

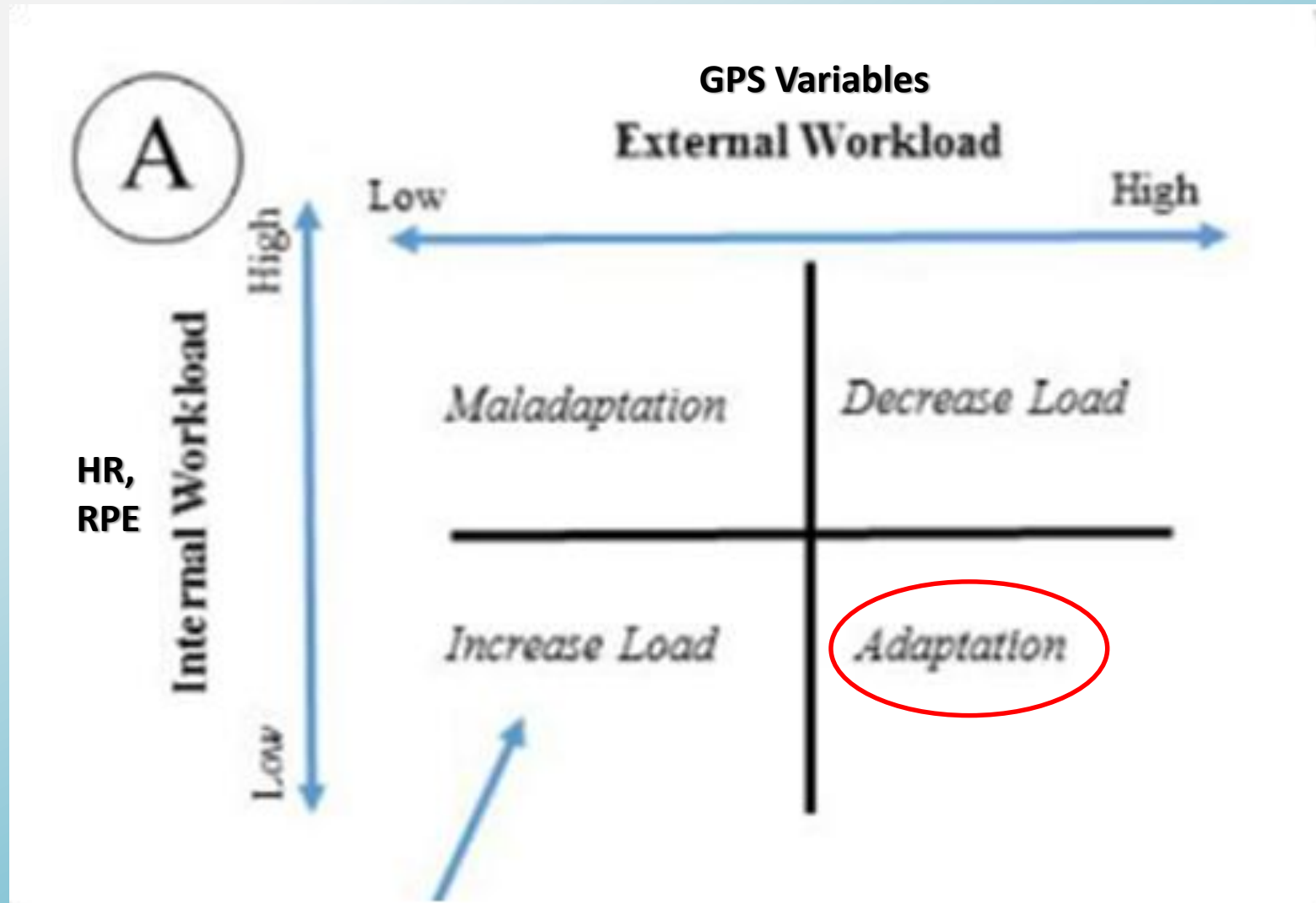
The role of small-sided games as both a training stimulus and a talent identification model in football

**Professor Vish Unnithan,
School of Science and Sport
University of the West of Scotland, Hamilton, Scotland,
UK**

Outline

- **Small-sided games (SSG) as physical and tactical training stimulus**
- **SSG as a multi-Dimensional Real-Task Model for Talent Identification**

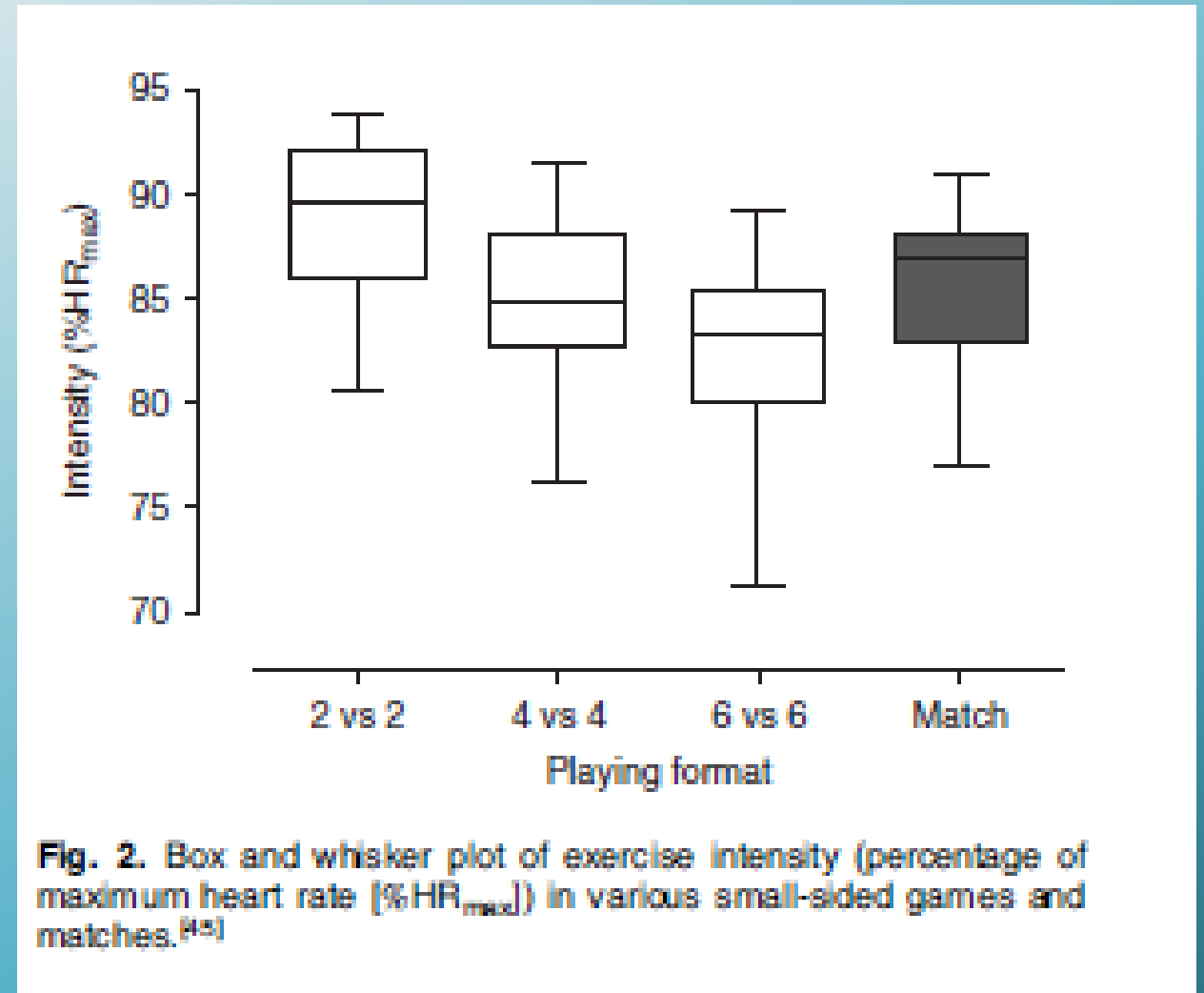
Training Adaptations: *Gabbett et al., 2017*



