

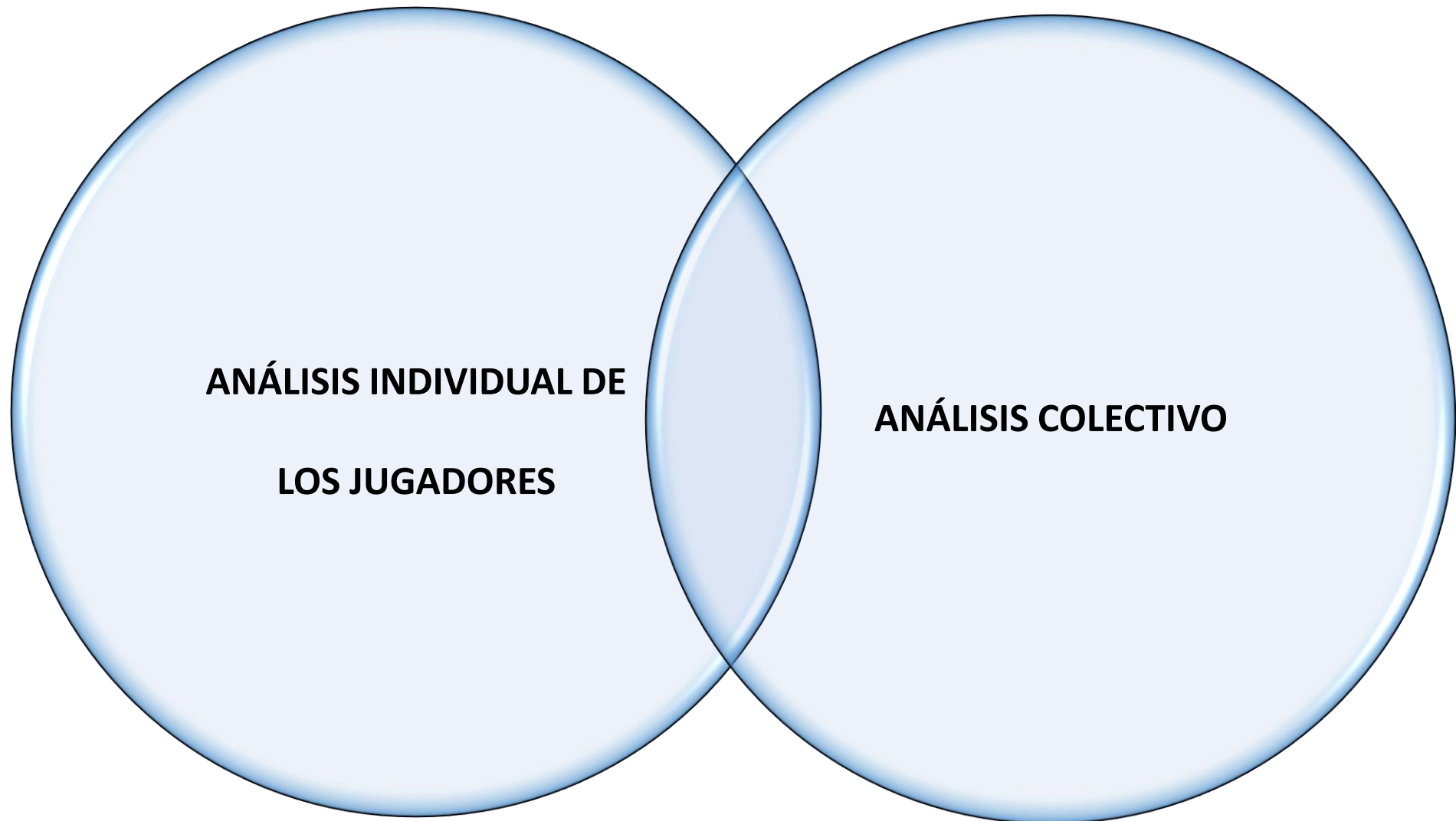
Elección de las variables tácticas colectivas en función del nivel competitivo

Markel Rico-González

Universidad del País Vasco (UPV-EHU)

