Optimal Selection of Rushing Course by Comprehension of Defensive Structure in American football

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Abstract
The purpose of this study was to investigate the effects of game structures on running backs’ comprehension of game situation and their rushing behavior in American football. Fourteen running backs were required to rush during scrimmage, and then recall the other players’ positions. In 2 of 5 plays, the defensive assignments had no structure to their game strategy. The results indicated that the subjects captured all of the players’ positions based on the structure of their defensive strategy and selected the optimal rushing patterns. We concluded that running backs’ comprehension of the entire game environment is necessary to prevent the running back from being trapped in a collapsed hole, and to cut into appropriate field position flexibly.

Key words: American football, run plays, game structure, recall task