



Assessing the Efficiency of Reduced Positional Games in Soccer: A Multivariate Analysis of Technical and Tactical Indicators According to Different Playing Systems

Mostafa Errama^{1ABCDE}, Mustapha Bassiri^{1ABCDE}, Atifi Jaafar^{1ABCDE} and Said Lotfi^{1ABCDE}

¹Hassan II University of Casablanca

Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection

Corresponding Author: Mostafa Errama, e-mail: mostafa.errama@enscasa.ma

Accepted for Publication: April 28, 2025

Published: May 30, 2025

DOI: 10.17309/tmfv.2025.3.19

Abstract

Background. Reduced positional games (RPG) are considered as a recognized training method for developing the physical, technical and tactical qualities of young footballers. They simulate real-life match situations, encouraging frequent interaction with the ball and rapid tactical decisions. Adapted to the specific needs of players according to their position, RPG contribute to improving physical fitness, game intelligence and team cohesion.

Objectives. The study aimed to assess the impact of RPG on players' technical and tactical performance, comparing them to standard training. It seeks to determine how RPG optimize key indicators such as possession, passing, shooting, goals scored and error reduction, while exploring their influence on tactical synchronization and team cohesion.

Materials and methods. The study involved 30 matches between five experimental teams and five control teams. The protocol adopted a mixed factorial design, incorporating both between-subjects and within-subjects factors. The between-subjects factor "Group" comprises two levels (experimental teams and control teams), while the within-subjects factors "Match" (three successive matches) and "Playing system" (two tactical configurations: 1-3-2-1 system and 1-2-3-1 system) make it possible to examine variations in performance indicators as a function of the playing context.

Results. The results of this study showed that teams trained with RPG significantly improved their performance. Ball possession increased by 24 %, completed passes by 106 %, and shots by 50 %. Furthermore, it was noted an increase of 43 % in goals scored, while passes lost and goals conceded decrease by 22.6 % and 29 % respectively. These benefits are independent of the game system used, and JRP also enhances communication and synchronization between players.

Conclusions. RPG are an effective training tool for improving players' technical and tactical performance. Applying this approach increases possession, passing, shooting and goals scored, while reducing errors and goals conceded. These findings offer promising prospects for coaches, bringing training methods into line with the demands of modern soccer and fostering players' individual and collective development.

Keywords: reduced positional games, system of play, training, technical, tactical, soccer.

Introduction

Positional short games are widely recognized as a means of training young footballers to improve physical, technical and tactical qualities. This training method creates a competitive environment that simulates real match situations, which is beneficial for the rapid development of young players. Sessions structured around specific themes, adapted to stimulate both the individual and collective

development of players (Slaidiņš & Fernāte, 2021). The interaction of these games with different game systems can potentially accelerate the acquisition of these essential skills, by adapting exercises to the specific needs of players according to their position and role in the team (Clemente et al., 2021).

Small-group soccer matches are generally modified versions of standard soccer matches designed to focus on specific training objectives or to adapt the game to fewer players. They are scaled-down versions of full soccer matches, generally involving fewer players and often played on smaller pitches. They are designed to increase player engagement and opportunities to train on the tactical and

technical aspects of the game (Clemente et al., 2021). In the context of soccer training, RGP are used as a training tool to develop players' skills, decision-making abilities and fitness in a more concentrated and intense environment (Castillo et al., 2020). Matches in reduced positional configurations are crucial in youth soccer for player development. They allow young players to have more frequent contact with the ball compared to full games, improving their ball-handling skills, understanding of space and movement, and overall game intelligence (Errama et al., 2024).

The physical aspect of reduced games manifests itself in a significant increase in intensity linked to reduced playing spaces (Martone et al., 2017), requiring quick reactions and decisions. This higher intensity is compared to match conditions, improving players' overall fitness. In addition, positionally adapted RGP allow specific physical aspects to be targeted, such as endurance, speed and agility, which are crucial for modern soccer (Barba et al., 2020). Arslan et al. (2020) compared the effects of high-intensity interval training and short games on the physical and technical performance of young soccer players. They observed that role-specific exercises increase the intensity of physical activity, leading to improvements in players' anaerobic and aerobic capacity. This ability to combine physical development with tactics offers a double benefit, making RGP a particularly valuable training tool.

In a confined space, the adoption of reduced play in training programs for young footballers is an increasingly common practice, recognized for its effectiveness in the integrated development of athletic skills. This method promotes accelerated learning through frequent interaction with the ball and constant exposure to tactical decisions (Dina, 2022). Players are forced to perfect technical skills such as ball control, accurate passing, and the ability to maintain possession under pressure. This helps them not only to improve their individual performance but also to synchronize their actions with those of the team, which is crucial to their personal and collective technical development (McCalman et al., 2021). Reduced play, characterized by matches on smaller pitches and fewer players, intensifies interactions with the ball and multiplies opportunities for play, facilitating technical improvement and rapid decision-making (Clemente et al., 2021).