José Pino-Ortega

Universidad de Murcia

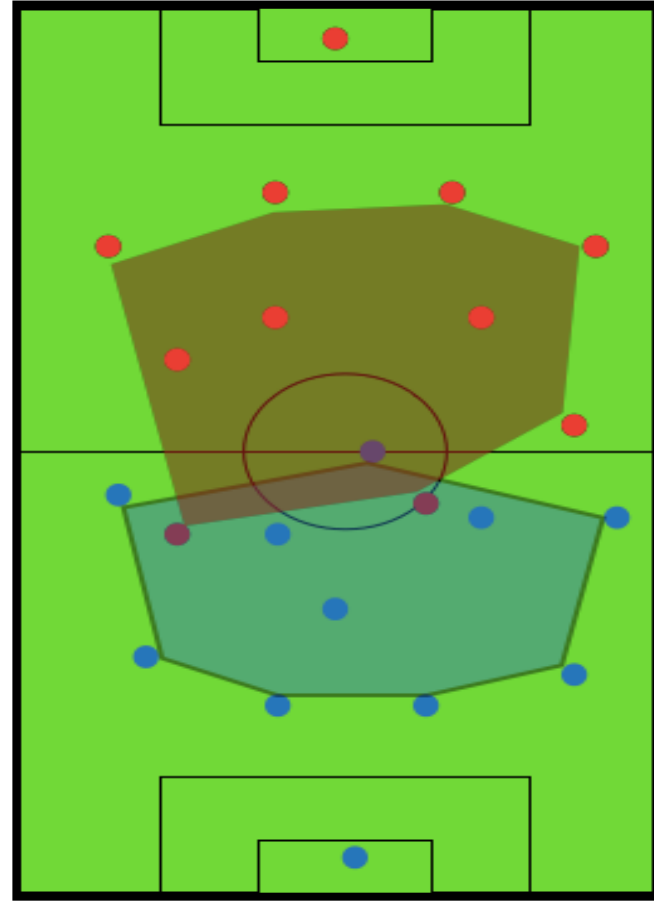
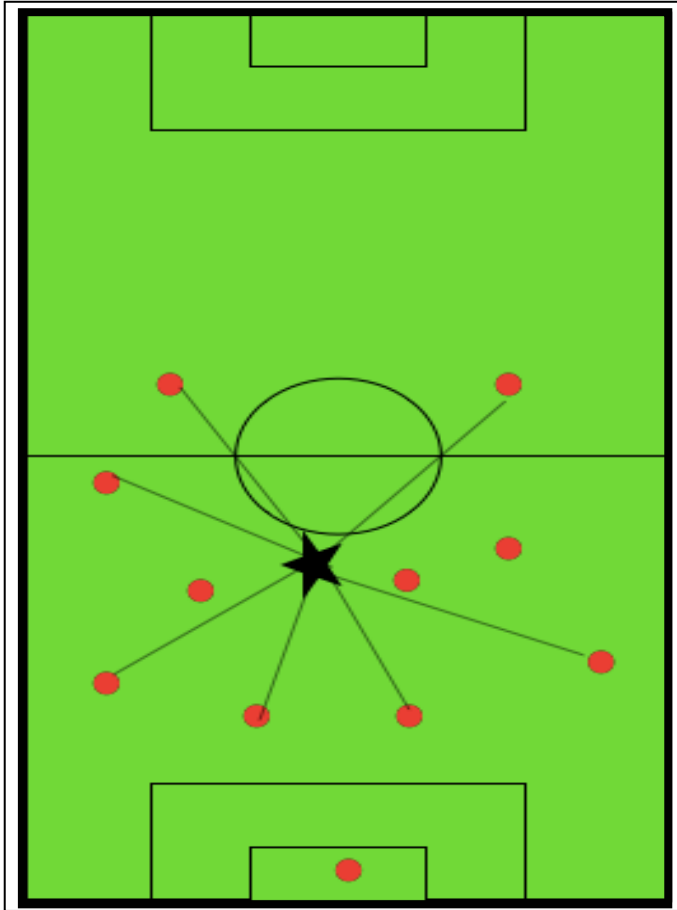


Classification of the collective tactical variables

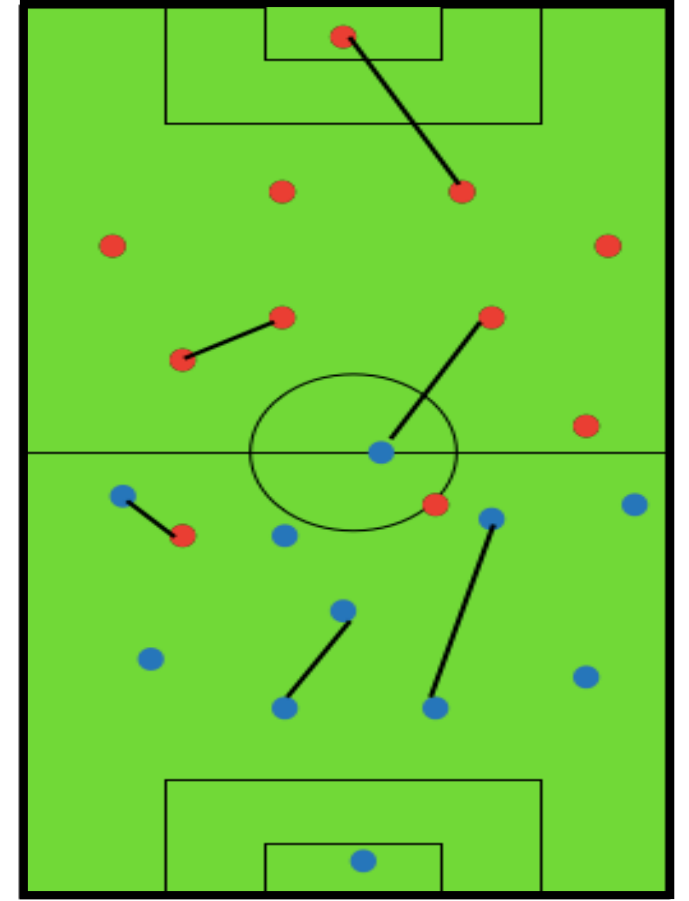
Variable	Group and sub-groups of variables	Variables included in each group
GC	GC	Geometrical centre of the team
Dyads	Distance between two points (i.e., GC of several players, players, space, ball)	
	Player-player	
	Player-opponent	Player-opponent. Team separateness
	Player-teammate	Player-teammate. Length; Width
	Player-space	Player-line. Player-goal.
	Player-ball	Player-ball
	GC – GC	GC-GC
	GC – Player	Own/opponent GC-player
	GC – Space	GC-defensive line /goal
Area	Occupied space	Surface area. Covered area
		Effective playing space
	Influence space	Major ranges of GC
	Dominant space	Dominant region area/Voronoi cells
		Weighted dominant region area
		Superimposed Voronoi diagrams
		Maximum percentage of overlapped area
		% of free area

GC: Geometrical Centre

MACRO-nivel



MICRO-nivel



Age-related effects of practice experience on collective behaviours of football players in small-sided games



Luís Barnabé ^{a,*}, Anna Volossovitch ^a, Ricardo Duarte ^a, António Paulo Ferreira ^a, Keith Davids ^b

^a CIPER, Faculdade de Motricidade Humana, SpertLab, Universidade de Lisboa, Portugal

