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Original scientific paper

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THE ANALYSIS OF GAME PERFORMANCE OF GOALKEEPERS IN THE U19 EUROPEAN CHAMPIONSHIPS QUALIFIER MATCHES

THEORETICAL ANALYSIS

Observational analysis of players' physical activity (game activity) focuses on monitoring physical activity during the match. The aim of observation is to get information about the whole content and intensity of physical activity and also to obtain information about typical player's profile characteristics. This information leads to interpretation of physical and physiological demand on player's performance and implication on the training process, too.

We can say that coach causes changes in player's activities and consequently, activities cause changes in game performance. These analyses provide knowledge which improves the quality of managing and planning the training process as well as organising the training practice (Hoek, 1998).

In practice, these analyses will help to understand the casual explanation of real game performance. In addition, they will help understand the normative model of game performance and training process which make concrete intervention and bring the right practical steps into the process (Peráček, Hrnčiarik, Kostolanský, 2008).

Effects of many related factors have impact on the level of game performance (Daniel, 1993) (Hohmann, Brack, 1983).

Many factors significantly affect the game performance and are important for the quality of performance. The different requirements of game regarding various functions of players should be taken into account, too (Bischops, K., Gerards, H., Wallraff, J., 2000). Nowadays functions of players are significantly affected by developing trends (universalism). For this reason, we agree with the idea of Disham, R.K., Washburn, R.A., Schoeller, D. A. (1996), who say that the only specialist in a game is the goalkeeper.

The game skills make up the individual game performance of goalkeeper. The quality of skills reflects the level of goalkeeper's capability of game performance of the team (Konzag, G., 1984).

Majority of analyses focus on top level game performance of adults. These studies pay attention to differences in models of physical activity (game activity) of players involved in various functions, including the goalkeeper in football (Whall, 2001).

AIM OF RESEARCH

The aim of our research is to analyse the chosen aspects of individual game performance of goalkeepers – juniors – in defensive and offensive phase of game during selected U19 European Championships qualifier matches in France.

RESEARCH TASKS

1. To innovate the sheets for analysing the chosen aspects of individual game performance of goalkeepers.
2. To observe game activity, localization and frequency of chosen game performances of goalkeeper in selected European Championships qualifier matches in 2010. Game activities will be indirectly observed by using the graphical record method of DataCoach Manager program 1.25.
3. To compare results with chosen aspects of individual game performance of goalkeepers in senior top level category.

RESEARCH METHODS

The research sample included goalkeepers playing in international U19 European Championships qualifier matches in 2010 (born in 1991):

- England – Finland
- Hungary – Russia
- Slovakia – Norway

Second research sample included two goalkeepers of senior category playing for Spain (I. C.) and (J. L.) Germany in European Championship matches in 2008. They played in monitored match

- Spain – Germany, the finals of European Championship in 2008.

We researched both goalkeepers in all matches, with each of them playing 90 minutes.

To obtain the research data, we used indirect observation – delayed. We monitored the physical strain (game activities) with such choice and number of monitored game characteristics to be the nature and quality of observed game activity provided. Observational analysis of game activities was applied to obtain as comprehensive

information as possible. The obtained information included models of external strain of junior and senior goalkeepers (game activity) – time (frequency) and place of realization (localization).

In our delayed and categorized observation, we used the evaluation of game activity through the chosen game activities of goalkeepers. Particular categories were divided into 5 defensive game activities and into 3 offensive game activities of goalkeepers (Tarkovič, 2000).

Defensive game activities of goalkeepers

- Catching - shoot (CS)
- Punching - shoot (PS)
- Catching - high pass (CHP)
- Punching - high pass (PHP)
- Crossing (run against the ball) (CR)

Offensive game activities of goalkeeper

- Playing by foot (PF)
- Playing by hand (PH)
- Kick from hand (KH)

	First half	Second half	Match
D-CHP			
D-PHP			
D-CS			
D-PS			
D-CR			
Σ DGA			

First half				Second half				Match			
O-PF				O-PF				O-PF			
O-PH				O-PH				O-PH			
O-KH				O-KH				O-KH			
Σ OGA				Σ OGA				Σ OGA			
Σ GA				Σ GA				Σ GA			

Figure 1. Game activities of a goalkeeper in match (1st half, 2nd half, match)

To record required parameters of game activity techniques we used graphical symbol (football ball), which was always located in the place where the game activity was realised. The place of game activity realization is always described with placed abbreviation.