Reduced games with position make it easy to learn and experiment with different tactical configurations and strategies. They encourage players to make quick and accurate decisions, which improves their tactical understanding of the game. These direct experiences enable players to adapt quickly to changes in the game and better respond to tactical challenges posed by opponents (Clemente et al., 2020).

Overall, the integration of positional RGP into daily training programs represents a comprehensive approach to developing the key performance attributes required for soccer excellence. In terms of performance of technical-tactical actions, it has been concluded that older players perform a greater number of collective technical-tactical actions (Almeida et al., 2017; Borges et al., 2017; Costa et al., 2010; García et al., 2014; Moreira et al., 2020), while their technical-tactical behaviors and group movement patterns remained unchanged (Barnabé et al., 2016; Brito et al., 2019a; Castellano et al., 2017; Martone et al., 2017; Moreira et al., 2020).

Positional adaptations in training through RGP are not limited solely to improving individual tactics, but also encompass the development of collective understanding and team cohesion. Research by González-Rodenas et al (2025) has shown that training sessions structured around position-specific game scenarios promote better synchronization of movements between players, thus improving collective performance during in-game transitions and defensive phases.

In addition, RGP also promote better communication and understanding between players, which is essential for executing complex strategies and adapting to changing match dynamics. According to a study by Reyes, Lago-Peñas, & Lago-Ballesteros (2023), the improvement in intra-team communication resulting from these specialized training sessions leads to greater tactical efficiency and better resolution of game situations.

This study therefore aims to thoroughly evaluate the impact of such training via RGP in interaction with different playing systems on several soccer performance indicators, to understand how they can be optimized to maximize both individual and collective technical-tactical performance. The aim is to provide coaches with clear guidelines on how to structure their training sessions to meet the technical and tactical demands of contemporary soccer, underlining the importance of personalized and targeted approaches in sports training.

Materials and Methods

The present study aimed to evaluate the impact of training with reduced games involving position play compared to standard training on various soccer performance indicators. The methodology employed is divided into four complementary components, as detailed below.

Study Participants

The sample consisted of 10 teams (07 players per team with goalkeeper) divided into two equal groups belonging to the AMF soccer academy: five experimental teams (positional games training) and five control teams (standard training).

For three months, the experimental teams were trained in two different systems (1-3-2-1 and 1-2-3-1) on a synthetic pitch (58m/34m).

The control teams trained on fields of the same dimensions as the experimental group. Both groups trained 3 times a week, each session lasting 75 minutes.

Players were selected according to inclusion criteria, players aged 16, with an acceptable level of performance and 3 years of competitive experience in the regional league, training 3 sessions and playing one match per week, in accordance with protocols previously described in the literature on soccer performance analysis. Sampling was carried out randomly among teams from recognized clubs, thus guaranteeing comparability between the two groups and controlling for potential confounding variables.

Study Design

The study involved 30 matches between five experimental teams and five control teams. The protocol adopted a mixed factorial design, incorporating both between-subjects and

within-subjects factors. The between-subjects factor “Group” comprises two levels (experimental teams and control teams), while the within-subjects factors “Match” (three successive matches) and “Playing system” (two tactical configurations: 1-3-2-1 system and 1-2-3-1 system) make it possible to examine variations in performance indicators as a function of the playing context. This design, enabling the analysis of interactions between main effects and their combinations, was chosen for its ability to explore several performance dimensions simultaneously (Barbero-Alvarez et al., 2017).

Measurement Instrument

Soccer performance was assessed using an observation grid operated by 4 experts. Thus, indicators collected included ball possession, number of complete and lost passes, number of shots, number of corners, and number of goals scored and conceded (dependent variables). The reliability of the measurements was ensured by repeatability tests and prior training of the analysts, guaranteeing objective and reproducible data collection.

Data Analysis

Data were analyzed using multivariate analysis of variance (MANOVA) to simultaneously test the effect of group (experimental vs. control teams), match and playing

system, as well as their interactions, on all performance indicators (seven dependent variables). Multivariate tests (Pillai’s Trace, Wilks’ Lambda, Hotelling’s Trace, and Roy’s Greatest Root) were performed to assess the homogeneity of main effects and interactions. In addition, univariate analyses detailed the specific contributions of each dependent variable, including reporting the sum of squares, calculated F and partial η^2 as effect measures (Hair et al., 2010; Field, 2018; Tabachnick & Fidell, 2019). Post-hoc comparisons were adjusted using Bonferroni’s method to control for type I error rate in multiple testing. All analyses were performed with a significance level set at 0.05.

