainly at: the gymnasium of School no. 2, Bacau, where we recorded official games during the National School Handball Championship, the area schools phase.

The research methods used in this study were: the study of the professional literature, the observation method, the modeling method, the inquiry method, the analysis based on video images of physical activities, the statistical-mathematical method, and the analysis of the efficiency of the training process.

Research subjects

This research studied the progress of the male players of the representative handball team that have played as central backs, namely:

Table 1. The observed players

No.	Initials	Team	Position
1.	CG	School no. 10, Bacau	Central Back
2.	ŞA	School no. 3, Adjud	Central Back
3.	BM	«Ştefan cel Mare» National College, Bacau	Central Back
4.	FV	School no. 2, Bacau	Central Back
5.	AI	School no. 10, Bacau	Central Back
6.	FA	«Ştefan cel Mare» National College, Bacau	Central Back
7.	BA	«Ştefan cel Mare» National College, Bacau	Central Back
8.	BV	School no. 2, Bacau	Central Back

The technical-tactical actions recorded in

this study

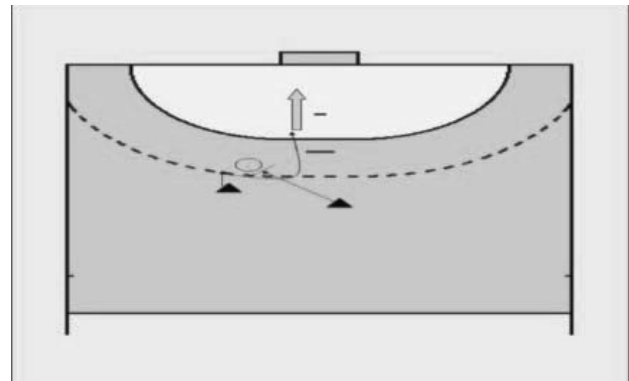


Figure 1. Technical-tactical action 1

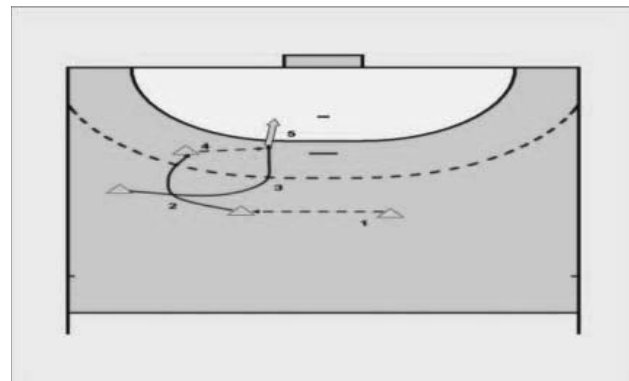


Figure 2. Technical-tactical action 2

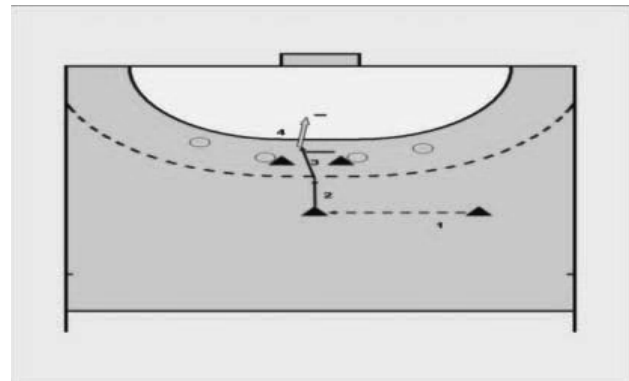


Figure 3. Technical-tactical action 3

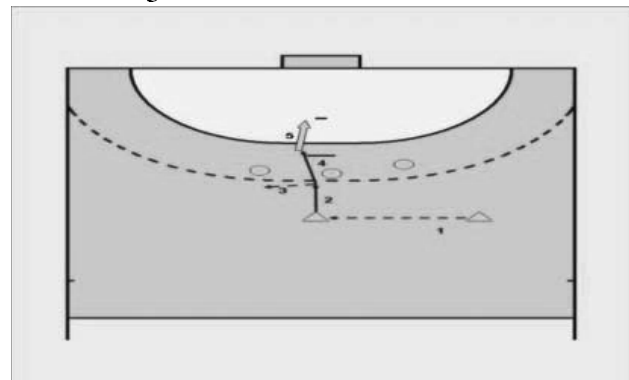


Figure 4. Technical-tactical action 4

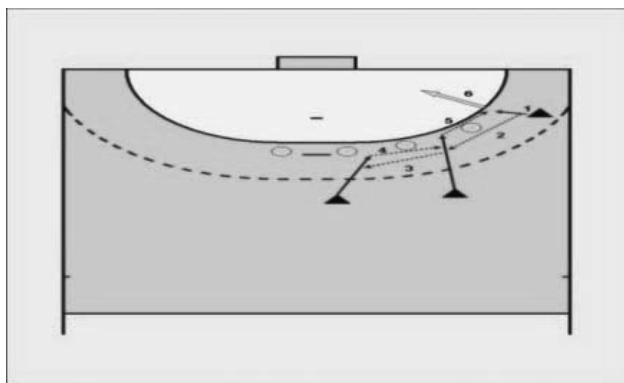


Figure 5. Technical-tactical action 5

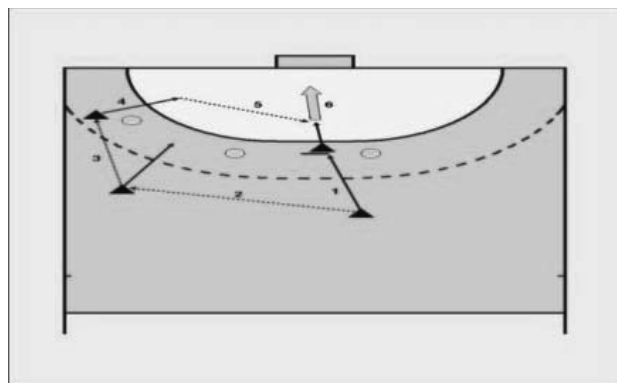


Figure 9. Technical-tactical action 9

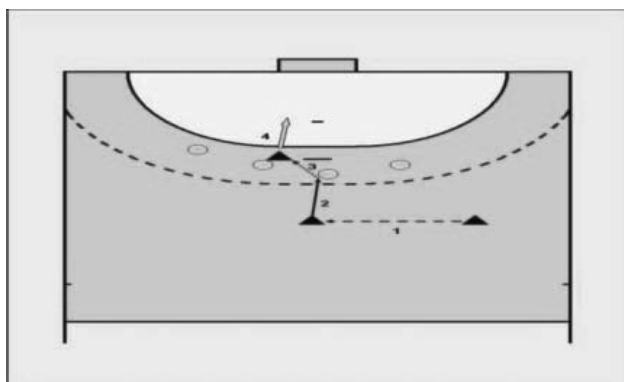


Figure 6. Technical-tactical action 6

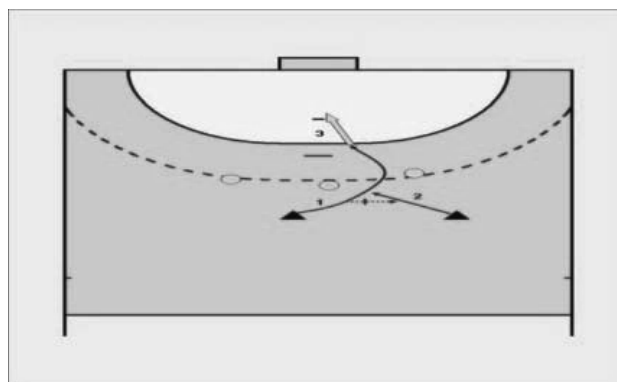


Figure 10. Technical-tactical action 10

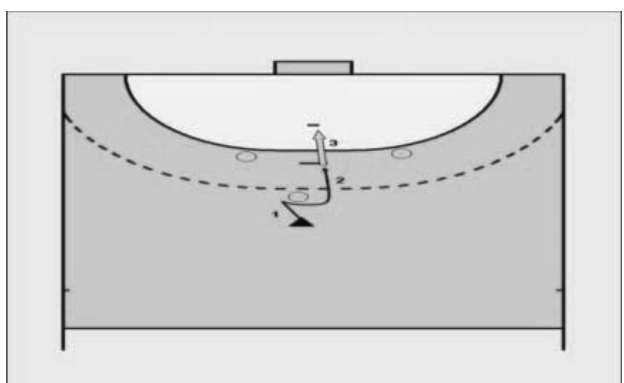


Figure 7. Technical-tactical action 7

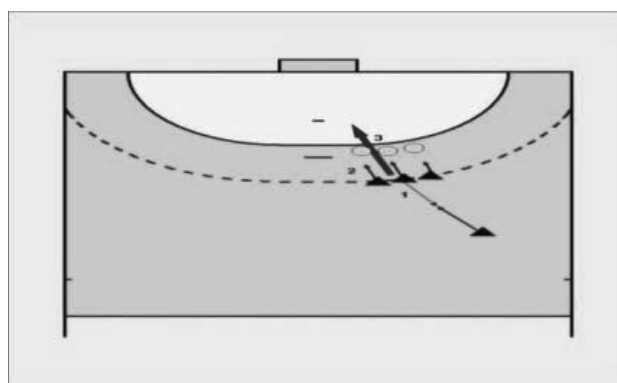


Figure 11. Technical-tactical action 11

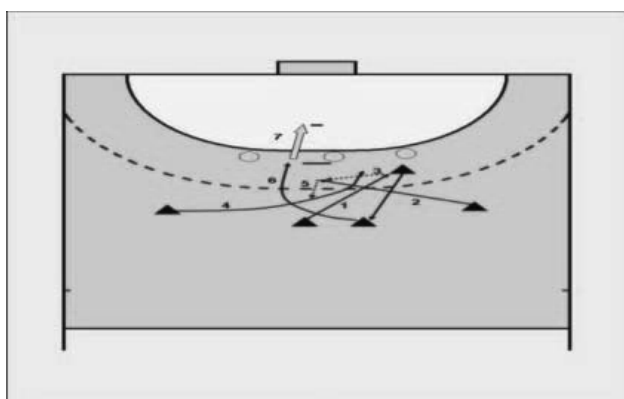


Figure 8. Technical-tactical action 8

3. Results

An example of recording the frequency of technical-tactical actions used by the central backs is presented next, recorded during official games. Based on these recordings, the frequency of each exercise structure necessary to model the training was calculated and established.

Example:

The game between School no. 10, Bacau, and the "Ștefan cel Mare" National College, Bacau

Final result: 23-22

The frequency of the technical-tactical actions performed by the School no. 10 central back

Total number of technical-tactical actions: 27

Table 2. The recorded technical-tactical actions – frequency coefficient

Technical-tactical action (Technical-tactical A.)	No. of actions	No. of goals	Frequency coefficient (%)
Technical-tactical A. 1	7	2	25,92%
Technical-tactical A. 2	2	0	7,40%
Technical-tactical A. 3	4	1	14,81%
Technical-tactical A. 4	2	1	7,40%
Technical-tactical A. 5	1	0	3,70%
Technical-tactical A. 6	0	0	0
Technical-tactical A. 7	2	1	7,40%
Technical-tactical A. 8	3	1	11,11%
Technical-tactical A. 9	1	0	3,70%
Technical-tactical A. 10	2	0	7,40%
Technical-tactical A. 11	3	1	11,11%

