OPEN ACCESS

Exercise and Quality of Life Journal (2024) 16(2): 49-56
DOI: 10.31382/eqol.241207

ORIGINAL ARTICLE

Technico-tactical elements of the game as a factor of success in the 2nd European Baskin Cup

Živan Milošević

University of Novi Sad, Faculty of Sport and Physical Education, Novi Sad, Serbia

Received: 03. July 2024 | Accepted: 30. November 2024

Abstract

The purpose of this research was to examine the effects of certain technico-tactical elements of the Baskin game as a predictor of the achieved result in the 2nd European Cup matches. The following variables were analyzed: number of balls brought to the side basket, saved balls by role 2, saved balls by other roles, three-point shots by role 2, scored points from the corner by the role 2, role 2 misses, number of points by roled 1-5. The Mann-Whitney test was used to evaluate the differences in relation to the outcome of the match (win, loss) and certain technico-tactical elements. The obtained results indicate statistically significant differences between the winning and losing teams in fourteen analyzed games for points scored from the points scored by players with role 3.

Keywords: sports for all · inclusive basketball · adapted sports · athletes with disabilities

Correspondence:
Živan Milošević
zivanmilosevic991@gmail.com

Introduction

Baskin is a sports discipline that originated in the Italian city of Cremona, with the aim of enabling the participation of different people without discrimination and segregation. This inclusive sport, inspired by basketball, has multiple similarities with it. It is open to every individual regardless of gender, type of disability, sports experience, level of technico-tactical elements (Bodini et al., 2010). Since the year 2003, an official competition system has been operating in several Italian regions (Magnanini & Espinosa, 2016). Baskin is an example of an integral sport that encourages an inclusive component and the actual engagement of disabled people in the game itself through the modification of the rules as adapted to each individual player and the tendency to adapt the rules of the sports branch to the player, rather than the player adapting to the specifics of a certain sport discipline (Batini et al., 2013).

In addition to the inclusive component, this sport tends to maintain competitive uncertainty while respecting everyone's abilities and creating equal opportunities for players to, regardless of their role in the team, influence the outcome of the game with their personal involvement (Magnanini, 2017). The only prerequisite for participating in this game is the ability to throw the ball out of the hand in a parabolic arc (Garel, 2018).

One of the primary goals of this sport is to maintain the participation of all players regardless of skill level and physical or cognitive abilities (Romano, 2023). This game considers what a person is able to manifest in his motor space, while respecting his skills, without discriminating players because of the low level of technico-tactical elements whom would not find a place in the teams of traditional sports games (Magnanini, & Trull, 2015). In the game of Baskin, three basic principles are observed: (1) the rules are modified to suit the players and not the other way around, (2) for each individual role the rules of the game are different, (3) everyone must be given a chance to express himself or herself without pity and pietism (Rosa & Madonna, 2019). In this integral inclusive sport, there are several modifications such as equipment - more hoops are used than in traditional basketball, the use of balls of different sizes, modification of space in the form of protected zones, modification of rules and tasks for individual players to help other players, primarily for the player in role 3 (Galvani, et al., 2018).

In addition to being inclusive, this sport also has a competitive component, while considering everyone's abilities. The team's success depends on the contribution of each of the five player roles. Each player is at the service of his team, striving to use the maximum of his or her own abilities. The general rules include 4 periods of 8 minutes each and 14 players per competing team, with 6 mandatory players on the field. To encourage the participation of players with disabilities, there are certain restrictions imposed upon on players with role 5. These restrictions include that the player with the role 5 is only allowed to shoot a maximum of 3 times per quarter. Players with roles 1, 2, 3, and 4 are not allowed to score more than 3 successful shots per period of the game. A detailed description of the current 18th revision of the rules for the inclusive game Baskin is available on the website www.baskin.it. These rules include and cover the following areas and topics: team structure, player categories, game rules, scoring, safety measures, the role of coaches, and the promotion of inclusion and respect among players.

