Trakia Journal of Sciences, No 3, pp 314-317, 2013

Available online at:
http://www.uni-sz.bg

ISSN 1313-7069 (print)
ISSN 1313-3551 (online)

Original Contribution

ANALYSES OF THE EFFICIENCY GAME IN ATTACK AND DEFENSE AT YOUNG FEMALE HANDBALL PLAYERS DURING THE COMPETITION

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ABSTRACT

The purpose of this study was to observe the efficiency of young handball female players, members of a school team, during a competition. Attack efficiency is based on the number of goals scored. The most efficient players were at the centre and left backcourt position with a total of 29 positive reactions during the game. For the inefficiency during the attack the important elements were: the missed shots saved shots (for the goalkeeper) and lost balls. The players at the right wing positions and pivot players contributed most to the inefficiency during attack. Game efficiency in the defence is based on winning the ball, forbidden body contacts and blocking the shots on the goal. The goalkeeper with 24 saved shots and the player at the central defence position were the most efficient players in defence.

Key words: game efficiency, young female handball players, handball

INTRODUCTION

For the purpose of observing the efficiency of young female school team handball players, the analysis of some handball elements during the first phase of the competition (the first three games) at the Zagreb primary school handball championship for female pupils' grades 4-6 has been made. It is a well-known fact that player's (child's) growth is characterised by certain characteristics during growth. Between the ages 4-7 child's motor abilities rapidly increase, between the ages 8-10 there is an increased interest in ball games, while between 11-12 attention and concentration increase and so does the general interest in sports, handball being no exception (1). The school handball team whose game has been analysed in this study belongs to the category characterised by the earlier mentioned elements (increased interest in sports, increased attention and concentration). As this paper focuses on 11-12 year old female handball players (5th and 6th grades of a primary school); it was possible to conduct a simplified analysis of their efficiency by observing the basic elements of handball adequate to their age and level of handball technique through situational efficiency (2) during the game. Due to an increased interest, attention and concentration in this age period, an assumption can be made that situational and competitive conditions would not be too distracting a factor during the game, so the "image" of the team would be more realistic during the match than in the course of training. Accordingly, there is a characteristic flow state (3) during a competition, that is enjoying a game is manifested through several elements of the "immersion in the activity" (4), such as a desire to experience the feeling caused by the competition, as well as the pleasure of experiencing a competition (5). Therefore, the enjoyment in a game is possible even in competitive conditions, however, the result must neither be the top priority, nor entirely irrelevant. Enjoying a game (even in competitive conditions) may be increased along with other factors (motivation) and anthropometric – motor

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– functional abilities of young successful sportswomen whose model is defined by very satisfying motor – functional abilities (6). Their very satisfactory competences, as well as good preparation, allow them to enjoy in a competition, rather than to see it as an encumbrance (stress). The purpose of observing certain elements was to show ”strong" and ”weak" spots of a handball team during the game, and based on the data, perform a correction process of training to improve game efficiency. The observation was performed during the first three games in the early stage of the competition.

RESEARCH METHODS

The research was conducted on a sample of 14 young female handball players from one Zagreb primary school, aged 11 to 12 (5^{th} and 6^{th} grade) who were training regularly three times a week. During the games elements of handball were observed. The games were played from 8 March to 12 April 2008.

Variables

The elements of offensive and defensive play in handball were analysed. The choice of analysed elements was modified according to Rogulj, Foretić (2). The results are displayed using descriptive statistics.

Table 1. *The elements of offensive and defensive play in handball*

Elements of offensive play	
Efficiency of offensive play	**Inefficiency of offensive play**
Scoring a goal	Fault during attack
Provoking penalty throw	Touching the goal-area-line
Provoking one minute out	Step mistake
Assistance for scoring	Ball leading mistake
	Missed shot (goalkeeper save)
	Lost ball
	Wrong pass ball

Elements of defensive play	
Efficiency of defensive play	**Inefficiency of defensive play**
Interrupted pass	7- meter throw
Blocking a shot	One minute out
Obstructing an opponent with the body	
Goalkeepers defence	

RESULTS AND DISCUSSION

Table 2. *Offensive play efficiency*

	Left wing			Left backcourt			Centre backcourt			Right backcourt			Right wing			Pivot		
	Matches			Matches			Matches			Matches			Matches			Matches		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Scoring a goal	2	1	1	5	2	4	7	3	5	2	1	2	-	1	1	1	1	3
Provoking a penalty throw	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Provoking one minute out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Assistance	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
Match results	**1st match (17 : 2) victory, 2nd match (9 : 9) tie score , 3rd match (16 : 6) victory**																	