Results

The multivariate analysis reveals a particularly pronounced main effect of the group (Pillai’s Trace = 0.972, $F(7,42) = 206.106$, $p < 0.001$, $\eta^2_p = 0.972$), indicating that small-sided game training (experimental teams) differs globally from standard training (control team) across all performance indicators. The univariate analyses confirm these significant differences for several variables. For instance, ball possession is higher in the experimental teams (mean = 110.70%) compared to the control team (mean = 89.27%), representing a relative increase of approximately 24%. Similarly, the number of completed passes is significantly improved in

Table 1. Means and standard deviations of soccer performance indicators according to the playing system and team group across the three matches. The data are presented as means and standard deviations, derived from the aggregation of the three matches for each combination of playing system and group (n = 15 matches)

Indicator	Team Groups Groups des équipes			
	Experimental Teams (n=5)		Control Teams (n=5)	
	System 1-3-2-1 (3 matches)	Systeme 1-2-3-1 (3 matches)	System 1-3-2-1 (3 matches)	System 1-2-3-1 (3 matches)
Ball Possession	110.73 ± 4.86	110.67 ± 6.80	89.00 ± 5.33	89.53 ± 7.32
Completed Passes	119.47 ± 7.51	124.93 ± 4.95	58.73 ± 6.97	60.13 ± 8.10
Lost Passes	25.53 ± 5.04	27.93 ± 5.91	34.93 ± 4.43	34.13 ± 4.47
Shots	6.47 ± 3.66	4.27 ± 2.09	3.47 ± 1.30	3.67 ± 2.19
Corners	4.53 ± 1.36	3.53 ± 1.68	3.93 ± 1.03	3.13 ± 1.64
Goals Scored	2.27 ± 0.88	2.40 ± 0.91	1.47 ± 0.83	1.80 ± 1.01
Goals Conceded	1.47 ± 0.83	1.87 ± 0.99	2.27 ± 0.88	2.40 ± 0.91

Table 2. Multivariate analysis of variance (MANOVA) of the effect of group (experimental teams vs. control teams), match, and playing system, as well as their interactions, on the seven performance indicators

Indicator	Effect			Interactions of Effects			
	Group	PS	Match	G x SJ	G x M	M x SJ	G x M x SJ
Ball Possession	0,000	0,885	0,914	0,107	0,107	0,938	0,312
Completed Passes	0,000	0,063	0,715	0,174	0,174	0,566	0,282
Lost Passes	0,000	0,553	0,360	0,795	0,795	0,728	0,657
Shots	0,008	0,132	0,473	0,556	0,556	0,668	0,464
Corners	0,196	0,022	0,370	0,814	0,814	0,435	0,381
Goals Scored	0,004	0,312	0,013	0,642	0,642	0,670	0,826
Goals Conceded	0,005	0,247	0,014	0,588	0,588	0,757	0,861

