

## ORIGINAL SCIENTIFIC PAPER

# The Most Common Ways of Scoring Points at the 2nd European Baskin Cup

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## Abstract

The aim of this research was to analyze the most common ways of scoring points at the 2nd European Baskin Cup, held in Schio, Italy, in 2023. The sample included 4 matches, with 224 registered cases analyzed. These cases included the scoring location, the role of the scorer, the type of attack, and the differences between winning and losing teams. The contingency analysis showed a significant association between match difficulty and the role of the scorer ( $p=0.021$ ), indicating that in close matches, most points were scored by players in role 5. However, the Chi-square test revealed no significant association between the scorer's role and match outcome ( $p=0.322$ ), type of attack and match outcome ( $p=0.859$ ), or position of the scorer and match outcome ( $p=0.389$ ). The analysis indicates that players in role 5 were the most dominant in scoring points across all match types, with a particular emphasis on uncertain games. Additionally, two-man plays were the most common attacking strategy, and shooting from the paint proved crucial for success, with losing teams struggling to capitalize on this method.

**Keywords:** *reverse integration, adapted physical exercise, sport for all*

## Introduction

Sport has the potential to be an effective tool within disability management models, and it also highlights the real need for organizing sports activities to enable the inclusion of people with disabilities. This implies that sport can play a significant role in improving the quality of life and integrating people with disabilities into society (Francesco & Raiola, 2017). One possible modality for including people with disabilities in sports activities is the model of reverse integration.

Reverse integration can be described as a process in which working-age individuals are included in sports with people with disabilities, creating an inclusive environment (Ramsden, 2023). The results of previous studies on reverse integration model in wheelchair basketball indicate positive experiences for able-bodied players in terms of purposeful use of their free time (Hutzler et al., 2016). However, the topic of reverse integration in sports for people with disabilities is insufficiently researched in the context of the motivations with which able-bodied people engage in activities designed for people

with disabilities (Medland & Ellis-Hill, 2008). Additionally, research results show that reverse integration activities positively affect the quality of life and perceived social competence of people with disabilities compared to other isolated activities in which only people with disabilities participate (Hutzler et al., 2013). The reverse integration model is present in wheelchair basketball (Pate et al., 2019; Stanojević et al., 2023; Verdonck et al., 2020), but this process has not always been favorably viewed by people with disabilities (Thiboutot et al., 1992).

This is particularly evident in sports disciplines that involve reverse integration at the international elite level, where there is a fear that able-bodied players might undermine the role of people with disabilities in reducing their actual contribution to achieving competitive results. The second decade of the 21st century has marked a turning point in the more intensive spread of Baskin, inclusive game similar to basketball, beyond the borders of the sport's birthplace, Italy. This inevitably brings the involvement of more experts from different countries and various educational back-



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grounds such as special educators, defectologists, physical education professors, and basketball professionals.

Also, the specific approaches to sports pedagogy from different European regions, such as the Western Balkans, Central Europe, and Mediterranean countries, must be considered. Analyses of the number of points scored by players in different roles in adapted Baskin provide a better understanding of how this game evolves and adapts to the needs of different players. Certainly, the information obtained from various situations during the game helps identify key trends and strategies that contribute to the effectiveness and success of the game.

Baskin, which is an inclusive game similar to basketball (Magnanini, 2017) where both people with and without disabilities play together, involves six baskets, including two offensive and two defensive, creating additional tactical possibilities for the teams (Milošević, 2023). This structure provides two degrees of freedom in offensive actions, adding dynamism and unpredictability to the game. Teams can use different tactics to maximize the strengths of all playing roles, creating an inclusive atmosphere and increasing the game's complexity. In this way, Baskin not only supports equality but also fosters creativity in approaching the technical-tactical elements of the game (Anzivino, 2015). In Baskin, we have different player roles in the game from 1 to 5, depending on functional abilities rather than medical history (Baskin Italy, 2023).

The previous study that analyzed the 2nd European Baskin Cup (Milošević, 2024) examine the impact of certain technical-tactical elements of the Baskin game as predictors of match outcomes in the 2nd European Cup. The study analyzed variables such as the number of balls brought to the side basket, saved balls by role 2, saved balls by other roles, three-point shots by role 2, points scored from the corner by role 2, misses by role 2, and points scored by players in roles 1 to 5. The Mann-Whitney test was used to assess the differences in these elements based on the match result (win or loss). The findings revealed statistically significant differences between winning and losing teams, particularly in the points scored by players in role 3, indicating the importance of this role in determining the match outcome. This study provides valuable insights into how specific gameplay factors can influence success in Baskin competitions. Although the mentioned study analyzed the technical-tactical elements of the Baskin game, according to the authors' knowledge, there is currently no study that has specifically examined the dominant ways of scoring points as a means of offensive tactics in Baskin. In this regard, the goal of this research was to analyze the dominant way of scoring points at the 2nd European Cup in Baskin.

