

# バスケットボールのゲームにおけるペイントエリア内のショットの成否に影響する要因

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## 【要旨】

バスケットボールのゲーム中のショットは, 様々な要因の影響を受けながら試行されている. ペイントエリア内のショットは, 試行頻度が高く, その成否がゲームの勝敗に及ぼす影響が大きいと考えられる. そこで, ゲーム中のショット状況を調査し, 成否に影響する諸要因を検討し, ゲームにおけるペイントエリア内のショットの特徴を見出すことを目的とした.

対象は, 第66回全日本大学バスケットボール選手権大会の男子準々決勝以降の10試合とした. すべてのショットにおけるショットの成否と「ゲーム状況」, 「ショット試行」, 「ショットに至る戦術」, 「相手の防御状況」の4つの要因に関する13項目を記録した. ショットの成否を目的変数, 記録した13項目を説明変数として, ロジスティック回帰分析による複合的なショットの成否への影響要因を検討した. その結果, 「ショット試行エリア」, 「ショットに結びついたプレイ」, 「ディフェンダーのハンズアップ」, 「被ファウルの有無」, 「ディフェンダーとの身長差」の5項目からなる回帰モデルが選択され, これらの項目が他の要因を考慮した上でショットの成否に影響する大きな要因であることが認められた.

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## **Factors affecting successful shots in the paint areas in basketball games**

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## **[Abstract]**

The present study examined factors affecting successful shots in the paint area in

basketball, in relation to shooting conditions.

The participants were outstanding male university basketball players from all over Japan. The targeted plays were all the plays performed in 10 games after the quarter-finals of the 66th All-Japan Collegiate Basketball Championships. Counted in each play were whether or not shots were successful, and 13 items describing the shooting situation, which were tallied in the following categories: score difference, remaining seconds on the shot clock, area of shot attempts, shooting method, play leading to a shot, screen play or not, player movements before shooting, ball movements before shooting, shooter distance to defenders, defenders' handwork, block shot, foul charged or not, and difference in height between the shooter and the defender. These were categorized in four factors: the game situation, shot attempts, strategies leading to a shot, and the opponent's defense situation. Compound factors affecting successful shots were investigated by a stepwise variable selection method in a logistic regression analysis, using whether or not a shot was successful as the dependent variable, and the 13 items as independent variables.

The regression model chosen consisted of five items relating to the following: area of shot attempts, play leading to a shot, defenders' handwork, foul charged or not, and difference in height between the shooter and the defender. The results indicated that these five items were always involved in successful shots, even when the influence of the other items was held constant.

In those instances in which the expectation of a successful shot as computed by the obtained regression formula was low, it is possible that the decision-making ability corresponding to a player's shooting ability is important. On the other hand, in those instances in which the expectation of a successful shot was high, it is possible that a player could perform a successful shot corresponding to a high expectation of success. Coaches should nurture skills and team strategies to increase the number of successful shots based on their understanding of players' difficulties according to the various shooting situations examined in the present study.