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Small-Sided and Conditioned Games in Soccer Training

The Science and Practical Applications

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Chapter 1
Small-Sided and Conditioned Games: An Integrative Training Approach

Abstract The specificity of the training requires that the soccer tasks improve all performance indicators associated with the game. For that reason, both technical and tactical indicators must be integrated in tasks that are typically used to develop physiological and physical variables. Therefore, small-sided and conditioned games (SSCG) have been recommended as the specific tasks that are required to apply in soccer training. Based on that, this chapter aims to provide relevant information that justifies the use of these smaller and adjusted versions of the formal game in the context of the training.

Keywords Small-sided and conditioned games · Decision-making · Tactics · Technical · Soccer · Football · Sports training

1.1 Should We Call Small-Sided Games (SSG) or Small-Sided and Conditioned Games (SSCG)?

Small-sided games (SSG) are typically described as smaller versions of the formal game (Hill-Haas et al. 2011). These games have been very popular in the last decade (Halouani et al. 2014; Owen et al. 2004) and are mostly used to optimize the time of training and the physiological/physical capabilities by following the main principle of the training methodology: the specificity (Clemente et al. 2014a).

SSGs are commonly smaller versions of the game that adjust the number of players (format) and the size of the field (Reilly and White 2004). These adjustments make possible to increase the individual participation of the players in the game and also increases the acute physiological responses (Castellano et al. 2013; Dellal et al. 2012).

The first studies in SSGs were mainly focused on the acute physiological effects promoted by changing the format and the size of the field (Aroso et al. 2004; Katis and Kellis 2009; Owen et al. 2004). Nevertheless, coaches often change some rules of play and even the structure of the game during training sessions (Davids et al.

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2013). These significant adjustments use some task conditions to augment the perception of players for specific topics, mostly tactical issues (Clemente et al. 2014b). Based on that, these games are no more only smaller versions of the game but new versions of the game, thus the concept small-sided game may not characterize the full concept of these variations.

Trying to provide a new understanding of the adjusted versions of the game, the concept of small-sided and conditioned games (SSCG) have been recently used (Clemente et al. 2014c; Davids et al. 2013). The concept of SCCG is more in-depth than the SSG. The typical smaller versions of the game (SSGs) are often used for fitness development and used as an alternative to the traditional running-based activities (Dellal et al. 2008; Hill-Haas et al. 2009). The main focus is to provide an extra motivation to players to run in high intensities. In other hand, the SCCGs can be used to help learners or expert players to gain more experience in picking up specifying information for continuously regulating interpersonal interactions with teammates and opponents during the match (Davids et al. 2013). These conditioned games can be developed to augment the perception of the players for specific tactical topics and also to develop fitness and conditioning (Clemente et al. 2014a, b, c). For that reason, the tactical complexity of SSCGs can be more rich and fruitful than regular SSGs. Nevertheless, in our perspective both concepts can be integrated as one-single concept: small-sided and conditioned games (SSCG). For that reason, in this book the concept of SSCG can be associated with regular smaller versions or with more complex and adjusted versions of the game.

The main focus of our book is the application of SSCGs on soccer training. Nevertheless, these conditioned games are often used in other team sports. In fact, the pertinence of these games for coaches has been researched (Clemente et al. 2015; Leite et al. 2009; Serrano et al. 2013; Siokos 2011). In the case of basketball it was asked to 185 coaches which kind of tasks (SSCGs, offensive superiority games, defensive superiority games, formal game, offense and defense) must be recommended for specific stage of expertise (initiation, orientation, specialization, and high performance) (Leite et al. 2009). The results revealed that SSCGs, formal game, and offense are important tasks to use in any stage of expertise, thus suggesting the great pertinence of the conditioned games for the training. In other hand, in futsal (indoor soccer) a similar study revealed that coaches frequently used more SSCGs in the context of elite players, progressively increasing from the novice stages (Serrano et al. 2013).

Nevertheless, the use of SSCGs depends from the coaches' level and from their background. The adjusted versions of the game require that coaches really know the game and the didactics to modify a particular variable that augment the perception of players for the specific tactical topic. A study conducted in Australia disclosures that coaches are not sufficiently qualified to coach by using SSCGs (Siokos 2011). In this study it was revealed that coaches that worked in under-6 and under-8 opted for too much free-play style, without a technical or tactical orientation/topic. For that reason, it was suggested that coaches need to have a conceptual understanding of how to best utilize SSCGs in a supportive and inclusive coaching environment (Siokos 2011). Nevertheless, in expert coaches it was verified their better

capabilities to correctly apply SSCGs in the context of soccer training (Clemente et al. 2015). In a study that was asked to an expert coach to develop SSCGs to match with specific heart rate intensities, it was possible to verify that the application of the designed tasks resulted in moderate-to-strength correlations with the heart rate responses expected by the coach (Clemente et al. 2015).