The offensive play efficiency is based on the element of goal-scoring which is understandable because it is the element which directly determines the winner of the game and the aim of the game is to score as many goals as possible (score every time they have the attack). Also, the research participants are very young female handball players who, at this level of adoption of the technical and tactical elements find it easiest to finish the attack with a shot on the goal. The results given in **Table 1** show that the main players are the central and left backcourt players, who have contributed to the offensive play efficiency with a total of 29 positive reactions during the matches. Players in other positions were equally effective during the offensive play (5 to 6 positive reactions). After the analysis of the player's position, the right wing position was shown to be a "weaker" point during the game. Players in that position contributed to the efficiency only twice, while at the same time, they made seven mistakes that contributed to offensive play inefficiency **(Table 2).** The reason can be lack of competitive experience, i.e. insufficient reaction to the demands placed on individual players in that position or poorer individual quality of the players compared to the players in other positions. Therefore, it is necessary to maximise "the work" on gradual greater inclusion of the players in that position in order to gain balance, as well as to increase the team's efficiency during the matches. Also, the efficiency of the pivot players, whose ratio of efficiency and inefficiency is negative, should be improved. Although the assistance data are quite low (only 2 assists), the fact that the team had scored a total of 42 goals, and that 5 goals were scored by the pivot player, it is possible to conclude that, in addition to individual qualities, there is a satisfying level of cooperation which is not clearly displayed here.

Table 3. *Offensive play inefficiency*

	Left wing			Left backcourt			Central backcourt			Right backcourt			Right wing			Pivot		
	Matches			Matches			Matches			Matches			Matches			Matches		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Obstruction in attack	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Stop on the goal area line	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
Steps	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Leading ball mistakes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missed the goal	2	-	-	2	3	2	-	2	1	-	2	-	3	1	1	1	1	1
Lost ball	-	-	-	-	1	-	-	1	-	-	1	-	2	-	-	-	-	1
Wrong pass	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-

Offensive inefficiency was mainly characterised as a goal missed, or as a save made by the opposing team's goalkeeper, followed by a lost ball. Hence, it is necessary, during further training process, to work on the improvement of shot accuracy to increase play efficiency with the precision of a shot. The analysis of offensive inefficiency reveals the right wing and pivot positions to be the "weaker points", as mentioned earlier. The upside is that technical mistakes (foot fault, travelling, mistake in leading the ball) are not responsible for the team's offensive inefficiency, which indicates that this team's players adopted technical knowledge of handball which is, at this age, the top priority of the training process.

The analysis of defensive play elements is based on the element of winning the ball from the opposing team. Most balls were taken by the backcourt position players, more specifically central backcourt player, and accordingly, this is the position with the most faults for the purpose of goal defence. While defending, the team mostly played 5:1 defensive zone, so great engagements were required from the central backcourt. Defensive play efficiency was also contributed by the right backcourt players, mostly by blocking a shot on own goal. Still, the most efficient defensive player was the goalkeeper with a total of 24 saves that is her 14 saves in the second match (when the team played worse than in the other two matches) resulted

with a point, i.e. a tied score. The impression remains that, while playing defence, the players relied on their goalkeeper's abilities very much, so during training it is necessary to increase the total contribution of the players in order to avoid their passivity in defence in the upcoming matches where the opposing teams might be stronger. The upside is that there were not many rough (dangerous) faults for 1 minute out, which indicates that the team was playing fast and agile handball and that, during defence, the aim was to take the ball, rather than to disable the opposing player.

Table 4. *Defensive play efficiency / inefficiency*

Efficiency in defence	Left wing			Left backcourt			Central backcourt			Right backcourt			Right wing			Pivot			Goalkeeper		
Matches	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Winning the ball	1	-	-	-	-	2	5	-	1	1	-	-	1	-	-	-	1	-	-	-	-
Shot block	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	1	-	-	-	-	-
Forbidden body contacts	-	-	-	-	-	-	5	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Goalkeeper saves																			6	14	4
Inefficiency in defence																					
Fault 7 m. throw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fault one minute out	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CONCLUSION

With the aim to increase offensive and defensive play efficiency, the analysis of certain elements at the starting phase of the handball championship in Zagreb for female pupils from 4th to 6th grade of primary school has been made. It was expected that the observation of certain elements of play would point at "strong" or "weak" positions in a handball team during a match. Thus, it was shown that offensive play efficiency is mostly contributed by the element of scoring a goal, and that the greatest contribution is provided by the left and central backcourt players. Offensive play inefficiency was characterised by a missed shot on goal, or with opposing team goalkeeper's save, whilst the greatest ball "consumers" were left backcourt, right wing and pivot players. Defensive play efficiency was based on the element of winning the ball, forbidden body contacts with the purpose to save own goal, and shot block. The special role in defensive play efficiency has been played by the goalkeeper, with a total of 24 defended shots, and the central backcourt player.

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