^b Centre for Sports Engineering Research, Sheffield Hallam University, UK

The purpose of this study was **to examine whether** offensive and defensive **collective behaviours** emerging in six-a-side football games (GK+5 vs. 5+GK) **varied according to age-related practice experience** of young, male players (U16, U17 and U19 yrs). Players' were not instructed to implement specific tactical plans and their movement trajectories (2D analyses) were recorded using 10 GPS units. Four common measures of team dispersion investigated in previous research (*surface area, stretch index, length and width* of a team) were used to analyse team performance behaviours. After recording these collective variables, we used sample entropy (SampEn) and cross-sample entropy (Cross-SampEn) measures to assess the regularity and synchronization of participant actions in teams. **Results demonstrated clear age-related variations in effects on the collective performance measures analysed.** In attacking phases, older and more experienced players occupied a greater *surface area* and displayed higher values of *team width and stretch index*. In defensive phases, significant differences were observed in *team length and stretch index*. Cross-SampEn analysis demonstrated a greater synchronization between offensive and defensive *surface areas and team width* in older age groups (U17 and U19 yrs). Data suggest how **coaches can manipulate practice task constraints to enhance development of team tactical performance behaviours** in developing footballers between 16 and 19 yrs of age.

https://www.sciencedirect.com/science/article/pii/S0167945716300550?casa_token=uwLle5aqWQUAAAAA:OgtpGc2u3MfgyDhmpTCVU5TYpU

HIPÓTESIS

Los entrenadores podrían
considerer diferentes
variables en función del nivel
competitivo.

OBJETIVO

Realizar una revisión
sistemática para analizar si
existe alguna tendencia a la
hora de elegir variables en
función del nivel competitivo.

ESTRATEGIA DE BÚSQUEDA

Guía PRISMA

Bases de datos:

PubMed, SPORTdiscus and Web of Science

Fecha:

November 7, 2019.

BÚSQUEDA

(1) PALABRAS RELACIONADAS CON EL **DEPORTE**:

soccer, football

(2) PALABRAS RELACIONADAS CON **RESULTADOS**:

“tactical behavio*”, “tactical performance*”, “tactical-derived variables”, “tactical analysis”, “tactical ability”, “team tactic*” “positioning performance*”, “collective variable*”, “collective behavio*”, “collective tactical movement*”, “positional data”, “teamwork analysis”, “dynamic positioning”, synchronization, “interpersonal coordination”, “team* organisation”, “coordination pattern*”.

