

¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?

Javier Yanci Irigoyen

Facultad de Educación y Deporte, Universidad del País Vasco (UPV/EHU)



¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?

Título de la ponencia

CUESTIONAR LOS SSG

RESPONSABILIDAD



¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?

RESTO DE PONENTES:

Trayectoria profesional

Numero de publicaciones/experiencia en el ámbito de los SSG

....



¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?



¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?

Mi objetivo.... APORTAR REFLEXIÓN

¿SSG BENEFICIOSOS COMO TAREA DE ENTRENAMIENTO?



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LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

- EFECTOS EN CAPACIDADES FÍSICAS/CONDICIONALES

- EFECTOS EN CAPACIDADES TÉCNICO/TÁCTICAS

- EFECTOS EN RENDIMIENTO COMPETICIÓN

CONCLUSIONES

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

¿QUIEN UTILIZA LOS SSG EN DEPORTES COLECTIVOS?



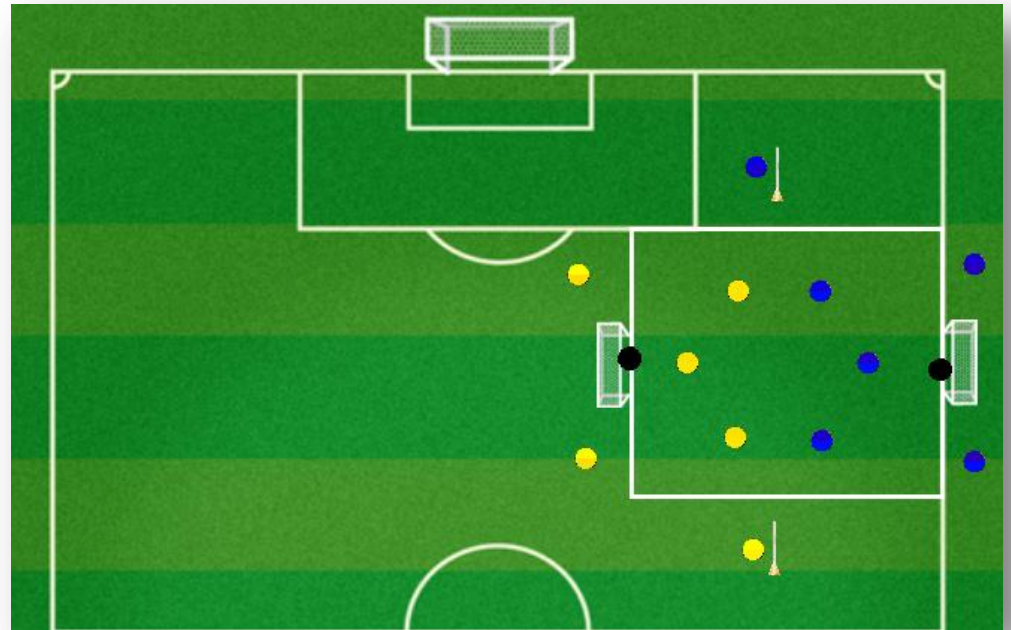
LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

CURSO FEDERATIVO DE ENTRENADOR NACIONAL DE FÚTBOL



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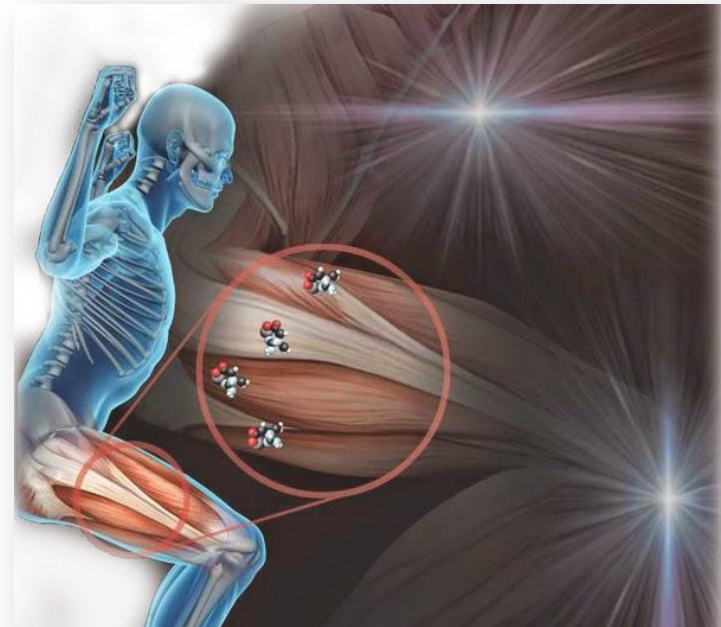


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CURSO FEDERATIVO DE ENTRENADOR NACIONAL DE FÚTBOL



Entonces les planteo otra tarea....
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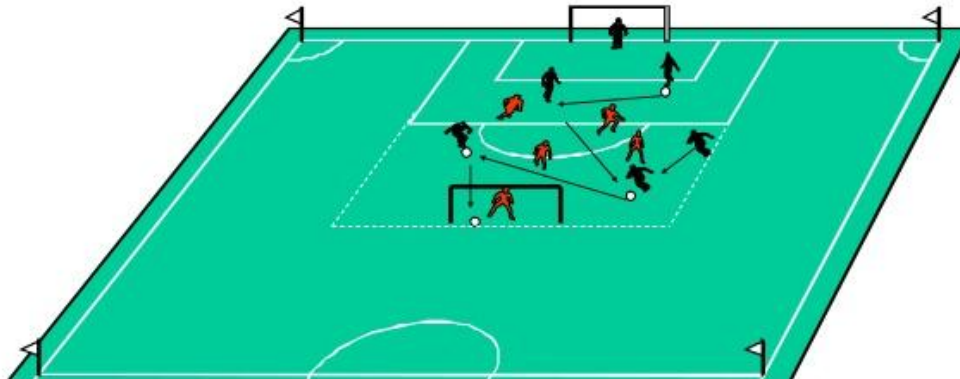
LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

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No hay manera...

FUTBOL REDUCIDO : 4x4, 5x5, 6x6



- **Superficie** : Doble área.
- **Jugadores** : 8,10,12.
- **Organización**: Los equipos defienden cada uno una portería normal.
- **Toques** : 1 , 2 ... 2 en un campo y libre en el contrario.
- **Reglas** : Cada vez que salga el balón fuera de banda saca el portero o al que le pertenece la posesión.
- Hay fuera de juego.
- Todos los jugadores del equipo que hace gol tienen que estar en el campo contrario para que valga.
- **Duración**: 5, 10... minutos

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

DESDE UN PUNTO DE VISTA MÁS CIENTÍFICO

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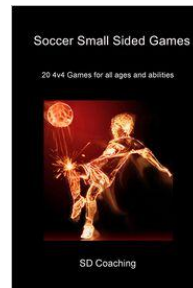
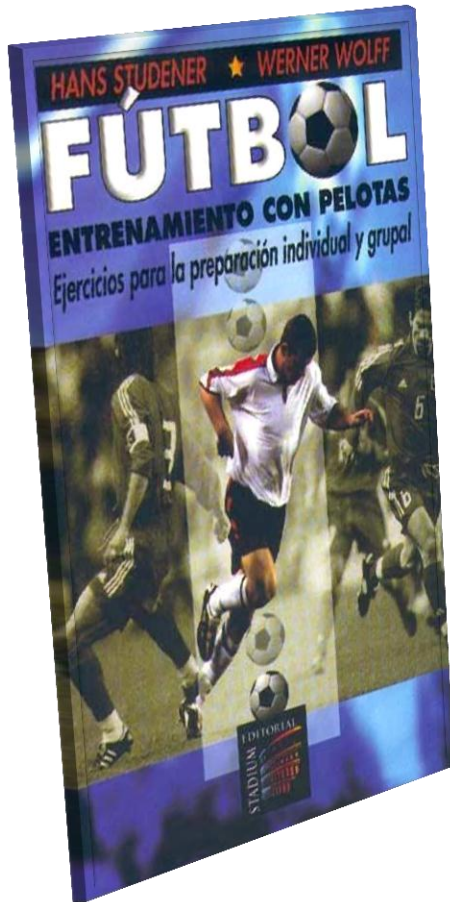
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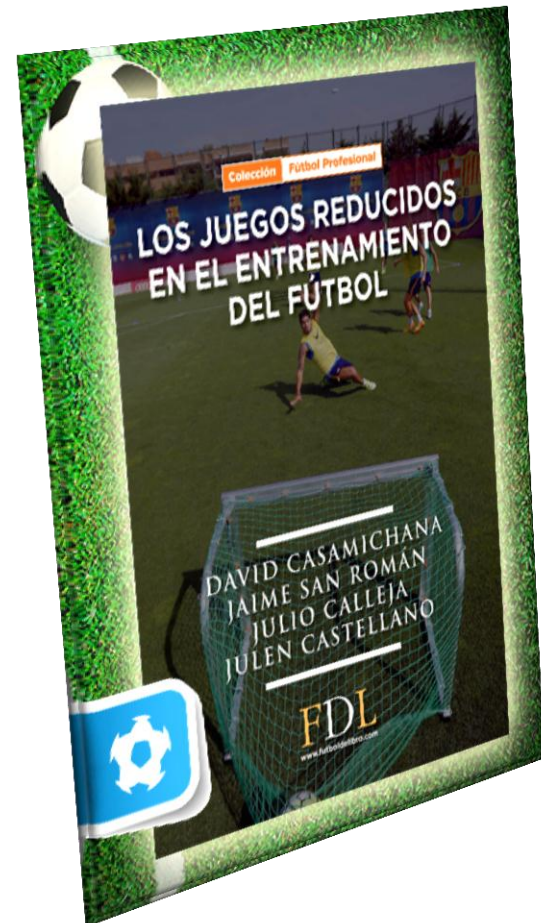
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LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Desde el....



Hasta el....



LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

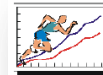
OPINIÓN DE ENTRENADORES

Idea 1:

Los **entrenadores de elite** consideran **mas relevantes los SSG** mientras que entrenadores principiantes otras tareas.

Idea 2:

Entrenadores de **menor nivel** – Partido
Entrenadores de **mayor nivel** – SSG



Journal of Human Kinetics volume 38/2013, 151-160 DOI: 10.2478/hukin-2013-0055 151
Section III – Sports Training

The Importance of Sports Performance Factors and Training Contents From the Perspective of Futsal Coaches

by
João Serrano¹, Shakib Shahidian¹, Jaime Sampaio², Nuno Leite²



LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Y vosotros...

¿POR QUÉ UTILIZAIS LOS SSG?



LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

FACTORES DE RENDIMIENTO EN FÚTBOL

**CAPACIDADES
CONDICIONALES**
Fuerza, Velocidad
Potencia, Rapidez

Harman et al., 1991, König et al., 2001,
Vanderford et al., 2004

**CAPACIDADES
CONDICIONALES**
Capacidad
Cardiovascular

Coyle et al., 1995, König et al., 2001,
Schabert et al., 2000



TÉCNICA Y TÁCTICA
Dominio de habilidades
específicas

Philippaerts et al., 2001,
Schabert et al., 2000

OTROS FACTORES

- Aspectos psicológicos
- Aspectos sociales

-

Boileau et al., 1977, Hickson et al., 1980,
Koutedakis et al., 1995

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

FACTORES DE RENDIMIENTO EN FÚTBOL

**CAPACIDADES
CONDICIONALES**
Fuerza, Velocidad
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Harman et al., 1991, König et al., 2001,
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**CAPACIDADES
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Capacidad
Cardiovascular

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Philippaerts et al., 2001,
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OTROS FACTORES

- Aspectos psicológicos
- Aspectos sociales

-
Boileau et al., 1977, Hickson et al., 1980,
Koutedakis et al., 1995



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International Journal of Sports Physiology and Performance, 2014, 9, 471-479
http://dx.doi.org/10.1123/IJSP.2013-0390
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Physiological Response, Time–Motion Characteristics, and Reproducibility of Various Speed-Endurance Drills in Elite Youth Soccer Players: Small-Sided Games Versus Generic Running

Jack D. Ade, Jamie A. Harley, and Paul S. Bradley

Silva et al. *SpringerPlus* (2016) 5:191
DOI 10.1186/s40064-016-1813-5

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RESEARCH

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Sports teams as complex adaptive systems: manipulating player numbers shapes behaviours during football small-sided games

Pedro Silva^{1,2*}, Luís Vilar^{3,4}, Keith Davids^{5,6}, Duarte Araújo⁴ and Júlio Garganta²

Journal of Science and Medicine in Sport
Contents lists available at ScienceDirect
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Original research
Influence of physical contact on neuromuscular fatigue and markers of muscle damage following small-sided games
Rich D. Johnston^{a,*}, Tim J. Gabbett^{a,b}, Anthony J. Seibold^c, David G. Jenkins^b

^aSchool of Exercise Science, Australian Catholic University, Australia
^bSchool of Human Movement Studies, University of Queensland, Australia
^cMedical and Science Rugby League Football Club, Australia

Human Movement Science 48 (2016) 1–6
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Manipulation of exercise to rest ratio within set duration on physical and technical outcomes during small-sided games in elite youth soccer players

Jack Christopher^{a,b}, Marco Beato^c, Andrew T. Hulton^{a,*}

^aThe Football Exchange, Research Institute of Sport and Exercise Sciences, Liverpool John Moores University, Liverpool, UK
^bChelsea Football Club Academy, Colchester, UK
^cDepartment of Neurological and Movement Sciences, University of Verona, Verona, Italy

Journal of Human Kinetics volume 33/2012, 103–113
Section III – Sports Training
DOI:10.2478/v10078-012-0040-x

A Review on the Effects of Soccer Small-Sided Games
by
Marco Aguiar¹, Goreti Botelho², Carlos Lago³, Victor Magus¹
Jaime Sampaio¹

COMPARING THE PHYSICAL DEMANDS OF FRIENDLY MATCHES AND SMALL-SIDED GAMES IN SEMI-PROFESSIONAL SOCCER PLAYERS

DAVID CASAMICHANA,¹ JULEN CASTELLANO,¹ AND CARLO CASTAGNA^{2,3}

¹Department of Physical Education and Sport, Faculty of Physical Activity and Sport Sciences, University of the Basque Country (UPV-EHU), Vitoria-Gasteiz, Spain; ²Biomechanics Laboratory, Italian Football Association (FIGC), Technical Department, Coverciano, Italy; and ³Regional School of Sport of Marche, Italian Olympic Committee (CONI), Ancona, Italy

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

LA FRASE...



“Cuando creíamos que teníamos todas las respuestas, de pronto cambiaron todas las preguntas”

(Mario Benedetti)

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Teniendo en cuenta que el **objetivo principal del entrenamiento es la mejora del rendimiento deportivo:**

¿LOS PROGRAMAS DE ENTRENAMIENTO MEDIANTE SSG SON EFECTIVOS EN LA MEJORA DEL RENDIMIENTO A CORTO, MEDIO Y LARGO PLAZO?

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

De partida, me encuentro aquí, no se donde terminaré....



LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

¿Por qué?



