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Use of effective play-space by U12 FC Barcelona players: an observational study combining lag sequential analysis and T-pattern detection

Daniel Lapresa a, Ángel Del Río a, Javier Arana b, Mario Amatria c and M. Teresa Anguera d

aDepartment of Educational Sciences, University of La Rioja, Logroño, Spain; bDepartment of Education, International University of La Rioja (UNIR), Logroño, Spain; cDepartment of Physical Activity Sciences and Sports, Pontifical University of Salamanca, Salamanca, Spain; dFaculty of Psychology, Institute of Neurosciences, University of Barcelona, Barcelona, Spain

ABSTRACT
This observational methodology study had a substantive and a methodological aim. The substantive aim was to analyse the use of overall and effective play-space (EP-S) in the construction of offensive sequences ending in a shot by under-12 (U12) FC Barcelona (FCB) players. Analysis of EP-S helps to contextualise play in terms of a player’s relationship with the ball and other players on the pitch. The data analysed corresponded to all the matches played by FCB during an international U12 tournament. The reliability and generalisability of the data were confirmed. The methodological aim was to illustrate the complementary use of two of the most common diachronic techniques in observational methodology: lag sequential analysis and T-pattern detection. The software for both techniques (GSEQ and Theme, respectively) is free. The patterns detected for the use of space in general and EP-S using both techniques show that FCB’s U12 team exhibits certain features of play that the senior team is well known for, namely, elaborate play; frequent use of the wings to widen the area of play and press forward to ultimately break through the last line of defense; and recovery of the ball in forward positions within the EP-S of both teams, enabling rapid completion of sequences ending in a shot. We also detected behaviours that reflect a playing style adapted to the smaller size of the pitch used in 7-a-side soccer (e.g. the use of distant shots from within the rival team’s EP-S).

1. Introduction
With this study, we pursued two objectives. The first, substantive in nature, was to investigate the use of overall playing space and EP-S from the perspective of play by under 12 (U12) players from FC Barcelona (FCB) during an elite international tournament. FCB is among the world’s greatest clubs and is renowned for its playing philosophy and pursuit of excellence at all levels (Camerino, Chaverri, Anguera, & Jonsson, 2012; Lago, Martín, & Seirullo, 2007;...