

# EFFECTS OF VARIOUS PITCH DIMENSIONS ON PHYSIOLOGICAL OUTPUT AND TOTAL DISTANCE: META-ANALYSES REVIEW

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## BACKGROUND



### Small-Sided Games

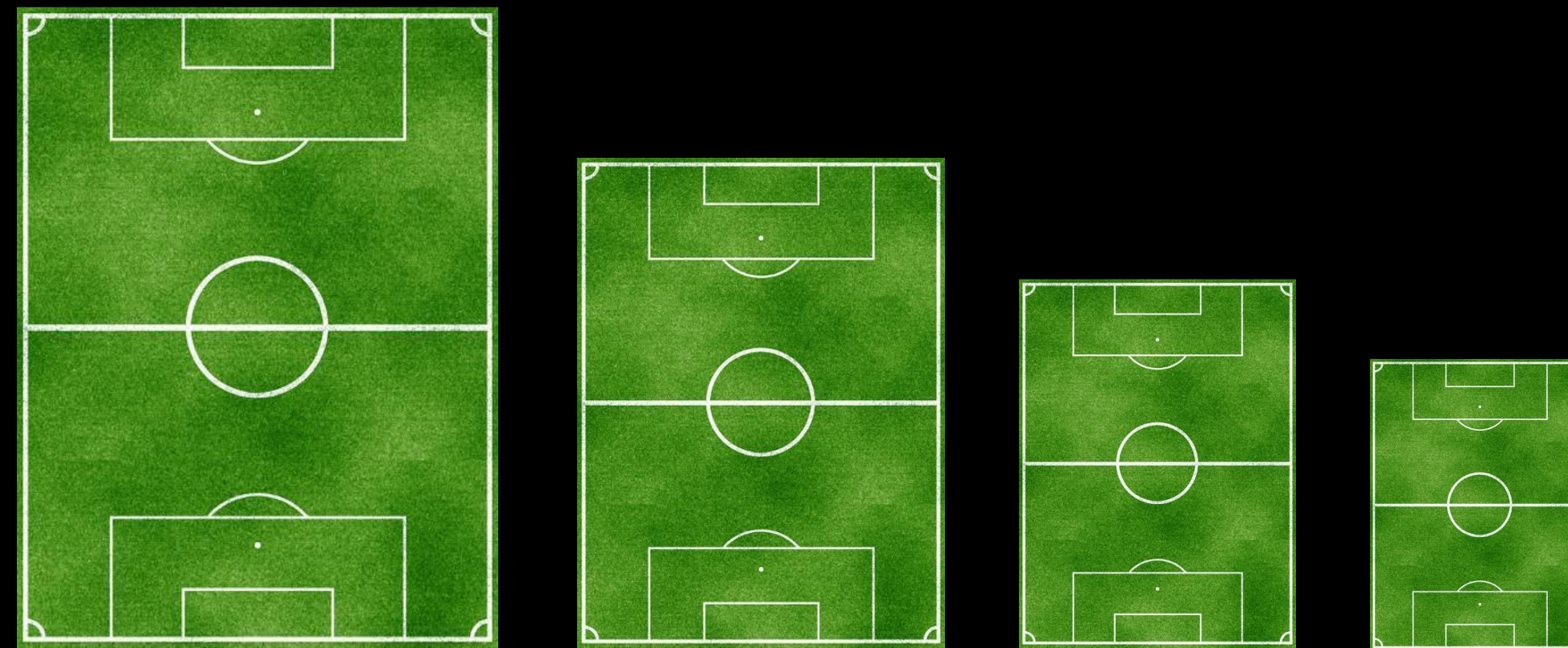
Small-sided games (SSGs) started as an optimal task to enhance training by attaining the fitness requirements without compromising decision making as well as skill performance. Therefore, SSG is predominately used for improvement in fitness, tactical awareness and specific dynamics of a real pitch game, that incorporates a wide variety of soccer codes (Reilly & White, 2004).

## COACHES UTILISATION



The use of SSGs in training protocols can be manipulated to suit the tasks and objectives required by the coach to restrict physiological stimulus. Playing levels need to be considered well utilising SSGs as a training protocol.

## EFFECTS OF PITCH DIMENSIONS



↑ Pitch dimensions, increases both anaerobic and aerobic fitness within each player

↓ Pitch size decreases ball receiving tasks and full competition of movement

Manipulation of pitch dimensions in SSG has shown to influence TD variables and running intensity of each soccer player (Hill-Haas, 2011).

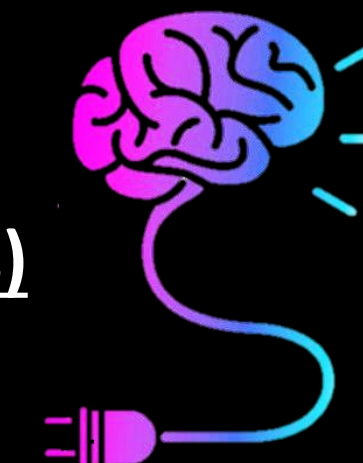


## METHODS

Database Search (5,065 Articles)

Inclusion (10 Articles)

Refinement (100 Articles)



## PHYSIOLOGICAL

- Small-sided games mimic the movement demands, technical requirements, physiological intensity and technical aspects of a competitive game day match. players show an increase in blood lactate, perceived exertion, heart rate and distance covered during a game.
- Increased lactate levels of  $10.1 \pm 1.8$  mmol occur in SSGs.
- SSGs in a substitute of generic anaerobic training, has found higher blood lactate levels on larger pitch dimensions compared to small and mediums games (Rampini, Impellizzeri, et al 2007)
- 3 vs 3 and 4 vs 4 small side games have an average heart of 173-184 bpm, corresponding to 90 to 95%  $Hr_{max}$
- Maximum heart rates above 85% intensity generate more cardiovascular Stimulant throughout small-sided games, enhancing aerobic fitness in each player.