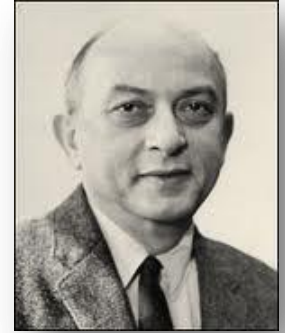
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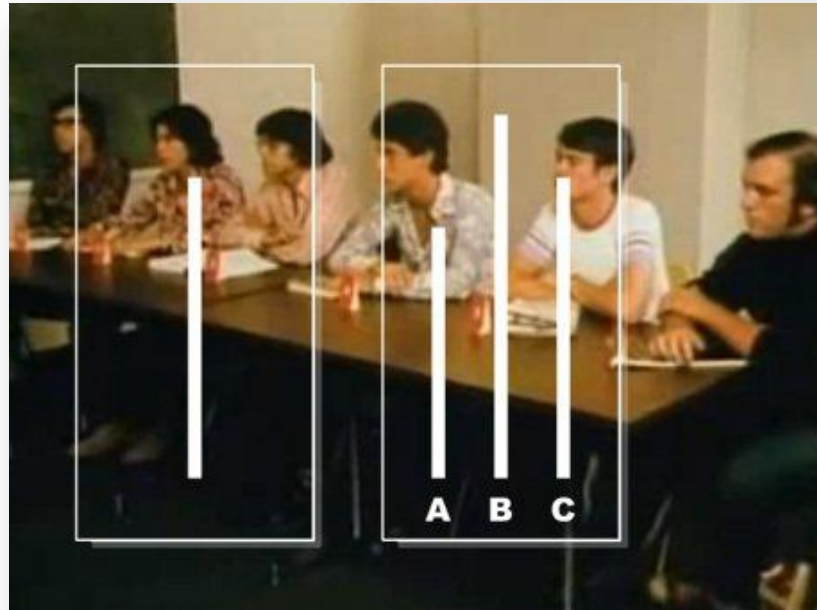


LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Profundizo más en el tema – Psicología social



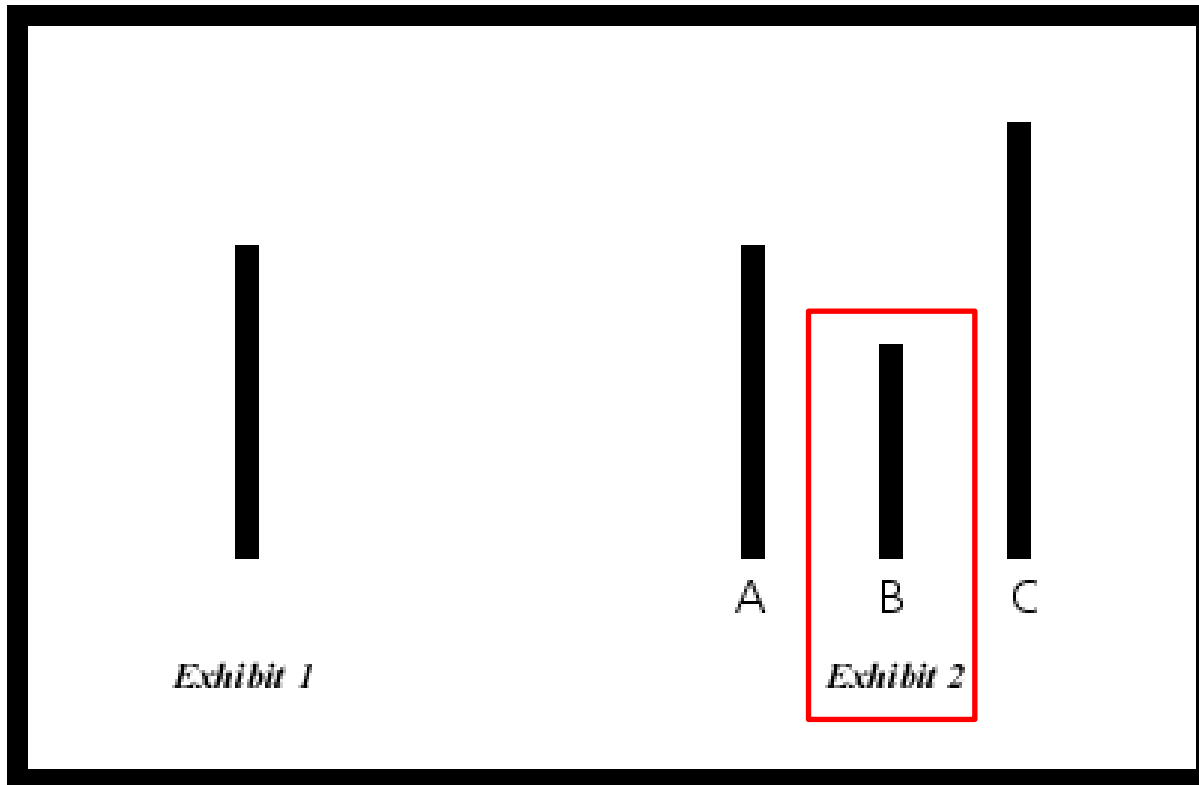
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LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Psicología social

Solomon Asch. 1955. Opinions and social pressure. [*Scientific American*](#), 193 (5): 31–35



70-85%

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

Un ejemplo



<https://www.youtube.com/watch?v=aaAqNXsW9A4>

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

A esto se le llama en psicología social...

Influencia del grupo en la conducta individual

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

A esto se le llama en psicología social...

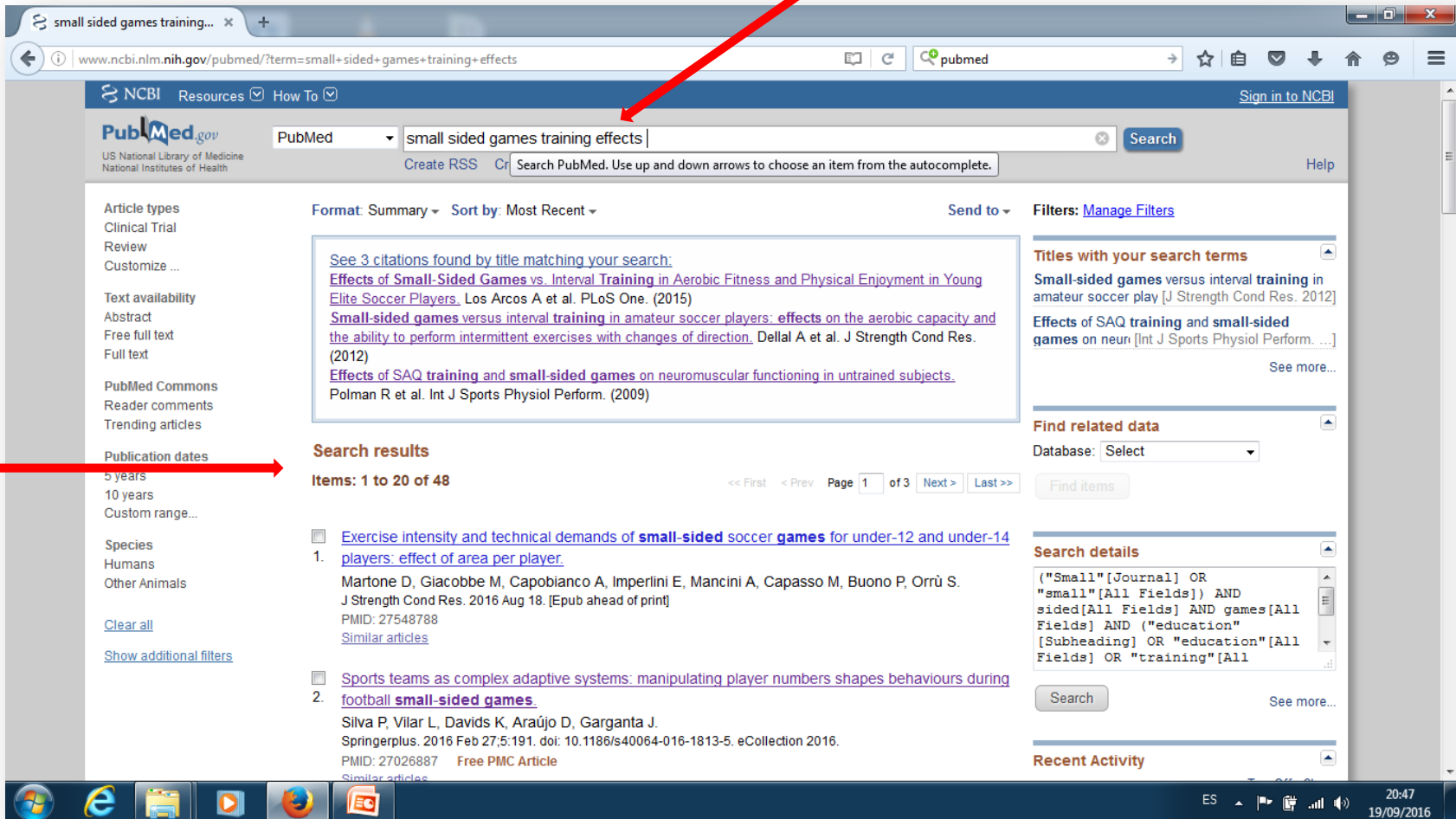
Influencia del grupo en la opinión individual

¿NOS ESTARÁ PASANDO ESTO CON LOS SSG?



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

Rápidamente para salir de dudas...



small sided games training... x +

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EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

Rápidamente para salir de dudas...

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

ADAM L. OWEN,¹ DEL P. WONG,² DARREN PAUL,³ AND ALEXANDRE DELLAL⁴

¹Sports Science Department, Rangers Football Club, Glasgow, Scotland; ²Department of Health and Physical Education, The Hong Kong Institute of Education, New Territories, Hong Kong; ³Aspetar, Qatar Orthopaedic and Sports Medicine Hospital, Doha, Qatar; and ⁴Olympic Lyon FC (Soccer), Lyon, France

Artículo más a mano, cumple criterios (SSG elite, deportes colectivos, programa de entrenamiento...)

Conclusión de los autores:

MEJORAN EN RSA

REDUCCIÓN DEL VO₂ Y HR A VARIAS INTENSIDADES DE CARRERA

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

Rápidamente para salir de dudas...

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Artículo m
ento...)

a de

Conclusió

MEJORAN
REDUCCIO



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

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PROFUNDIZAR Y VISIÓN CRÍTICA...

Efectos en capacidades:

FÍSICAS
TÉCNICAS
TÁCTICAS



ÍNDICE

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

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CONCLUSIONES

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Participantes

15 jugadores fútbol profesionales Premier escocesa

Procedimiento

4 semanas intervención

7 sesiones SSG

Mediciones

Test Antropometría

RSA, Economía, LA

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

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TABLE 2. SSG training intervention.*

Session progression	Progressive overload	Total SSG duration (min)
SSGs 1	5 × 3-min games	15
SSGs 2	6 × 3-min games	18
SSGs 3	7 × 3-min games	21
SSGs 4	8 × 3-min games	24
SSGs 5	9 × 3-min games	27
SSGs 6	10 × 3-min games	30
SSGs 7	11 × 3-min games	33

*All SSGs were played in a 3 versus 3 format (3 outfield players + 1 goalkeeper on each side) for a 3-minute duration and a 2-minute passive recovery between bouts.

TABLE 1. Four-week periodized training intervention.*

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 0				Pretest	Rest		
Week 1	Tech + tact	SSGs 1 + IP	LITr	Tech + tact	SSGs 2 + IP	LITr	Day off
Week 2	Tech + tact	SSGs 3 + IP	LITr	Tech + tact	SSGs 4 + IP	LITr	Day off
Week 3	Tech + tact	SSGs 5 + IP	LITr	Tech + tact	SSGs 6 + IP	LITr	Day off
Week 4	SSGs 7 + IP	Tech + Tact	LITr	Posttest	Rest	Posttest	Day off

*IP = injury prevention/activation (low-intensity work); LITr = low-intensity recovery session; SSGs = small-sided games; Tact = tactical session (low intensity); Tech = technical session (low intensity).

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Antropometría – No mejora

RSA - Solo mejora evidente en %Decre medio

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

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TABLE 3. Effects of SSG training on fitness parameters ($n = 15$).†

	Pre	Post	95% CI	Effect size/magnitude
RSA, s				
10-m FST	1.77 ± 0.07	1.75 ± 0.05*	0.00–0.04	0.35/small
20-m FST	3.08 ± 0.11	3.06 ± 0.09	0.00–0.06	0.27/small
TST	18.96 ± 0.68	18.61 ± 0.56*	0.19–0.51	0.57/medium
%Decre	2.43 ± 1.42	1.48 ± 1.11*	0.12–1.79	0.75/medium
Skinfold thickness, mm	60.23 ± 16.21	59.23 ± 14.78*	0.97–4.83	0.06/trivial

†CI = confidence interval; FST = fastest sprint time; RSA = repeated-sprint ability; TST = total sprint time; %Decre = percentage decrement score.

* $p < 0.05$.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

ADAM L. OWEN,¹ DEL P. WONG,² DARREN PAUL,³ AND ALEXANDRE DELLAL⁴

¹Sports Science Department, Rangers Football Club, Glasgow, Scotland; ²Department of Health and Physical Education, The Hong Kong Institute of Education, New Territories, Hong Kong; ³Aspetar, Qatar Orthopaedic and Sports Medicine Hospital, Doha, Qatar; and ⁴Olympic Lyon FC (Soccer), Lyon, France

Mejora evidente en algunos parámetros cardiovasculares (VO₂ y HR)
Aumento trivial de LA

TABLE 4. Effects of SSG training on submaximal aerobic performance ($n = 15$).†

	Pre	Post	95% CI	Effect size/magnitude
VO ₂ , ml·min ⁻¹ ·kg ⁻¹				
9 km·h ⁻¹ , 3%	31.90 ± 1.74	30.23 ± 1.66*	0.37 to 2.98	0.98/large
11 km·h ⁻¹ , 3%	43.96 ± 2.24	42.01 ± 2.37*	0.98 to 2.94	0.85/large
14 km·h ⁻¹ , 3%	52.03 ± 3.88	49.81 ± 4.54*	0.65 to 3.79	0.53/medium
RER				
9 km·h ⁻¹ , 3%	0.84 ± 0.05	0.85 ± 0.04	0.04 to 0.04	0.00/trivial
11 km·h ⁻¹ , 3%	0.95 ± 0.04	0.95 ± 0.04	0.03 to 0.04	0.06/trivial
14 km·h ⁻¹ , 3%	1.10 ± 0.04	1.06 ± 0.06	0.01 to 0.08	0.68/medium
RR				
9 km·h ⁻¹ , 3%	34.54 ± 9.08	32.26 ± 10.34	-1.16 to 6.70	0.22/small
11 km·h ⁻¹ , 3%	39.00 ± 8.14	35.93 ± 8.40*	1.67 to 6.02	0.37/small
14 km·h ⁻¹ , 3%	48.38 ± 7.30	45.43 ± 9.72*	0.02 to 7.36	0.34/small
HR, b·min ⁻¹				
9 km·h ⁻¹ , 3%	145.79 ± 13.93	126.79 ± 11.93*	14.64 to 23.36	1.46/large
11 km·h ⁻¹ , 3%	170.07 ± 11.36	154.64 ± 11.03*	11.72 to 19.13	1.38/large
14 km·h ⁻¹ , 3%	184.43 ± 9.46	173.36 ± 11.38*	4.95 to 17.19	1.06/large
Blood lactate, mmol·L ⁻¹	4.72 ± 1.23	4.80 ± 1.39	-0.89 to 0.74	0.06/trivial

†CI = confidence interval; HR = heart rate; RER = respiratory exchange ratio; RR = respiratory rate; VO₂ = oxygen uptake.

* $p < 0.05$.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Conclusión de los autores:

Mejoran en RSA

Reducción del VO2 y HR a varias intensidades de carrera

EFFECTS OF A PERIODIZED SMALL-SIDED GAME TRAINING INTERVENTION ON PHYSICAL PERFORMANCE IN ELITE PROFESSIONAL SOCCER

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EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Conclusión de los autores:

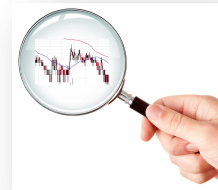
Mejoran en RSA

Reducción del VO2 y HR a varias intensidades de carrera

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Visión crítica:

Test analíticos

Solo analiza uno de los factores de rendimiento (capacidades físicas)

No hay CG

7 sesiones SSG vs. 11 sesiones baja intensidad

7 sesiones SSG vs. 26 posibles sesiones

¿INFLUENCIA DEL RESTO DE CONTENIDOS?