Some elite coaches have also been emphasizing the importance of using drill-based tasks that emulate the dynamic of the game. One of the main coaches that advocate for the use of SSCGs as the main tasks to develop his teams is José Mourinho. During a long interview about their training methodologies, Rui Faria (member of the Mourinho's staff) said (Oliveira et al. 2006):

> The ultimate goal is to play. For that reason, sports training only can mean one thing: doing at playing. If the goal is to improve the quality of the game and the organization, these parameters only can be achieved by using training situations where such organization can be developed.

Following the concept of an integrative approach that can be reached by using SSCGs, Mourinho also said (Figueroa and Mourão 2009):

> The beauty of this type of training [drill-based tasks] it is the possibility to develop at the same time many things. It is hard to define the goal of this task [a specific SSCGs that Mourinho applied] because he is very rich.

SSCGs are adjusted versions of the game that improve the possibility to learn or to develop a tactical topic and at the same time may also provide the opportunity to develop the fitness (Halouani et al. 2014). Their opportunities are evident in elite training and also in recreational mode and for that reason it is important to highlight the main benefits of these games for the soccer training (Krustrup et al. 2010). The justifications to adhere by these tasks can be briefly identified in the following section.

1.2 Why Should We Use Small-Sided and Conditioned Games?

The traditional approach to soccer training was to incorporate the fitness training within the overall session but without the ball when doing so, thus making such training a running-based activity (Reilly 2005). Such approach was adopted based on the traditional training methodology and also considering the beginnings of the training periodization (Turner 2011). The use of such approach focused fitness in weight training and running and only in a second part of the training comprised ball skills, training drills, and games (Reilly 2005). This separation between fitness and technical/tactical training not accomplished one of the main principles of the training: the specificity.

The specificity cannot be only understood as training responses/adaptations that are tightly coupled to the mode, frequency, and duration of exercise performed

(Hawley 2008). This physiological point of view may reduce the big-picture of the fundamental concept. Running-based activities may emulate the physiological conditions of soccer, nevertheless it lacks something to be the soccer: the game, their dynamic, and most important the ball (Davids et al. 2005; Gréhaigne et al. 1997).

The analytical and traditional approach advocate that the fitness training must be focused in running-based activities and weight training. Such approach frequently leads to longer training sessions because the first part of the training is totally different from the second part (Reilly 2005). In this methodological option, the fitness coach does not participate in the second part of the training and the head coach does not participate in the first part of the training. For that reason the synchronization between staff can be more difficult. In summary, the 'classical' approach to the fitness training soccer leads to longer sessions and also to a separation between physical and the technical/tactical development.

In traditional training, tasks often are designed for performance without opposition or with passive opposition to simplify decision-making during repetitive drill practice with small levels of variability (Davids et al. 2013). These tasks are designed to increase the accuracy and precision of the actions and for that reason the ecological validity is reduced. Typically, these traditional drills can be characterized and easily identified by the presence of static markers to benefit repetition of discrete performance (Chow et al. 2007).

If the smaller complexity can be understood as a benefit to guarantee the greater performance in a specific task, it is also important to highlight that such small complexity may be not adequate with the specificity of the soccer. The dynamic of soccer requires a permanent intra- and inter-synchronization with teammates and opponents and, for that reason, tactics are always present even in moments without the ball (Duarte et al. 2012; Vilar et al. 2014). Such tactical improvement depends from the capacity to be fast into 'read' the dynamic of the game (González-Víllora et al. 2011). Nevertheless, if a half of the training session occurs in isolated and fragmented tasks without the essence of the game (the cooperation–opposition relationship), it is half of the training that players are not improving their abilities to quickly analyze the contextual variables and make decisions about them (McGarry 2005).

On the other hand, by using drill-based activities it is possible to include fitness workout and also the development of decision-making situations in conditioned games (Serra-Olivares et al. 2015). This option by drill-based activities guarantees the simulation of movement patterns of team sport, while maintaining a competitive environment where players must perform under pressure and while fatigue (Gabbett 2008). More important than that, drill-based activities provide an additional challenge to team-sport players that would not normally be present in non-skill tasks associated with conditioning (Gabbett et al. 2009).

Obviously that the use of drill-based activities (SSG, SSCG) may lead to an increase in the variability of acute physiological effects (Hill-Haas et al. 2009). In the same task, the individual participation of each player is different and the specific variability of the game may induce different results in the players. However,