The aim of this research was to examine the impact of specific technico-tactical elements of the game on match outcomes (win-loss). This study represents the first research that examines the technico-tactical elements of Baskin as factors influencing team performance, as well as analyzing teams from various heterogeneous backgrounds in terms of Baskin development.

Description of specific player roles

Player with role number 5 - has the ability to shoot only at the traditional basket, with three attempts per one quarter. May play a defensive role only against other players with role 5 from the opposing team. In case of performing defensive tasks towards any other player of lower role from the opposing team he/she will be sanctioned with a technical foul. Players with role 5 can be guarded by all opposing roles.

Player with role number 4 - has the ability to shoot only at the traditional basket. Has the right to perform defensive tasks only against the opposing roles 4 and 5. The player with role 4 can only be guarded by players with roles 3 and 4.

Player with role number 3 – can shoot at traditional baskets as well as side baskets outside the designated area. Traveling can be tolerated. Can perform defensive assignments against opposing roles 3, 4, and 5. Can only be guarded by an opponent of equivalent role number 3.

Player with role number 2 - during the game, the player is positioned inside the side semi-circle. Can shoot to the high side basket from outside the field. Has one opportunity to shoot with 10 available seconds. When he receives the ball, he must dribble twice, go over the line of the area in one of the three sectors and shoot.

Player with role number 1 - is located inside the side semi-circle. Can shoot at the side low basket from inside the field. Has 10 seconds available for taking the shot. The player in this position is given the option to shoot once or twice.

Method

Study Design

For the purposes of this research, all 14 official match reports from the 2nd European Cup in Baskin, which was held in the Italian city of Schio from June 16 to 18, 2023, were analyzed. A total of 8 teams participated, which were divided in two groups. Teams from the first group were Italy, Serbia, Luxembourg, and Germany, while the second group included France, Greece, Belgium, and Spain national teams. The tournament winner was Italy, which defeated France in the final, and Serbia secured third place by beating Greece. Additionally, a video analysis of all matches in this championship was performed to quantify certain technico-tactical elements of the game. The tournament concept consisted of two groups of 4 teams, each playing matches within their respective group, with the team that finished first in the group advanced directly to the finals, while the second-placed teams entered the competition for third place.

Sample variables

A total of 11 variables were analyzed, and their description is presented in Table 1.

Table 1. Description of variables

Variable	Description
Number of balls brought to the side basket	This variable indicates the total number of balls that were served during one competitive match by players with roles 3, 4 and 5 to players in the pivot position inside the side racket.
Saved balls by role 2	This variable indicates the number of saved balls by role 2 players, who after the realization of their shot, entered the zone of the side racket, caught the ball and successfully passed it to their player outside. the racket.
Saved balls by other roles	This variable indicated the number of correctly caught balls by the players in roles 3, 4, and 5 after the shot of the player with role 2 on the side basket.
Three Point Shots by role 2	This variable indicated the number of shots from the corner to the side basket by role 2 player, which is valued with 3 points.
Scored points from the corner by the role 2	This variable indicated the number of points scored from the corner by role 2 player to the side basket, which were valued with 3 points.
Role 2 misses	This variable indicates the number of missed shots by role 2 at the side basket.
Number of points of role 1-5	These variables denoted the number of points achieved separately by each role in one competitive match.

Statistical analysis

For all variables, basic descriptive parameters (arithmetic mean and standard deviation) were calculated separately for each national team. The normality of the distribution was tested using the Kolmogorov-Smirnov test. Since most variables deviate from the normal distribution, the Mann-Whitney test was used to analyze the differences between the winning and losing teams.

Results

By looking at the results in Table 2, it can be seen that the French national team had the highest number of balls brought to the side basket, while the smallest cooperation with the players in the pivot position was achieved by the Spanish national team. While observing the variable of the number of balls saved by role 2, it can be seen that the players in role 2 of the Greek national team achieved the best values, and the lowest values were attained by players from Germany and Belgium. By

observing the variable of the number of saved balls by players with roles 3, 4, 5 after a shot by a pivot player, the highest values were attained by the French national team, while the lowest values were achieved by the players from the Luxembourg, Belgian and Spanish national teams, respectively.