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Participantes

10 jugadores de una academia de rugby

Procedimiento

Entrenamiento SSG: 8 semanas, 2 sesiones/semana

Pretest y posttest: antropometría, sprint, RSA y 30-15 intermitent fitness test

Semana tipo

5 h entrenamiento técnico/táctico

2 h SSG

2 h entrenamiento de fuerza

1 h prevención lesiones

No entrenamiento RSA ni HIIT

Seitz, LB, Rivière, M, de Villarreal, ES, and Haff, GG. The athletic performance of elite rugby league players is improved after an 8-week small-sided game training intervention. *J Strength Cond Res* 28(4): 971–975, 2014-



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Mejora en todas las variables

Seitz, LB, Rivière, M, de Villarreal, ES, and Haff, GG. The athletic performance of elite rugby league players is improved after an 8-week small-sided game training intervention. *J Strength Cond Res* 28(4): 971–975, 2014-

TABLE 2. Mean, *SD*, and *ES* for 30-15 Intermittent Fitness Test, speed, and RSA tests pre- and posttraining intervention ($n = 10$).^{*†}

Variable [‡]	Pretraining Mean $\pm$ <i>SD</i>	Posttraining Mean $\pm$ <i>SD</i>	<i>p</i>	<i>ES</i>
V_{IFT} ($\text{km} \cdot \text{h}^{-1}$)	19.35 $\pm$ 1.00	19.60 $\pm$ 0.77	0.05	1.29
10 m (s)	1.95 $\pm$ 0.07	1.89 $\pm$ 0.06	0.003	12.99
20 m (s)	3.28 $\pm$ 0.10	3.24 $\pm$ 0.08	0.002	10.88
40 m (s)	5.34 $\pm$ 0.16	5.28 $\pm$ 0.13	0.001	6.33
MST (s)	3.51 $\pm$ 0.15	3.43 $\pm$ 0.13	0.001	6.48
TST (s)	28.06 $\pm$ 1.21	27.47 $\pm$ 1.06	0.001	0.81
% Decrement	7.10 $\pm$ 3.14	5.93 $\pm$ 3.03	0.05	0.27

^{*}*ES* = effect size; MST = mean sprint time; TST = total sprint time.

[†]Values are reported as means (95% confidence interval) for velocity reached at the end of the 30-15 IFT test (V_{IFT}), MST, TST and % of sprint decrement during the RSA test and 10-, 20-, and 40-m sprint times.

[‡]Different between pre- and postintervention ($p < 0.05$).

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS



Seitz, LB, Rivière, M, de Villarreal, ES, and Haff, GG. The athletic performance of elite rugby league players is improved after an 8-week small-sided game training intervention. *J Strength Cond Res* 28(4): 971–975, 2014-

TABLE 2. Mean, SD, and ES for 30-15 Intermittent Fitness Test, speed, and RSA tests pre- and posttraining intervention ($n = 10$). *†

Visión crítica:

Resulta curioso mejoras en 40 m por SSG si no se alcanzan velocidades altas.

			<i>p</i>	ES
V_{IFT} (km·h ⁻¹)	18.88 ± 1.00	18.88 ± 0.77	0.05	1.29
10 m (s)	1.95 ± 0.07	1.89 ± 0.06	0.003	12.99
20 m (s)	3.28 ± 0.10	3.24 ± 0.08	0.002	10.88
40 m (s)	5.34 ± 0.16	5.28 ± 0.13	0.001	6.33
MST (s)	3.51 ± 0.15	3.43 ± 0.13	0.001	6.48
TST (s)	28.06 ± 1.21	27.47 ± 1.06	0.001	0.81
% Decrement	7.10 ± 3.14	5.93 ± 3.03	0.05	0.27

*ES = effect size; MST = mean sprint time; TST = total sprint time.

†Values are reported as means (95% confidence interval) for velocity reached at the end of the 30-15 IFT test (V_{IFT}), MST, TST and % of sprint decrement during the RSA test and 10-, 20-, and 40-m sprint times.

‡Different between pre- and postintervention ($p < 0.05$).

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS



Seitz, LB, Rivière, M, de Villarreal, ES, and Haff, GG. The athletic performance of elite rugby league players is improved after an 8-week small-sided game training intervention. *J Strength Cond Res* 28(4): 971–975, 2014-

TABLE 2. Mean, SD, and ES for 30-15 Intermittent Fitness Test, speed, and RSA tests pre- and posttraining intervention ($n = 10$) ^{†‡}

- Visión crítica:

- Resulta curioso mejoras en 40 m por SSG si no se alcanzan velocidades altas.

VIFT (min)	10.00 ± 1.00	10.00 ± 0.77
10 m (s)	1.95 ± 0.07	
20 m (s)	3.28 ± 0.10	
40 m (s)	5.34 ± 0.16	
MST (s)	2.51 ± 0.15	

p	ES
0.05	1.29

Deportistas jóvenes??

Grupo control??

Influencia de otros contenidos??

Semana tipo

5 h entrenamiento técnico/táctico

2 h SSG

2 h entrenamiento de fuerza

1 h prevención lesiones

20-, and 40-m sprint times.

^{†‡}Different between pre- and postinterv

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Participantes

55 adolescentes con sobrepeso

Procedimiento

GE – SSG 11 semanas, 2 ses/sem, (no especifica tipo SSG)

GC – no SSG y hábitos habituales

Medidas

Antropometría

Capacidad aeróbica

Rev Med Chile 2015; 143: 744-750

Efecto de los juegos reducidos en la composición corporal y la condición física aeróbica en un grupo de adolescentes escolares

HERNALDO CARRASCO BELTRÁN^{1,2,3}, RAFAEL E. REIGAL GARRIDO^{2,3},
DAVID ULLOA DÍAZ^{2,3}, IGNACIO JESÚS CHIROSA RÍOS^{2,3,4},
LUIS JAVIER CHIROSA RÍOS^{2,3,4}

Effects of small-sided exercises on body composition and maximal oxygen uptake in adolescents



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Mejora % grasa e IMC

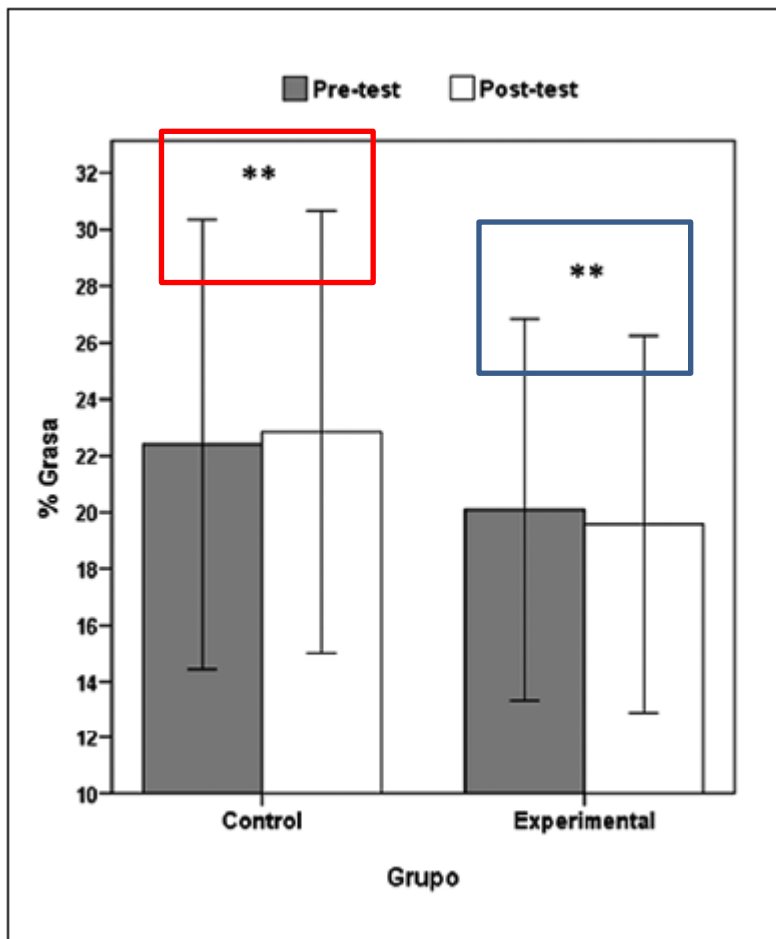


Figura 1. % Grasa=% masa grasa. **Indica $p < 0,01$.

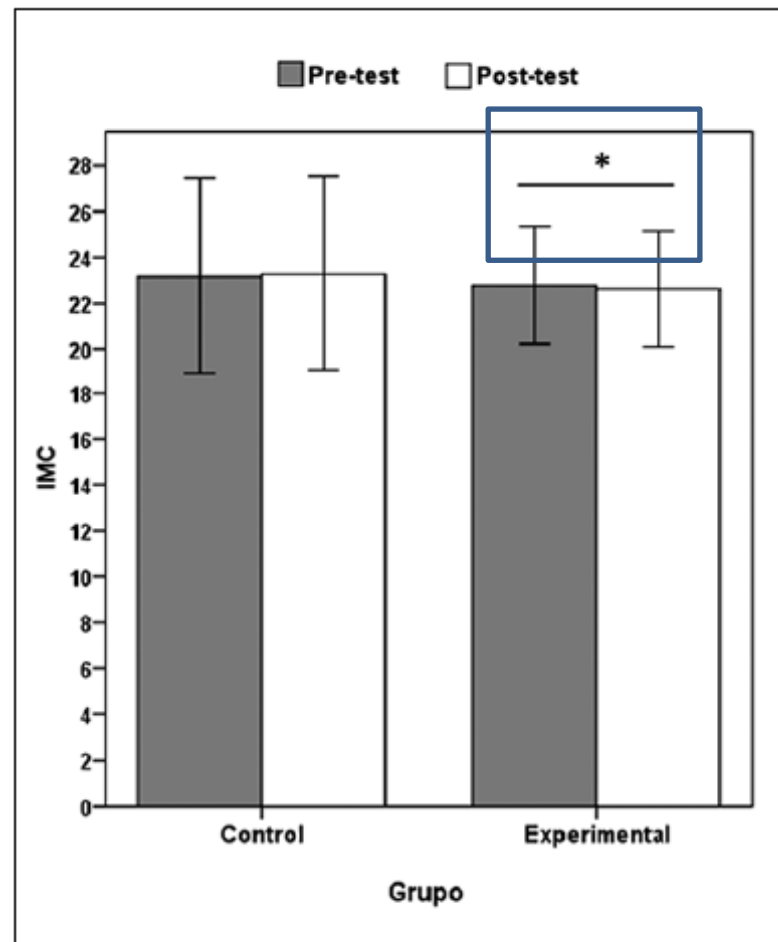


Figura 3. IMC = índice de masa corporal. *Indica $p < 0,05$.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

VO₂maxE

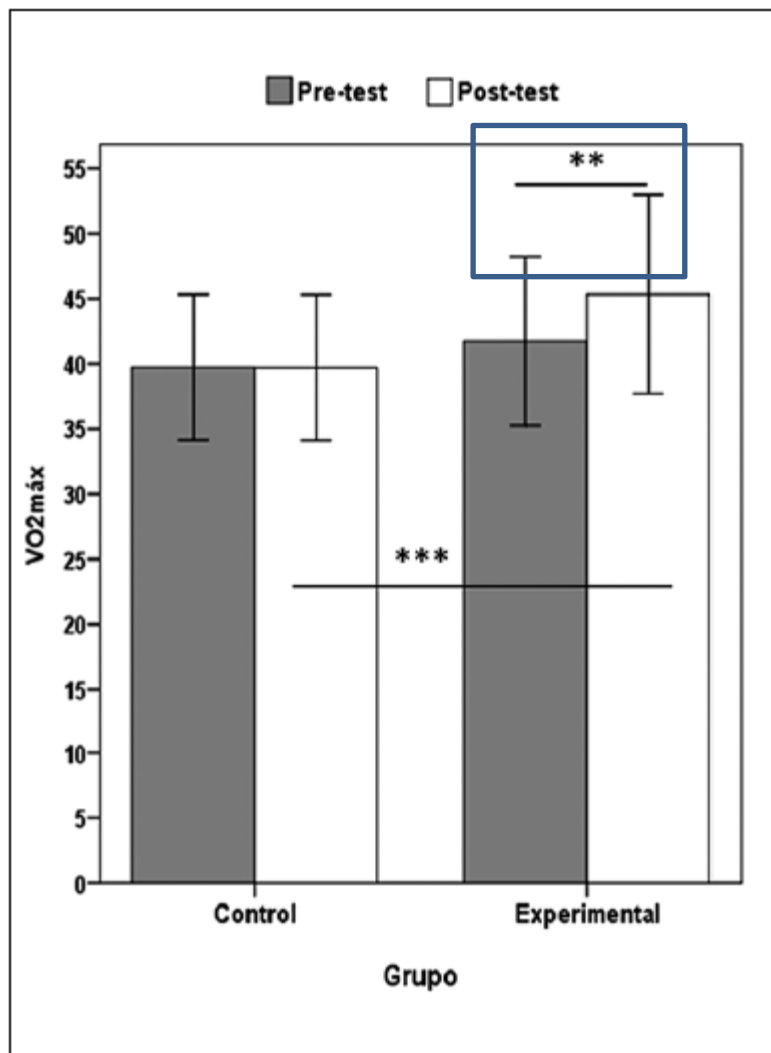


Figura 2. VO_{2max} = consumo máximo de oxígeno. **Indica $p < 0,01$. *** Indica $p < 0,01$.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Conclusión

SSG efectivo antropometría y capacidad aeróbica

Rev Med Chile 2015; 143: 744-750

**Efecto de los juegos reducidos en la
composición corporal y la condición
física aeróbica en un grupo de
adolescentes escolares**

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EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Conclusión

SSG efectivo antropometría y capacidad aeróbica



Visión crítica:

Población, adolescentes con sobrepeso

No datos de tipo SSG.

Rev Med Chile 2015; 143: 744-750

Efecto de los juegos reducidos en la composición corporal y la condición física aeróbica en un grupo de adolescentes escolares

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EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

¿SSG vs. OTRAS TAREAS?



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores jóvenes de fútbol
Academia de un club Premier League

Reilly T, White C. Small-sided games as an alternative to interval-training for soccer players [abstract]. J Sports Sci 2004; 22 (6): 559

Procedimiento

Grupo SSG – 5 vs. 5, 6 x min, rec 3 min
Grupo Entrenamiento Interválico aeróbico (ITG)

6 semanas

Mediciones

CMJ
Sprint
6 x 30 m shuttle run
T-test CODA
MSFT



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Reilly T, White C. Small-sided games as an alternative to interval-training for soccer players [abstract]. J Sports Sci 2004; 22 (6): 559

Conclusión

Tanto SSG como ITG no se obtienen mejoras (mantienen) en rendimiento de los jugadores en las variables analizadas



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores italianos Campionato Berretti
15-20 años

Procedimiento

SSG - 3 vs 3, 4 vs 4, 5 vs 5
ITG

Programa - 4 y 8 semanas

Mediciones

Test Laboratorio (VO₂max, RE, economía, LA...)
Test específico de resistencia fútbol (Ekblom Test)

F. M. Impellizzeri¹
S. M. Marcora²
C. Castagna³
T. Reilly⁴
A. Sassi¹
F. M. Iaia¹
E. Rampinini¹

Physiological and Performance Effects of Generic
versus Specific Aerobic Training in Soccer Players

- 3 vs. 3, with goalkeeper, 2 – 3 ball-touches, 25 × 35 m field dimension;
- 4 vs. 4, with goalkeeper, 2 ball-touches, 40 × 50 m field dimension;
- 4 vs. 4 and 5 vs. 5 according to Bangsbo (p. 166 and 176 of reference [9]);
- 4 vs. 4 and 5 vs. 5 according to Bangsbo (p. 52 of reference [12]);
- 4 vs. 4 and 5 vs. 5 according to Balsom (p. 45 of reference [4]).