Significant at $p < 0.05$, PS. Playing System

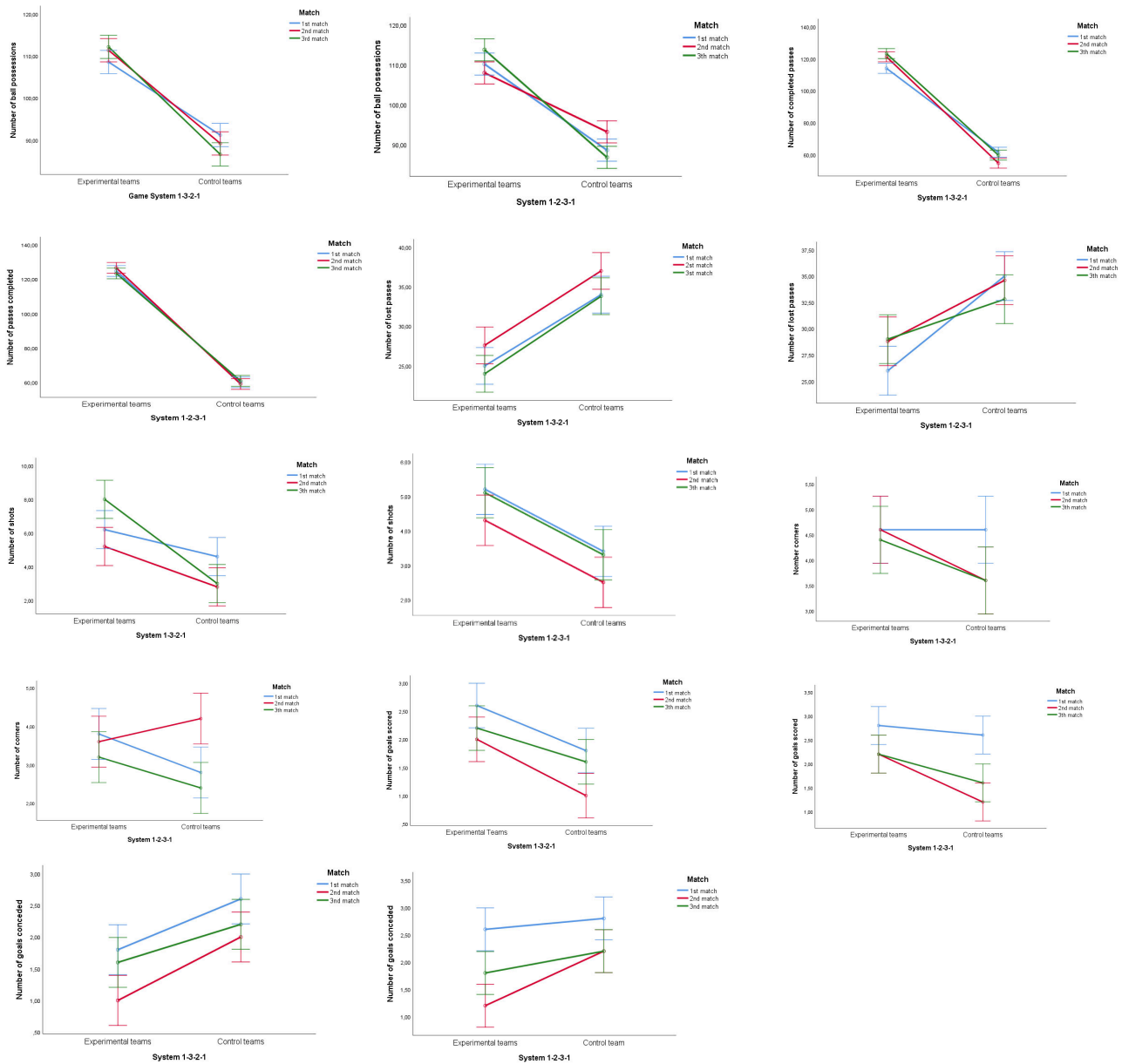


Fig. 1. Variation in game indicator scores for teams undergoing small-sided game training and those following standard training in two playing systems (1-3-2-1; 1-2-3-1)

the experimental teams (mean = 122.20) compared to the control team (mean = 59.43), corresponding to an increase of nearly 106%. Conversely, the number of lost passes decreases significantly by 7.80 units in the experimental teams (mean = 26.73) compared to the control team (mean = 34.53), representing a reduction of approximately 22.6%. Furthermore, the number of shots is significantly higher in the experimental teams (mean = 5.37) than in the control team (mean = 3.57), reflecting an approximate increase of 50%. Moreover, goals scored increase by 0.70 (mean = 2.33 vs. 1.63), representing a relative improvement of approximately 43%, while goals conceded decrease by 0.67 units (mean = 1.67 vs. 2.33), corresponding to a reduction of approximately 29%.

Regarding the effect of the playing system, multivariate tests generally do not reveal a significant influence, with the exception of the “corners” indicator. Univariate analysis

shows that the 1-3-2-1 system (mean = 4.23) produces significantly more corners than the 1-2-3-1 system (mean = 3.33), with a difference of 0.90, representing a relative increase of approximately 27%.

The effect of the match, evaluated over three games, does not show significant variations for most indicators. However, paired comparisons indicate significant differences for goals scored and goals conceded between certain matches. Specifically, the average goals scored is 2.45 in the first match and 1.60 in the second match, a difference of 0.85, which corresponds to a relative variation that can be interpreted either as a decrease of approximately 34.7% or, conversely, as an increase of approximately 53.1% if the value of 1.60 is taken as the reference. A similar pattern is observed for goals conceded, suggesting a comparable change in defensive performance from one match to another.

Finally, the interactions (Group \times Match, Group \times Playing System, Match \times Playing System, and their triple interaction) did not reach the significance threshold, indicating that the impact of small-sided game training on soccer performance is primarily attributable to the effect of the small-sided game training itself and manifests homogeneously regardless of the match or the playing system used.

These results suggest that small-sided game training significantly improves several technical and tactical performance indicators, particularly by increasing ball possession, the number of completed passes, shots, and goals scored, while reducing errors such as lost passes and goals conceded. These observations will be discussed in the following section.

Discussion

The results of this study highlight the significant impact of Reduced games of position (RGP) in interaction with playing systems on soccer performance, particularly in terms of ball possession, passing accuracy, shots, and goals scored. These findings confirm the effectiveness of RGP as a training tool to improve players' technical and tactical skills while enhancing their ability to adapt to different match situations.

One of the most notable results of this study is the significant increase in ball possession among the experimental teams (110.70%) compared to the control teams (89.27%). This 24% improvement suggests that RGP promote better ball control and an enhanced ability to dictate the pace of the game. These results align with the work of Coutinho et al. (2022), who demonstrated that RGP increase the frequency of ball interactions, thereby improving players' ability to maintain possession under pressure. Furthermore, the reduction in lost passes (22.6%) among the experimental teams indicates that RGP also enhance passing accuracy and decision-making under pressure, a crucial aspect of match performance (Matos et al., 2023).

The number of completed passes increased dramatically in the experimental teams (122.20 compared to 59.43 for the controls), representing a 106% increase. This improvement can be attributed to the nature of RGP, which require constant communication and quick coordination in confined spaces (Lyons et al., 2021). These conditions simulate real match situations, where players must make quick and precise decisions. Furthermore, the reduction in lost passes (22.6%) confirms that RGP not only enhance the quantity but also the quality of passes, which is essential for maintaining possession and creating offensive opportunities (Wang et al., 2022).

The experimental teams also showed a significant increase in the number of shots (50%) and goals scored (43%). These results suggest that RGP not only improve build-up play but also the ability to finish offensive actions. This improvement may be linked to the repetition of finishing scenarios in realistic game conditions, which reinforces players' confidence and effectiveness in critical areas (Basevitch et al., 2020). Additionally, the reduction in goals conceded (29%) indicates that RGP also enhance defensive coordination by allowing players to better anticipate defensive transitions and recover the ball more effectively.