Table 2. Basic descriptive indicators of technical-tactical game elements

Variable	Italy (M±SD)	France (M±SD)	Serbia (M±SD)	Greece (M±SD)
Number of balls brought to the side basket	28.00±6.68	33.25±8.61	18.75±2.98	31.25±8.42
Saved balls by role 2	2.00±1.41	5.50±1.73	2.25±1.50	9.25±5.37
Saved balls by other roles	3.25±2.98	4.25±2.63	0.75±0.50	0.50±1.00
Three-point shots by role 2	10.25±6.23	7.00±4.24	2.50±3.00	0.25±0.50
Scored points from the corner by role 2	2.75±1.50	2.50±1.73	0.50±1.00	0.00±0.00
Role 2 misses	10.75±2.50	17.00±5.88	9.25±2.63	20.25±3.59

Table 2 (continued). Basic descriptive indicators of technical-tactical game elements

Variable	Luxembourg (M±SD)	Belgium (M±SD)	Spain (M±SD)	Germany (M±SD)
Number of balls brought to the side basket	17.67±8.08	18.00±4.58	16.67±7.63	17.67±6.80
Saved balls by role 2	0.33±0.57	0.00±0.00	2.33±3.21	0.00±0.00
Saved balls by other roles	0.33±0.57	0.33±0.57	0.33±0.57	1.00±1.73
Three-point shots by role 2	0.00±0.00	0.00±0.00	0.00±0.00	0.00±0.00
Scored points from the corner by role 2	0.00±0.00	0.00±0.00	0.00±0.00	0.00±0.00
Role 2 misses	8.67±4.04	14.00±2.64	9.67±6.42	8.00±1.00

By looking at the variable of number of 3-point shot attempts made by the pivot player with role 2, the host team Italy achieved the highest value by far, while 50% of the national teams at this championship (Luxembourg, Belgium, Spain, Germany) did not take a single shot from this position. By observing the variable of number of points scored from this position, the Italian national team was in first place, while 5 national teams did not score a single basket for three points from the side sector (Greece, Luxembourg, Belgium, Spain, Germany). The highest number of misses from the pivot position of player with role 2 was achieved by the Greek national team, and the least by the Luxembourg national team.

Table 3. Basic descriptive indicators of the number of points achieved per roles

Variable	Italy (M±SD)	France (M±SD)	Serbia (M±SD)	Greece (M±SD)
Number of points by role 5	13.00±6.63	15.75±8.77	26.75±10.34	16.50±6.02
Number of points by role 4	9.75±8.01	12.00±2.82	5.00±2.58	7.50±7.18
Number of points by role 3	36.75±4.50	14.75±10.21	18.50±7.59	12.50±5.06
Number of points by role 2	20.75±4.11	32.50±5.80	18.50±7.89	21.50±10.24
Number of points by role 1	0.00±0.00	0.00±0.00	0.00±0.00	0.00±0.00

Table 3(continued). Basic descriptive indicators of the number of points achieved per roles

Variable	Luxembourg (M±SD)	Belgium (M±SD)	Spain (M±SD)	Germany (M±SD)
Number of points by role 5	11.00±6.92	31.00±12.12	6.67±5.03	7.67±1.52
Number of points by role 4	9.00±5.56	4.00±2.00	11.67±8.02	4.00±4.00
Number of points by role 3	16.00±9.64	7.00±4.58	15.00±11.79	4.67±2.08
Number of points by role 2	6.67±8.08	3.33±1.15	5.33±3.05	6.00±3.46
Number of points by role 1	0.67±1.15	2.67±3.05	0.00±0.00	4.00±4.35

By looking at the results from Table 3, it can be seen that the Belgian national team scored the most points by players with role 5, while the Spanish national team scored the least. When analyzing the number of points scored by role 4, the French national team was the leader, while the fewest points from this position were scored by the national teams of Belgium and Germany, respectively. When looking at the points made by players of role 3, Italy was dominant compared to other national teams, and Germany scored the fewest points from this position. When analyzing the number of points in role 2, the French national team scored the most, and the Belgian national team scored the least. The German national team scored the highest number of points, but one should take into account the fact that four national teams did not even have a player in this role in the game protocol, and therefore they did not score a single point (Italy, France, Greece, Serbia).