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Mejora trivial con ambos programas

0.2 – 0.7%

No diferencias entre SSG - ITG

F. M. Impellizzeri¹
S. M. Marcora²
C. Castagna³
T. Reilly⁴
A. Sassi¹
F. M. Iaia¹
E. Rampinini¹

Physiological and Performance Effects of Generic versus Specific Aerobic Training in Soccer Players

Table 1 Effects after 4 weeks (Mid) and a further 8 weeks (Post) of generic vs. specific aerobic interval training on soccer players' aerobic fitness and soccer-specific endurance (Ekblom's test)

	Pre	Mid	Post	Interaction [‡]
Maximal values				
GTG (n = 15)				
- $\dot{V}O_{2max}$ (l · min ⁻¹)	3.883 ± 0.306	4.143 ± 0.378	4.163 ± 0.387	p = 0.80
- $\dot{V}O_{2max}$ (ml · kg ⁻¹ · min ⁻¹)	55.6 ± 3.4	59.7 ± 4.1	60.2 ± 3.9	p = 0.81
- HR_{max} (b · min ⁻¹)	197.7 ± 9.5	196.2 ± 10.0	194.1 ± 7.2	p = 0.99
STG (n = 14)				
- $\dot{V}O_{2max}$ (l · min ⁻¹)	3.960 ± 0.383	4.200 ± 0.417	4.203 ± 0.437	
- $\dot{V}O_{2max}$ (ml · kg ⁻¹ · min ⁻¹)	57.7 ± 4.2	61.4 ± 4.6	61.8 ± 4.5	
- HR_{max} (b · min ⁻¹)	194.5 ± 7.1	192.9 ± 8.2	192.7 ± 8.9	
Lactate threshold				
GTG (n = 15)				
- $\dot{V}O_2$ at Tlac (l · min ⁻¹)	3.150 ± 0.348	3.386 ± 0.338	3.515 ± 0.270	p = 0.98
- $\dot{V}O_2$ at Tlac (ml · kg ⁻¹ · min ⁻¹)	45.1 ± 3.8	48.7 ± 3.3	50.9 ± 2.9	p = 0.94
- % $\dot{V}O_{2max}$	81.0 ± 4.3	81.7 ± 3.1	84.6 ± 3.4	p = 0.94
- Vel at Tlac (km · h ⁻¹)	11.2 ± 0.6	11.6 ± 0.5	12.2 ± 0.4	p = 0.42
- RE at Tlac (ml · kg ^{-0.75} · m ⁻¹)	0.72 ± 0.03	0.71 ± 0.04	0.70 ± 0.04	p = 0.53
STG (n = 14)				
- $\dot{V}O_2$ at Tlac (l · min ⁻¹)	3.242 ± 0.407	3.465 ± 0.247	3.592 ± 0.281	
- $\dot{V}O_2$ at Tlac (ml · kg ⁻¹ · min ⁻¹)	47.3 ± 4.9	50.7 ± 3.2	52.4 ± 2.8	
- % $\dot{V}O_{2max}$	81.5 ± 4.3	82.2 ± 3.6	84.7 ± 5.1	
- Vel at Tlac (km · h ⁻¹)	11.3 ± 0.7	11.9 ± 0.7	12.4 ± 0.5†	
- RE at Tlac (ml · kg ^{-0.75} · m ⁻¹)	0.73 ± 0.03	0.72 ± 0.02	0.71 ± 0.03	
Ekblom's test				
GTG (n = 15)				
- time (s)	704 ± 42	618 ± 49	603 ± 17	p = 0.57
STG (n = 14)				
- time (s)	723 ± 47	629 ± 36	609 ± 33	

GTG, generic training group; STG, soccer-specific training group; RE, running economy; Tlac, lactate threshold; $\dot{V}O_{2max}$, maximum oxygen uptake; †, group × time interaction of a 2 × (3) ANOVA

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

636 Training & Testing

Generic Versus Small-sided Game Training in Soccer

Authors

S. V. Hill-Haas^{1,2}, A. J. Coutts², G. J. Rowsell², B. T. Dawson¹

Mejoras similares con ambos programas

YYIR1

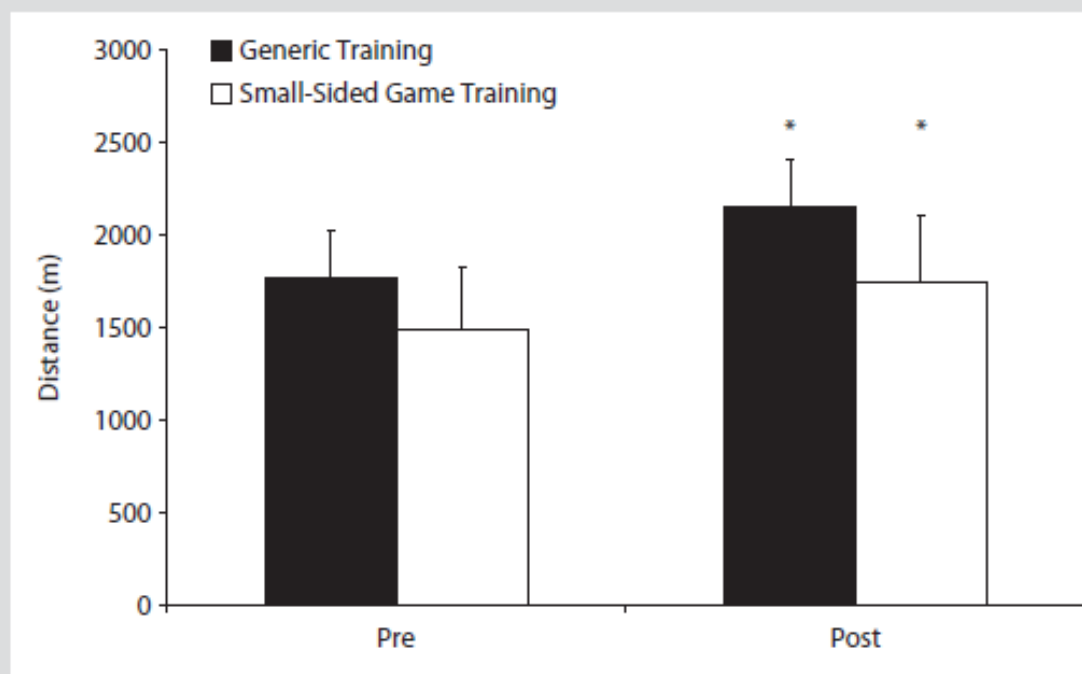


Fig. 3 SSG and GTG performance changes in the YYIRTL1 over 7 weeks of pre-season training. *Significant difference between pre and post.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

636 Training & Testing

Generic Versus Small-sided Game Training in Soccer

Authors

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Resultados similares con ambos programas

Table 2 Comparison of physiological performance tests and anthropometric data over 7 weeks of pre-season training (mean $\pm$ SD).

Variable	Group	Pre	Post	Interaction		Time	
				P	ES	P	ES
$\dot{V}O_{2\max}$ ($\text{mL} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$)	ITG	60.2 $\pm$ 4.6	61.4 $\pm$ 3.5	0.619	0.007	0.778	0.002
	SSG	59.3 $\pm$ 4.5	58.9 $\pm$ 5.5				
$\dot{V}O_{2\max}$ ($\text{mL} \cdot \text{kg}^{-0.75} \cdot \text{min}^{-1}$)	ITG	169 $\pm$ 14	173 $\pm$ 10	0.626	0.007	0.648	0.006
	SSG	167 $\pm$ 9	166 $\pm$ 11				
treadmill time to exhaustion (s)	ITG	589 $\pm$ 34	604 $\pm$ 43	0.340	0.027	0.943	0.000
	SSG	594 $\pm$ 50	581 $\pm$ 49				
MSFT (m)	ITG	2258 $\pm$ 131	2327 $\pm$ 174	0.514	0.013	0.684	0.005
	SSG	2222 $\pm$ 240	2206 $\pm$ 221				
YYIRTL1 (m)	ITG	1764 $\pm$ 256 ^b	2151 $\pm$ 261 ^b	0.522	0.013	0.004 ^a	0.229
	SSG	1488 $\pm$ 345	1742 $\pm$ 362				
RSA _{total} (s)	ITG	42.2 $\pm$ 1.8	42.3 $\pm$ 1.5	0.800	0.002	0.977	0.000
	SSG	42.1 $\pm$ 1.1	42.0 $\pm$ 1.4				
5 m sprint (s)	ITG	1.16 $\pm$ 0.02	1.15 $\pm$ 0.05	0.429	0.019	0.809	0.002
	SSG	1.15 $\pm$ 0.05	1.16 $\pm$ 0.07				
20 m sprint (s)	ITG	3.27 $\pm$ 0.06	3.22 $\pm$ 0.10	0.610	0.008	0.366	0.025
	SSG	3.26 $\pm$ 0.12	3.24 $\pm$ 0.17				

^asignificant difference between pre and post training

^bsignificant difference to SSG

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores de fútbol de amateur

Quinta división francesa

Dellal, A, Varliette, C, Owen, A, Chirico, EN, and Pialoux, V.
Small-sided games versus interval training in amateur soccer players: Effects on the aerobic capacity and the ability to perform intermittent exercises with changes of direction.
J Strength Cond Res 26(10): 2712–2720, 2012

SSG

HIT

GC

TABLE 2. Characteristics of the small-sided games (SSGs) training.

SSG	Field area (m × m)	Pitch size (m ²)	Bout duration	No. of bouts	Duration of recovery interbouts (min)	Effective duration of play (min)	Total duration (min)
2 vs. 2	20 × 20	100	2 min 30 s	5	2	12.5	20.5
1 vs. 1	15 × 10	150	1 min 30 s	5	1.5	7.5	13.5

TABLE 3. Characteristics of the high-intensity intermittent training (HIT) sessions.*

Type of HIT	Intensity (%V30-15 _{FT})	No. of blocks	No. of work periods	Interseries recovery (min)	No. of recovery periods	Nature of the between-runs recovery
30s-30s	95	2	2 × 10	6	2 × 9	Passive
15s-15s	100	2	2 × 8	5	2 × 7	Passive
10s-10s	95	2	2 × 7	5	7 × 6	Passive

*V30-15_{FT} = maximal speed reached at the end of the 30-15 intermittent fitness test.

Pretest-Posttest

Test continuo aeróbico (Vameval test)

Test intermitente (30-15IFT)

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Ambos grupos mejoran Test continuo aeróbico

Dellal, A, Varliette, C, Owen, A, Chirico, EN, and Pialoux, V. Small-sided games versus interval training in amateur soccer players: Effects on the aerobic capacity and the ability to perform intermittent exercises with changes of direction. *J Strength Cond Res* 26(10): 2712–2720, 2012

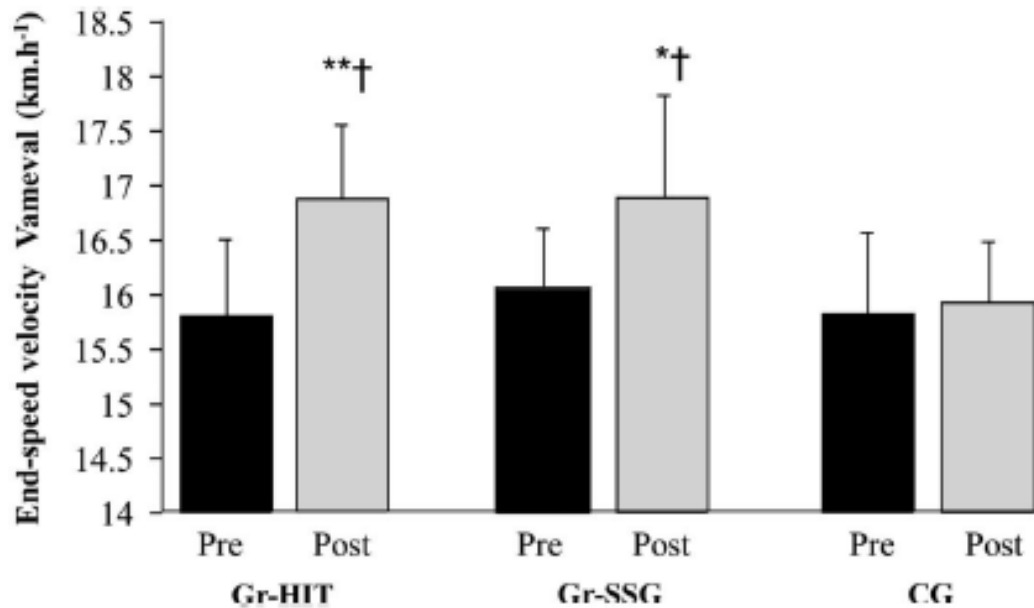


Figure 2. Effect of small-sided games and high-intensity intermittent training on Vameval test performance. CG = control group; Gr-SSG = small-sided games group; Gr-HIT = high-intensity intermittent training group. * $p < 0.05$ and ** $p < 0.01$ compared with pretraining; † $p < 0.05$ compared with CG.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Ambos grupos mejoran Test intermitente

Dellal, A, Varliette, C, Owen, A, Chirico, EN, and Pialoux, V. Small-sided games versus interval training in amateur soccer players: Effects on the aerobic capacity and the ability to perform intermittent exercises with changes of direction. *J Strength Cond Res* 26(10): 2712–2720, 2012

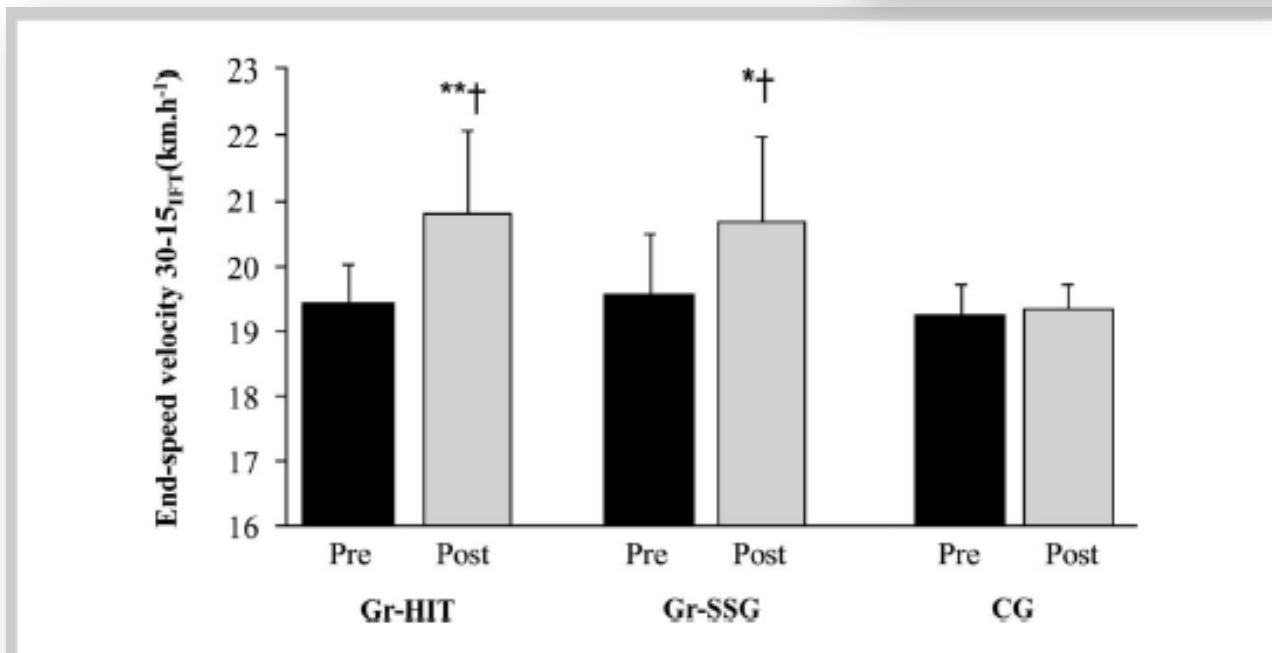


Figure 3. Effect of small-sided games and high-intensity intermittent training on maximal speed reached at the end of the 30-15 intermittent fitness test (30-15_{IIT}). CG = control group; Gr-SSG = small-sided games group; Gr-HIT = high-intensity intermittent training group. * $p < 0.05$ and ** $p < 0.01$ compared with pretraining; † $p < 0.05$ compared with CG.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Adultos desentrenados

