



Study of Interpersonal Coordination in the Marking Dynamic of Football: Effects of Task Manipulation in Different Training Categories

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Abstract

The objective of this thesis was to analyse the trends in interpersonal coordination under different marking intensities in different age categories in football. More specifically, it set out to map and describe the interpersonal coordination dynamic based on the tools of dynamic systems, in which it was possible to verify the coordination tendencies that emerged in the different contexts presented. Marking intensity was manipulated by altering the playing space and the amount of ball possession time in the small-side football game popularly known as rondo. Five participants from each age category (sub-13, sub-15, sub-17 and sub-20) played in a training environment combining four experimental conditions: expanded space and free ball possession (AL), expanded space and restricted ball possession (AR), reduced space and free ball possession (RL) and reduced space and restricted ball possession (RR). The independent variables were age category (sub-13, sub-15, sub-17 and sub-20) and marking intensity (AL, AR, RL and RR). The dependent variables were performance in play (measured by rally time, ball speed and passing frequency), pass topology (measured by interpersonal distances, angle and speed of the pass in each pass) and marking synergy (measured by the relationship between distances from the marker's ball and the barycentre). Analysis procedures and tools were developed to observe the players' interpersonal coordination trends. The results demonstrated that: 1) markers and passers are closely connected (discussed here as marking synergy); 2) marking synergy emerges from a flexible and adaptive change of passes; 3) marking synergy is bolstered according to marking intensity; and 4) marking synergy is bolstered according to age and experience in the modality. It transpires that interpersonal coordination in marking (marking synergy) can be analysed as an emerging and self-organised process within the context of action, opening up new avenues of research and intervention in group invasion sports.

Keywords: ecological dynamic, dynamic systems, marking synergy, interpersonal coordination, football