Although the main effect of the playing system was not significant for most indicators, a notable exception

was corners. The 1-3-2-1 system generated significantly more corners (27%) than the 1-2-3-1 system. This could be explained by the more offensive structure of the 1-3-2-1 system, which encourages players to attack wide areas and force defenses to concede corners. These results highlight the importance of adapting playing systems to specific tactical objectives, particularly within the context of SSGs (Clemente et al., 2021; Djaoui, 2017).

The analysis of performance over three consecutive matches revealed significant variations in goals scored and conceded. For example, goals scored decreased by 34.7% between the first and second match before rising again in the third match. These fluctuations could reflect tactical adjustments or variations in players' physical and mental form during the study period. These results underscore the need to account for performance variability when evaluating the effects of training (Bazvand et al., 2020). In Reduced games with position (RGP), in particular, the demand for ball circulation in terms of speed and amplitude was similar to that of professional matches. Longer possession time does not seem to favor goals scored, according to the results. On the other hand, a higher number of passes has a positive impact on scoring. The data suggest that teams that recover the ball in their defensive zone and string together a large number of passes in a short time increase their chances of scoring (Taha & Ali, 2023). Elements have been found that support the need to use RGP in training, as they provide stimuli similar to those players will encounter in professional settings in the future (Teoldo da Costa & de Freitas Silvino, 2022).

The absence of significant interactions between group, match, and playing system suggests that the benefits of RGP are relatively stable and independent of the game context. This indicates that RGP can be applied flexibly across different playing systems and at different stages of the season while maintaining their effectiveness (Sarmiento et al., 2018).

The results of this study have important implications for coaches. RGP can be used to improve ball possession, passing accuracy, chance creation, and defensive efficiency. Additionally, their flexibility allows them to be integrated into various playing systems, making them a versatile tool for tactical training. However, it is important to note that RGP must be tailored to the specific needs of players and teams, taking into account their skill level and tactical objectives (Hintermann et al., 2021). SSGs can play a significant role in youth and adolescent team sports training, as they develop multidimensional factors (e.g., technical/tactical and physical/physiological factors) (Fernández-Espínola et al., 2020).

This study has some limitations, including the relatively small sample size and the limited duration of the intervention (three months). Future research could explore the long-term effects of RGP on player performance, as well as their impact on other aspects of the game, such as physical conditioning and recovery. Additionally, it would be interesting to investigate the effect of RGP on players of different skill levels to determine whether their benefits are universal or specific to certain groups.

Conclusions

In conclusion, this study demonstrates that Reduced games with position are an effective tool for improving the technical and tactical performance of soccer players.

The results show a significant increase in ball possession, completed passes, shots, and goals scored, as well as a reduction in errors and goals conceded. These benefits are independent of the playing system used, highlighting the versatility of RGP as a training method. These findings offer promising prospects for coaches seeking to optimize team performance while developing the individual skills of their players.

Conflict of Interest

If the authors have any conflicts of interest to declare.