Grupo SO – fútbol SSG

Grupo RU - carrera

Eur J Appl Physiol (2010) 108:1247–1258
DOI 10.1007/s00421-009-1319-8

ORIGINAL ARTICLE

Muscle adaptations and performance enhancements of soccer training for untrained men

Peter Krstrup · Jesper F. Christensen · Morten B. Randers · Henrik Pedersen · Emil Sundstrup · Markus D. Jakobsen · Birgitte R. Krstrup · Jens J. Nielsen · Charlotte Suetta · Lars Nybo · Jens Bangsbo



EFFECTS OF PROGRAMS WITH SMALL SIDED GAMES ON PHYSICAL CAPACITIES

Table 2 Muscular metabolites, enzyme activity, fibre type distribution and fibre sizes after 0, 4 and 12 weeks of soccer practice (SO, $n = 12$) and running (RU, $n = 10$) for untrained men, as well as after 0 and 12 weeks for an inactive control group (CO, $n = 10$)

	SO			RU					
	0 weeks	4 weeks	12 weeks	0 weeks	4 weeks				
Glycogen content (mmol/kg d.w.)	464 $\pm$ 37	422 $\pm$ 28	470 $\pm$ 31	412 $\pm$ 29	402 $\pm$ 19				
CP content (mmol/kg d.w.)	89.2 $\pm$ 6.8	80.5 $\pm$ 8.0	85.9 $\pm$ 10.5	82.7 $\pm$ 9.4	85.2 $\pm$ 7.9				
CS activity (μ mol/g d.w./min)	35.6 $\pm$ 2.2	39.3 $\pm$ 2.0*	40.7 $\pm$ 2.3*	33.0 $\pm$ 2.8	35.6 $\pm$ 2.2				
HAD activity (μ mol/g d.w./min)	25.4 $\pm$ 2.3	27.2 $\pm$ 1.8	26.6 $\pm$ 1.5	28.1 $\pm$ 1.9	29.2 $\pm$ 2.3				
Capillaries (cap/fibre)	1.76 $\pm$ 0.11	2.01 $\pm$ 0.12	2.15 $\pm$ 0.12*	1.83 $\pm$ 0.10	2.02 $\pm$ 0.12	2.09 $\pm$ 0.12*	2.18 $\pm$ 0.08	2.29 $\pm$ 0.05	
Capillaries (cap/mm ²)	354 $\pm$ 25	386 $\pm$ 28	395 $\pm$ 18	367 $\pm$ 19	371 $\pm$ 15	404 $\pm$ 30	430 $\pm$ 24	454 $\pm$ 32	
ST fibre size (μ m ²)	4,711 $\pm$ 304	5,417 $\pm$ 447	5,683 $\pm$ 463	5,229 $\pm$ 309	5,490 $\pm$ 371	5,436 $\pm$ 501	5,056 $\pm$ 315	4,733 $\pm$ 339	
FTa fibre size (μ m ²)	5,172 $\pm$ 271	5,911 $\pm$ 420	5,604 $\pm$ 207	5,169 $\pm$ 230	5,858 $\pm$ 303	5,695 $\pm$ 385	4,992 $\pm$ 263	4,728 $\pm$ 358	
FTx fibre size (μ m ²)	4,509 $\pm$ 336	4,777 $\pm$ 419	5,121 $\pm$ 317	4,721 $\pm$ 285	4,915 $\pm$ 465	5,111 $\pm$ 502	3,456 $\pm$ 1,020	4,484 $\pm$ 213	
Mean fibre size (μ m ²)	4,828 $\pm$ 233	5,513 $\pm$ 373	5,546 $\pm$ 240*	5,075 $\pm$ 239	5,507 $\pm$ 287	5,367 $\pm$ 473	5,065 $\pm$ 271	4,767 $\pm$ 233	
Fibre type distribution (% ST fibres)	43.0 $\pm$ 3.8	45.3 $\pm$ 6.0	47.4 $\pm$ 4.7	44.6 $\pm$ 3.8	48.4 $\pm$ 3.7	47.6 $\pm$ 5.9	43.9 $\pm$ 5.3	49.0 $\pm$ 5.0	
Fibre type distribution (% FTa fibres)	39.1 $\pm$ 2.7	38.1 $\pm$ 3.5	41.9 $\pm$ 3.9	38.7 $\pm$ 2.7	37.5 $\pm$ 4.6	40.1 $\pm$ 4.3	44.6 $\pm$ 3.9	39.9 $\pm$ 3.6	
Fibre type distribution (% FTx fibres)	17.9 $\pm$ 3.2	16.5 $\pm$ 3.9	10.7 $\pm$ 1.8*	16.7 $\pm$ 3.9	14.1 $\pm$ 3.6	12.2 $\pm$ 4.6	11.5 $\pm$ 3.0	10.7 $\pm$ 1.8	

Mean $\pm$ SEM are presented

* Significant difference from 0 weeks

Ambos grupos

Aumento de capilares/fibra

Grupo Futbol (SO)

Descenso de % Fibras rápidas

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

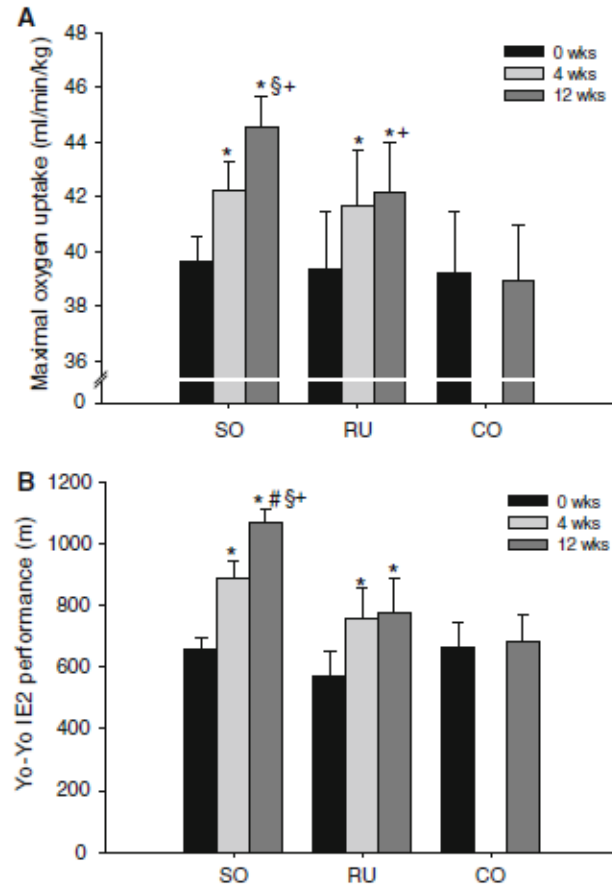


Fig. 4 Maximal oxygen uptake (a) and Yo-Yo Intermittent Endurance level 2 test performance (b; Yo-Yo IE2) before as well as after 4 and 12 weeks of soccer practice (SO, $n = 12$) and running (RU, $n = 10$) for untrained men, or continuation of an inactive life-style (CO = 10). Mean $\pm$ SEM are presented. * Significant difference from 0 weeks. §Significant difference from 4 weeks. +Significant difference from RU. +Significant difference from CO

Eur J Appl Physiol (2010) 108:1247–1258
DOI 10.1007/s00421-009-1319-8

ORIGINAL ARTICLE

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Ambos grupos mejoran

VO2max
Rendimiento YYIE2

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores jóvenes de fútbol

Procedimiento

6 semanas de intervención

Grupo entrenamiento interválico

Grupo SSG

Mediciones

Analizan VAM en prueba continua y el CMJ

PLOS ONE

RESEARCH ARTICLE

Effects of Small-Sided Games vs. Interval Training in Aerobic Fitness and Physical Enjoyment in Young Elite Soccer Players

Asier Los Arcos^{1*}, Juan Sebastián Vázquez^{2*}, Juan Martín³, Javier Lerga³, Felipe Sánchez², Federico Villagra^{4,5*}, Javier J. Zulueta^{4,5*}



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS



RESEARCH ARTICLE

Effects of Small-Sided Games vs. Interval Training in Aerobic Fitness and Physical Enjoyment in Young Elite Soccer Players

Asier Los Arcos^{1*}, Juan Sebastián Vázquez^{2*}, Juan Martín³, Javier Lerga³, Felipe Sánchez³, Federico Villagra^{4,5†}, Javier J. Zulueta^{4,5†*}

No mejoras en VAM con ningún programa

No diferencias entre grupos en los efectos de los programas

Table 3. Results, change in mean (%) and effect size (ES) of MAS ($\text{km} \cdot \text{h}^{-1}$) from Test 1 (T1) to Test 2 (T2).

Group	n	T1	T2	Change (%)	p	ES	Rating	
IT	8	16.8 ± 0.9	17.1 ± 1.0	1.7 ± 1.5	0.08	0.27 ± 0.25	Possibly	69/30/0
SSG	7	17.0 ± 0.8	16.9 ± 0.8	-0.4 ± 1.9	0.72	-0.07 ± 0.34	Possibly	9/68/23

IT = Interval Training; SSG = Small-sided Game.

SSG “possibly small” descenso en CMJ

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Aspecto novedoso - Satisfacción por la tarea

SSG mayor satisfacción



Table 4. Results of Physical Activity Enjoyment Scale (PACES) (arbitrary units).

	ITG	SSGG	<i>p</i>	ES	Rating	
PACES Scores	15.63 ± 6.1	28.43 ± 9.1	0.006	1.86 ± 1.07	Very Likely	99/1/0

ITG = Interval Training Group; SSGG = Small-sided Game group; ES = Effect Size.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores balonmano de elite

Table 1. Description of the testing schedule and details of the training protocol over the 8-week training period in small-sided games (SSG) and repeated shuffle sprints (RSS).

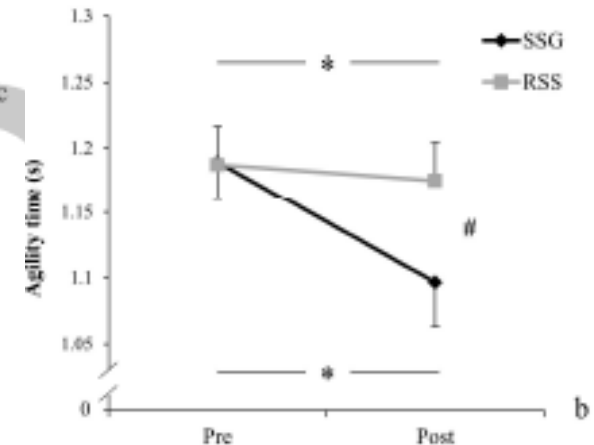
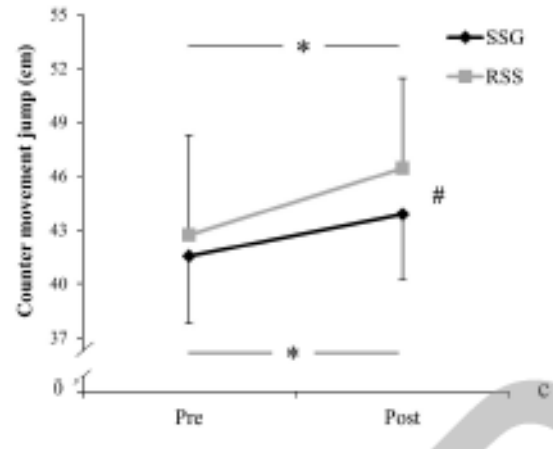
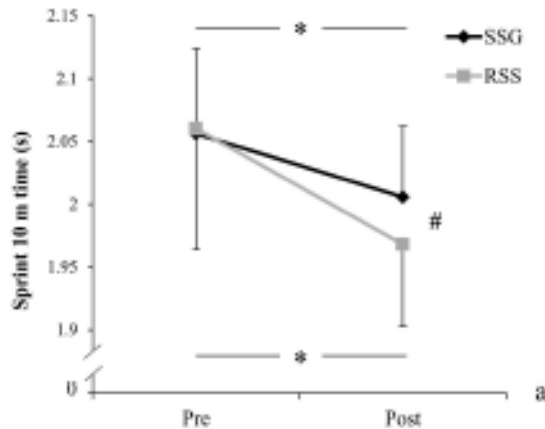
		SSG	RSS
Pre-test	Week-1	RSA, anthropometry, CMJ test, sprint test (20 m), throwing tests (standing throw and jump shot).	
Training Period	Week-2	2×[5×2'25"-1'P]	2×[2×14-20"p-4'P]
	Week-3	2×[5×2'35"-1'P]	2×[2×15-20"p-4'P]
	Week-4	2×[5×2'55"-1'P]	2×[2×16-20"p-4'P]
	Week-5	2×[5×3'-1'P]	2×[2×16-20"p-4'P]
	Week-6	2×[5×3'-1'P]	2×[2×16-20"p-4'P]
	Week-7	2×[5×3'10"-1'P]	2×[2×17-20"p-4'P]
	Week-8	2×[5×3'10"-1'P]	2×[2×17-20"p-4'P]
	Week-9	2×[5×2'25"-1'P]	2×[2×14-20"p-4'P]
Post-test	Week-10	RSA, anthropometry, CMJ test, sprint test (20 m), throwing tests (standing throw and jump shot).	

As in the SSG protocol, 2×[5×2'25"-1'P] in week 2 means: 2 sessions *per* week consisting of 5 bouts of 2'25" of continuous handball small sided games with 1' (1'P) of passive recovery between bouts. As for RSS protocol, 2×[2×14-20"p-4'P] in week-2 means: 2 sessions *per* week consisting of 2 sets of 14 sprints (10+10 m) followed by a jump shot with 20" (20"p) of active recovery between repetitions and 4' (4'P) of passive recovery between sets.



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS



Los dos grupos mejoran en todas las variables

No diferencias entre los dos programas en RSA

Mayores mejoras RSS en aceleración, salto y velocidad de tiro tras salto

Mayores mejoras grupo SSG en agilidad y velocidad tiro desde parado



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Participantes

Jugadores de balonmano elite Israel

IMPROVING FITNESS OF ELITE HANDBALL PLAYERS: SMALL-SIDED GAMES VS. HIGH-INTENSITY INTERMITTENT TRAINING

ANTONIO DELLO IACONO,¹ ALON ELIAKIM,^{1,2} AND YOAV MECKEL¹

J Strength Cond Res 29(3): 835–843,



TABLE 1. Description of the training schedule and details of training protocol over the 8-week training period in high intensity intermittent training and small-sided games.*

	HIIT	SSG
Testing		
Wk 1	Sprint tests (10, 20 m), agility test (HAST), maximal strength and lower limb explosive power, YYIRT1	
Training period		
Wk 2	2 × (2 × 6':15" [90%]–15"p)	2 × (5 × 2'25"–1'p)
Wk 3	2 × (2 × 6'30":15" [90%]–15"p)	2 × (5 × 2'35"–1'p)
Wk 4	2 × (2 × 7':15" [92%]–15"p)	2 × (5 × 2'55"–1'p)
Wk 5	2 × (2 × 7'30":15" [92%]–15"p)	2 × (5 × 3'–1'p)
Wk 6	2 × (2 × 7'30":15" [92%]–15"p)	2 × (5 × 3'–1'p)
Wk 7	2 × (2 × 8':15" [92%]–15"p)	2 × (5 × 3'10"–1'p)
Wk 8	2 × (2 × 7'30":15" [95%]–15"p)	2 × (5 × 3'–1'p)
Wk 9	2 × (2 × 7':15" [95%]–15"p)	2 × (5 × 2'55"–1'p)
Testing		
Wk 10	Sprint tests (10, 20 m), agility test (HAST), maximal strength and lower limb explosive power, YYIRT1	

*HIIT = intensity intermittent training; SSG = small-sided games; HAST = handball agility specific test.

