



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students

Predictores multidimensionales del rendimiento del regate en fútbol: control motor en estudiantes de educación física

Jumaking¹; Wahyuningtyas Puspitorini¹; Yasep Setiakarnawijaya¹

Universitas Negeri Jakarta, Indonesia¹

Correspondence:

*Correspondence Author: Jumaking, jumaking@mhs.unj.ac.id

Editorial schedule: Article received 11/03/2026 Accepted: 19/05/2026 Published: 01/07/2026

<https://doi.org/10.55040/81bt4e61>

To cite this article use the following reference:

Jumaking; Puspitorini, W.; Setiakarnawijaya, Y. (2026). Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. *Sportis Sci J*, 12 (3), 1-15 <https://doi.org/10.55040/81bt4e61>

Author contribution: All authors (J, WP, YS) contributed equally to this work.

Funding: This study did not receive funding.

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical aspects: The study declares the ethical aspects.



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n.º 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Abstract

This study examined multidimensional predictors of dribbling performance in soccer from a motor control perspective in physical education students. A cross-sectional predictive approach was used with 120 participants (72 men, 48 women; mean age = 21.3 ± 1.4 years). Dribbling performance was assessed using a standardized slalom test. Predictor variables included linear sprint speed, off-ball change of direction ability, lower limb power, and dynamic coordinative control with the ball. Data were analyzed using Pearson correlation and multiple linear regression techniques. The regression analysis was statistically significant ($F = 28.4$, $p < 0.001$), explaining 53% of the variance in dribbling performance (adjusted $R^2 = 0.53$). Among the predictors, dynamic coordinative control with the ball proved to be the most influential factor ($\beta = 0.41$, $p < 0.001$), followed by linear sprint speed ($\beta = 0.31$, $p < 0.001$) and change-of-direction ability ($\beta = 0.26$, $p = 0.001$), while lower limb power was not a significant independent predictor ($\beta = -0.09$, $p = 0.158$). These findings suggest that dribbling performance in soccer is best explained by multidimensional motor control, emphasizing the central role of coordination in the context of physical education.

Keywords: soccer dribbling; motor control; coordination; change of direction; physical education.

Resumen

Este estudio examinó los predictores multidimensionales del rendimiento del regate en fútbol desde una perspectiva de control motor en estudiantes de educación física. Este estudio utilizó un enfoque predictivo transversal con 120 participantes (72 hombres, 48 mujeres; edad media = $21,3 \pm 1,4$ años). El rendimiento del regate se evaluó mediante una prueba de slalom estandarizada. Las variables predictoras incluyeron velocidad de sprint lineal, capacidad de cambio de dirección sin el balón, potencia de las extremidades inferiores y control coordinativo dinámico con el balón. Los datos se analizaron mediante correlación de Pearson y técnicas de regresión lineal múltiple. El análisis de regresión fue estadísticamente significativo ($F = 28,4$, $p < 0,001$), explicando el 53% de la varianza en el rendimiento del regate (R^2 ajustado = 0,53). Entre los predictores, el control coordinativo dinámico con el balón resultó ser el factor más influyente ($\beta = 0,41$, $p < 0,001$), seguido de la velocidad de sprint lineal ($\beta = 0,31$, $p < 0,001$) y la capacidad de cambio de dirección ($\beta = 0,26$, $p = 0,001$), mientras que la potencia de las extremidades inferiores no fue un predictor independiente significativo ($\beta = -0,09$, $p = 0,158$). Estos hallazgos sugieren que el rendimiento en el regate en el fútbol se explica mejor por el control motor multidimensional, lo que enfatiza el papel central de la coordinación en el contexto de la educación física.

Palabras clave: regate de fútbol; motor de control; coordinación; cambio de dirección; educación física.



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Introduction

Soccer dribbling is a fundamental technical skill that enables players to maintain ball possession while adapting to continuously changing environmental constraints (Renshaw et al., 2022). Effective dribbling performance is not solely determined by physical capacity, but rather by the performer's ability to regulate movement patterns in response to perceptual information, task demands, and opponent pressure (Robalo et al., 2021; Oonk et al., 2025). In contemporary soccer science, dribbling has increasingly been conceptualized as a complex motor behavior that integrates physical, coordinative, and perceptual-cognitive processes (Triggs et al., 2025).