Table 4. Basic descriptive indicators of technical-tactical elements of basketball game

Variable	Winning teams	Losing teams
	Mean±SD	Mean±SD
Scored points from the corner by role 2	1.29±1.72	0.36±0.92
Three Point Shots by role 2	4.71±5.74	1.00±2.57
Number of balls brought to the side basket	26.93±9.96	19.86±6.58
Role 2 misses	13.50±5.90	11.50±5.11
Saved balls by role 2	3.71±3.38	2.29±4.21
Saved balls of other roles	2.14±2.71	0.79±0.97

Table 4 (continued). Basic descriptive indicators of technical-tactical elements of basketball game

Variable	Winning teams	Losing teams
	Mean±SD	Mean±SD
Number of points by role 5	18.71±11.03	13.93±9.65
Number of points by role 4	9.07±5.69	6.86±5.68
Number of points by role 3	22.50±12.35	10.21±6.36
Number of points by role 2	21.00±10.71	10.21±9.72
Number of points by role 1	0.00±0.00	1.00±2.41

When analyzing the results between the winning and losing teams shown in Table 4, the winning teams achieved higher values in 10 of the 12 variables. The winning teams achieved higher values in the following variables: scored shots for 3 points by the role 2, shots for 3 points by the role 2, the number of balls brought for the role 2, as well as a greater number of misses by the role 2 players, more points by role 5, more points by role 4, more points by role 3, more points by role 2, less number points by role 1, more number of saved balls, more number of saved balls by other players in the field, greater number of 2-point shots.

Table 5. Differences between winning and losing teams in analyzed variables

Variable	Mann-Whitney U	Wilcoxon W	Z	p	Mean Rank	Outcome
Scored points from the corner by role 2	68.000	173.000	-1.731	0.178	16.64	Win
					12.36	Loss
Three Point Shots by role 2	50.000	155.000	-2.504	0.027	17.93	Win
					11.07	Loss
Number of balls brought to the side	57.500	162.500	-1.863	0.062	17.39	Win
					11.61	Loss
Role 2 misses	43.500	148.500	-2.516	0.376	18.39	Win
					10.61	Loss
Saved balls by role 2	60.500	165.500	-1.770	0.085	17.18	Win
					11.82	Loss
Saved balls of other roles	77.000	182.000	-1.024	0.352	16.00	Win
					13.00	Loss
Number of points by role 5	78.500	183.500	-0.904	0.210	15.89	Win
					13.11	Loss
Number of points by role 4	70.500	175.500	-1.266	0.227	16.46	Win
					12.54	Loss
Number of points by role 3	71.000	176.000	-1.258	0.009*	16.43	Win
					12.57	Loss
Number of points by role 2	42.500	147.500	-2.554	0.011	18.46	Win
					10.54	Loss
Number of points by role 1	70.000	175.000	-2.114	0.210	12.50	Win
					16.50	Loss

Inspection of Table 5 reveals that in the following variables: scored points from the corner by the role 2 (p=0.178), three point shots by role 2 (p=0.027), number of balls brought to the side (p=0.062), role 2 misses (p=0.376), saved balls by role 2(p=0.376), saved balls of other roles (p=0.062),number of points by role 5 (p=0.210), number of points by role 4 (p=0.227), number of points by role 2 (p=0.011), number of points by role 1 (p=0.210), no statistically significant differences were observed between the outcomes of the match (win-loss). Statistically significant differences between variables that influenced the outcomes of the match (win-loss) were observed only in one variable, which was number of points by role 3 (p=.009).