Internal Load (HR): Manipulation of game format

- Fewer players in SSG: greater relative exercise intensity (%HR_{max})
- All formats equivalent to match intensity

Hill-Haas et al., 2011



Internal Load (%HRmax): Manipulation of Training Modality

- Shape/ pattern of play influences tactical training, relative intensity is lower. Can we challenge this paradigm?
- SSGs equivalent to Circuit interval training

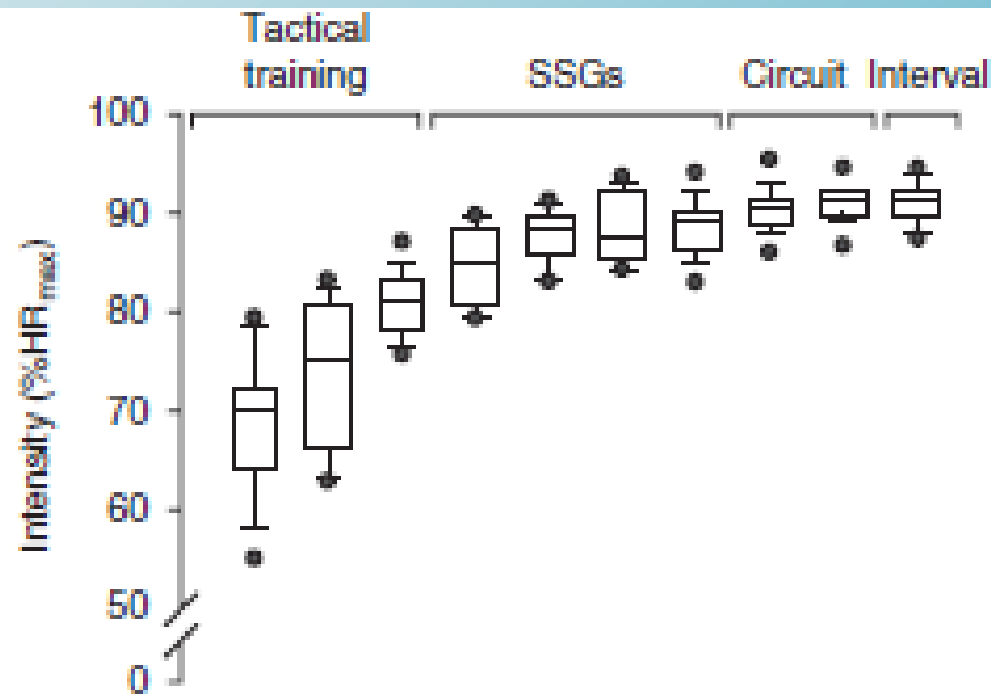


Fig. 3. Mean ($\pm 90\%$ CI) exercise intensity (percentage of maximum heart rate [%HR_{max}]) in various football training activities. SSGs = small-sided games.

Hill-Haas et al., 2011

Internal Load (RPE): Manipulation of player number

- Fewer players: greater distance covered and greater perception of effort
- Introduction of floater increases both the tempo of the game and perception of effort