References

- Slaidiņš, K., & Fernāte, A. (2021). Technical skills development for youth football players: Theory and practice. *LASE Journal of Sport Science*, 12(2), 121-135. <https://doi.org/10.2478/ljss-2018-0051>
- Clemente, F. M., Ramirez-Campillo, R., Sarmiento, H., Praça, G. M., Afonso, J., Silva, A. F., Rosemann, T., & Knechtle, B. (2021). Effects of small-sided game interventions on the technical execution and tactical behaviors of young and youth team sports players: A systematic review and meta-analysis. *Frontiers in Psychology*, 12, 667041. <https://doi.org/10.3389/fpsyg.2021.667041>
- Clemente, F., Ramirez-Campillo, R., Sarmiento, H., Praça, G., Afonso, J., Silva, A., Rosemann, T., & Knechtle, B. (2021). Effects of small-sided game interventions on the technical execution and tactical behaviors of young and youth team sports players: A systematic review and meta-analysis. *Frontiers in Psychology*, 12, Article 667041. <https://doi.org/10.3389/fpsyg.2021.667041>
- Castillo, D., Lago-Rodríguez, A., Domínguez-Díez, M., Sánchez-Díaz, S., Rendo-Urteaga, T., Soto-Célix, M., & Raya-González, J. (2020). Relationships between players' physical performance and small-sided game external responses in a youth soccer training context. *Sustainability*, 12(11), 4482. <https://doi.org/10.3390/su12114482>
- Errama, M., Bassiri, M., Atifi, J., & Lotfi, S. (2024). A comparative analysis of the effects of reduced positional games and traditional training on the physical and technical performance of young soccer players in training. *Physical Education Theory and Methodology*, 24(6), 961-970. <https://doi.org/10.17309/tmfv.2024.6.14>
- Martone, D., Giacobbe, M., Capobianco, A., Imperlini, E., Mancini, A., Capasso, M., Buono, P., & Orrù, S. (2017). Exercise intensity and technical demands of small-sided soccer games for under-12 and under-14 players: Effect of area per player. *Journal of Strength and Conditioning Research*, 31(6), 1486-1492. <https://doi.org/10.1519/JSC.0000000000001615>
- Martone, D., Giacobbe, M., Capobianco, A., Imperlini, E., Mancini, A., Capasso, M., Buono, P., Orrù, S. (2017). Exercise Intensity and Technical Demands of Small-Sided Soccer Games for Under-12 and Under-14 Players: Effect of Area per Player. *Journal of Strength and Conditioning Research*, 31(6), 1486-1492. <https://doi.org/10.1519/JSC.0000000000001615>
- Barba, F., Iturriaga, F. M. A., Borges-Hernández, P. J., Ruiz-Lara, E., & Perdomo, A. (2020). Effect of training in SSG on the ability to repeat sprints in young football players. *Journal of Physical Education and Sport*, 20(4), 1783-1790. <https://doi.org/10.7752/jpes.2020.04242>
- Arslan, E., Orer, G. E., & Clemente, F. M. (2020). Running-based high-intensity interval training vs. small-sided game training programs: effects on the physical performance, psychophysiological responses and technical skills in young soccer players. *Biology of Sport*, 37(2), 165-173. <https://doi.org/10.5114/biolosport.2020.94237>
- Dina, N.-A. (2022). *Physical preparation as component part of the training process and characteristics of modern football*. In *Sport. Olimpism. Sănătate* (7th ed., pp. 519-526). Editura USEFS. <https://doi.org/10.52449/soh22.83>
- McCalman, W., Crowley-McHattan, Z. J., Fransen, J., & Bennett, K. J. M. (2021). Skill assessments in youth soccer: A scoping review. *Journal of Sports Sciences*, 40(6), 667-695. <https://doi.org/10.1080/02640414.2021.2013617>
- Clemente, F. M., Afonso, J., Castillo, D., Los Arcos, A., Silva, A. F., & Sarmiento, H. (2020). The effects of small-sided soccer games on tactical behavior and collective dynamics: A systematic review. *Chaos, Solitons & Fractals*, 134, 109710. <https://doi.org/10.1016/j.chaos.2020.10971>
- Almeida, C. H., Volossovitch, A., & Duarte, R. (2017). Influence of scoring mode and age group on passing actions during small-sided and conditioned soccer games. *Human Movement*, 18(5), 125-134. <https://doi.org/10.5114/hm.2017.73621>
- Borges, P. H., Andrade, M. O. C., Rechenchosky, L., da Costa, I. T., Teixeira, D., & Rinaldi, W. (2017). Desempenho tático, antropometria e capacidades físicas de jovens futebolistas: comparação entre diferentes grupos maturacionais. *Journal of Physical Education*, 28(1), e-2826. Retrieved from <https://periodicos.uem.br/ojs/index.php/RevEducFis/article/view/30182>
- Costa, I. T. D., Garganta, J., Greco, P. J., Mesquita, I., & Seabra, A. (2010). Influence of Relative Age Effects and Quality of Tactical Behaviour in the Performance of Youth Soccer Players. *International Journal of Performance Analysis in Sport*, 10(2), 82-97. <https://doi.org/10.1080/24748668.2010.11868504>
- García, J. D. C., Refoyo-Román, I., Calleja-González, J., & Dellal, A. (2014). Quantification and Analysis of Offensive Situations in Different Formats of Sided Games in Soccer. *Journal of Human Kinetics*, 44(1), 193-201. <https://doi.org/10.2478/hukin-2014-0125>
- Moreira, P. E. D., Barbosa, G. F., Murta, C. D. C. F., Pérez Morales, J. C., Bredt, S. D. G. T., Praça, G. M., & Greco, P. J. (2020). Network analysis and tactical behaviour in soccer small-sided and conditioned games : influence of absolute and relative playing areas on different age categories. *International Journal of Performance Analysis in Sport*, 20(1), 64-77. <https://doi.org/10.1080/24748668.2019.1705642>
- Barnabé, L., Volossovitch, A., Duarte, R., Ferreira, A. P., & Davids, K. (2016). Age-related effects of practice experience on collective behaviours of football players in small-sided games. *Human Movement Science*, 48, 74-81. <https://doi.org/10.1016/j.humov.2016.04.007>
- Brito, Â., Roriz, P., & Garganta, J. (2019a). Positioning and displacement patterns of young players during 5v5, 7v7, 9v9, and 11v11 soccer matches. *Journal of Human Sport*

