A QUALITATIVE BIOMECHANICAL ANALYSIS OF THE PUNT KICK IN GAELIC FOOTBALL, COMPARING DOMINANT AND NON DOMINANT KICKING LEGS

Tighe, A. and Kenny, I.C.
Biomechanics Research Unit
Department of Physical Education and Sport Sciences, University of Limerick.

There is very little scientific research specific to the sport of Gaelic football, with biomechanical research in relation to the execution of the fundamental skills of Gaelic football virtually nonexistent. The punt kick is a primary technique in Gaelic football. It is used to maintain possession, move the ball downfield and create scoring opportunities, and is a desired element of any player’s skill set. Due to the high pressure nature of the game, Gaelic football requires its players to be able to perform kicks with both dominant and non dominant kicking legs. Players who are equally proficient with both kicking legs are seen to have a distinct tactical advantage.

The objective of the current study was to investigate if qualitative biomechanical differences existed in the execution of the punt kick in Gaelic football between dominant and non dominant kicking legs. It was also the aim to use the results identified to create a range of evidence-based teaching and coaching resources for use by teachers, coaches and players.

Twenty elite Gaelic football players were recruited for the purpose of the current study. All players had competed at University and / or Inter-county level. Each participant was video recorded performing four punt kicks with both dominant and non dominant kicking legs towards a life sized target located ten metres away. Each kick was qualitatively analysed using SiliconCoach™ software using a systematic observational checklist to determine proficiency and identify qualitative differences in the execution of the kick with dominant and non dominant kicking legs.

Key qualitative results showed distinct differences in the movement patterns of participants when executing the punt kick with dominant and non dominant kicking legs. Significant differences were identified across each of five phases of the punt kick, with an overall P value <0.05. 90% of participants were classed at expert level when executing the kick with their dominant kicking leg, while only 50% were classified as expert during non dominant kicking leg trials. The areas where qualitative differences were most evident between dominant and non dominant sides were in movements of the arms, both kicking and non kicking arm, and the support leg.

From the results identified it was possible to establish key teaching points for the punt kick in Gaelic football and to develop resources for coaching the punt kick with both dominant and non dominant kicking legs.