Hill-Haas et al., 2011

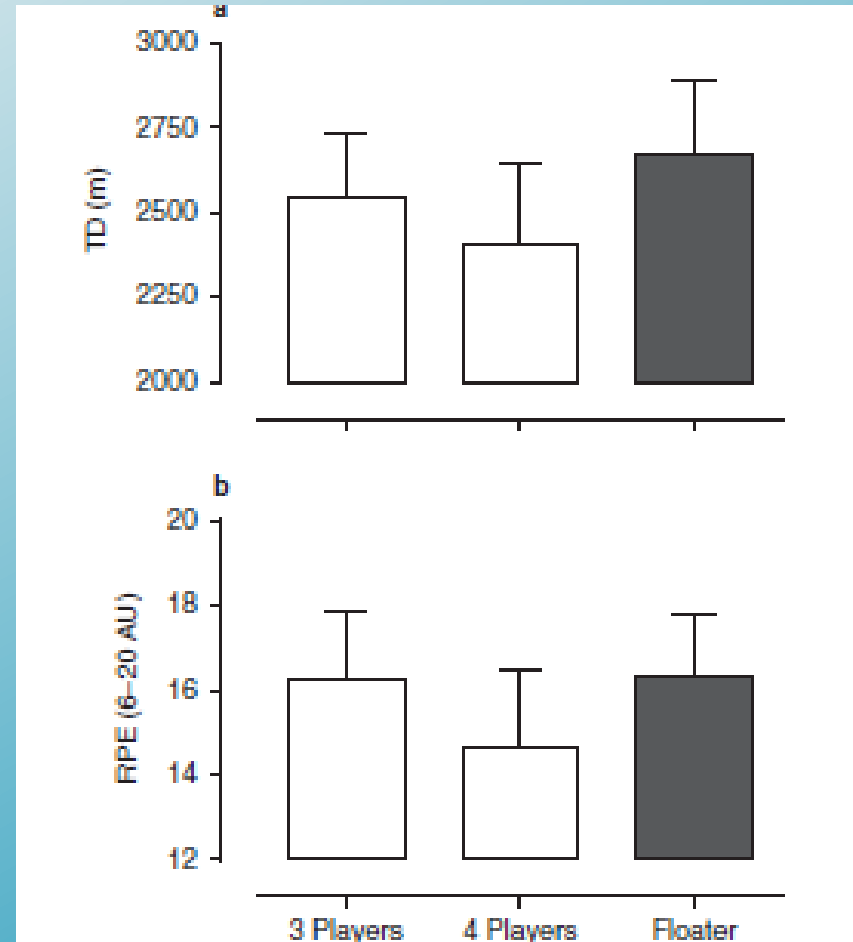
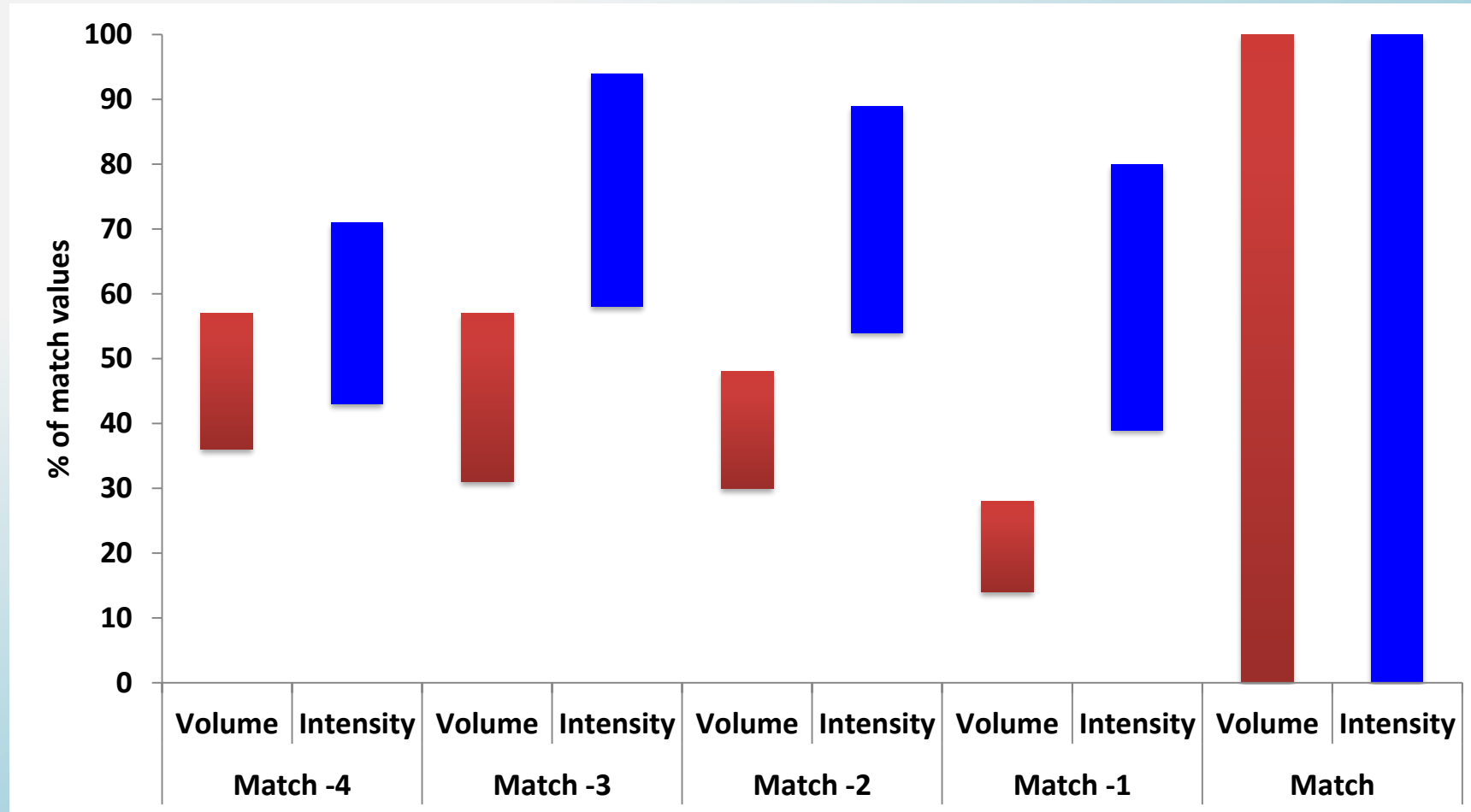
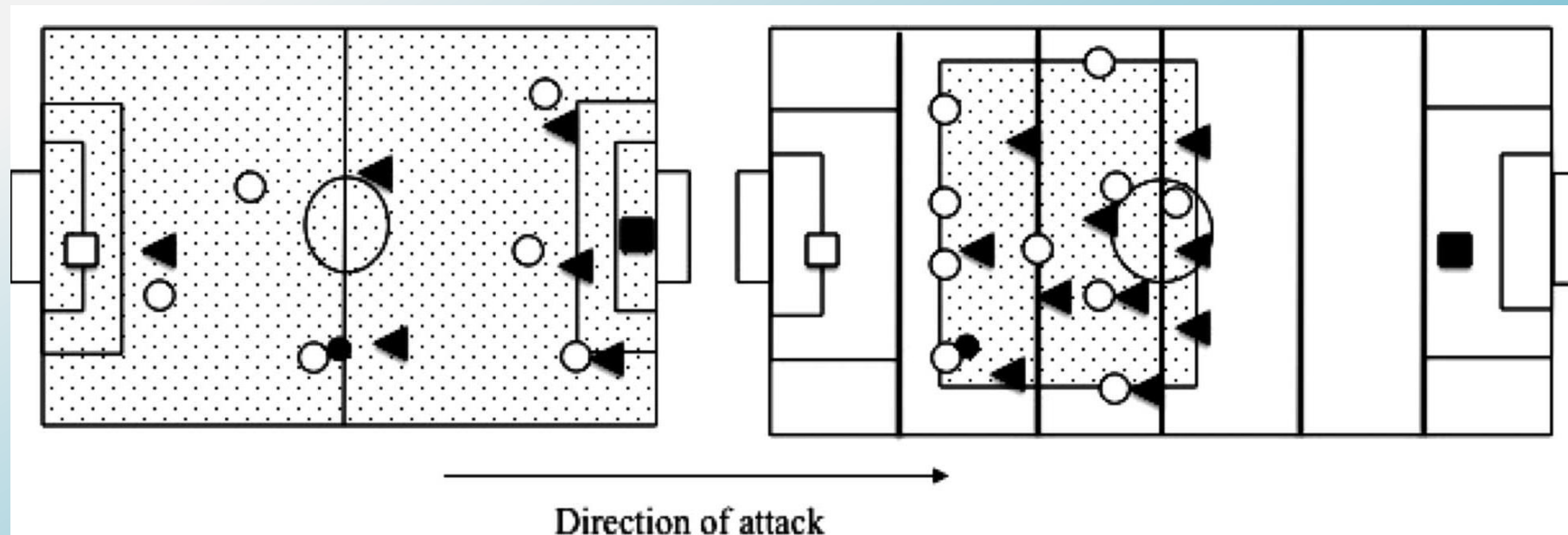


Fig. 1. Comparison of (a) total distance (TD; m) and (b) rating of perceived exertion (RPE) [6-20 arbitrary units; AU] with 'floating' players and other players in various smaller game formats.^[34]

Typical lead in to a game – volume and intensity



Tactical Application of SSG: The Challenge of Individual Playing Area (IPA-m²)



SSG (162.7 m²)

11-a-side (78.97- 93.87m²)

Recommendations for tactical training using SSG

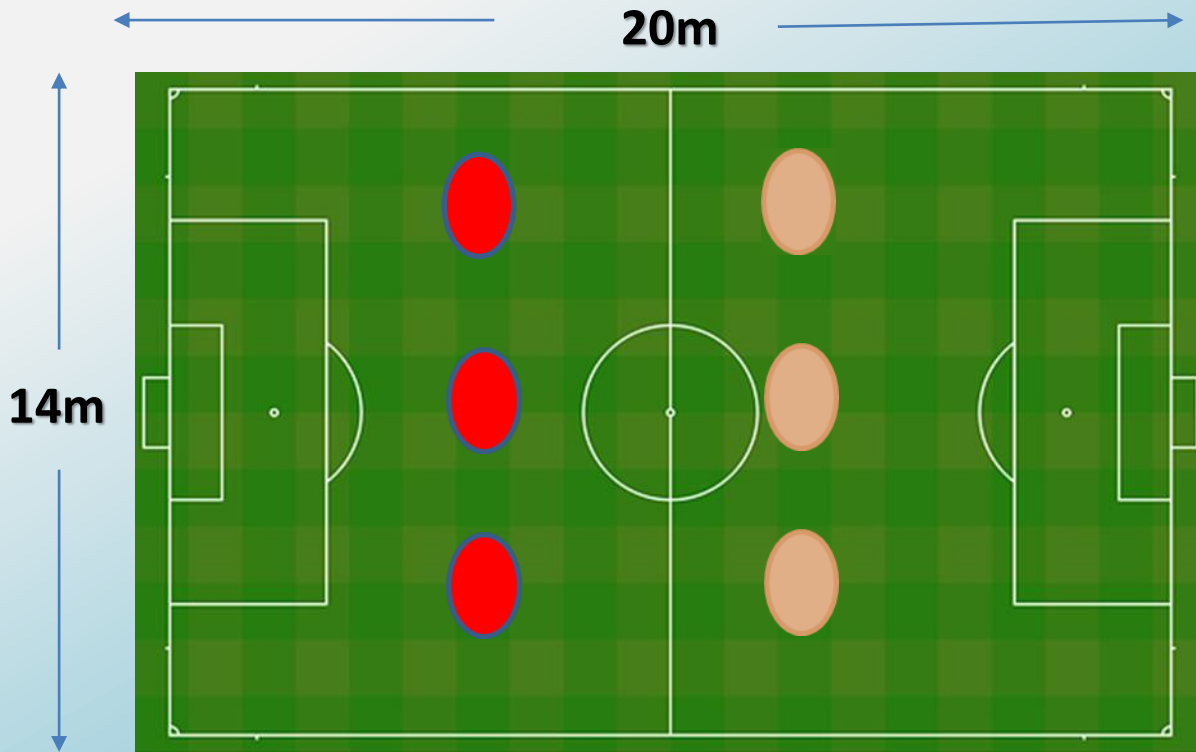
Aim of the SSG	Location of the ball on the pitch	IPA (m ²)	Exemplar pitch dimension for 5 v5
Build-up play	Defensive Area	70-110	30 x 30m
Transition play	Midfield	65-95	25 x 30m
Finishing phase	Attack	70-110	30 x 30m