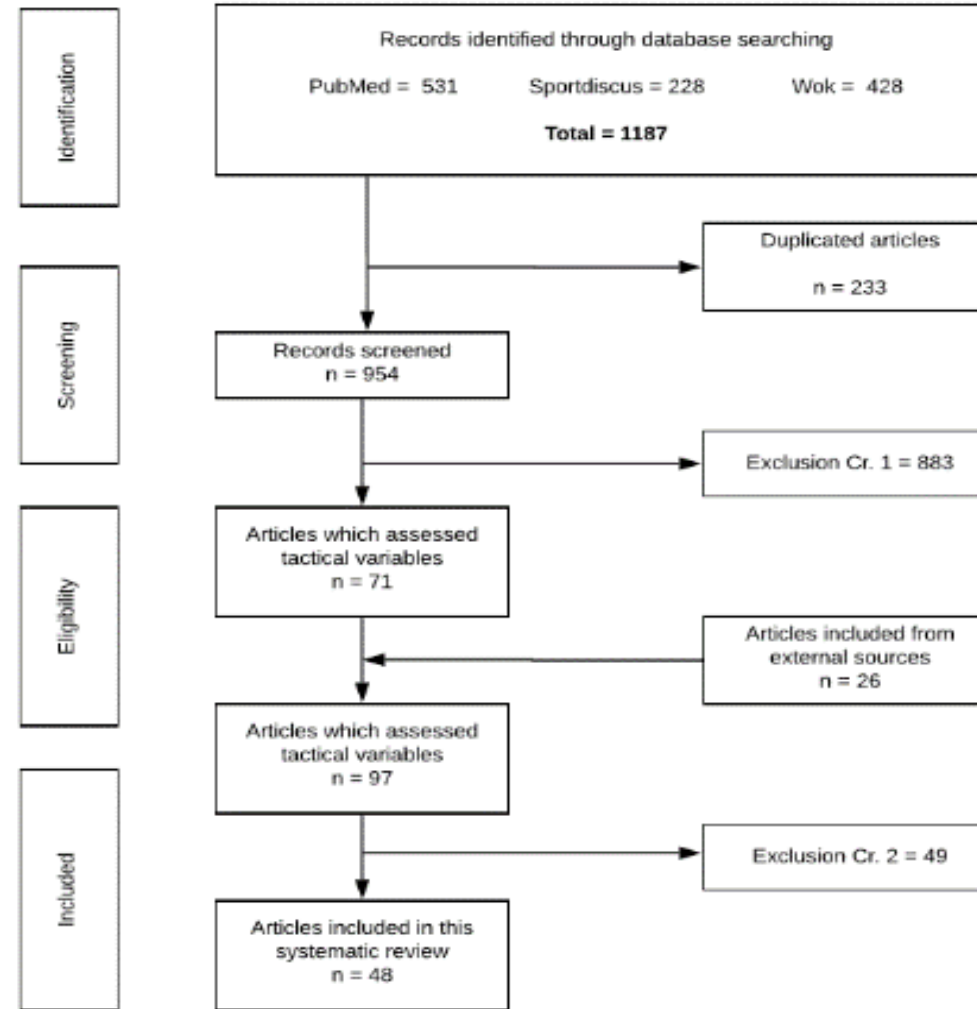
MÉTODO

BASES DE DATOS	TÍTULO	AUTOR	REVISTA	AÑO	DUPLICADOS	EXCLUSIÓN
SPORTDISUCUS	How Does the Adjustment of Training Task Difficulty Level Influence Tactical E	Machado, J	Research Qu	2019	1	
SPORTDISUCUS	Análise do perfil técnico-tático das equipes da "La Liga" 2017-2018: uma abor	Añon, I. C.;	Revista And	2019	1	
SPORTDISUCUS	Effects of pitch spatial references on players' positioning and physical perfor	Coutinho, I	Journal of Sp	2019	1	
SPORTDISUCUS	Effects of the players' level and age group category on positional tactical beh	Serra-Olivei	Internationa	2019	1	
SPORTDISUCUS	Análisis de variables condicionales y técnico-tácticas mediante juegos reducic	Torreblanc	Retos: Nuev	2019	1	
SPORTDISUCUS	比赛情境因素对中超联赛技战术表现指标影响的实证研究.	柏延洋; 杜	Journal of St	2019	1	
SPORTDISUCUS	La influencia de los constreñimientos espacio-temporales en la toma de deci	Romero Cl	Cuadernos d	2018	1	
SPORTDISUCUS	Training camp for youngsters.	WILSON, C	World Socce	2018	1	
SPORTDISUCUS	Functional Analysis of Losing your Marker in Football.	LOSQUIÑO, A	Apunts: Edu	2018	1	
SPORTDISUCUS	Impact of motivation on anxiety and tactical knowledge of young soccer play	MENEGASS	Journal of Pt	2018	1	
SPORTDISUCUS	Match Analysis, Big Data and Tactics: Current Trends in Elite Soccer.	Memmert, G	erman Jour	2018	1	
SPORTDISUCUS	多重比赛情境下中国足球超级联赛球队技战术表现对比赛胜负的影响.	姜哲; 黄竹	Journal of Pt	2018	1	
SPORTDISUCUS	COMPARISON OF TACTICAL PRINCIPLES EFFICIENCY AMONG SOCCER PLAYERS	RECHENCHI	Human Mov	2017	1	
SPORTDISUCUS	Demandas físicas, fisiológicas, táticas e técnicas no pequeno jogo 3vs.3 no fut	Moreira Pr	Revista Brasi	2017	1	
SPORTDISUCUS	A cluster phase analysis for collective behavior in team sports.	López-Felip	Human Mov	2018	2	
PUBMED	A cluster phase analysis for collective behavior in team sports.	López-Felip	Hum Mov Sc	2018	3	
SPORTDISUCUS	THE DEVELOPMENT OF TACTICAL SKILLS IN U-14 AND U-15 SOCCER PLAYERS TI	PRAÇA, GIB	Human Mov	2017	1	
SPORTDISUCUS	足球比赛核心制胜因素和制胜公式的探讨分析.	侯会生; 米	Journal of Be	2017	1	
SPORTDISUCUS	The influence of floaters on players' tactical behaviour in small-sided and cor	Bach Padill	Internationa	2017	1	
SPORTDISUCUS	A Pilot Study on Offensive Success in Soccer Based on Space and Ball Control	Perl, J.; Me	Internationa	2017	1	
SPORTDISUCUS	THE EFFECTS OF A COMPREHENSIVE TEACHING PROGRAM ON DRIBBLING AND	Pizarro, Alb	Kinesiology	2017	1	
SPORTDISUCUS	足球运动专项无氧能力训练设计实证研究.	水祎舟; 黄	Journal of Be	2017	1	
SPORTDISUCUS	足球技战术表现大数据分析-基于广义线性模型与数据级数推断法.	刘鸿优; 彭	Journal of Pt	2017	1	
SPORTDISUCUS	比赛情境因素对中国足球超级联赛技战术表现的影响.	谢军; 刘鸿	Journal of Be	2017	1	