From a motor control perspective, dribbling involves the coordinated interaction between locomotor control and object manipulation under temporal and spatial constraints (Park & Jeong, 2023). Players must synchronize lower-limb kinematics, postural control, and ball-foot interactions while continuously adjusting movement trajectories in real time (Brink et al., 2023). Empirical research has demonstrated that dribbling outcomes are associated with speed-, agility-, and coordination-related capacities; however, these associations are not purely mechanical (Szabo et al., 2020). Instead, performance appears to depend on how effectively individuals regulate movement under dynamic constraints rather than on maximal physical output alone (Manouras & Batatolis, 2023).

Despite increasing interest in soccer dribbling performance, much of the existing literature has relied on unidimensional or single-factor approaches. Isolated assessments of sprint speed, change-of-direction ability, or muscular power provide useful information, yet they often fail to capture the interactive and multidimensional nature of motor control that underpins skilled dribbling (Bekris et al., 2023). Such reductionist approaches limit theoretical understanding and restrict the development of evidence-based training and instructional strategies, particularly within educational and developmental contexts (Klotzbier & Schott, 2024).

Contemporary motor control and ecological dynamics frameworks emphasize that skilled movement emerges from the interaction of multiple subsystems related to the performer, task, and environment, with coordination and perception-action coupling serving as central mechanisms (Esposito et al., 2024). Within this perspective, soccer



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

dribbling performance should be understood as the outcome of multiple interrelated components, including locomotor speed reserve, directional control, neuromuscular force production, and dynamic coordinative regulation with the ball (Eraslan et al., 2025). Consequently, multidimensional analytical models are required to estimate the relative contribution of these components and to avoid overinterpretation of isolated associations (Dinnick et al., 2025).

Physical education students represent a particularly relevant population for examining such multidimensional predictors (Zha et al., 2025). As developing performers rather than elite athletes, they typically exhibit greater inter-individual variability in motor control characteristics, which enhances the sensitivity of predictive models and provides insights applicable to curriculum design and skill acquisition strategies in educational settings (Fortunato et al., 2024).

Although the complex nature of dribbling as a motor skill is widely acknowledged, integrative empirical studies adopting a multidimensional motor control perspective remain limited, especially within physical education contexts. Recent research has highlighted the importance of incorporating coordination- and motor-cognitive considerations when evaluating soccer skills under realistic information-processing demands (Schumacher et al., 2024; Memain et al., 2025). Accordingly, this study aimed to investigate soccer dribbling performance in physical education students by analyzing multidimensional predictors within a motor control framework.

Methodology

Study Design

This research adopted a cross-sectional predictive design to determine multidimensional motor control factors associated with soccer dribbling performance. The predictive framework was used to assess the relative influence of multiple motor control-related components on dribbling outcomes, aligning with contemporary motor control perspectives that conceptualize performance as an emergent property of integrated systems rather than isolated abilities.



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Participants

A total of 120 physical education students (72 men and 48 women) volunteered to participate in this study. Participants were recruited from the undergraduate physical education program at a public university. Participants were 19–22 years old, with all participants having received formal soccer instruction as part of the academic curriculum. Participants were eligible for inclusion if they had no musculoskeletal injuries of the lower extremities within the preceding six months, were actively engaged in practical sport-related coursework, and possessed prior experience with fundamental soccer skills, including dribbling. Individuals reporting neurological conditions or ongoing injuries were excluded from the study. Prior to data collection, all participants provided written informed consent, and the research protocol was approved by the institutional ethics committee.

Variables and Measures

Dribbling Performance

Soccer dribbling performance was assessed using a standardized slalom dribbling test, which required participants to dribble a soccer ball through a series of cones arranged at fixed intervals as quickly as possible. Performance was quantified as total completion time, with lower times indicating better dribbling performance. The test has been widely used in soccer research and demonstrates acceptable reliability for assessing dribbling ability.

Motor Control–Related Predictors

The selection of predictor variables was theoretically grounded in contemporary motor control frameworks, which conceptualize skilled soccer dribbling as an emergent behavior arising from the interaction of locomotor capacity, directional control, neuromuscular force production, and coordinative regulation under task constraints. To avoid conceptual overlap between predictors and the dribbling outcome measure, motor control–related variables were operationalized using complementary but non-redundant assessments.