As for HIIT protocol, 2 × (2 × 6':15" [90%]–15"p) in week 2 means: 2 sessions per week consisting of 15-second runs at 90% of YYIRT1 final speed interspersed with 15-second passive recovery (15"p) by walking for a total time of 6'15". As for SSG protocol, 2 × [5 × 2'25"–1'p] in week 2 means: 2 sessions per week consisting of 5 bouts of 2'25" of continuous handball small-sided games with 1-second passive recovery (1'p) between bouts.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

IMPROVING FITNESS OF ELITE HANDBALL PLAYERS: SMALL-SIDED GAMES VS. HIGH-INTENSITY INTERMITTENT TRAINING

ANTONIO DELLO IACONO,¹ ALON ELIAKIM,^{1,2} AND YOAV MECKEL¹

J Strength Cond Res 29(3): 835–843,

Ambos grupos mejoran en la mayoría de las capacidades físicas analizadas

TABLE 2. Effect of both training methods on anthropometric and fitness characteristics of the participants (mean $\pm$ SD).*

	High-intensity training (n = 9)		Small-sided games (n = 9)	
	Pre	Post	Pre	Post
Weight (kg)	91.0 $\pm$ 8.5	91.1 $\pm$ 7.5	90.1 $\pm$ 10.1	90.7 $\pm$ 9.8
Height (cm)	185.9 $\pm$ 5.0	185.9 $\pm$ 5.0	188.8 $\pm$ 5.7	188.8 $\pm$ 5.7
Body fat (%)	13.3 $\pm$ 3.7	12.8 $\pm$ 2.8†	12.0 $\pm$ 2.6	11.3 $\pm$ 2.1†
YYIRTL1 (m)	1297.8 $\pm$ 300	1601.1 $\pm$ 192†	1364.4 $\pm$ 397	1723.3 $\pm$ 327†
10-m sprint (s)	1.55 $\pm$ 0.08	1.52 $\pm$ 0.07††	1.54 $\pm$ 0.12	1.48 $\pm$ 0.12†
20-m sprint (s)	2.80 $\pm$ 0.10	2.75 $\pm$ 0.12††	2.81 $\pm$ 0.12	2.70 $\pm$ 0.10†
Agility test (s)	6.72 $\pm$ 0.22	6.65 $\pm$ 0.24††	6.68 $\pm$ 0.25	6.54 $\pm$ 0.21†
Bench press (kg)	99.4 $\pm$ 10.1	106.2 $\pm$ 10.7††	105.0 $\pm$ 22.6	118.2 $\pm$ 21.0†
CMJ (cm)	34.3 $\pm$ 5.0	36.9 $\pm$ 4.5††	36.5 $\pm$ 4.5	40.5 $\pm$ 4.5†
CMJam (cm)	40.2 $\pm$ 5.9	42.8 $\pm$ 5.3††	42.6 $\pm$ 5.8	46.4 $\pm$ 5.2†

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

COMPARACIÓN ENTRE PROGRAMAS

Las mejoras son mayores en SSG

Conclusión

SSG preferible para balonmano

IMPROVING FITNESS OF ELITE HANDBALL PLAYERS: SMALL-SIDED GAMES VS. HIGH-INTENSITY INTERMITTENT TRAINING

ANTONIO DELLO IACONO,¹ ALON ELIAKIM,^{1,2} AND YOAV MECKEL¹

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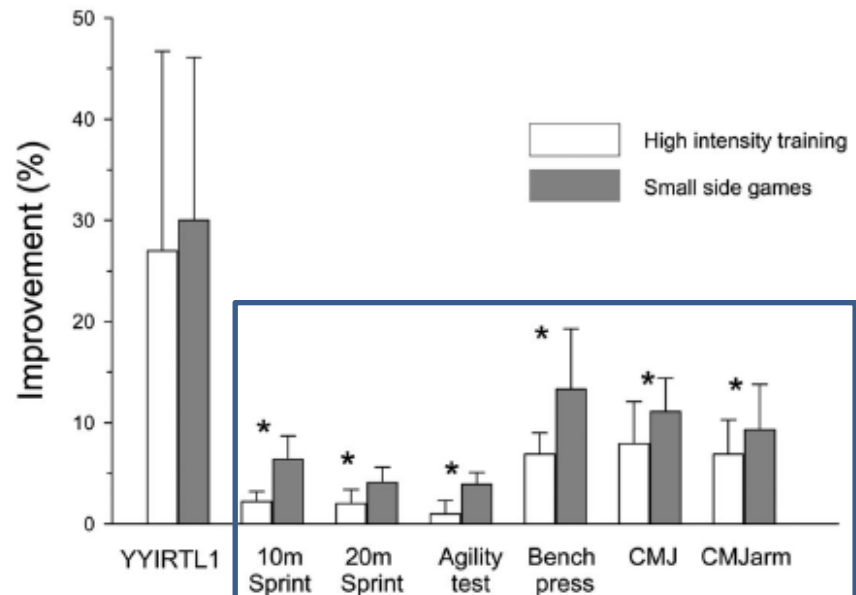


Figure 3. Improvement in fitness characteristics following the different training protocols (* $p \leq 0.05$ for between-group differences). CMJ = countermovement jump without arm movement; CMJarm = countermovement jump tests with arm movement.

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Otras cuestiones importantes

Si, salvo en balonmano, **los SSG NO** son mas efectivos que otros programas en el **rendimiento físico**



EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Otras cuestiones importantes

Si, salvo en balonmano, **los SSG NO son mas efectivos que otros programas en el rendimiento físico**

Mayor dificultad de cuantificar la carga de entrenamiento.



REVIEW ARTICLE

Sports Med 2011; 41 (3): 196-220
0112-1642/11/0003-0196/\$49.00/0

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Physiology of Small-Sided Games Training in Football

A Systematic Review

Stephen V. Hill-Haas,¹ Brian Dawson,¹ Franco M. Impellizzeri^{2,3} and Aaron J. Coutts⁴

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Otras cuestiones importantes

Si, salvo en balonmano, **los SSG NO son mas efectivos que otros programas en el rendimiento físico**

Mayor dificultad de cuantificar la carga de entrenamiento.

Múltiples variables que influyen en la carga de los SSG



REVIEW ARTICLE

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Otras cuestiones importantes

Si, salvo en balonmano, **los SSG NO son mas efectivos que otros programas en el rendimiento físico**

Mayor dificultad de cuantificar la carga de entrenamiento.

Múltiples variables que influyen en la carga de los SSG

Es necesario un **alto nivel técnico/táctico** para alcanzar intensidades altas



REVIEW ARTICLE

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0112-1642/11/0003-0199/\$49.00/0

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EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN CAPACIDADES FÍSICAS

Otras cuestiones importantes

Si, salvo en balonmano, **los SSG NO son mas efectivos que otros programas en el rendimiento físico**

Mayor dificultad de cuantificar la carga de entrenamiento.

Múltiples variables que influyen en la carga de los SSG

Es necesario un **alto nivel técnico/táctico** para alcanzar intensidades altas

Mayor riesgo de lesión que otras tareas



REVIEW ARTICLE

Sports Med 2011; 41 (2): 199-220

0112-1642/11/0003-0199/\$49.00/0

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A Systematic Review

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LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

¿POR QUÉ UTILIZAR LOS SSG EN DEPORTES COLECTIVOS?



LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

¿POR QUÉ UTILIZAR LOS SSG EN DEPORTES COLECTIVOS?

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

FACTORES DE RENDIMIENTO EN FÚTBOL

~~CAPACIDADES
CONDICIONALES
Fuerza, Velocidad
Potencia, Rapidez~~

~~Harman et al., 1991, König et al., 2001,
Vanderford et al., 2004~~

~~CAPACIDADES
CONDICIONALES
Capacidad
Cardiovascular~~

~~Cole et al., 1995, König et al., 2001,
Schabert et al., 2000~~

SSG

TÉCNICA Y TÁCTICA

Dominio de habilidades específicas

Philippaerts et al., 2001,
Schabert et al., 2000

OTROS FACTORES

-Aspectos psicológicos
-Aspectos sociales

-
Boileau et al., 1977, Hickson et al., 1980,
Koutedakis et al., 1995

ÍNDICE

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

- EFECTOS EN CAPACIDADES FÍSICAS/CONDICIONALES

- EFECTOS EN CAPACIDADES TÉCNICO/TÁCTICAS

- EFECTOS EN RENDIMIENTO COMPETICIÓN

CONCLUSIONES

EFFECTS OF PROGRAMS WITH SSG ON TECHNICAL/TACTICAL CAPACITIES

Participantes

Jugadores de fútbol jóvenes (14 años)

Grupo SSG

Grupo COD

G control

Multidirectional Sprints and Small-Sided Games Training Effect on Agility and Change of Direction Abilities in Youth Soccer

Article in The Journal of Strength and Conditioning Research - August 2014
DOI: 10.1519/JSC.0000000000000005 Source: PubMed

Anis Chaouachi¹, Moktar Chtara^{1,2}, Raouf Hammami¹, Hichem Chtara¹, Olfa Turki^{1,2}, Carlo Castagna³

Table 1.

Week		1vs1 (30s)	2vs2 (1 min)	3vs3 (2 min)
1	S x R	2 x 2	2 x 2	2 x 2
	W:R	1:4	1:2	1:1
2	S x R	2 x 2	2 x 2	2 x 2
	W:R	1:4	1:1	1:1
3	S x R	2 x 3	2x3	2 x 2
	W:R	1:4	1:1	1:1
4	S x R	2 x 3	2 x 3	2 x 2
	W:R	1:4	1:1	1:1
5	S x R	2 x 4	2 x 4	1 x 2
	W:R	1:4	1:1	1:1
6	S x R	2 x 4	2x 3	1 x 2
	W:R	1:4	1:2	1:1

S = Series; R = Repetition ; W:R= Work-to-Rest ratio time.

Table 2.

Weeks		Skipping 10m	COD 5-0-5m	Half-T-test 20m	Shuttle 4 x 10m	Total distance (m)	Session COD Number
1	S x R	2 x 2	2 x 2	2 x 2	2 x 2	360	48
	r (min)	1	1	1	2		
2	S x R	2x3		2 x 3	2 x 3	420	66
	r (min)	1		1	2		
3	S x R		2 x 3	2 x 3	2 x 3	480	72
	r (min)		1	1	2		
4	S x R	2 x 3	2x3	2 x 3	2 x 3	540	72
	r (min)	1	1	1	2		
5	S x R	2 x 4		2 x 4	2 x 4	560	88
	r (min)	1		1	2		
6	S x R	2 x 2	2 x 2	2 x 4	2 x 3	520	78
	r (min)	1	1	2	2		

S = Series; R = Repetition; r = recovery time ; COD = Change of Direction

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

Multidirectional Sprints and Small-Sided Games
Training Effect on Agility and Change of
Direction Abilities in Youth Soccer

Article in The Journal of Strength and Conditioning Research - August 2014
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Anis Chaouachi¹, Moktar Chtara^{1,2}, Raouf Hammami¹, Hichem Chtara¹, Olfa Turki^{1,2}, Carlo Castagna³

Ambos grupos mejoran en todas las variables analizadas

GC también salvo S10m y en ACMJ

GCOD mayores mejoras en:

Aceleración 15, 20 y 20 m

Test de COD (varios test)

ACMJ y en 5JT

Mejora similar en RAT

GSSG: mayor mejora en “componente técnico”:

Test con Balón (Ball-15, RAT-B)

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Esto nos lleva a pensar que...

Multidirectional Sprints and Small-Sided Games
Training Effect on Agility and Change of
Direction Abilities in Youth Soccer

Article in The Journal of Strength and Conditioning Research - August 2014
DOI: 10.1519/JSC.0000000000000505 - Source: PubMed

Anis Chaouachi¹, Moktar Chtara^{1,2}, Raouf Hammami¹, Hichem Chtara¹, Olfa Turki^{1,2}, Carlo Castagna³

SSG, por mayor interacción con balón **mejoras en acciones específicas**

Para mejorar en **condición física (componente anaeróbico), COD**

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

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Esto nos lleva a pensar que...

SSG, por mayor interacción con balón **mejoras en acciones específicas**

Para mejorar en **condición física (componente anaeróbico), COD**



Visión crítica:

Jóvenes futbolistas- efecto maduración

Aportan diferencias en % y ANCOVA pero no ES.

Continuidad al trabajo comparando también con grupo de entrenamiento COD con balón.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Participantes

2 equipos de fútbol sala categoría nacional (2ª)

Grupo experimental

G control

Procedimiento

6 semanas SSG, 1 sesión/semana – 6 sesiones SSG

Periodización cada semana aumento 1 min de SSG y descenso de 1 min rec.



EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

Ningún grupo mejora en:

Cambio de dirección 4 x 10 m

Agilidad con balón (elemento técnico)

G SSG: mejora Multi Stage Fitness test

American Journal of Sports Science and Medicine, 2015, Vol. 3, No. 2, 28-34
Available online at <http://pubs.sciepub.com/ajssm/3/2/1>
© Science and Education Publishing
DOI:10.12691/ajssm-3-2-1



VO₂max Changes in English Futsal Players after a 6-Week Period of Specific Small-Sided Games Training

D. Berdejo-del-Fresno^{1,2}, R. Moore², M. W. Laupheimer^{1,3}

¹England Futsal National Squad, The Football Association and The International Futsal Academy (United Kingdom)

²Research Fellow, Sport Industry Research Centre, Sheffield Hallam University (United Kingdom)

³Senior Clinical Lecturer in Sports and Exercise Medicine, Queen Mary University of London (United Kingdom)

*Corresponding author: damberdejo@gmail.com

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

Ningún grupo mejora en:

Agilidad 4 x 10 m cambio de dirección

Agilidad con balón (elemento técnico)

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Conclusiones

Necesidad de implementar otros ejercicios para mejora aspectos técnicos

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

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Conclusiones

Necesidad de implementar otros ejercicios para mejora aspectos técnicos



Visión crítica:

No aporta datos estadísticos sin porteros.

No calcula el ES

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Participantes

Jugadores de WB (1 división)

SSG – 5 semanas

Title of the Article

Small sided game training effects in straight sprint and change of direction ability in wheelchair basketball

Full Names of the Authors:

Yanci, J.¹ Iturricastillo, A.¹ Granados, C.¹



EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mejora SP5 m

Title of the Article

Small sided game training effects in straight sprint and change of direction ability in wheelchair basketball

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Table 2 PreTest and PostTest results in straight sprint with and without ball and change of direction ability.

	PreTest	PostTest	Mean dif. (%)	Cohens' d
Straight sprint without ball (s)				
SP5 m	1.74 ± .16	1.66 ± .16**	-4.32	-.46
SP20 m	5.36 ± .64	5.32 ± .62	-.75	-.06
Straight sprint with ball (s)				
SPB5 m	1.90 ± .28	2.00 ± .25*	5.26	.36
SPB20 m	5.90 ± .86	6.77 ± 1.08**	14.60	1.00
Change of direction ability (s)				
T-test	14.62 ± 1.83	14.66 ± 1.90	.23	.02

SP5 = 5 m straight sprint, SP20 = 20 m straight sprint, SPB5 = 5 m straight sprint with ball, SPB20 = 20 m straight sprint with ball. PreTest to PostTest significant differences (* $p < .05$, ** $p < .01$).