The playground was divided into three sections, where the game activity was evaluated.

Methods of processing and evaluation of data

We used the basic statistical methods of evaluation such as logical methods – induction, deduction, analysis and synthesis.

RESULTS

Game activity analysis of goalkeepers

The goalkeepers touched the ball in the middle part of the penalty area (Fig. 2) the most (120 times). Almost the same number of game activities (41/47) was recorded out of the penalty area and at goal area.

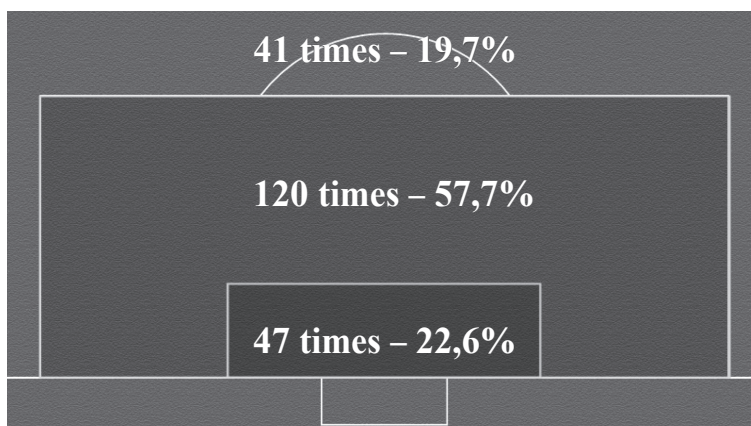


Figure 2. The number of game activities of up to 19 year category of goalkeepers

The major part of goalkeepers' game performance was playing by foot. Goalkeepers used this activity after the pass from teammate, catching the long ball behind the defensive line and when the direct free kick was played. This could be a signal to the coaches to involve keepers into team training practice, and during group or individual practice constantly work to improve keeper's playing by foot. Crossing the ball was played the most when referring to the most played defensive game activity (Fig. 3, 4).

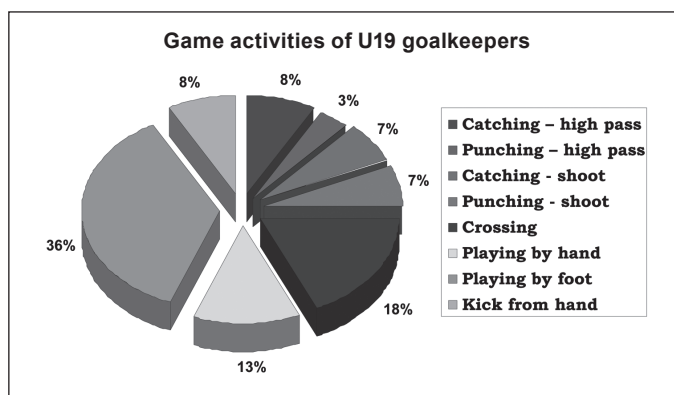


Figure 3. Proportion of game activities of U19 goalkeepers in qualification matches

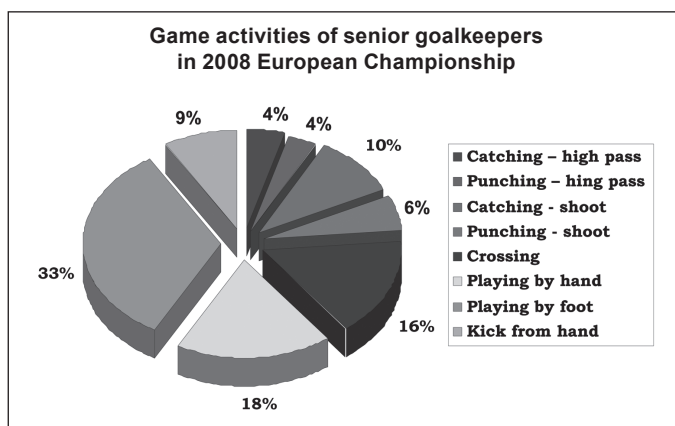


Figure 4. Proportion of game activities of senior goalkeepers in 2008 European Championship