Conclusion: SSG can replicate the tactical aspects of full-sized soccer matches

Fradua et al., 2013

SSG Training Models

3 vs 3; No GK (small goals): 6 x 2.5 mins



TD – 1567m - 70.1 m/min

HML- 311m - 13.9m/min

HSR – 27m - 1.2m/min

EXT: High-Intensity, anaerobic session. Low amount of High Speed Runs (HSR), but accelerations and decelerations are high (HML)

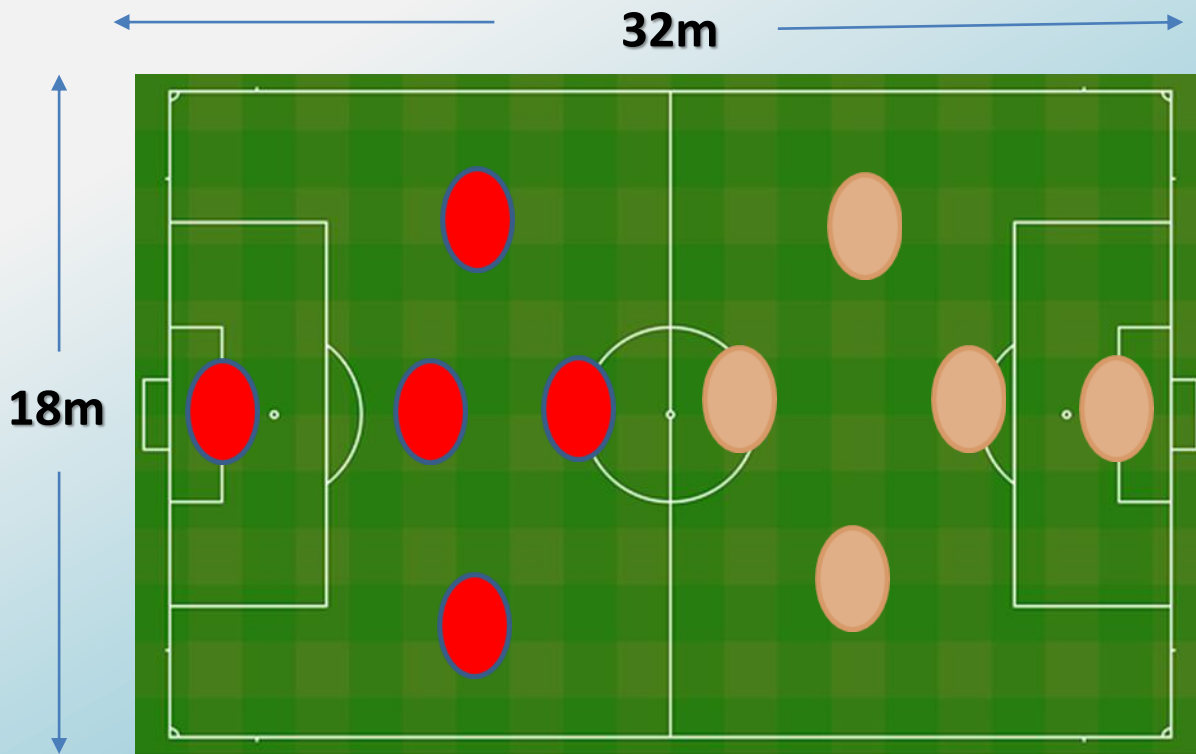
INT: >90%HRmax (Dellal et al. 2011)

High Accelerations: Translation



SSG Training Models

4 vs 4; GK (goals): 4 x 3 mins



TD- 1256m - 78.1m/min

HML- 173m - 10.8m/min

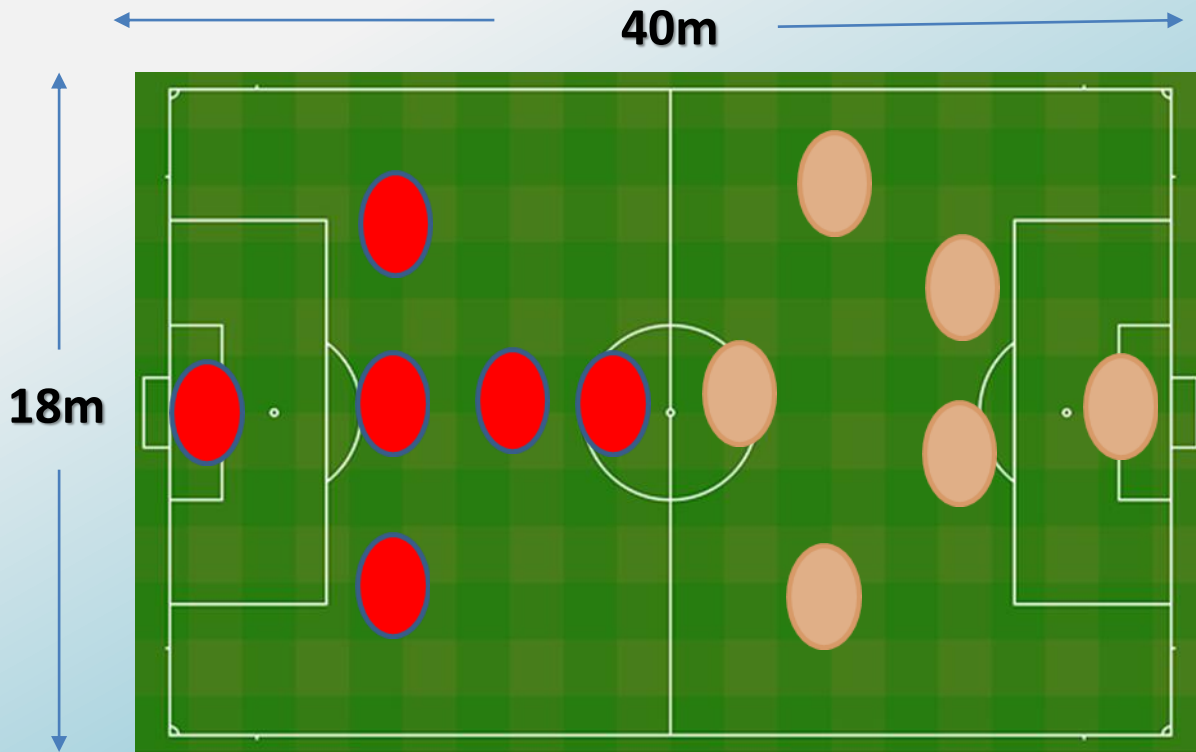
HSR – 6m - 0.4m/min

EXT: Pacing strategy, play in shape rather than constant press

**INT: 87.6%HRmax; 4.3 mmol/L;
RPE (6). Rampinini et al., 2007**

SSG Training Models

5 vs 5; GK (goals): 4 x 4 mins



TD- 1864m - 88.3m/min

HML – 342m - 15.6m/min

HSR – 26m - 1.3m/min

EXT: Aerobic-interval training session, accels and decels not as high as 3 v 3. High-intensity work load. Players will press constantly.