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mejora SP5

Empeora test “técnicos” (SPB5m, SPB20m)

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EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS



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Full Names of the Authors:

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Visión crítica:

Baja muestra

Características especiales: propulsión con extremidades superiores

No grupo control

Test analíticos

Periodo corto de intervención



EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Artículos más completos por número/características de test técnicos

Small-Sided Game Training Improves Aerobic Capacity and Technical Skills in Basketball Players

A. Delextrat¹, A. Martinez²

¹ Sport and Health Sciences Department, Oxford Brookes University, Oxford, United Kingdom

² ASPTT Toulon Basketball Club, Toulon, France



Journal of Science and Medicine in Sport (2007) 10, 79–88



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ORIGINAL PAPER

Journal of
Science and
Medicine in
Sport

www.elsevier.com/locate/jsams

Effects of two different short-term training programs on the physical and technical abilities of adolescent basketball players

Gregory C. Bogdanis^{b,*}, Vaghelis Ziagos^a,
Michalis Anastasiadis^a, Maria Maridaki^b

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Participantes

Jugadores de baloncesto U17

Procedimiento

Grupo HIT

Grupo SSG

Small-Sided Game Training Improves Aerobic Capacity and Technical Skills in Basketball Players

A. Delextrat¹, A. Martinez²

¹ Sport and Health Sciences Department, Oxford Brookes University, Oxford, United Kingdom

² ASPTT Toulon Basketball Club, Toulon, France

Table 1 Description of the 6-weeks training programmes for the small-sided game (SSG) group and the high-intensity intermittent running group (HIT).

	HIT	SSG
subjects characteristics	N=9 (4 guards, 3 forwards, 2 centres) Age: 16.0 ± 0.6 years Height: 181 ± 7 cm Body mass: 73.5 ± 6.9 kg Basketball training experience: 6.8 ± 3.1 years	N=9 (4 guards, 3 forwards, 2 centres) Age: 16.3 ± 0.8 years Height: 182 ± 9 cm Body mass: 74.2 ± 6.3 kg Basketball training experience: 7.2 ± 2.9 years
week 1	2 × (8 min of 15"-15" at 95% of V _{IFT})	2 × (2 × 3 min 45)
week 2	2 × (9 min of 15"-15" at 95% of V _{IFT})	2 × (2 × 4 min 15)
week 3	2 × (10 min of 15"-15" at 95% of V _{IFT})	2 × (3 × 3 min)
week 4	2 × (11 min 30s of 15"-15" at 95% of V _{IFT})	2 × (3 × 3 min 30)
week 5	2 × (13 min of 15"-15" at 95% of V _{IFT})	2 × (3 × 4 min)
week 6	2 × (9 min of 15"-15" at 95% of V _{IFT})	2 × (2 × 4 min 15)

15"-15": 15 s of high-intensity running at a speed corresponding to 95 % of the speed attained in the last stage fully completed during the 30-15 intermittent fitness test (V_{IFT})

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mediciones

Variables físicas

Capacidad aeróbica (30-15 IT)

RSA

Potencia ext. Sup (Lanz Balón)

Potencia ext. Inf (5JT)

T-test (agilidad defensiva)

Variables técnicas

Small-Sided Game Training Improves Aerobic Capacity and Technical Skills in Basketball Players

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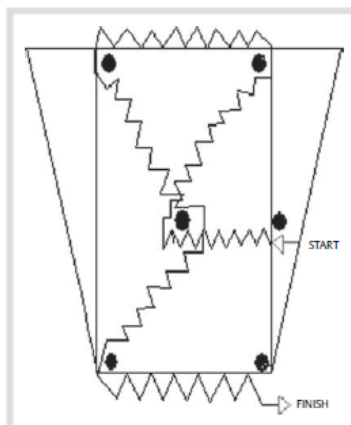


Fig. 2 Control dribble test, used in the assessment of offensive agility. The test consists of running with the ball as fast as possible while changing hands around 5 cones placed inside the key.

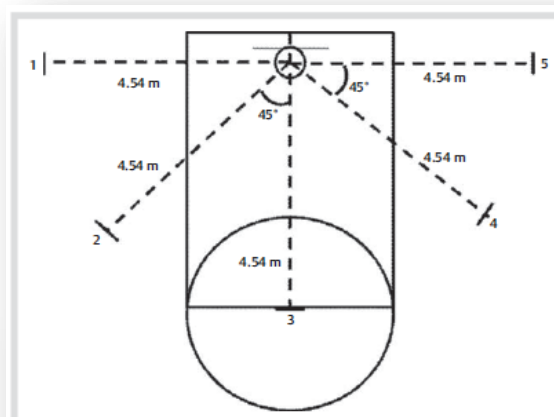


Fig. 3 Shooting skills assessment. Guidelines: Starting from any of the 5 positions, players were instructed to shoot, get their rebound and dribble to another position. No specific rules were given regarding the order in which the positions were used, except that players should attempt at least 1 shot per position. Players were allowed to attempt a maximum of 4 lay-ups during the test, but these could not be performed in succession. They received 2 points for each successful shot and one point when the ball touched the rim. Points awarded during the 60 s were then added and used as a performance indicator.

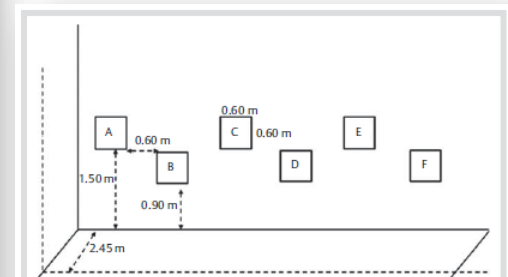


Fig. 4 Assessment of passing skills. Guidelines: The starting position was facing the furthest left target behind a line placed 2.45 m from the wall, and players were requested to place their feet as close as possible but behind the line while performing shuttles (side-shuffling) between the first and sixth target. Targets must be attempted in a succeeding manner (i.e., following the sequence order: A-B-C-D-E-F-F-E-D-C-B-A-A-B-...). 2 points were awarded when the ball landed within the target or on its border, while passes touching the spaces between targets were awarded one point. Points accumulated for 30 s were used as a performance indicator.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mediciones

Variables físicas

Diferencias entre grupos

Potencia ext. Sup (Lanz Balón)

Table 2 Effects of time (pre vs. post) and training intervention (high-intensity interval training, HIT vs. small-sided games, SSG) on physical and technical performances of male junior basketball players (V_{IFT} : maximal aerobic performance; RSA: repeated sprint ability).

	Time	HIT	SSG	P values and Effect sizes (eta squared η^2)	Confidence interval limit
V_{IFT} ($\text{km}\cdot\text{h}^{-1}$)	PRE	17.4 $\pm$ 0.7	17.2 $\pm$ 1.7	Time: P = 0.028 , $\eta^2 = 0.395$ Group: P = 0.814, $\eta^2 = 0.006$ Interaction: P = 0.765, $\eta^2 = 0.006$	HIT: 16.2–18.6 SSG: 16.0–18.4
	POST	18.0 $\pm$ 1.0	17.9 $\pm$ 1.5		HIT: 16.9–19.1 SSG: 16.8–19.0
total time RSA (s)	PRE	27.1 $\pm$ 1.9	27.9 $\pm$ 2.4	Time: P = 0.300, $\eta^2 = 0.070$ Group: P = 0.230, $\eta^2 = 0.108$ Interaction: P = 0.146, $\eta^2 = 0.144$	HIT: 25.5–28.8 SSG: 26.2–29.7
	POST	27.0 $\pm$ 1.8	28.7 $\pm$ 1.9		HIT: 25.6–28.4 SSG: 27.2–30.2
ideal time RSA (s)	PRE	26.1 $\pm$ 1.8	26.3 $\pm$ 1.9	Time: P = 0.667, $\eta^2 = 0.013$ Group: P = 0.490, $\eta^2 = 0.037$ Interaction: P = 0.208, $\eta^2 = 0.117$	HIT: 24.7–27.5 SSG: 24.8–27.8
	POST	25.8 $\pm$ 1.7	26.9 $\pm$ 1.9		HIT: 24.4–27.1 SSG: 25.4–28.3
performance decrement RSA (%)	PRE	3.75 $\pm$ 1.99	5.83 $\pm$ 2.53	Time: P = 0.399, $\eta^2 = 0.055$ Group: P = 0.162, $\eta^2 = 0.145$ Interaction: P = 0.938, $\eta^2 = 0.001$	HIT: 2.03–5.48 SSG: 3.99–7.67
	POST	4.35 $\pm$ 2.51	6.33 $\pm$ 4.26		HIT: 1.72–6.98 SSG: 3.52–9.14
defensive agility (s)	PRE	10.32 $\pm$ 1.16	10.36 $\pm$ 0.72	Time: P = 0.558, $\eta^2 = 0.018$ Group: P = 0.432, $\eta^2 = 0.045$ Interaction: P = 0.037 , $\eta^2 = 0.270$	HIT: 9.6–11.0 SSG: 9.6–11.2
	POST	10.60 $\pm$ 0.97	9.89 $\pm$ 0.40		HIT: 10.0–11.2 SSG: 9.3–10.5
offensive agility (s)	PRE	8.33 $\pm$ 0.34	8.48 $\pm$ 0.50	Time: P = 0.001 , $\eta^2 = 0.700$ Group: P = 0.895, $\eta^2 = 0.001$ Interaction: P = 0.131, $\eta^2 = 0.047$	HIT: 8.03–8.63 SSG: 8.14–8.81
	POST	7.97 $\pm$ 0.42	7.87 $\pm$ 0.24		HIT: 7.71–8.22 SSG: 7.58–8.16
shooting skills (points)	PRE	29.4 $\pm$ 3.4	29.7 $\pm$ 3.7	Time: P = 0.151, $\eta^2 = 0.086$ Group: P = 0.195, $\eta^2 = 0.117$ Interaction: P = 0.006 , $\eta^2 = 0.394$	HIT: 27.7–31.2 SSG: 27.7–31.7
	POST	28.7 $\pm$ 4.0	31.9 $\pm$ 3.6		HIT: 26.6–30.7 SSG: 29.6–34.2
passing skills (points)	PRE	97.7 $\pm$ 9.0	95.7 $\pm$ 4.2	Time: P = 0.004 , $\eta^2 = 0.452$ Group: P = 0.541, $\eta^2 = 0.027$ Interaction: P = 0.504, $\eta^2 = 0.018$	HIT: 88.4–106.8 SSG: 85.4–106.1
	POST	107.3 $\pm$ 6.9	102.3 $\pm$ 5.4		HIT: 99.4–115.2 SSG: 93.3–111.2
upper body power (m)	PRE	5.91 $\pm$ 1.83	6.10 $\pm$ 1.34	Time: P = 0.223, $\eta^2 = 0.080$ Group: P = 0.532, $\eta^2 = 0.029$ Interaction: P = 0.048 , $\eta^2 = 0.231$	HIT: 4.74–7.08 SSG: 4.77–7.43
	POST	5.79 $\pm$ 1.49	6.58 $\pm$ 1.29		HIT: 4.78–6.80 SSG: 5.43–7.71
lower body power (m)	PRE	10.7 $\pm$ 1.3	10.7 $\pm$ 1.0	Time: P = 0.094, $\eta^2 = 0.179$ Group: P = 0.734, $\eta^2 = 0.009$ Interaction: P = 0.401, $\eta^2 = 0.042$	HIT: 9.8–11.5 SSG: 10.2–11.5
	POST	10.9 $\pm$ 1.0	11.2 $\pm$ 0.8		HIT: 9.7–11.6 SSG: 10.5–12.0

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mediciones

Variables físicas

Diferencias entre grupos

Potencia ext. Sup (Lanz Balón)

Variables técnicas

Diferencias SSG en:

- Agilidad defensiva (sin balón)
- Habilidad tiro (balón)

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EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Mediciones

Variables físicas

Diferencias entre grupos

Potencia ext. Sup (Lanz Balón)

Variables técnicas

Diferencias SSG en:

- Agilidad defensiva (sin balón)
- Habilidad tiro (balón)

No diferencias entre grupos:

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- Habilidad pase (balón)

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	POST	4.35 $\pm$ 2.51	6.33 $\pm$ 4.26		HIT: 1.72–6.98 SSG: 3.52–9.14
defensive agility (s)	PRE	10.32 $\pm$ 1.16	10.36 $\pm$ 0.72	Time: $P = 0.558$, $\eta^2 = 0.018$ Group: $P = 0.432$, $\eta^2 = 0.045$ Interaction: P = 0.037 , $\eta^2 = 0.270$	HIT: 9.6–11.0 SSG: 9.6–11.2
	POST	10.60 $\pm$ 0.97	9.89 $\pm$ 0.40		HIT: 10.0–11.2 SSG: 9.3–10.5
offensive agility (s)	PRE	8.33 $\pm$ 0.34	8.48 $\pm$ 0.50	Time: P = 0.001 , $\eta^2 = 0.700$ Group: $P = 0.895$, $\eta^2 = 0.001$ Interaction: $P = 0.131$, $\eta^2 = 0.047$	HIT: 8.03–8.63 SSG: 8.14–8.81
	POST	7.97 $\pm$ 0.42	7.87 $\pm$ 0.24		HIT: 7.71–8.22 SSG: 7.58–8.16
shooting skills (points)	PRE	29.4 $\pm$ 3.4	29.7 $\pm$ 3.7	Time: $P = 0.151$, $\eta^2 = 0.086$ Group: $P = 0.195$, $\eta^2 = 0.117$ Interaction: P = 0.006 , $\eta^2 = 0.394$	HIT: 27.7–31.2 SSG: 27.7–31.7
	POST	28.7 $\pm$ 4.0	31.9 $\pm$ 3.6		HIT: 26.6–30.7 SSG: 29.6–34.2
passing skills (points)	PRE	97.7 $\pm$ 9.0	95.7 $\pm$ 4.2	Time: P = 0.004 , $\eta^2 = 0.452$ Group: $P = 0.541$, $\eta^2 = 0.027$ Interaction: $P = 0.504$, $\eta^2 = 0.018$	HIT: 88.4–106.8 SSG: 85.4–106.1
	POST	107.3 $\pm$ 6.9	102.3 $\pm$ 5.4		HIT: 99.4–115.2 SSG: 93.3–111.2
upper body power (m)	PRE	5.91 $\pm$ 1.83	6.10 $\pm$ 1.34	Time: $P = 0.223$, $\eta^2 = 0.080$ Group: $P = 0.532$, $\eta^2 = 0.029$ Interaction: P = 0.048 , $\eta^2 = 0.231$	HIT: 4.74–7.08 SSG: 4.77–7.43
	POST	5.79 $\pm$ 1.49	6.58 $\pm$ 1.29		HIT: 4.78–6.80 SSG: 5.43–7.71
lower body power (m)	PRE	10.7 $\pm$ 1.3	10.7 $\pm$ 1.0	Time: $P = 0.094$, $\eta^2 = 0.179$ Group: $P = 0.734$, $\eta^2 = 0.009$ Interaction: $P = 0.401$, $\eta^2 = 0.042$	HIT: 9.8–11.5 SSG: 10.2–11.5
	POST	10.9 $\pm$ 1.0	11.2 $\pm$ 0.8		HIT: 9.7–11.6 SSG: 10.5–12.0

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Participantes

Jugadores baloncesto U16 (cadetes)

Procedimiento

Grupo SP (SSG + entrenamiento técnico)

Grupo MX (- SSG y entto técnico + entto circuito)

Grupo control



Table 1 The mean percentage contribution (per week) of the components of each session to the total session duration

	Week 1		Week 2		Week 3		Week 4		Mean	
	SP	MX	SP	MX	SP	MX	SP	MX	SP	MX
Warm-up	18	21.1	18.2	15.4	17.6	16.2	17	17.5	17.7 ± 0.3	17.6 ± 1.3
Fundamentals	70	43.9	37.4	29.4	21.2	15.7	18.1	12.8	36.7 ± 11.9	25.5 ± 7.1
Individual work	0.0	0.0	34	26.4	43.8	32.4	21.3	16.6	24.8 ± 9.5	18.9 ± 7.1
Off.-def. coop.	0.0	0.0	0.0	0.0	0.0	0.0	34.9	26.4	8.7 ± 8.7	6.6 ± 6.6
Team work	6.5	7	5.6	3.3	12.5	10.4	4.6	4.5	7.3 ± 1.8	6.3 ± 1.6
Cool-down	5.5	5.8	4.8	3.6	4.9	4	4.1	3.1	4.8 ± 0.3	4.1 ± 0.6
Circuit training	—	22.2	—	21.9	—	21.3	—	19.1	—	21.1 ± 0.7
Total	100	100	100	100	100	100	100	100	100	100

SP: specialized; MX: mixed training group; Off.-def. coop.: offensive/defensive co-operations between players.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

Capacidad aeróbica:

Solo mejora VO2max, similar en ambos grupos

Journal of Science and Medicine in Sport (2007) 10, 79–88



ORIGINAL PAPER

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Medicine in
Sport
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Effects of two different short-term training programs on the physical and technical abilities of adolescent basketball players

Gregory C. Bogdanis^{b,*}, Vaghehis Ziagos^a,
Michalis Anastasiadis^a, Maria Maridaki^b

Table 2 Maximal oxygen uptake (VO_{2max}), oxygen uptake the first (VT1) and second ventilatory threshold (VT2), maximal heart rate (HR_{max}) and heart rate at VT1 (HR_{VT1}) and VT2 (HR_{VT2}), before (PRE) and after (POST) training

	SP		MX		C	
	PRE	POST	PRE	POST	PRE	POST
VO_{2max} (ml kg ⁻¹ min ⁻¹)	52.3 ± 1.4	54.7 ± 0.7*	52.5 ± 1.3	54.9 ± 1.0*	49.8 ± 3.3	49.4 ± 3.4
VT1 (ml kg ⁻¹ min ⁻¹)	33.9 ± 1.1	35.0 ± 1.1	37.0 ± 1.7	38.1 ± 1.6	33.1 ± 2.2	33.2 ± 2.8
VT2 (ml kg ⁻¹ min ⁻¹)	43.5 ± 1.2	46.3 ± 0.9	45.6 ± 1.1	46.8 ± 0.9	42.4 ± 2.6	42.1 ± 2.9
HR_{max} (b min ⁻¹)	201 ± 1	200 ± 1	199 ± 1	200 ± 1	200 ± 2	200 ± 3
HR_{VT1} (b min ⁻¹)	163 ± 2	162 ± 2	167 ± 2	166 ± 2	164 ± 3	167 ± 3
HR_{VT2} (b min ⁻¹)	184 ± 2	183 ± 2	186 ± 1	185 ± 2	184 ± 3	184 ± 4

Values are mean ± S.E.