**Methods**

A video analysis was conducted on 4 matches played at the 2nd European Cup in Baskin, which took place from June 18

to June 22, 2023, in Schio, Italy. A total of 224 points were analyzed. The research was conducted through notation analysis.

*Variable descriptions*

**Two-man plays:** Refers to specific tactical actions that involve interaction between two players, where one of them takes an active role in creating space for an attack or scoring points, while the other player performs a task that involves either passing the ball or moving to achieve an open position for a shot or an assist.

**Individual Offense:** Refers to situations in the game where one player takes responsibility for attacking the opponent's defense, using their skills and abilities to score a point. The individual offense included dribbling, where the player uses various techniques to deceive the opposing defense and create space for a shot or a breakthrough.

**Team Offense:** Refers to a team approach in the attack, where several players work together to create scoring opportunities through different strategies that allow for ball exchanges, creating chances for a shot at the traditional basket, or passing the ball to pivot players positioned in side areas through passing, screens, and off-ball movement.

**Fast break:** Refers to quickly scoring while the opposing defense is still unorganized, involving several key elements: a fast transition where players immediately move toward the opponent's basket and take advantage of the element of surprise before the opposing defense can set up.

*Statistics*

Using contingency analysis (Chi-square test, Cramer's V), the following relationships were examined: the role of the player who scored and the match difficulty (uneven, equal, and uncertain games), the role of the player who scored and the match outcome, the type of offense (fast break, individual offense, two-man plays, team offense) and the match outcome, and the relationship between the position from which the point was scored and the match outcome. The statistical data analysis was performed using the SPSS 21.0 statistical software (SPSS Inc., Chicago, IL, USA). In all statistical analyses, significance was considered when  $p < 0.05$ .

**Results**

Table 1 presents the distribution of points scored according to player roles during uneven, equal, uncertain games as well as the total points scored across all four matches.

Chi-square test showed a significant association between the match difficulty and the number of points scored by different player roles ( $\chi^2 = 14.897$ ,  $df = 6$ ,  $p = 0.021$ , Cramer's  $V = 0.183$ ), indicating a significant difference in the distribution of point scorers across different game types. Analyzing the results from Table 1, it is evident that more than half of the points in uncertain matches were scored by players in role 5.

**Table 1.** Distribution of points scored by different player roles according to match difficulty

Match Difficulty	Role 2	Role 3	Role 4	Role 5	Total
Uneven	9 (25.7%)	5 (14.3%)	9 (25.7%)	12 (34.3%)	35 (15.7%)
Equal	34 (28.1%)	26 (21.5%)	24 (19.8%)	37 (30.6%)	121 (54.3%)
Uncertain	14 (20.9%)	13 (19.4%)	4 (6.0%)	36 (53.7%)	67 (30.1%)
Total	57 (25.6%)	44 (19.7%)	37 (16.6%)	85 (38.1%)	223 (100%)

$\chi^2(6, n=224) = 14.897, p = 0.021, \phi = 0.183$

Legend. The values are presented in numbers and percentages (N/%) ;  $\chi^2$  - coefficient of the Chi square test; p - coefficient of significance;  $\phi$  - measure of association.

The chi-square test (table 2) showed no significant association between the player role and the match outcome ( $\chi^2=3.489$ ,  $p=0.322$ , Cramer's  $V=0.125$ ). Role 2 player showed similar

percentages for both winning and losing teams, at 24.8% and 27.8%, respectively. However, players in role 3 performed worse for the losing teams, with a contribution of 14.4%.

**Table 2.** Distribution of Point Scorers According to Match Outcome

Match Outcome	Role 2	Role 3	Role 4	Role 5	Total
Winner	32 (24.8%)	31 (23.3%)	19 (14.3%)	51 (38.3%)	133 (59.6%)
Loser	25 (27.8%)	13 (14.4%)	18 (20.0%)	34 (37.8%)	90 (40.4%)
Total	57 (25.6%)	44 (19.7%)	37 (16.6%)	85 (38.1%)	223 (100%)

$\chi^2(6, n=224)=3.489, p=0.322, \phi=0.125$

Legend. The values are presented in numbers and percentages (N/%);  $\chi^2$  – coefficient of the Chi square test;  $p$  - coefficient of significance;  $\phi$  - measure of association.

Chi-square test results indicate no significant association between offense type and match outcome ( $\chi^2=0.759$ ,  $p=0.859$ , Cramer's  $V=0.064$ ). Looking at the results in Table 3, it is apparent that in the winning teams, the most frequent offense involved two-man plays and individual

offense, with a significant advantage for fast breaks, suggesting they were more efficient in fast transitions from defense to offense. In losing teams, a lower trend was observed in all offense type, suggesting they faced difficulties in execution.