**INT: 75.7%HRmax and 152 bpm.
*Owen et al., 2004 and Williams and Owen (2007)***

SSG Training Models

7 vs 7; GK (goals): 4 x 5 mins



TD- 2490m - 94.8m/min

HML – 488m - 18.6m/min

HSR – 149m - 5.7m/min

EXT: Hard conditioning day (MD +3) Large distances covered and at high speed. Accels and Decels high

INT: 84%HRmax. *Castellano et al. (2013)*

Constant Press: Translation



**GPS Drill Report: U18s at
Wolverhampton Wanderers FC (MD +2)**

Contextualisation: SSG (MD+2)

- **4 ZONE possession**
- Form of small-sided game
- Create overloads
- Create constraints
- Create individual player challenges
- **7 vs 7 SSG**
- Never continuous
- Create constraints (one touch-pass and two-touch finishing)

SSG: Contextualisation

- **3 Goal Set-up**
- Objective: Work on team unit-pressuring, switches of play. Key to goal scoring, search for gaps and strike

Wolves FC



Limitations of SSG

- Ceiling effect for high-skilled players?
- Can you replicate very high-intensity epochs in SSG that mimic match-play
- Is a pre-requisite for high levels of technical and tactical skill needed to achieve the optimal exercise intensity for SSG?

Talent Identification

MESSI: AGE 9



MESSI: AGE 27



SSG as a multi-Dimensional Real-Task Model for Talent Identification

Rationale for Talent ID

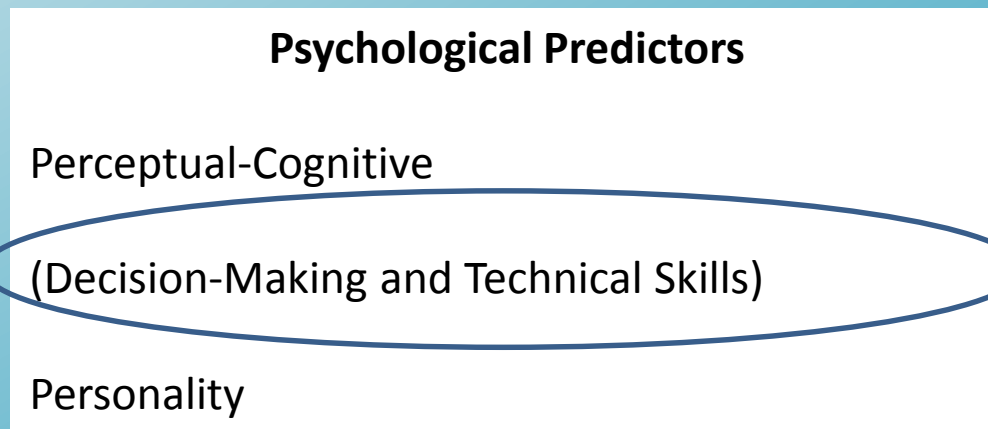
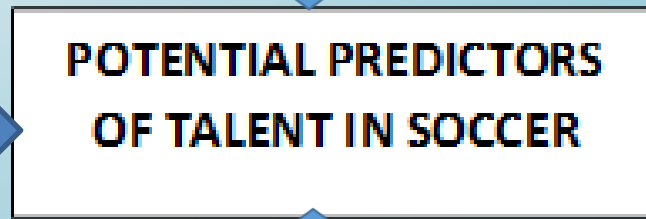
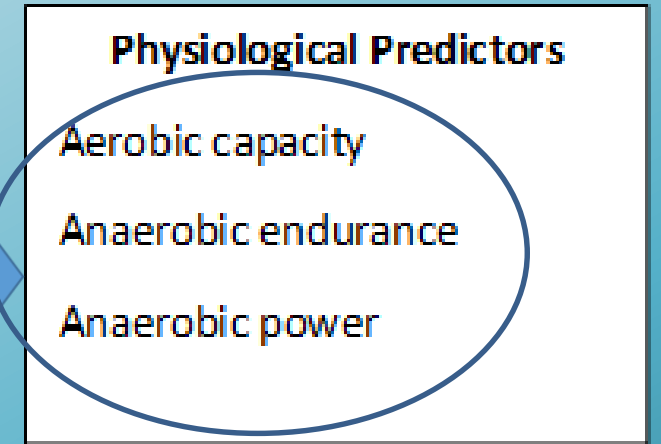
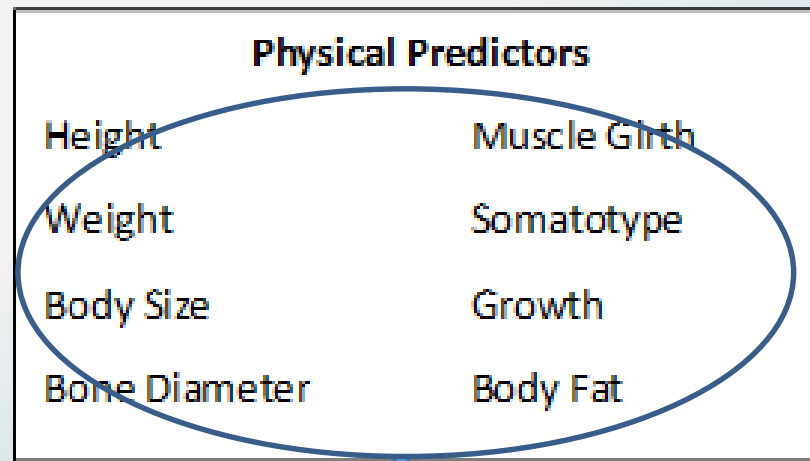
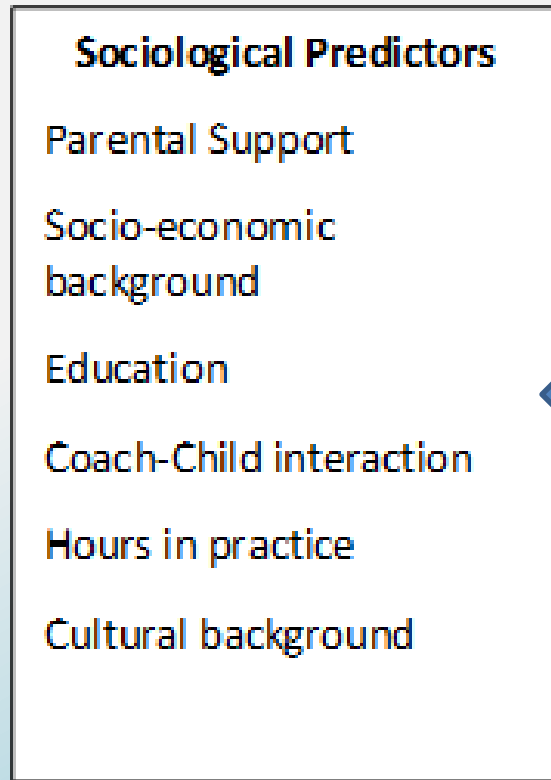
- Identify players that have the capacity to progress to the first-team
- Competitive gains through establishing a core identity of young players that identify with the club
- Financial Strategy-save money and/or generate transfer income



Traditional vs Alternative Talent ID Paradigms

- Soccer is a complex sport where skills have to be executed in a rapidly changing environment (Unnithan et al., 2012)
- A Talent ID model needs to be developed that better represents the demands of actual competition (Vaeyens et al., 2008)

TRADITIONAL PARADIGM



Modified from Williams and Reilly (2000)



The evaluation of small-sided games as a talent identification tool in highly-trained pre-pubertal soccer players

Fenner, Iga and Unnithan, Journal of Sports Sciences (2016)



Dr Jonathan Fenner
WOLVERHAMPTON WANDERERS FC

Previous Research

Unnithan, V., White, J., Georgiou, A., Iga, J., and Drust, B. (2012). Talent Identification in youth soccer. *Journal of Sports Sciences*, 30 (15), 1719-1727.