- Linear sprint speed was evaluated through a 20-m sprint performed without ball involvement. Sprint performance was measured using electronic timing gates



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

placed at the starting and finishing points. This measure was included to reflect fundamental locomotor output capacity, representing the underlying speed reserve necessary for high-velocity ball manipulation, while not directly mirroring the dribbling task.

- Change-of-direction (COD) performance without ball involvement was assessed using a standardized directional change test. This assessment was employed to capture directional control, braking, and re-acceleration capacities independent of ball handling, thereby minimizing task overlap with the dribbling performance measure. Performance time was obtained via electronic timing gates.
- Lower extremity explosive strength was evaluated using the counter-movement jump (CMJ) test, recorded with a validated jumping mat system. This variable was incorporated as a marker of neuromuscular force-generating capacity, which indirectly supports rapid acceleration and push-off actions during directional changes in dribbling. Participants performed three maximal attempts with one-minute recovery periods, and the greatest jump height was selected for analysis.
- Dynamic coordinative control with ball was measured using a soccer-specific foot-ball coordination test, requiring rapid alternating foot contacts, precise ball touches, and continuous movement regulation within a constrained area. Performance was quantified as total completion time, with lower values indicating superior coordinative regulation. This variable was selected to represent the regulatory component of motor control, emphasizing movement timing, inter-limb coordination, and ball-foot coupling under speed constraints rather than overall dribbling speed.

All assessment protocols have been widely used in soccer performance and motor control research and demonstrate acceptable to high reliability, with previously reported intraclass correlation coefficients exceeding 0.80.

Statistical Analysis

Initial data processing used descriptive statistics to obtain an overview of the average results for each variable. Normality was tested using the Shapiro-Wilk test. Homogeneity was tested using the Levene test. Pearson product-moment correlation was



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

used to examine the relationship between predictors related to motor control and soccer dribbling performance. Furthermore, significant predictors were identified using multiple linear regression analysis.

Results

The results of descriptive statistical tests for all variables in the physical education student sample (N = 120) are summarized in Table 1. Mean values indicate typical performance levels in dribbling, sprinting, change-of-direction, jumping, and coordinative control tasks, while the standard deviations reflect moderate inter-individual variability, supporting the suitability of the data for subsequent correlational and predictive analyses.

Table 1. Descriptive Statistics of Study Variables (N = 120)

Variable	Mean $\pm$ SD
Dribbling performance (s)	14.62 $\pm$ 1.21
Linear sprint speed (s)	3.21 $\pm$ 0.19
Change-of-direction ability (s)	2.41 $\pm$ 0.17
Countermovement jump height (cm)	42.8 $\pm$ 6.3
Dynamic coordinative control with ball (s)	9.84 $\pm$ 0.88

Pearson correlation coefficients among all variables are reported in Table 2. Dribbling performance was significantly associated with all motor control-related predictors. Faster dribbling times were moderately associated with superior linear sprint speed, better change-of-direction ability, and higher levels of dynamic coordinative control with the ball. In contrast, countermovement jump height demonstrated a weaker, though statistically significant, negative association with dribbling performance.

Table 2. Pearson Porrelation Matrix Among Study Variables

Variable	1	2	3	4	5
1. Dribbling performance (s)	—				
2. Linear sprint speed (s)	0.52*	—			
3. Change-of-direction ability (s)	0.48*	0.44*	—		
4. Countermovement jump height (cm)	-0.29*	-0.33*	-0.27*	—	
5. Dynamic coordinative control with ball (s)	0.61*	0.46*	0.42*	-0.25*	—

Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Values represent Pearson correlation coefficients. Lower times indicate better performance; therefore, positive correlations with dribbling performance reflect slower execution. * $p < 0.05$.

The results of the multiple linear regression analysis are presented in Table 3. The regression model reached statistical significance ($F = 28.4$, $p < 0.001$) and explained 53% of the variance in soccer dribbling performance (adjusted $R^2 = 0.53$). Examination of multicollinearity indicated no concerns, as all variance inflation factor values remained below 3. Dynamic coordinative control with the ball was identified as the most influential independent predictor of dribbling performance. Linear running speed and the ability to change direction without involving the ball also contribute significantly to the model, although their standardized effects were comparatively smaller. Conversely, countermovement jump height did not exhibit a significant independent effect when other predictors were considered simultaneously.