**Table 3.** Distribution of Attack Types According to Match Outcome

Match Outcome	Fast breaks	Individual offense	Two-man plays	Team offense	Total
Winner	17 (15.0%)	24 (21.2%)	46 (40.7%)	26 (23.0%)	113 (60.1%)
Loser	9 (12.0%)	18 (24.0%)	33 (44.0%)	15 (20.0%)	75 (39.9%)
Total	26 (13.8%)	42 (22.3%)	79 (42.0%)	41 (21.8%)	188 (100%)

$\chi^2(6, n=224)=0.759, p=0.859, \phi=0.064$

Legend. The values are presented in numbers and percentages (N/%);  $\chi^2$  – coefficient of the Chi square test;  $p$  - coefficient of significance;  $\phi$  - measure of association.

Chi-square test results indicate no significant association between the position of the shot and the match outcome ( $\chi^2=1.891$ ,  $p=0.389$ ; table 4). This result suggests that while winners had a higher distribution of shots, the type of shot might not be directly linked to the match outcome. The lim-

itation of three shots per quarter for players in role 5 may encourage these players to be more selective in their shot choices, which could explain the exceptionally high shooting percentages both for the winners and losers in the "in the paint" category.

**Table 4.** Distribution of Points Scored According to Position and Match Outcome

Match Outcome	Outside the Paint	In the Paint	Side Basket Shot	Total
Winner	1 (0.8%)	86 (72.9%)	31 (26.3%)	118 (61.5%)
Loser	1 (1.4%)	47 (63.5%)	26 (35.1%)	74 (38.5%)
Total	2 (1.0%)	133 (69.3%)	57 (29.7%)	192 (100%)

$\chi^2(6, n=224)=1.891, p=0.389, \phi=0.99$

Legend. The values are presented in numbers and percentages (N/%);  $\chi^2$  – coefficient of the Chi square test;  $p$  - coefficient of significance;  $\phi$  - measure of association.

## Discussion

The essence of Baskin's dynamism lies in the two degrees of freedom in offensive actions, allowing for sudden and unpredictable changes in the direction of attacks. This situation gives the offensive team a ready alternative at all times, while simultaneously putting defensive players in a state of continuous alertness and adjustment to protect both baskets (Anzivino, 2015). Changes in the direction of offensive actions towards the traditional or side basket can be highly productive in all phases of the offense.

Analyzing the results in Table 1, which shows the distribution of points scored by different player roles according to match difficulty, several key aspects are noticeable. Role 5 players show the highest percentage of points scored in uneven 34.3% and uncertain matches 53.7%, suggesting that this

role is crucial in taking responsibility when the final score difference is small. In equal matches, where one might expect a balance in terms of the quality of players in roles 4 and 5 between both teams, role 2 player have the highest scoring percentage 28.1%, while players in other roles have similar percentages, indicating a more even distribution of points among the remaining roles. In uncertain matches, role 4 contributes minimally with only 6.0%, while the dominant role belongs to players in role 5, who score a significant 53.7%. This result suggests that despite differences in the number of points scored by different player roles, the outcome of the match may depend on other factors, such as team coordination, strategy, or individual player skills, rather than solely on the roles of the point scorers.

Analyzing the results from Table 2, no statistically signif-

icant association was found, which does not align with the findings of previous studies (Sisti et al., 2011). However, players in role 5 stand out with a 38.3% share in the points scored by the winning teams. This result highlights the importance of players in this position, while players in role 4 contribute less to the scoring of the winning teams, with only 14.3%, suggesting that players in this role are less involved in scoring points.

Looking at the results from Table 4, it is clear that most of the points for the winning teams were scored in the paint (72.9%), indicating that teams focusing on the outcome of the game in such situations opt for safer points, scored by more experienced players.

Analyzing the results from Table 3, we gain insight into the distribution of offense types according to match outcome. Winning teams scored 15.0% of their points from fast breaks, suggesting that fast transitions played a significant but not dominant role in the total points scored. When individual actions are analyzed, it is noticeable that players used their individual skills in 21.1% of attacking situations to create opportunities for scoring. However, the most successful attack type was two-man plays, which accounted for 40.7% of the total points scored. Examining the points scored from group offense, it is evident that strategies involving collaboration among multiple players were successful, but less commonly used than two-man plays.

Analyzing the performance of the losing teams, it is evident that they were less successful in scoring points from fast breaks 12.0% compared to the winning teams, while relying more on individual player skills, where their share of total points scored was higher than that of the winning teams 24.0%, as well as in two-player collaboration 44.0%. However, this was lower than the group attack 20.0% compared to the winning teams.