Recorded subjects:

CG and FA= School no. 10, Bacau

BA = The “Ștefan cel Mare” National College, Bacau

In order to calculate the frequency percentage, the following formula was elaborated:

$$\text{Frequency percentage} = \frac{\text{Number of Tech.-Tac. A. } \square \times \square}{\square} \times 100$$

After analyzing the data recorded and presented in the tables above, a ranking was established, for the top 4 technical-tactical actions, from the viewpoint of frequency, used in this game by the central backs of the two teams:

Table 3. Frequency of the technical-tactical actions recorded during the game between School no. 10, Bacau, and the “Ștefan cel Mare” National College, Bacau

Frequency School no. 10, Bacau	Frequency «Ștefan cel Mare» National College, Bacau
1. A. Th- Ta 1 = 25,92%	1. A. Th-Ta 1 = 19,04%
2. A. Th- Ta 3 = 14,81%	2. A. Th-Ta 7 = 14,28%
3. A. Th- Ta 8, 11 = 11,11%	3. A. Th-Ta 3, 4, 6, 8, 11 = 14,28%
4. A. Th- Ta 2,4,7,10 = 25%	

From the analysis of the results, one can see that each team's central back frequently use certain technical-tactical actions, in other words, each team has a certain characteristic in regards to the central backs' play. In this sense, one can say that the play of certain teams studied here is based very much around the central backs.

We believed it was necessary to present statistically the usage percentage of the technical-tactical actions used by each team throughout every recorded game.

For the next step of the research, we aimed to study, from a statistical-mathematical standpoint, the contribution of the technical-tactical actions recorded throughout this research.

In order to calculate the contribution of each technical-tactical action of the central backs (during the 5 recorded games), we started from the total number of goals scored by the central backs divided by the total number of technical-tactical actions of the central backs, using the formula:

$$\text{Total contribution percentage} = \frac{\text{Total no. of goals scored from the technical tactical action } \square \times \square \times 100}{\text{The total number of } \square \times \square \text{ technical-tactical actions used in all of the games}}$$

Global contribution of the central backs' technical-tactical actions

Recorded games: 5

Recorded teams: 6

No. of recorded central backs: 8

Total number of goals scored by the central backs: 66

Total no. of central backs' technical-tactical actions: 98

Total number of goals scored by the central backs: 66

Total no. of goals from all of the recorded games: 251

$$\text{Total contribution} = \frac{66 \times 100}{251} = 26.29\%$$

From the previously presented data, one can rank the top technical-tactical actions used by the central backs during the recorded official games that can be used as exercise structures for an adequate modeling for the training of the central backs of the school representative team.

One can see clearly that the first three technical-tactical actions that had a larger contribution,

used by the central backs throughout the games recorded during the area tournament of the National School Championship, were the technical-tactical actions no. 1, 2, and 5.

These simple actions that are used very much throughout a game by most central backs, together with other presented game actions, can constitute the most important structures of exercises to model the training of these players.

Conclusions

The recording of the frequency and contribution of the technical-tactical actions used during the official competition games by the central back allowed an adequate analysis that supports the initial hypotheses, leading to the following conclusions:

The official competition game is the most reliable source for real data regarding the contribution of the central back's technical-tactical actions. The evolution of team handball, noticeable mostly during the official

competitions, is characterized mainly by the emergence of several new technical-tactical actions that permanently constitute the premises for the creation of new game models for all of the players, including the central backs.

From the concrete development of the official games recorded during this research, 11 basic technical-tactical actions resulted, with scoring, performed by the central back, individually, or in collaboration with the back or with the pivot.

This research tried to bring concrete data that could beneficially influence the quality and the contribution of the central back players' attack actions.

Thus, this research was able to confirm the initial hypothesis, meaning that the study of frequency and contribution of the central back technical-tactical actions in attack, for the representative handball school team really did lead to the completion of the game models for the representative middle school handball teams.

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