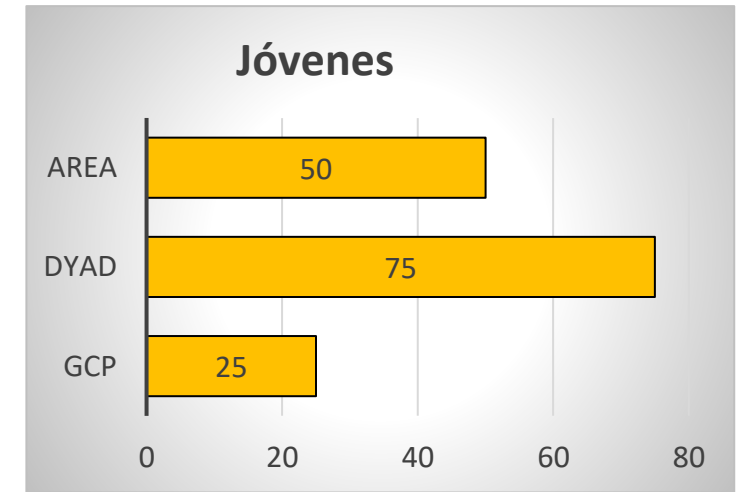
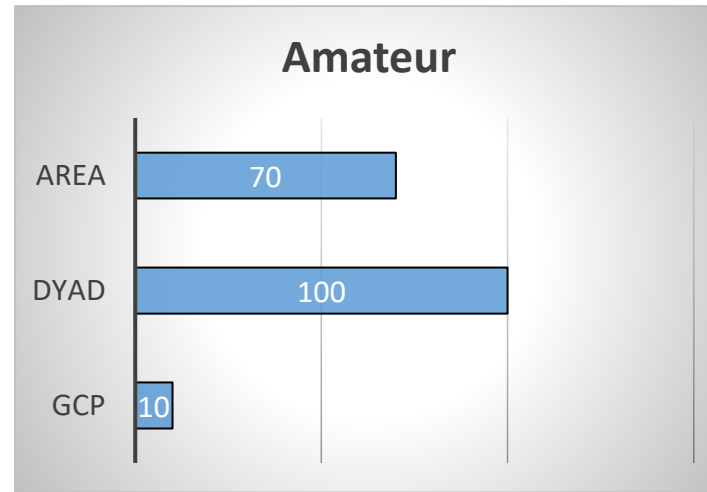
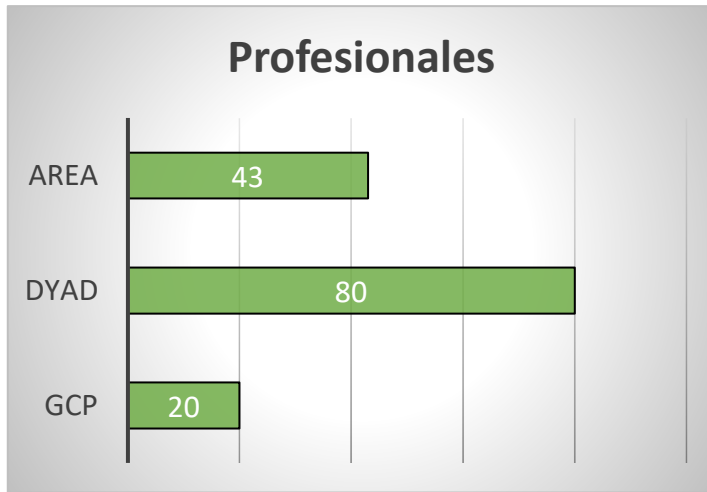
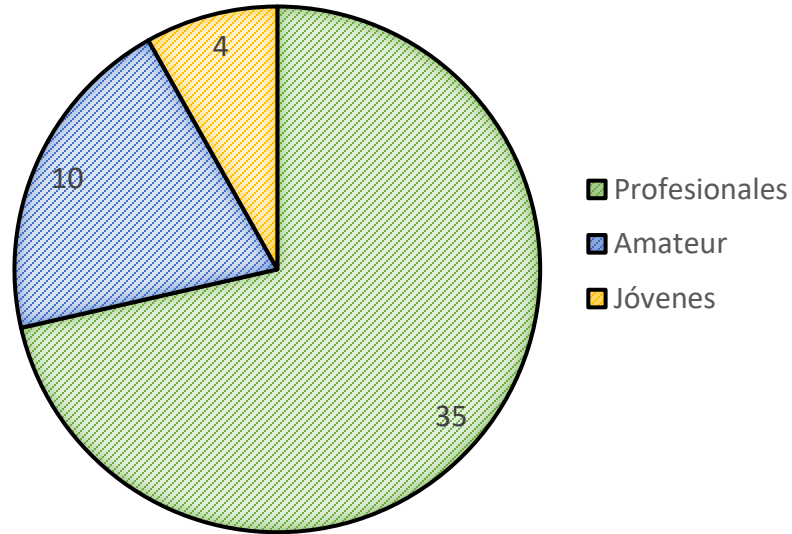
SELECCIÓN DE ESTUDIOS

Los artículos fueron incluidos si utilizaban variables tácticas colectivas en partidos de fútbol.