These results suggest that Baskin, as an inclusive game of reversed integration, emphasizes the importance of teamwork and cooperation among players. It should also be considered that a player in role 3, among all players outside the side zones, represents the player with the greatest offensive potential in the context of the game's rules, as this role allows them to score both from the side and the traditional basket, with additional valuation, increasing the value of a 3-point shot as opposed to a 2-point shot, in situations where the ball is brought into the paint before attempting the shot.

It is important to remember that, aside from its competitive aspect, this game has an inclusive component, where all players have equal opportunities to contribute to their team's victory (Magnanini & Espinosa, 2016). However, the results indicate that when it comes to achieving a competitive outcome, teams primarily rely on the points scored by players in role 5, who, according to the categorization, possess the highest level of basketball skills. Based on the obtained results, we can conclude that players in role 5 made a dominant contribution to the total points scored, which can be explained by the fact that the context of the competition, being the European Cup, carries a certain competitive weight and importance for representing one's country. Therefore, the results obtained in this regard are expected.

The results of the previous study, which analyzed the technical-tactical elements as a factor of team success in the 2nd European Cup in Baskin, indicate the significant importance of points scored from position 3, which clearly indicates the difference between winning and losing teams. The results of

this study also showed that the Serbian national team was leading among the teams that achieved high placements in terms of points scored from the role of the five-player position ( $26.75 \pm 10.34$ ). This study also points to the significant contribution of players with role 3, from the tournament winner, the Italian national team ( $36.75 \pm 4.50$ ). It can be concluded that strategies that favor roles 5 and 3 in the game, as well as collective offense, have the potential to be key for achieving a competitive result in the Baskin game (Milošević, 2024). A limitation of this study is the relatively small number of analyzed games from the 2nd European Baskin Cup, considering that only 4 out of 14 matches were analyzed. Future research could analyze the number of points scored in a larger sample of matches or competitive seasons in Baskin. It should also be kept in mind that the participants in the European Baskin Cup were highly heterogeneous in terms of the development of Baskin in their respective countries, which could result in different approaches to activating players in various roles, depending on their abilities to score points. A comparison could be made between the host of the competition, Italy, which has a developed tradition and competition system, and countries that have only one Baskin section, without a national Baskin federation.

Baskin is certainly still an under-researched field, and the direction of future studies could focus on preserving the sports core of this game, with an emphasis on the actual participation of players with disabilities in achieving the competitive result. The analyses mentioned could serve as a supportive tool for coaches in designing strategies to increase the real involvement of players with disabilities, regardless of their role in the team, in achieving the competitive result and preserving the sports core of the game, as well as in valuing the abilities of each player in situational game conditions without bias.

Future studies should consider the 18th revision of the rules, which proposes additional restrictions for players in role 3, such as valuing their points scored in the paint as 2 points instead of 3, if the player was in the paint at the time of receiving the ball (Baskin Italy, 2023). Future studies could also provide a more detailed description of the factors involved in group attacks and two-man plays, emphasizing whether a player in role 3 participated in these situations.

It is possible that future research, such as replications of this study but in the context of the new 18th revision of the rules, with a special focus on the player in role 3, could take into account that during the 2nd European Baskin Cup, the 17th version of the game rules was in effect. Future studies could also explore gender equality in the share of total points scored, specifically the points scored by female roles. The number of points scored following offensive or defensive rebounds, how different team compositions and rotations influence the outcome of the match, tracking individual player performances including assists, blocks, offensive and defensive rebounds, and steals, could also be valuable. It would also be interesting to analyze the number of personal fouls and their impact on the game, as well as the percentage of free throws made.

## Conclusion

The goal of this research was to present the dominant ways of scoring points in the 2nd European Baskin Cup. After conducting a statistical analysis of 4 matches in which the Serbia national team participated, the following conclusions can be drawn. Players in role 5 scored the most points in all catego-



ries of match difficulty. This distribution of points scored by role suggests that role 5 is the most represented among point scorers in all types of matches. These data indicate that role 5 dominates in point scoring across all match types, with particular prominence in uncertain games. In relation to match outcome, players in role 5 were dominant in scoring points, both in winning and losing teams. The distribution of roles in point scoring indicates that players in roles 2 and 5 had the greatest impact on the match outcome. The most common

type of attack was two-man plays, both in winning and losing teams. The winners were more successful in using individual and group attacks, while losing teams relied more on two-man plays. Shots from the paint to the traditional basket accounted for the largest share of points scored. This data suggests that shooting from the paint is key to success in a Baskin match. Although losing teams scored more points from the side basket, their lower efficiency from the paint contributed to their defeat.

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#### Conflict of interest

The authors declare that there is no conflict of interest.

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