- and Exercise*, 15(4), 904-917.
<https://doi.org/10.14198/jhse.2020.154.17>
- Castellano, J., Fernández, E., Echeazarra, I., Barreira, D., & Garganta, J. (2017). Influencia de la longitud del campo en los comportamientos inter e intra -equipo en jóvenes jugadores de fútbol. *Anales de Psicología / Annals of Psychology*, 33(3), 486-496.
<https://doi.org/10.6018/analesps.33.3.27105>
- Gonzalez-Rodenas, J., Ferrandis, J., Carril-Valdó, J., Claver-Rabaz, F., Ballester, R., & Gil-Arias, A. (2024). Effects of Different Tactical Formations on Positional Team Behaviors during Small Sided Games in Youth Soccer Players. *Journal of Human Kinetics*.
<https://doi.org/10.5114/jhk/1940711>
- Reyes, A., LagoPeñas, C., & LagoBallesteros, J. (2023). Team communication and tactical performance in professional soccer. *Journal of Sports Sciences*, 41(8), 952-960.
<https://doi.org/10.1080/02640414.2023.1386321>
- Barbero-Alvarez, J. C., Gómez-López, M., Castagna, C., Barbero-Alvarez, V., Romero, D. V., Blanchfield, A. W., & Nakamura, F. Y. (2017). Game demands of seven-a-side soccer in young players. *Journal of Strength & Conditioning Research*, 31(7), 1771-1779.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Pearson. ISBN: 0135153093
- Field, A., & Miles, J. (2010). *Discovering statistics using SAS*. SAGE Publications Ltd.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson. ISBN: 9780134790541
- Coutinho, D., Gonçalves, B., Laakso, T., & Travassos, B. (2022). Clustering ball possession duration according to players' role in football small-sided games. *PLoS ONE*, 17(8), e0273460. <https://doi.org/10.1371/journal.pone.0273460>
- Matos, R., Moreira, C., Alves, E., Teixeira, J. E., Rodrigues, F., Monteiro, D., Antunes, R., & Forte, P. (2023). Tactical knowledge through decision making and motor efficiency of young football players in different playing positions during a threeside smallsided game. *Behavioral Sciences*, 13(4), 310. <https://doi.org/10.3390/bs13040310>
- Lyons, M. J., Conlon, J., Perejmibida, A., Chivers, P., & Joyce, C. (2021). Sustained passing performance of elite and subelite female soccer players following a female match-specific exercise protocol. *International Journal of Sports Physiology and Performance*, 16(4), 504-510.
<https://doi.org/10.1123/ijspp.2020-0082>
- Wang, S., Qin, Y., Jia, Y., & Igor, K. E. (2022). A systematic review about the performance indicators related to ball possession. *PLoS ONE*, 17(3), e0265540.
<https://doi.org/10.1371/journal.pone.0265540>
- Basevitch, I., Tenenbaum, G., Filho, E., Razon, S., Boiangin, N., & Ward, P. (2020). Anticipation and situation-assessment skills in soccer under varying degrees of informational constraint. *Journal of Sport and Exercise Psychology*, 42(1), 59-69. <https://doi.org/10.1123/jsep.2019-0118>
- Clemente, F. M., Afonso, J., Castillo, D., Arcos, A. L., Silva, A. F., & Sarmento, H. (2021). The effects of small-sided soccer games on tactical behavior and collective dynamics: A systematic review. *Chaos, Solitons & Fractals*, 144, 110682. <https://doi.org/10.1016/j.chaos.2021.110682>
- Djaoui Léo (2017). *Analyse des performances physiques, des incidences physiologiques d'un match de football de haut niveau et des facteurs d'influence : mention spéciale au contexte de enchaînement des matchs*. Education. Université de Lyon, 2017. Français. NNT: 2017LYSE1266. tel-01807779
- Bazvand, A., Yaali, R., & Bahram, A. (2020). Comparison of the effect of traditional and small-sided game on the emotional intelligence of young football players. *Sport Psychology Studies*, 9(33), 187-204.
<https://doi.org/10.22089/spsyj.2020.8017.1868>
- Taha, T., & Ali, A.-Y. (2023). Greater numbers of passes and shorter possession durations result in increased likelihood of goals in 2010 to 2018 World Cup Champions. *PLoS ONE*, 18(1), e0280030.
<https://doi.org/10.1371/journal.pone.0280030>
- Teoldo da Costa, I., & de Freitas Silvino, M. P. (2022). Analysis of tactical behavior in full- and small-sided games: Comparing professional and youth academy athletes to enhance player development in soccer. *International Journal of Sports Science & Coaching*, 18(1), 132-142.
<https://doi.org/10.1177/17479541221074992>
- Sarmento, H., Clemente, F. M., Harper, L. D., Costa, I. T. da, Owen, A., & Figueiredo, A. J. (2018). Small sided games in soccer – a systematic review. *International Journal of Performance Analysis in Sport*, 18(5), 693-749.
<https://doi.org/10.1080/24748668.2018.1517288>
- Fernández-Espínola, C., Robles, M. T. A., and Fuentes-Guerra, F. J. G. (2020). Small-sided games as a methodological resource for team sports teaching: a systematic review. *Int. J. Environ. Res. Public Health*, 17.
<https://doi.org/10.3390/ijerph17061884>
- Hintermann, M., Born, D.-P., Fuchslocher, J., Kern, R., & Romann, M. (2021). How to improve technical and tactical actions of dominant and non-dominant players in children's football? *PLoS ONE*, 16(7), e0254900.
<https://doi.org/10.1371/journal.pone.0254900>

Оцінювання ефективності редукованих позиційних ігор у футболі: Багатовимірний аналіз техніко-тактичних показників відповідно до різних систем гри

Мостафа Еррама^{1ABCDE}, Мустафа Бассірі^{1ABCDE}, Джаафар Атіфі^{1ABCDE}, Саїд Лотфі^{1ABCDE}

¹Університет Хасана II в Касабланці

Авторський вклад: А – дизайн дослідження; В – збір даних; С – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 8 с., 2 табл., 1 рис., 39 джерел.