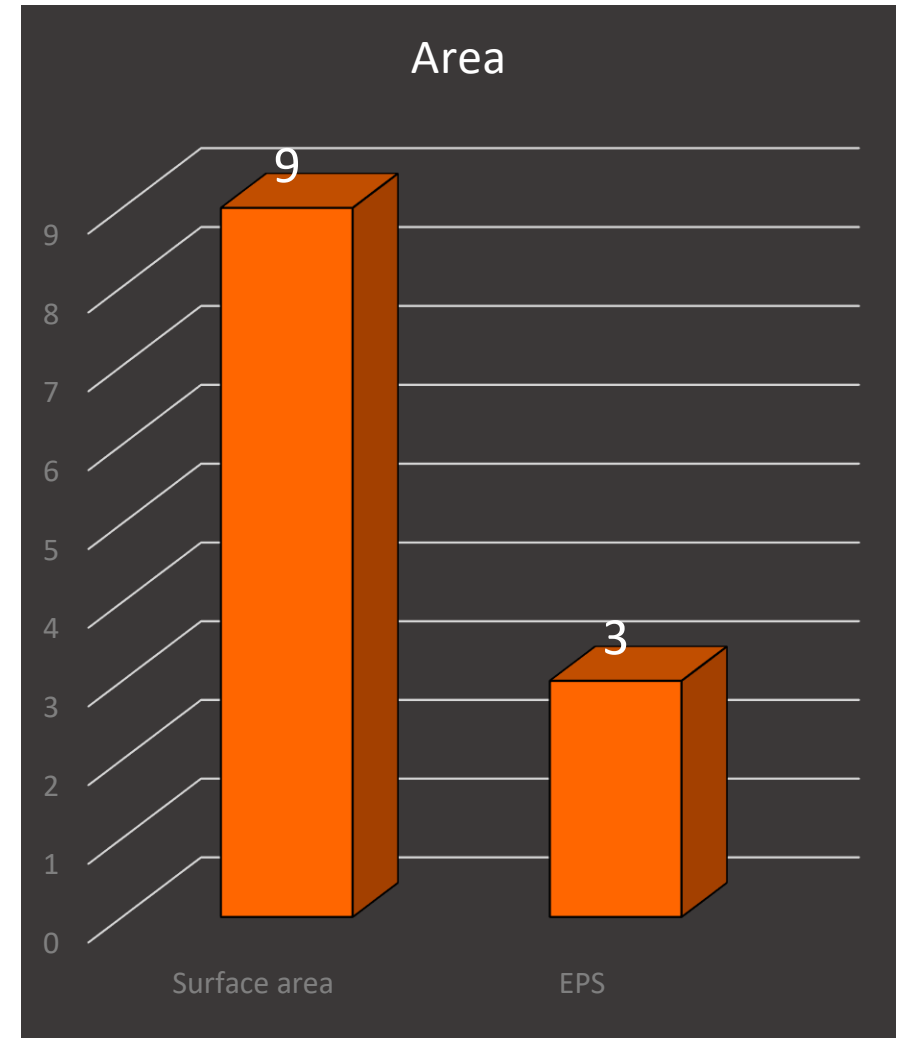
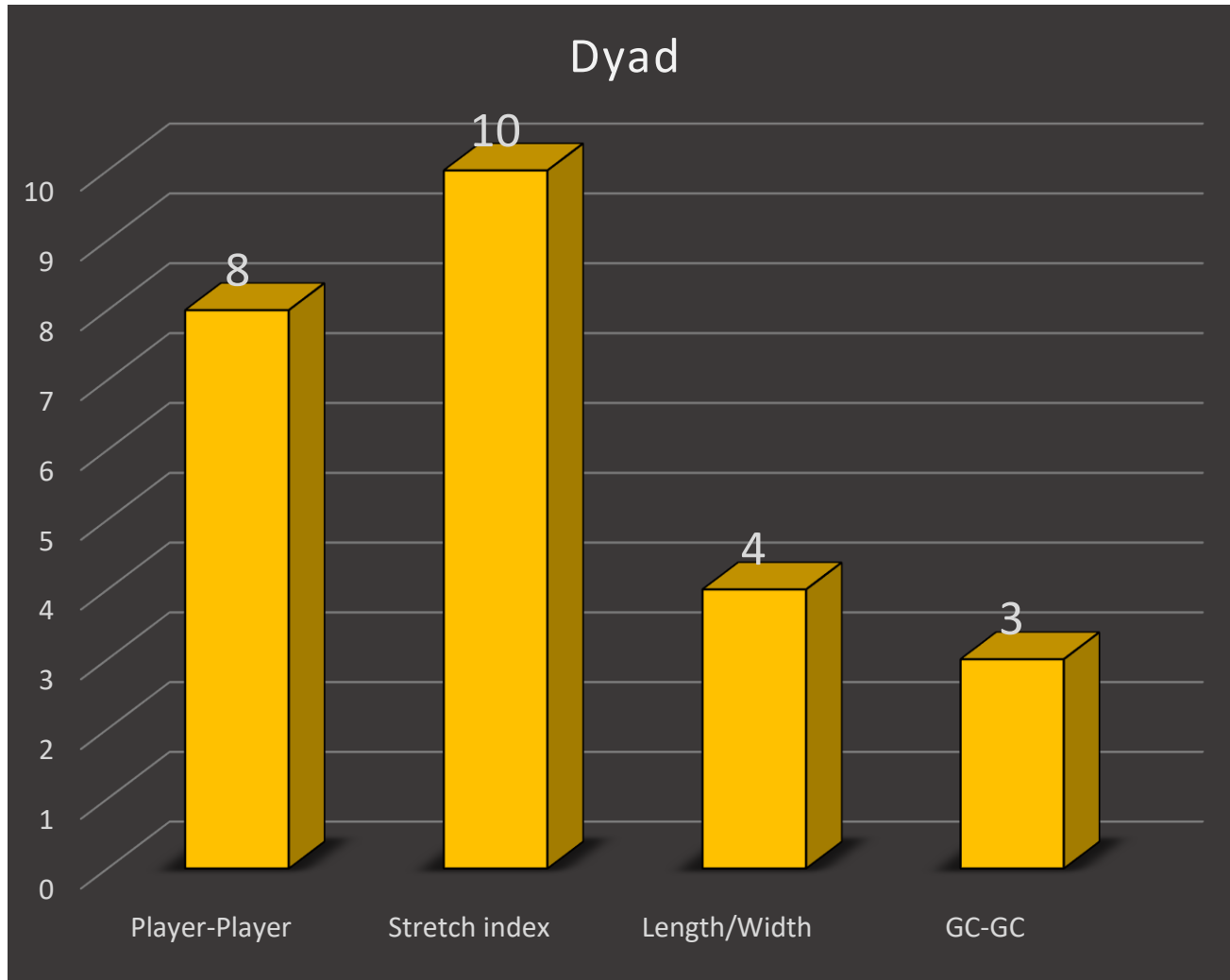
RESULTADOS



RESULTADOS



RESULTADOS



Las **díadas** es el grupo de variable más considerado.

Esto parece ser habitual en equipos profesionales donde

el **nivel de experiencia es**

mayor, y un análisis más

concreto podría ser más

adecuado

Sin embargo, **los equipos generan mucha variedad de patrones a nivel**

macro-escala. De hecho, descomponer el análisis a un nivel de micro-escala podría aportar información lejos de la naturaleza social del fútbol (Grehaigne, Bouthier, & David, 1997).

Por eso, las variables relacionadas con el área ha sido ampliamente utilizadas.