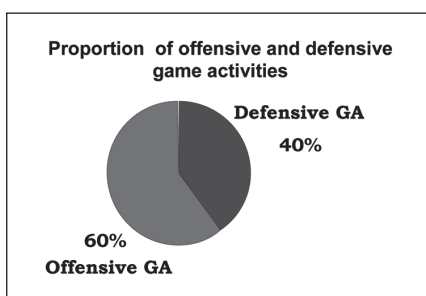


Figure 5. Proportion of GA of U19 goalkeepers

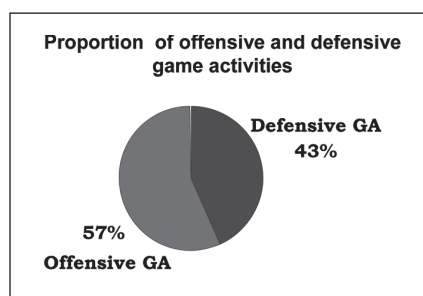


Figure 6. Proportion of GA of senior goalkeepers

We recorded almost the same number of game activities in every 15 minutes (Fig. 5, 6). It means that goalkeepers should maintain concentration at the maximum level every minute of the match. The majority of unsuccessful game activities were recorded in the final part of the match in the category up to 19 year (Fig. 7, 8). It has probably much to do with the loss of the above mentioned concentration of young goalkeepers.

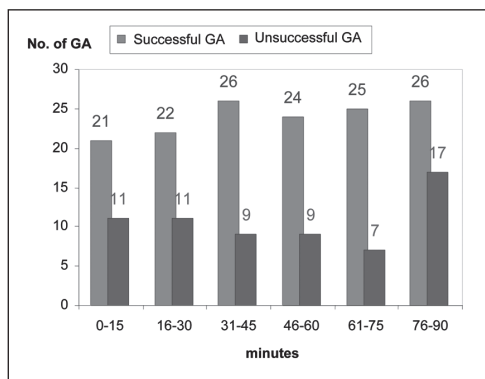


Figure 7. No. of GA in selected 15minute periods of U19 goalkeepers

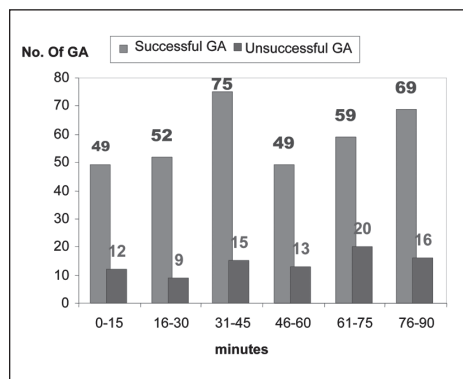


Figure 8. No. of GA in selected 15minute periods of senior goalkeepers

The successfulness of young goalkeepers in the analyzed matches is 69%. Comparing this percentage to game performance of senior goalkeepers, we found out that the younger group reached below-average values. The goalkeepers made mistakes most often in the goal area while solving critical situations and kicking by foot.

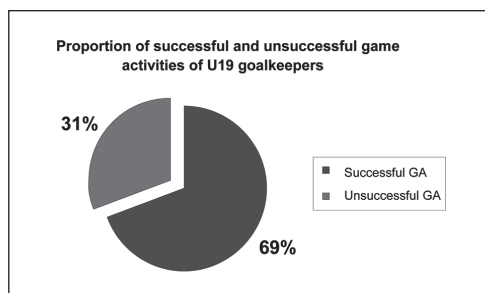


Figure 9. Successfulness of game activities of U19 goalkeepers in the qualification matches

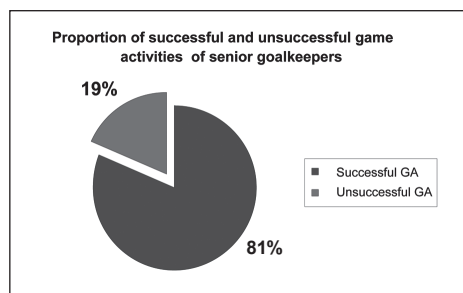


Figure 10. Successfulness of game activities of senior goalkeepers in European Championship matches

The proportionality of monitored game activities varied from the successful realization during the match, too. Senior goalkeepers in the European Championships were successful in 81% on average (Fig. 10). Juniors were successful in 69% (Fig. 9), where the most mistakes were made in playing by foot and crossing the ball.