- Small-sided games (SSG) used to identify the most talented U16 players at Wolves FC
- The premise behind this study was to play multiple SSG (4 vs. 4) and manipulate team combinations after each match.
- The aim was to challenge the more talented player to elevate the level of the players around him and this would lead to a higher win ratio for the more talented individual.

- The technical level of the player would simultaneously be objectively evaluated by the coaching staff
- This study found a moderate relationship between the coaches rating of the best player (GTSC) and the player who won the most games.

Performance Criteria Name of Scorer: _____ Condition: _____

Criteria	Game 1					Game 2					Game 3				
Cover / Support															
Communication-Team work															
Decision making															
Passing															
Receiving-1 st touch															
Control-Running with the ball															
1v1															
Shooting															
Assist															
Marking															
Game Score (won, draw or loss and write score)															

Key
5 - Excellent

Players name in team: _____

Comments: _____

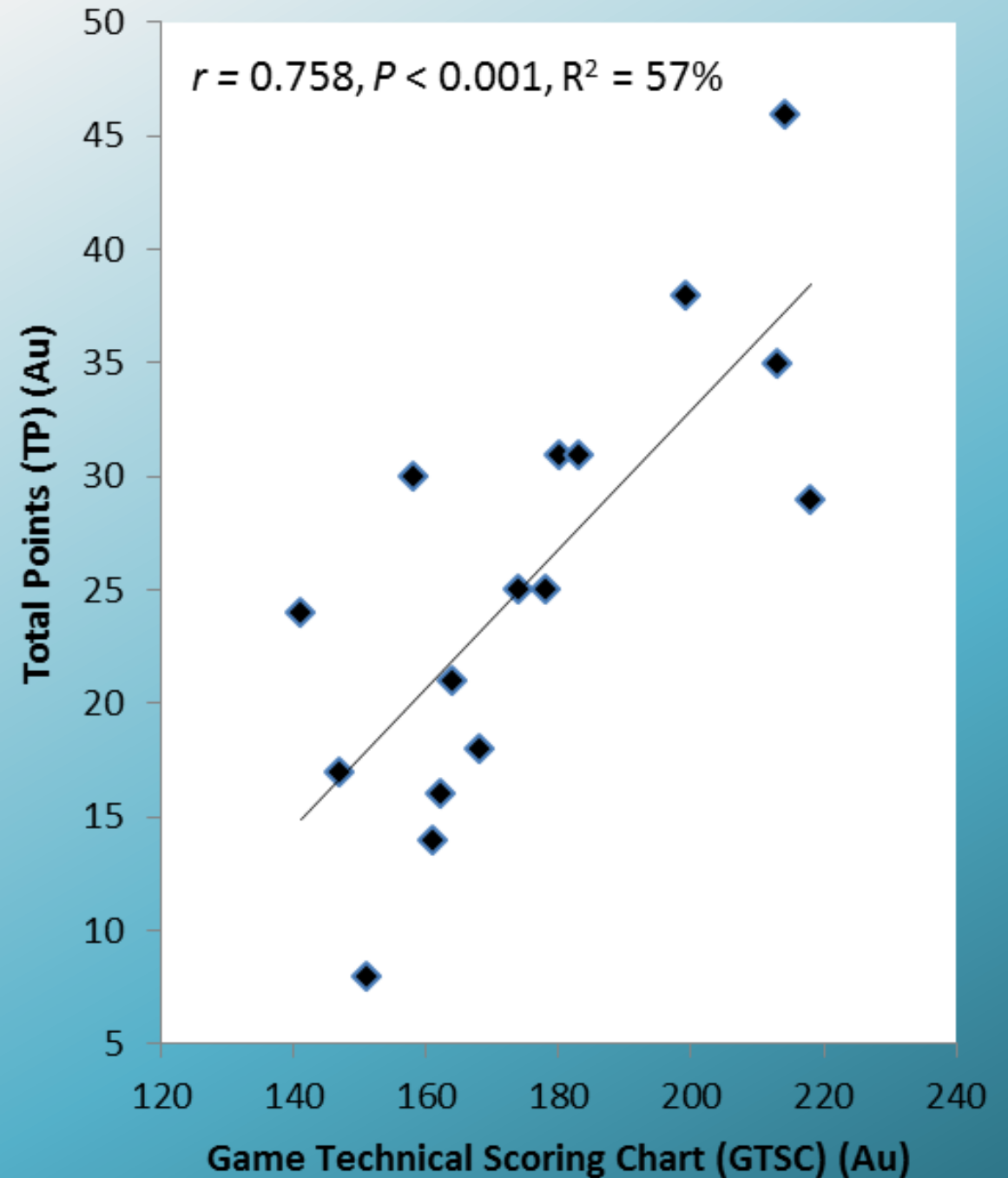
Small-Sided Games: Talent Identification Design in U-10 Soccer Players