Discussion

The purpose of this study was to examine which technico-tactical elements of the game contributed to the achievement of a positive result in official competitive matches in the game of Baskin, at the international level, in this case at the 2nd European Cup held in Italian city of Schio in 2023.

The deviation from the normality of the distribution in the analyzed variables can be explained by the fact that Baskin as a sport on the territory of Europe is still in developmental phases, and that the teams participating in this championship had different orientations and priorities. Some teams were primary oriented towards achieving a competitive result, while others were focused on achieving social connection, as well as on the discovery of the unexplored factors such as the influence of the level of preparation of individual teams, the level of technico-tactical training of players in roles 4 and 5. Subsequent research should deal with aforementioned unexplored topics. It is also noticeable that certain selections did not include players with the most severe forms of disability in position number 1, which in a way is another limitation of this study in terms of analyzing the number of points scored, i.e., missed by players in pivot position 1.The large number of points scored by roles 2 and 3, represents a type of confirmation of the "inclusive power" of this sport, in the sense that people with disabilities who are often deprived of responsibilities in daily functioning, have the opportunity to be the main protagonists of a continental competition, and among other things, the main subjects of the final outcome of the match. On the other hand, it is necessary to analyze what are the motives that drive people in positions 4 and 5 to get involved in such sporting events, whether their orientation is geared more towards the outcome and self-actualization, or more towards cooperation and service as an auxiliary role for players in pivot positions and for players in role 3.

Since Baskin is a relatively young sport, especially outside the territory of Italy, which is the cradle of this inclusive game and which for many years has an organized league system of competition at the regional and national level, one can understand the high ranking of the Italian national team. The differences between the winning and defeated teams are also noticeable in the variables of the points achieved by roles 2 and 3, which are precisely the roles with disabilities, which in a way corroborates the very postulates of this inclusive game, namely that the success of the team depends on the competitive contribution of the roles with disabilities.

The obtained results do not align with the findings of an Italian study that examined the degree of contribution to scoring efficiency in relation to the number of points scored from each role, showing that points scored by roles 1 and 2, who represent players with the most severe forms of disability, are statistically the most important. The results of a study conducted in Italy (Sisti et al., 2019), indicated that the most significant contribution to competitive outcomes (wins and losses) came from points scored by players in roles 1 and 2. After analyzing 90 matches, the study presented the following values: points by Role 1 (13.60±7.91), points by Role 2 (9.87±8.33), points by Role 3 (3.24±5.42), points by Role 4 (1.77±2.76), points by Role 5 (4.06±4.34).

The results showed a relatively high level of cooperation with players in side positions, which also strengthens the "inclusive power" of this game, through the frequent handing of balls to players in pivot positions, which essentially contributes to the cooperation of players with and without disabilities, while the ability of players with disabilities being fully recognized, acknowledged and appreciated in game. The above-mentioned observations, contribute to the fact that the person in the pivot positions experiences a sense of unity in the team with the players in the field, that they play together in the team, and what is extremely important, that the other players respect them and show them their trust.

Based on the application of the Mann-Whitney U test, it was determined that there are statistically significant differences in 1 of the 12 analyzed variables between the winning and defeated teams at the 2nd European Cup in Baskin. The obtained results can provide a contribution to Baskin coaches and other entities involved in the technico-tactical aspects of match preparation, so that by knowing the weaknesses and strengths of individual Baskin teams, they can more easily achieve an active result, that is, to defend the more vulnerable danger zone (side or high basket) with a better defensive organization. By analyzing the tested variables, it can be concluded that the winner of the Baskin match will be the team that scores more points from role 3 players. The results corroborate that Baskin has reached a high level in terms of integration of disabled and non-disabled people.