Історія питання. Редуковані позиційні ігри (РПІ) розглядаються як визнаний метод тренування для розвитку фізичних, технічних і тактичних якостей юних футболістів. Вони імітують ігрові ситуації реального матчу, заохочуючи до частой взаємодії з м'ячем та швидкого ухвалення тактичних рішень. Адаптовані до конкретних потреб гравців відповідно до їхньої позиції, РПІ сприяють покращенню рівня фізичної підготовки, ігрового інтелекту та командної згуртованості.

Мета дослідження. Дослідження мало на меті оцінити вплив РПІ на показники техніко-тактичної результативності гравців, порівнюючи їх використання із проведенням стандартних тренувань. Представлена робота спрямована на визначення шляхів оптимізації ключових показників, як-от володіння м'ячем, виконання пасів і ударів, кількість забитих голів та зменшення кількості помилок через використання РПІ, а також вивчення їхнього впливу на тактичну синхронізацію та командну згуртованість.

Матеріали та методи. Дослідження включало проведення 30 матчів між п'ятьма експериментальними та п'ятьма контрольними командами. У протоколі застосовано змішаний факторіальний дизайн, що включає як міжсуб'єктні, так і внутрішньосуб'єктні фактори. Міжсуб'єктний фактор «Група» складається з двох рівнів (експериментальні та контрольні команди), тоді як внутрішньосуб'єктні фактори «Матч» (три послідовні матчі) та «Система гри» (дві тактичні конфігурації: система 1-3-2-1 та система 1-2-3-1) надають можливість дослідити варіації показників результативності як функцію ігрового контексту.

Результати. Результати дослідження продемонстрували, що команди, які тренувалися за методикою РПІ, значно покращили свої показники. Володіння м'ячем збільшилося на 24%, кількість завершених пасів — на 106%, а ударів — на 50%. Крім того, відзначено зростання на 43% кількості забитих м'ячів, тоді як кількість втрачених передач і пропущених м'ячів зменшилася на 22,6% і 29% відповідно. Зазначені переваги не залежать від типу використовуваної системи гри, до того ж спільна редукована позиція покращує комунікацію та синхронізацію між гравцями.

Висновки. РПІ є ефективним тренувальним інструментом для поліпшення показників технічної та тактичної результативності гравців. Застосування вказаного підходу підвищує рівень володіння м'ячем, виконання пасів та ударів, а також кількість забитих голів, водночас зменшуючи кількість помилок і пропущених м'ячів. Отримані результати відкривають широкі перспективи для тренерів, забезпечуючи приведення тренувальних методів у відповідність до вимог сучасного футболу та сприяючи індивідуальному і колективному розвитку гравців.

Ключові слова: редуковані позиційні ігри, система гри, тренування, технічний, тактичний, футбол.

Information about the authors:

Errama, Mostafa: mostafa.errama@enscasa.ma; Multidisciplinary Laboratory in Education Sciences and Training Engineering (LMSEIF). Sport Science Assessment and Physical Activity Didactic. Normal Higher School (ENS-C), Hassan II University of Casablanca, Morocco.

Bassiri, Mustapha: m.bassiri@enscasa.ma; <https://orcid.org/0000-0002-1077-8057>; Multidisciplinary Laboratory in Education Sciences and Training Engineering (LMSEIF). Sport Science Assessment and Physical Activity Didactic. Normal Higher School (ENS-C), Hassan II University of Casablanca, Morocco.

Atifi, Jaafar: jaafaratifi1@gmail.com; <https://orcid.org/0009-0006-6338-1834>; Multidisciplinary Laboratory in Education Sciences and Training Engineering (LMSEIF). Sport Science Assessment and Physical Activity Didactic. Normal Higher School (ENS-C), Hassan II University of Casablanca, Morocco.

Lotfi, Said: lotfisaïd@gmail.com; <https://orcid.org/0000-0002-0008-6145>; Director of the Multidisciplinary Laboratory in Education Sciences and Training Engineering (LMSEIF). Responsible for the sports science Assessment and physical activity didactics research team. Higher education professor at Normal Higher School (ENS-C), Hassan II University of Casablanca, Morocco.

Cite this article as: Errama, M., Bassiri, M., Atifi, J., & Lotfi, S. (2025). Assessing the Efficiency of Reduced Positional Games in Soccer: A Multivariate Analysis of Technical and Tactical Indicators According to Different Playing Systems. *Physical Education Theory and Methodology*, 25(3), 625-632. <https://doi.org/10.17309/tmfv.2025.3.19>

Received: 20.03.2025. Accepted: 28.04.2025. Published: 30.05.2025

This work is licensed under a Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0>)