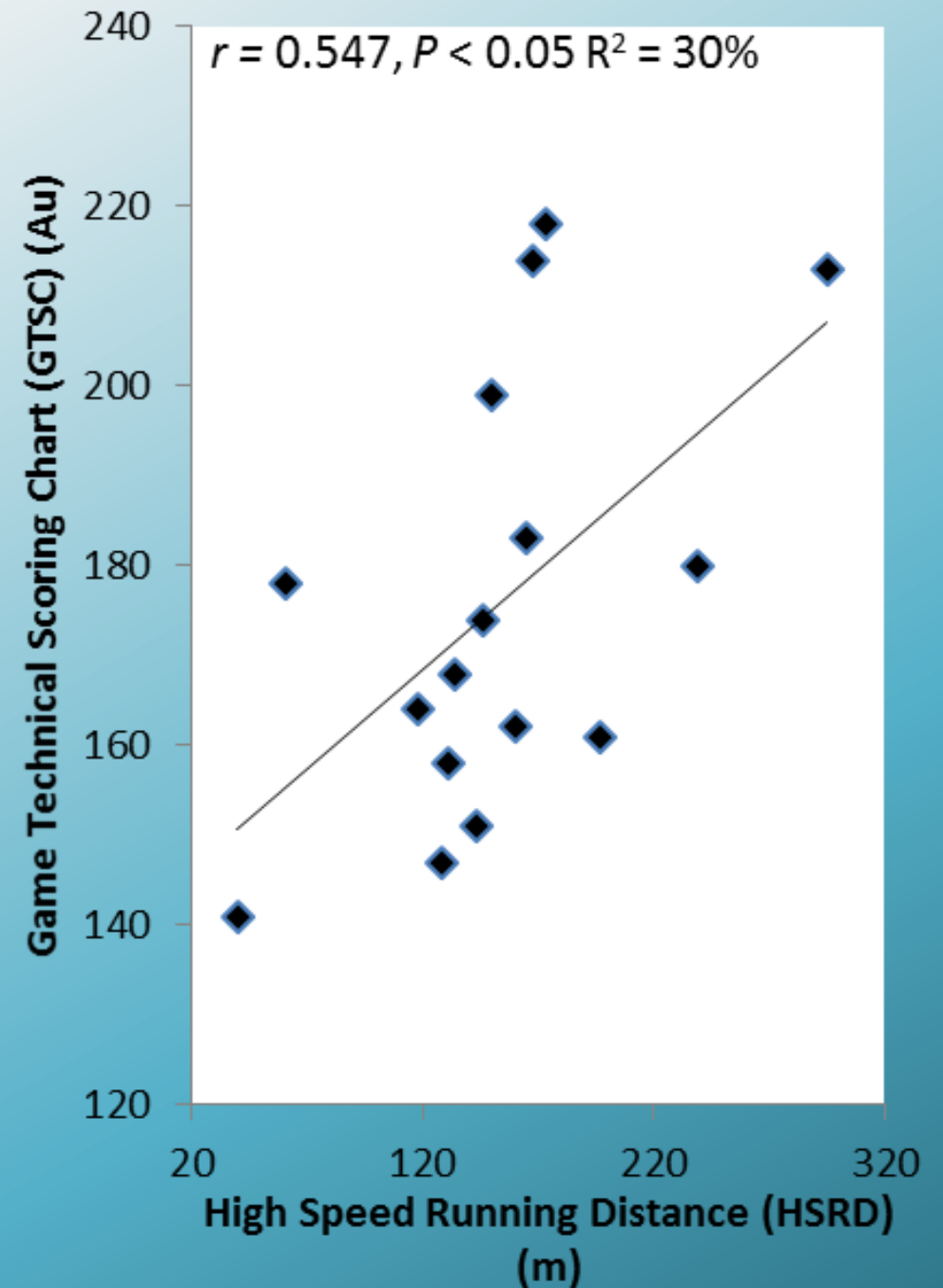
Talent Identification using SSG in U10 players

- **Aim: Assess if success in multiple SSG's can identify the most talented player within a cohort of U10 soccer players**

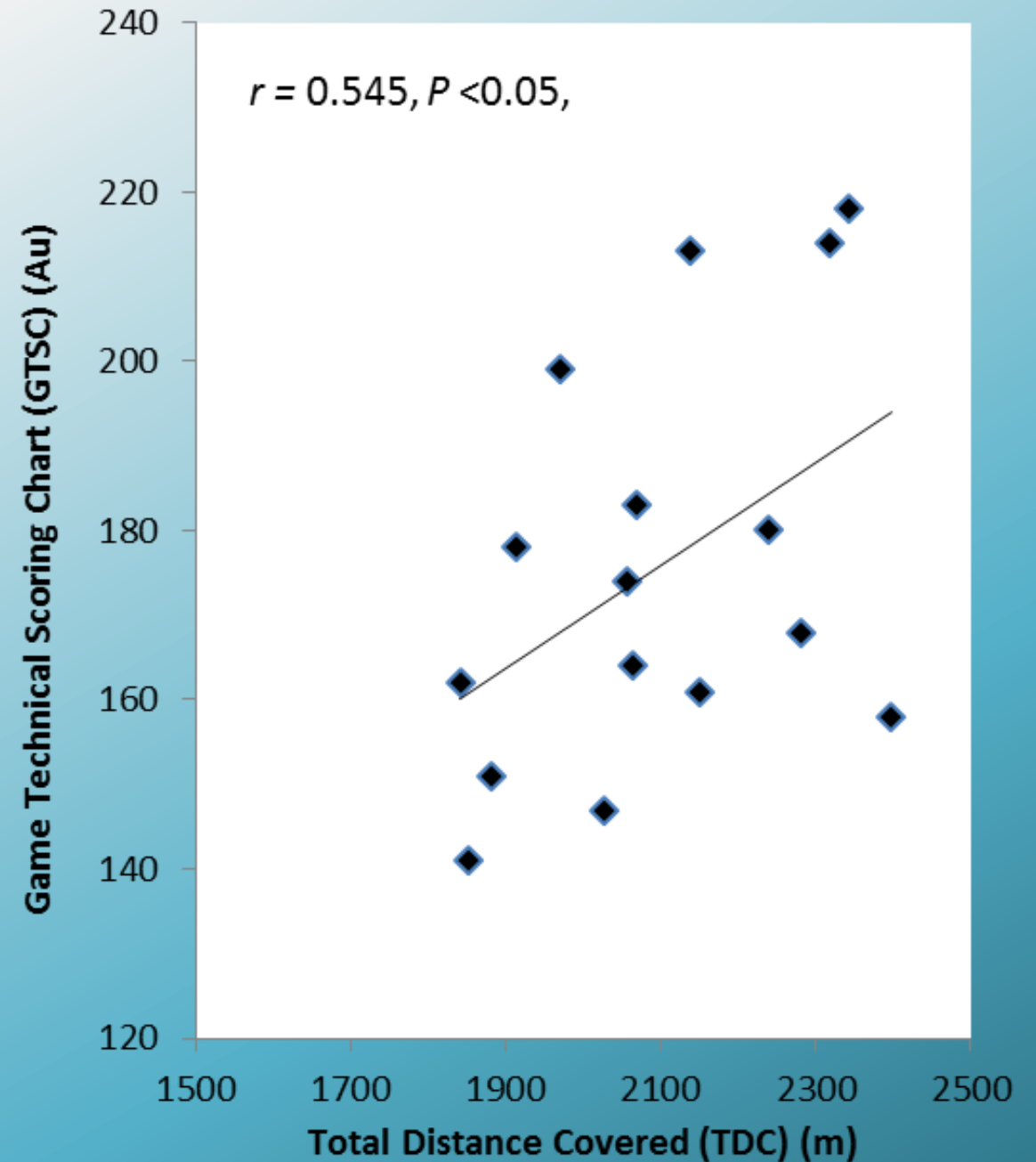
Evaluate the simple relationship between matches won in the SSG and technical skill level of the player



Evaluate the relationship between the amount of distance covered at high-speed (HSRD) and technical skill level of the player (GTSC)



Evaluate the simple relationship between the total distance covered (TDC) and the technical skill level of the player



Conclusion

Talented players as rated by coaches were the most successful players in multiple SSG, these players also covered the greatest amount of total distance and high speed running distance. Therefore SSG's could act as a talent identification model by simply measuring which players won the most amount of games.