Comparison of chosen aspects of individual game performance of junior and senior goalkeepers

As can be seen in the following Figures, the difference in game performance of junior and senior goalkeepers is mainly in the quality of realised offensive game activities (Fig. 12). The results were the same comparing the categories of goalkeepers in defensive game activities (Fig. 11).

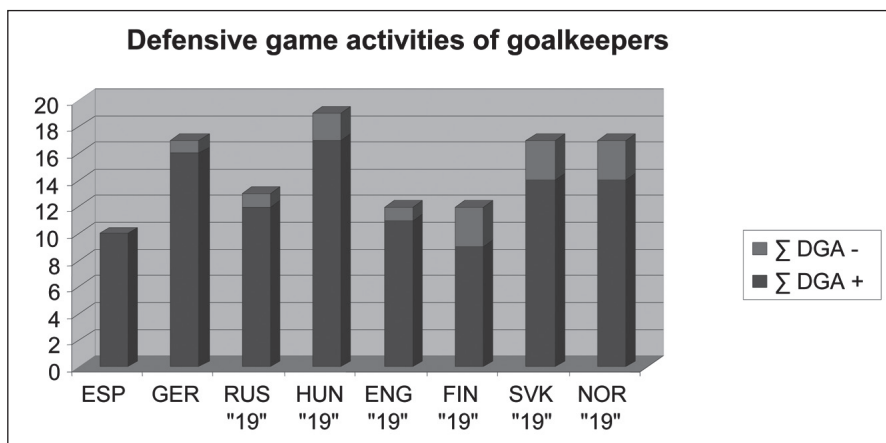


Figure 11. Comparison of successful and unsuccessful defensive game activities of U19 and senior goalkeepers

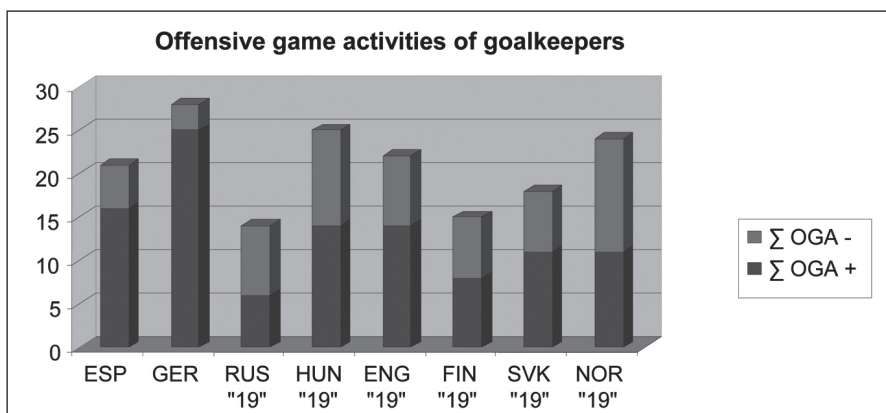


Figure 12. Comparison of successful and unsuccessful offensive game activities of U19 and senior goalkeepers

The successfulness of playing by foot as one individual game activity was for both senior goalkeepers higher than for junior goalkeepers, irrespective of the final match result (Fig. 12, 13). We also found similar results in the previous researches and analyses of top level senior goalkeepers (Peráček, Hrnčiarik, Kostolanský, 2008). The results of senior goalkeepers in our research were better, despite exogenous deformational factors affecting the match in the final tournament of the European Championship in 2008.