* $p < 0.05$ from the corresponding pre training value.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

Test Wingate

Mejora del Pico de potencia (PP) y potencia media (MPP), similar en ambos

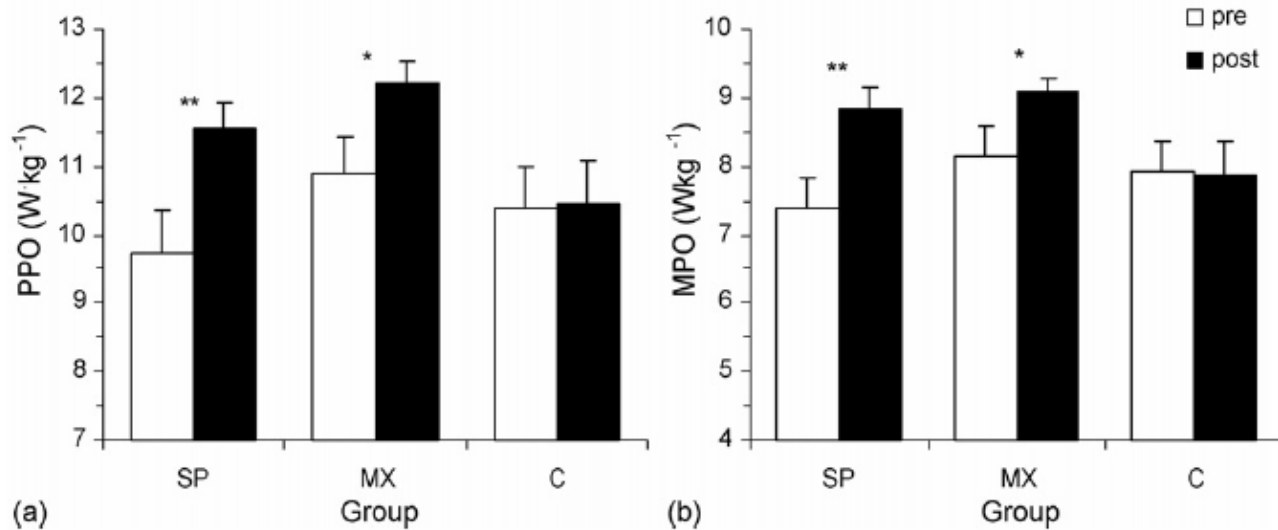


Figure 2 (a) Peak (PPO) and (b) mean power output (MPO) relative to body mass of the control group (C) and the specialized (SP) and mixed training (MX) groups before (pre) and following 4 weeks of training (post). Values are mean $\pm$ S.E. ** $p < 0.01$ and * $p < 0.05$ from the corresponding pre training value.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

Resultados

No diferencias en variables técnicas

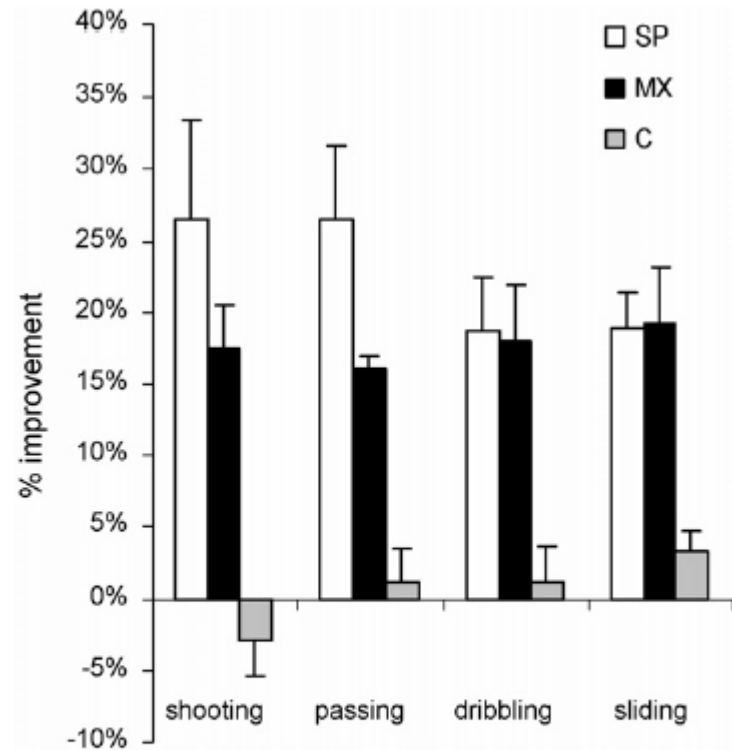


Figure 4 Percent improvement in technical abilities of the control group (C) and the specialized (SP) and mixed training (MX) groups following 4 weeks of training. Values are mean $\pm$ S.E.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

¿REALMENTE LOS SSG MEJORAN LAS HABILIDADES TÉCNICAS?



EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÉCNICO/TÁCTICAS

¿Y LAS HABILIDADES TÁCTICAS?



EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÁCTICAS/Toma de decisión

ANÁLISIS DE LA CAPACIDAD DE DECISIÓN/REACCIÓN



Journal of Sports Sciences

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rjsp20>

Effects of small-sided game and change-of-direction training on reactive agility and change-of-direction speed

Warren Young^a & Nathan Rogers^a

^a School of Health Sciences, University of Ballarat, Ballarat, Australia

Published online: 09 Sep 2013.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÁCTICAS/Toma de decisión

Participantes

27 jugadores de fútbol Australiano
U18

Procedimiento

Grupo SSG
Grupo CODA

7 semanas
(2 sesiones semanales, 11 sesiones en total)



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EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÁCTICAS/Toma de decisión

Mediciones

Agilidad reactiva (toma de decisión)

Planned-AFL agility test (conocida de antemano)



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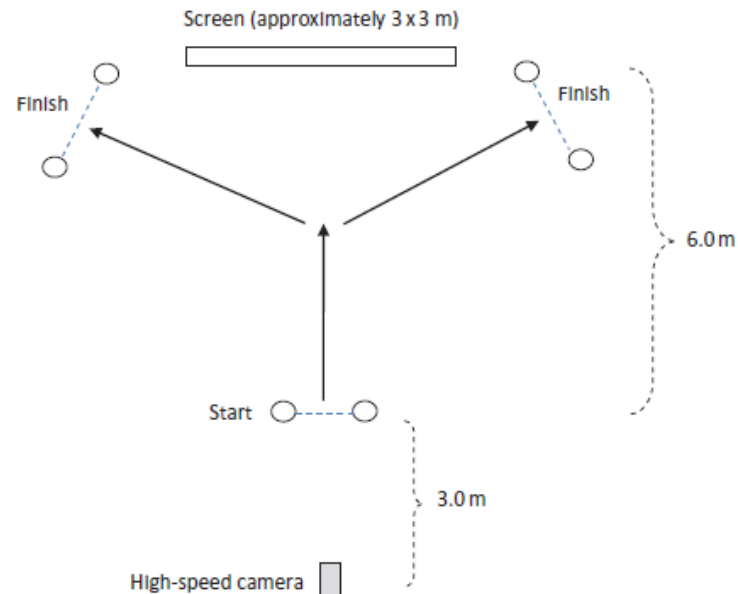


Figure 1. Set-up of the reactive agility test.

EFFECTOS DE PROGRAMAS CON SSG EN CAPACIDADES TÁCTICAS/Toma de decisión

Grupo CODA: no mejora

Grupo SSG: mejora en test reactivo (tiempo total y tiempo decisión)



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Table I. Mean $\pm$ standard deviation results for all variables for both groups. The *P*-values are based on paired *t*-tests.

	Change-of-direction (<i>n</i> = 12)					Small-sided games (<i>n</i> = 13)				
	Pre	Post	%	<i>P</i> -value	ES	Pre	Post	%	<i>P</i> -value	ES
TT (s)	2.56 $\pm$ 0.10	2.56 $\pm$ 0.09	0	0.941	0 (trivial)	2.64 $\pm$ 0.13	2.54 $\pm$ 0.08	-3.8	0.008	0.93 (moderate)
DT (s)	0.28 $\pm$ 0.07	0.27 $\pm$ 0.05	-3.6	0.383	0.16 (trivial)	0.35 $\pm$ 0.06	0.24 $\pm$ 0.03	-31.4	<0.001	2.32 (very large)
MRT (s)	0.96 $\pm$ 0.10	0.98 $\pm$ 0.17	2.1	0.404	0.20 (small)	0.97 $\pm$ 0.08	0.98 $\pm$ 0.09	1.0	0.644	0.12 (trivial)
Planned AFL agility	8.65 $\pm$ 0.45	8.64 $\pm$ 0.32	-0.1	0.971	0.03 (trivial)	8.67 $\pm$ 0.29	8.74 $\pm$ 0.42	0.8	0.358	0.19 (trivial)

Note: TT = total time, DT = decision time, MRT = movement response time, ES = effect size; 0-0.19 = trivial, 0.20-0.59 = small, 0.60-1.19 = moderate, 1.20-1.99 = large, 2.00-4.00 = very large.

ÍNDICE

LOS SMALL SIDED GAMES EN LOS DEPORTES COLECTIVOS

EFFECTOS DE PROGRAMAS CON SMALL SIDED GAMES EN DEPORTES COLECTIVOS

- EFECTOS EN CAPACIDADES FÍSICAS/CONDICIONALES

- EFECTOS EN CAPACIDADES TÉCNICO/TÁCTICAS

- EFECTOS EN RENDIMIENTO COMPETICIÓN

CONCLUSIONES

EFFECTOS DE PROGRAMAS CON SSG EN RENDIMIENTO COMPETICIÓN

¿CUÁLES SON LOS EFECTOS DE PROGRAMAS DE SSG EN LA PROPIA COMPETICIÓN?

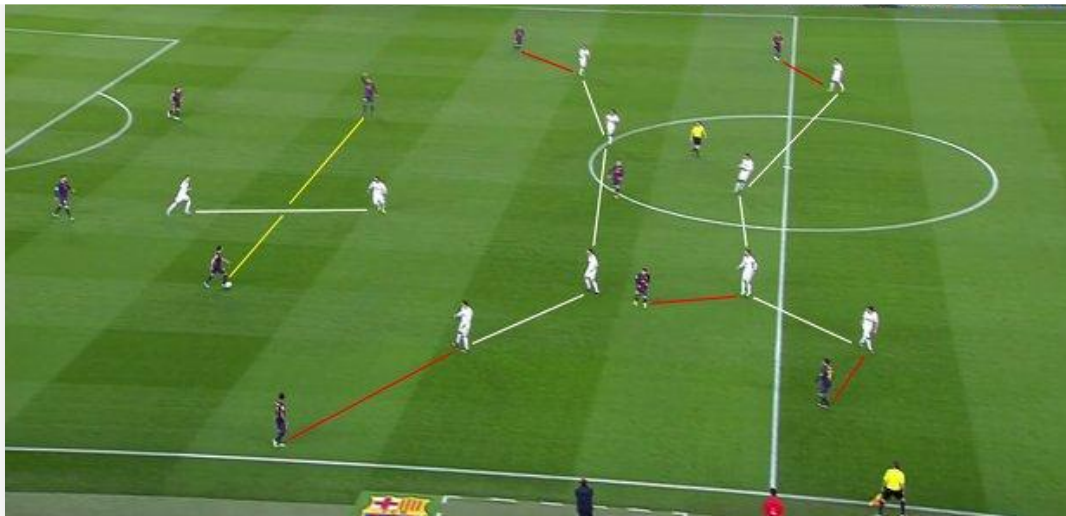


EFFECTOS DE PROGRAMAS CON SSG EN RENDIMIENTO COMPETICIÓN

F. M. Impellizzeri¹
S. M. Marcora²
C. Castagna³
T. Reilly⁴
A. Sassi¹
F. M. Iaia¹
E. Rampinini¹

Physiological and Performance Effects of Generic versus Specific Aerobic Training in Soccer Players

No diferencias en las intensidades de carrera tras programa de SSG ni ITG



Impellizzeri et al.^[58] also examined the influence of generic and specific training strategies on physical performance during matches. The results revealed non-significant increases (pre-season training phase only) in low-intensity activity (forwards, backwards and sideways jogging), high-intensity activity (higher speed running and sprinting) and total distance travelled for both the ITG and SSG groups following the 12-week training period. However, when match performance measures for the in-season phase of training were analysed, the magnitude of the increases (for both groups) in low- and high-intensity activity are considerably smaller.^[58]

EFFECTOS DE PROGRAMAS CON SSG EN RENDIMIENTO COMPETICIÓN

¿...Y LOS EFECTOS EN ASPECTOS TÉCNICOS Y TÁCTICOS EN PARTIDOS?

EFFECTOS DE PROGRAMAS CON SSG EN RENDIMIENTO COMPETICIÓN

¿...Y LOS EFECTOS EN ASPECTOS TÉCNICOS Y TÁCTICOS EN PARTIDOS?

"A VECES PARECE QUE ESTAMOS EN EL CENTRO DE LA FIESTA.
SIN EMBARGO, EN EL CENTRO DE LA FIESTA NO HAY NADIE.
EN EL CENTRO DE LA FIESTA ESTÁ EL VACÍO.
PERO EN EL CENTRO DEL VACÍO HAY OTRA FIESTA."

— ROBERTO JUARROZ, POESÍA VERTICAL XII - 21

A COLLECTION OF MOMENTS FROM SPAIN, FRANCE, CANADA, USA, SERBIA AND MAROCCO

ÍNDICE

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Poca evidencia sobre la mejora de variables técnico/tácticas.

Escasísima evidencia de si los programas de SSG tienen efectos en el rendimiento en competición.

La mayor parte de estudios con jugadores jóvenes o poblaciones concretas

CONCLUSIONES

“Estos son los datos, tuyas son las conclusiones”



CONCLUSIONES

LO QUE SI SÉ...



¿SON LOS SMALL SIDED GAMES LA SOLUCIÓN PERFECTA PARA EL ENTRENAMIENTO EN LOS DEPORTES COLECTIVOS?

MUCHAS GRACIAS