Especialmente, en futbolistas

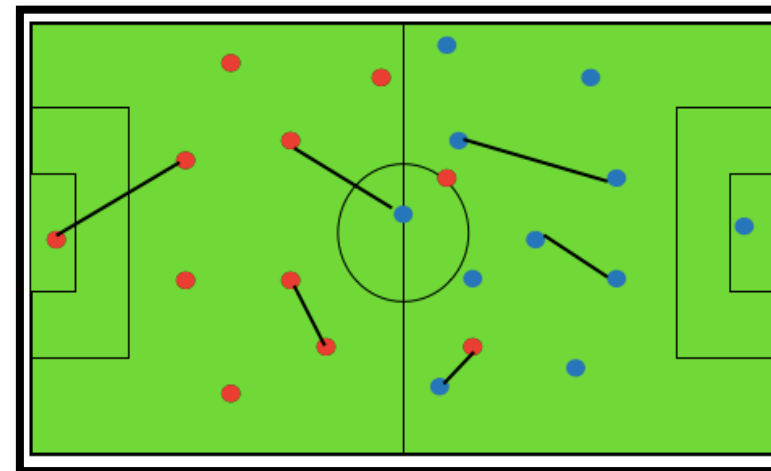
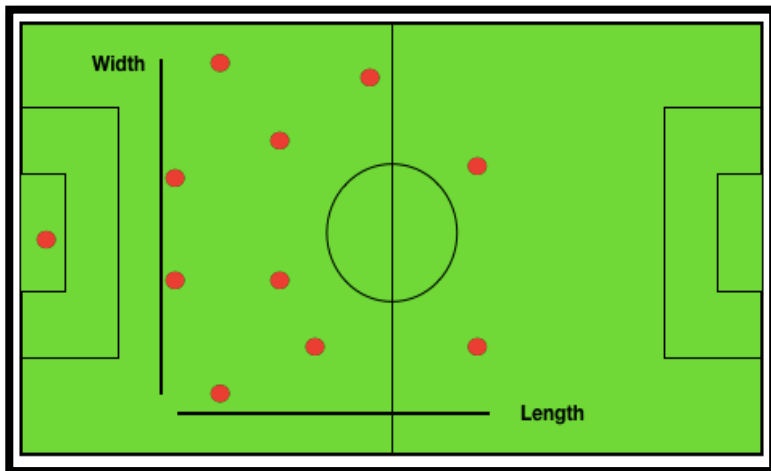
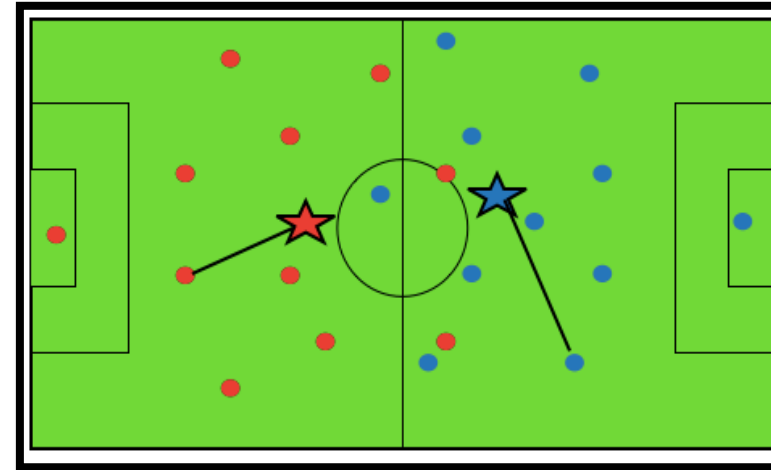
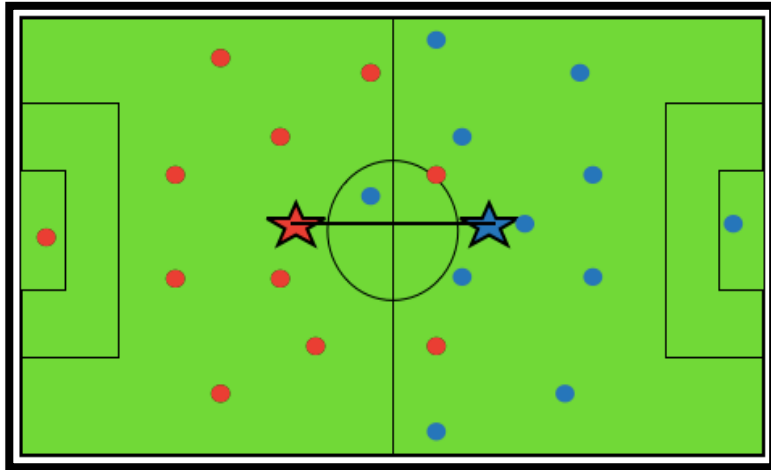
jóvenes y amateur, donde la