This was the first research that dealt with the technico-tactical elements of the Baskin game as a success factor in international competitions. One of

the limitations of this study is the small sample size of analyzed matches. Subsequent research could analyze the tested variables throughout the entire championship season, i.e., take as covariates the degree and the type of disability of the players of certain roles, as well as analyze the distribution of certain parameters depending on the competitive difficulty of the matches themselves, as well as decipher whether the matches are equal, unequal, or uncertain when considering the outcome. This research opens up space for subsequent researchers in this area to analyze some other parameters of the inclusive Baskin game, such as more detailed analyzes of players in roles 4 and 5, the number of offensive rebounds, assists, outcomes of action units after saved balls after a shot by a pivot player, etc. This research can also serve as a starting point for further research on international baskin tournaments and comparative analyses.

Considering the results obtained, future baskin coaches should focus on individual work with players in the role 3 with a goal to increase their autonomy in the game. It is essential to develop skills that will enable these players to make quick decisions and effectively collaborate with role 5 players. Additionally, to ensure a more balanced distribution of points scored, it is necessary to encourage an offensive organization that allows players in the role 4 to have more opportunities to score. This can be achieved by creating situations that favor their strengths, as well as by working on collective communication and understanding among different roles on the court. This way, all players will feel that they are included in the game. Such an approach not only enhances individual skills but also strengthens team chemistry and contributes to the overall success of the team.

References

Avinzino, A. (2015). *Baskin a 360°: Teoria, tecnica e tattica* [*Baskin a 360°: Theory, technique, and tactics*]. Erickson.

Batini, F., Bartolucci, M., & Toti, G. (2013). Gli effetti della lettura di narrativa nell'infanzia: Un mezzo per potenziare lo sviluppo di abilità cognitive e psicologiche [The effects of reading narrative in childhood: A means to enhance the development of cognitive and psychological skills]. *Notizie, Recensioni e Segnalazioni, 342*(6156), 121.

Bodini, A., Capellini, F., & Magnanini, A. (2010). *Baskin… uno sport per tutti* [*Baskin… a sport for everyone*]. FrancoAngeli.

Galvani, C., Bruseghini, P., Bianco, M., Palmieri, V., & Gianfelici, A. (2018). Baskin. *Medicina Dello Sport, 71*, 296-307.https://doi.org/10.23736/S0025-7826.18.03340-9

Garel, J. P. (2018). Jeux sportifs collectifs et handicap. Genèse de pratiques partagées innovantes 1 [Collective sports and disability. Genesis of innovative shared practices 1]. *La Nouvelle Revue-Éducation et Société Inclusives, 81*(1), 123-142.

Magnanini A., & Trull, P. E. (2015). Sport for all: Italian model. *International Journal of Sport Culture and Science*, *3*(2), 113-127.

Magnanini, A. (2017). Inclusive coach between theory and practice. *International Journal of Sport Culture and Science*, *5*(4), 364-374.

Magnanini, A., & Espinosa, P. (2016). Integrated Sport: From Theory to Practice. *Journal of Sports Science*, *4*, 80-92.

Moliterni, P., & Mastrangelo, M. E. (2016). Verso il canestro e oltre! Baskin per promuovere inclusione e prosocialità: Uno studio pilota [Towards the basket and beyond! Baskin to promote inclusion and prosociality: A pilot study]. *Italian Journal of Special Education for Inclusion, 4*(2), 171-188.

Romano, A. (2023). Beyond barriers: Inovative strategies for the inclusion of students with special educational needs in school sports activities. *Italian journal of health education, sport and inclusive didactics*, *7*(4), 1-10

Rosa, R., & Madonna, G. (2019). Strategie educative per l'Inclusione Sociale: Biodanza SRT e Baskin [Educational strategies for social inclusion: Biodanza SRT and Baskin]. *Italian Journal of Health Education, Sport and Inclusive Didactics, 3*(1).

Sisti, D., Amatori, S., Bensi, R., Vandoni, M., Calavalle, A. R., Gervasi, M., Lauciello, R., Montomoli, C., & Rocchi, M. B. (2019). Baskin—a new basketball-based sport for reverse integration of athletes with disabilities: An analysis of the relative importance of player roles. *Sport in Society*, 1-9. https://doi.org/10.1080/17430437.2019.1640212