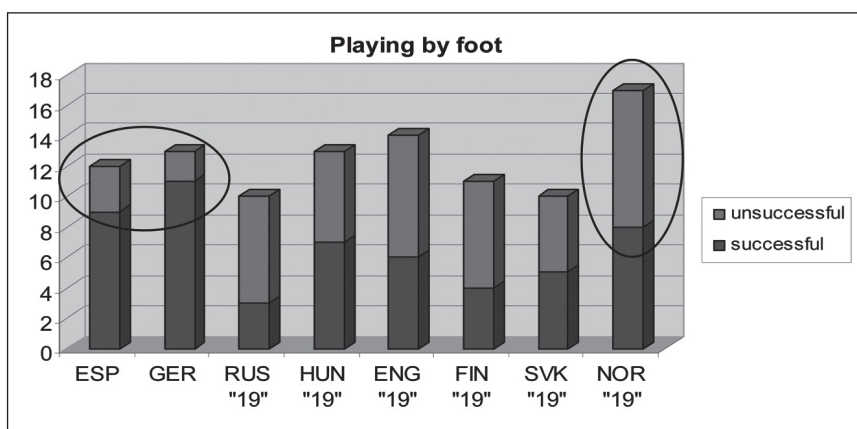


Figure 13. The successfulness of GA - playing by foot

Senior goalkeepers playing in the finals of the European Championship in 2008 were recorded as more successful on the monitored parameters than the under 19 goalkeepers in international matches irrespective of the final results. Also, Figure 13 indicates the tendency towards special individual preparation of football goalkeeper.

DISCUSSION

A significant game intensification in football is noticeable nowadays. The intensification is not only related to bio-energy as an external strain but also to game activity which is also an external strain. If goalkeepers want to accelerate the game, they are demanding too much. If the goalkeeper is not experienced enough, he is unsuccessful in the offensive game activities. The proportionality of successful and unsuccessful game activities of goalkeepers is different in senior and in junior category (Peráček, Hrnčiarik, Kostolanský, 2008). The high frequency of changing the intensity in physical activity is typical for game (physical) activities. The intensity changes every 3 – 10 seconds in football (Bangsbo, Lindqvist, 1992).

We specify the requirements for game performance of goalkeepers in a match using detailed duel analysis of the best European junior national teams. We focused on the number of game activities as well as the localization of monitored game activities. Our new view of creating the exercises (methodological and organizational forms) is provided by the frequency of successful or unsuccessful game situation solutions. The exercises are created on the basis of key problems of individual game performance. Such attitude to the development and cultivation of game performance enables us to form the exact requirements for individual game performance and the control of performance. Furthermore, it enables us to influence the unexpected situations due to the pressure of competition and action of team-mates. This is very important, especially for junior goalkeepers who are less successful in offensive game activities. It is probably typical for younger age category, too.

Such attitude enables us to plan the exercise where goalkeepers must make decisions under the time pressure. It is also possible in training process to highlight the deliberate fitness strain (to provide the „environment” for second halftime, the end of the match). High training precision is not enough for assessing the game performance resistance against the disturbances. The crucial criterion will always be a particular performance in an important duel, in an unfamiliar environment, in the condition of noise and exhaustion. This is what changes the understanding of training activity as a proving action without any risk.

CONCLUSION

We found that the number of chosen game activities of goalkeepers in both senior and junior categories, as well as the proportionality of defensive and offensive game activities in both categories is the same. The difference occurred in offensive game activities of senior goalkeepers who were more successful.

The observational analysis method of game activity can be used in following areas of pedagogical (training) practice:

- a) In motor analysis required in game performance - technical profile of player - goalkeeper.
- b) In managing and planning the training process in training practice. The evaluation of body strain during the particular methodological and organizational forms of training process is a part of designing methods for choosing the challenge in training.
- c) In game performance football diagnostics.
- d) In game activity analysis of players (not only goalkeepers), the observational analysis can monitor the contribution of a player to the team performance, or intraindividual comparison of game performance.

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ABSTRACT

The authors in their research analyze selected aspects of the individual game performance of the under- U19 national team goalkeepers. They focus on observing the game activity of players in the course of the match with the aim to gather information on typical technical profiles of goalkeepers in these age categories. They found that the frequency of game actions of the junior players – goalkeepers – is approximately equal to that of senior goalkeepers, with a relatively higher rate of success in selected game actions among the senior national-team goalkeepers.

Key words: *football, individual game performance, goalkeeper, game activity, game actions of goalkeepers*