diferencia entre el uso de las

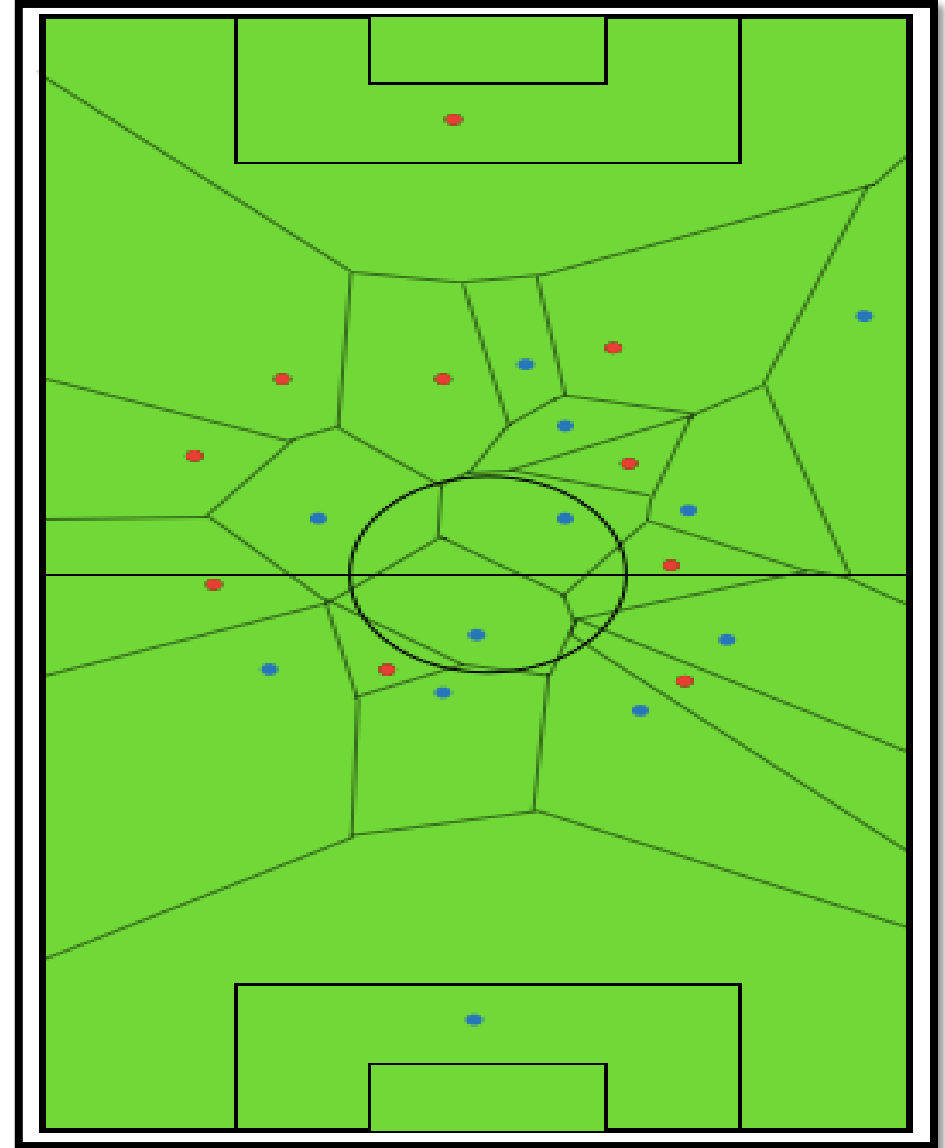
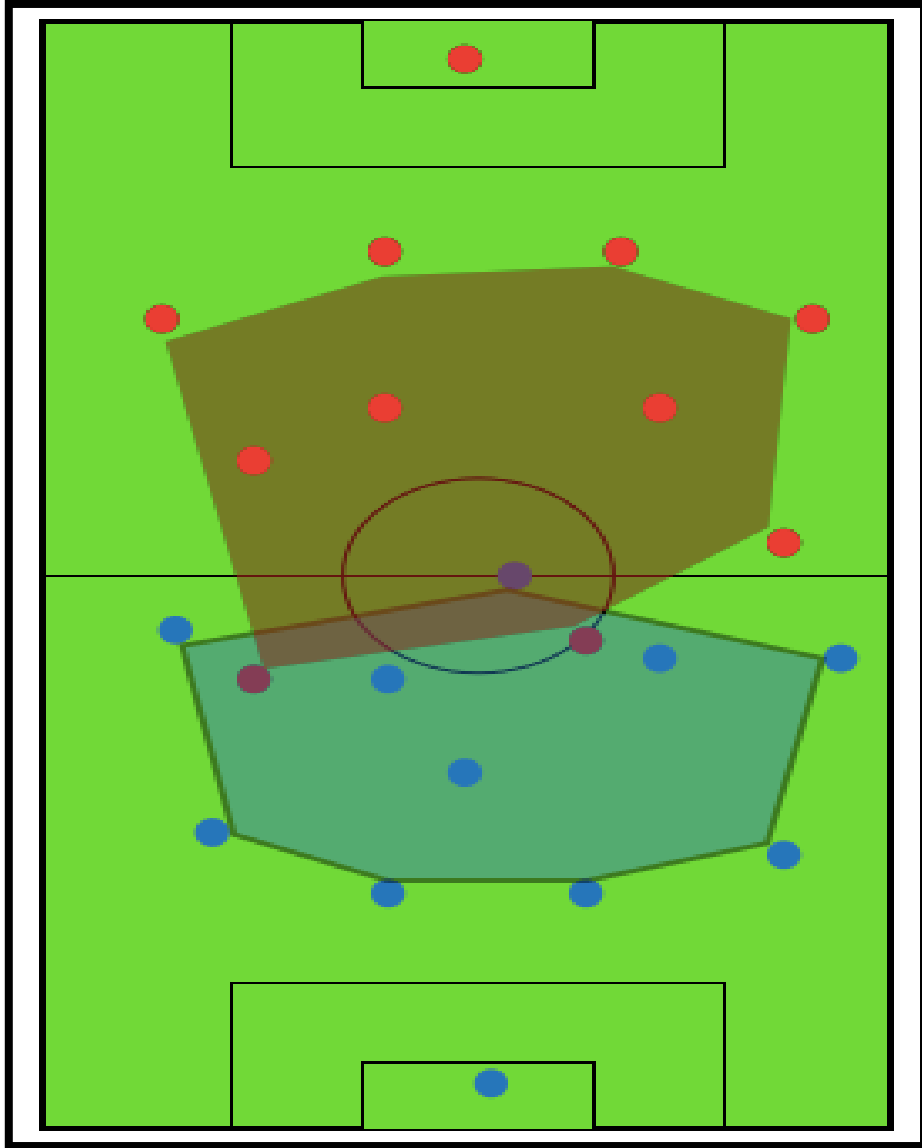
díadas y el área no es tan

grande como en

profesionales.



Memmert, D., Lemmink, K., & Sampaio, J. 2017. «Current Approaches to Tactical Performance Analyses in Soccer Using Position Data». *Sports Medicine* 47(1):1-10.



Los entrenadores deben considerar el análisis a micro escala cuando el jugador tiene una mayor experiencia de comprensión del juego, mientras que con jugadores con menor experiencia de comprensión del juego, los análisis de macro escala pueden informar suficiente información, al menos, en los pasos iniciales de aprendizaje.

FUTURAS LÍNEAS DE INVESTIGACIÓN

Debido al gran número de variables que han surgido para analizar el comportamiento táctico colectivo, próximos estudios deberían analizar cual de ellas podría reportar mayor información en diferentes tareas de entrenamiento o situaciones de competición

MUCHAS GRACIAS



markeluniv@gmail.com
pepepinoortega@gmail.com