Decision-making Ability

- Evidence in the adult and youth literature that “expert” soccer players demonstrate superiority over less-skilled players in their ability to anticipate and make decisions (Roca et al., 2011; 2012; Vaeyens et al., 2007)
- Using cues from the ball, teammates and opposition they extract more information in a smaller time-frame using a different visual search strategy



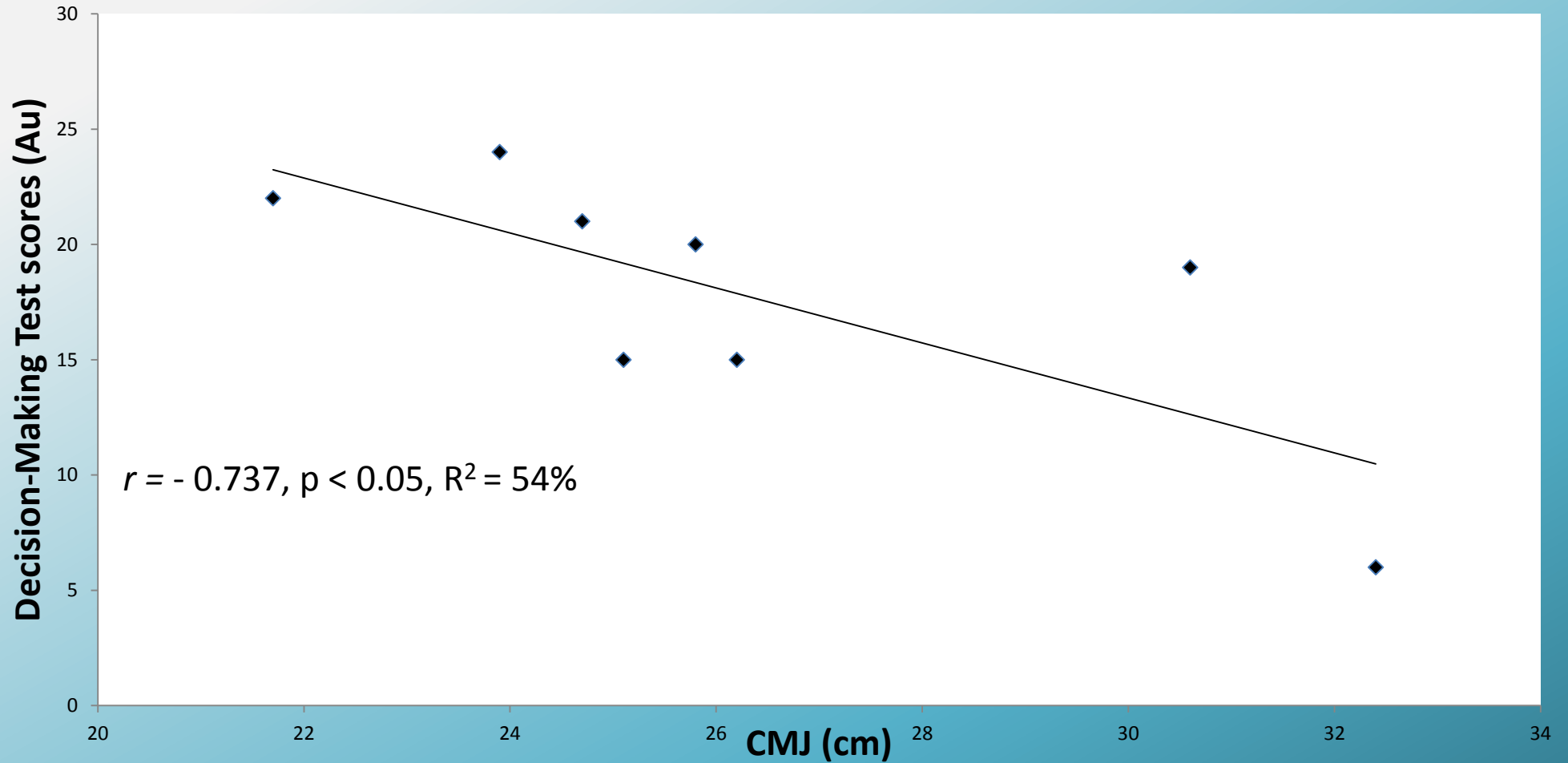
Aim: Evaluate the decision making ability of U10 soccer players using a visual occlusion strategy



Methods: Multiple game-related clips were viewed with a 3 second response time



Talent Identification and Decision-Making

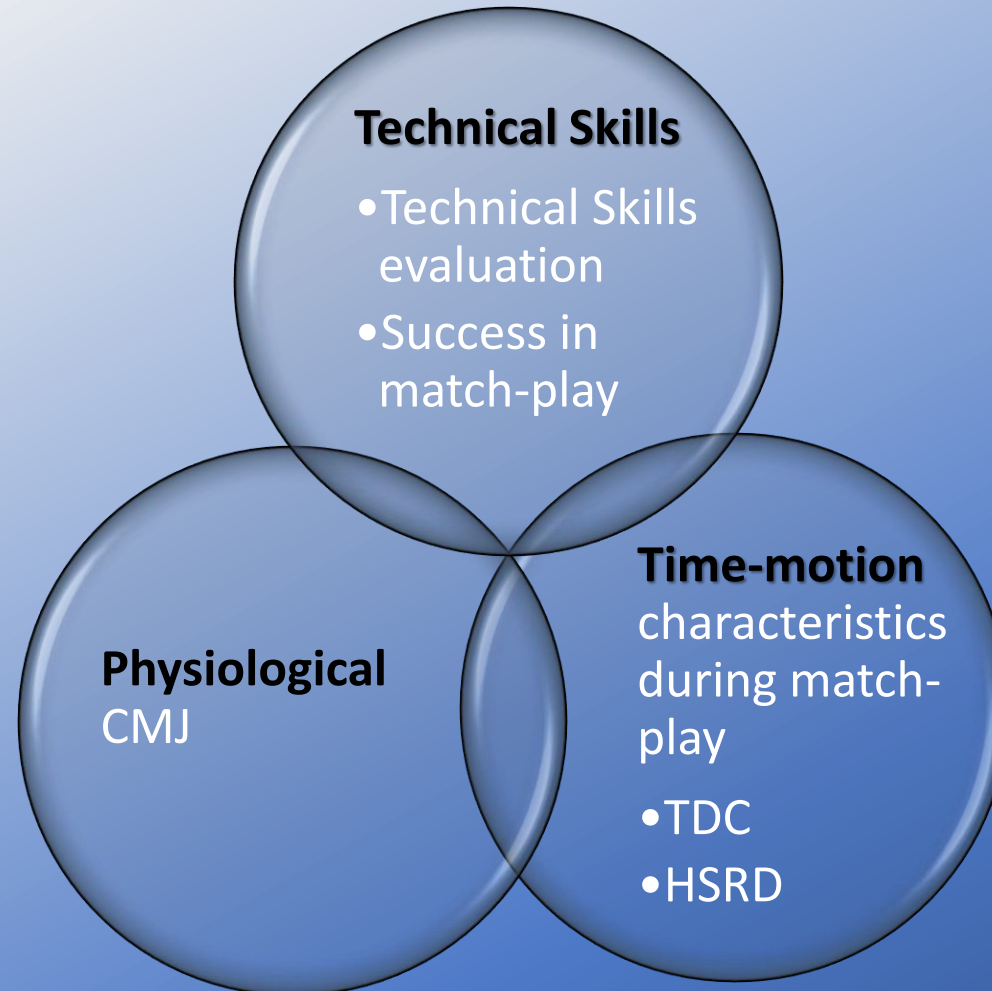


Conclusion

Talented players that have been identified via successful performances in SSG's achieved this status without superior decision-making ability.

This study did find that players potentially compensate for a lack of power output with improved decision-making ability to enable them to succeed in SSG performance.

Multi-Dimensional Task-Based Talent ID Model



Implications of the SSG Talent Identification Model

The more talented pre-pubertal soccer player has the capacity to create solutions on the soccer pitch by self-organizing and spontaneously devise individual and team movement patterns to the task, irrespective of the changing environment around him.

***Seirul.lo and Vila (2003). Football Methodology Department:
FC Barcelona***



Acknowledgements

- Dr. Paul Ford (Brighton University, UK)
- Dr. Alistair McRobert (Liverpool John Moores University, Liverpool, UK)
- Professor Barry Drust (Liverpool John Moores University, Liverpool, UK)
- Dr Jonathan Fenner (Wolverhampton Wanderers FC)
- Dr Daniel Medina (Philadelphia 76ers)
- Joan Vila (FC Barcelona)
- Paco Seirul.Lo (FC Barcelona)