Table 3. Multiple Linear Regression Predicting Soccer Dribbling Performance

Predictor	β	SE	T	P
Linear sprint speed (20 m)	0.31	0.07	4.42	<0.001
Change-of-direction ability	0.26	0.08	3.35	0.001
Countermovement jump height	-0.09	0.06	-1.42	0.158
Coordinative control with ball	0.41	0.06	6.78	<0.001

β = standardized regression coefficient; SE = standard error. Model statistics: $R^2 = 0.55$; adjusted $R^2 = 0.53$; $F = 28.4$; $p < 0.001$.

Discussion

This study sought to investigate soccer dribbling performance in physical education students by examining multidimensional predictors within a motor control framework. The findings indicate that dribbling performance cannot be explained by a single physical or technical factor, but rather emerges from the interaction of multiple motor components with different functional roles. This supports contemporary views in sport science that conceptualize dribbling as a complex motor skill requiring the integration of physical capacities, coordinative regulation, and perceptual–cognitive processes (Araújo et al., 2023; Esposito et al., 2024).

A key finding of the present study was that dynamic coordinative control with the ball emerged as the most powerful predictor of dribbling performance. This result highlights the central role of coordination and movement regulation in executing effective



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

dribbling actions (Coutinho et al., 2023). From a motor control perspective, dribbling requires continuous adjustment of football contact, timing, and body position while responding to changing task constraints (Arslan & Ermis, 2023). Empirical evidence has consistently emphasized that coordination and perceptual–motor regulation are key determinants of soccer skill performance, particularly under time pressure and complex task demands (Hall et al., 2024; Sutherland et al., 2025; Sliedrecht et al., 2025).

Linear sprint speed and the ability to change direction without the ball also contribute significantly to dribbling performance, although their influence is weaker than that of coordinative control. (Cauševi et al., 2023). These findings suggest that locomotor speed and directional control function as supporting capacities that facilitate dribbling execution rather than directly determining it. Previous research has reported moderate associations between sprinting, change-of-direction abilities, and soccer-specific technical actions, while simultaneously cautioning that these physical qualities do not automatically translate into superior technical execution without effective movement regulation (He et al., 2025; Sánchez-López et al., 2023).

In contrast, lower-limb explosive power, as measured by countermovement jump height, did not show a significant independent contribution to dribbling performance when other variables were considered simultaneously. The results of this study are consistent with previous research indicating that muscular power is more closely related to general athletic performance and acceleration capacity than to fine motor regulation required during ball manipulation tasks (Makhlouf et al., 2022). From a motor control standpoint, increases in force-generating capacity do not necessarily result in improved skill performance unless accompanied by adaptations in coordinative control and perception–action coupling (Cassidy et al., 2025; Collins et al., 2024).

Collectively, the results of this study reinforce a multidimensional conceptualization of soccer dribbling performance, in which coordinative regulation occupies a central role, while physical attributes such as speed, change-of-direction ability, and explosive power function as complementary contributors (Aboulfaraj et al., 2025). This integrated interpretation aligns with ecological dynamics and motor learning frameworks that emphasize representative task design and the interaction of constraints in skill acquisition (Esposito et al., 2024; Collins et al., 2024).



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

From an applied standpoint, the findings indicate that physical education curricula should place greater emphasis on learning activities that actively challenge students' ball-related coordinative skills, including diversified dribbling exercises, directional changes performed under time constraints, and tasks that require ongoing movement adaptation (Marcojos et al., 2025). Recent intervention studies have shown that motor–cognitive and coordination-focused training approaches can effectively enhance soccer-related skill performance, supporting the integration of such methods into educational and developmental practice (Friebe et al., 2024; Lucas et al., 2025).

Conclusion

This study demonstrates that dribbling performance in soccer among physical education students is best interpreted from a multidimensional motor control perspective. Ball-related coordination control emerged as the primary determinant of performance, with locomotor speed and ability to change direction providing additional support. This study highlights the importance of prioritizing coordination and movement regulation in physical education programs designed to develop fundamental soccer skills.

Acknowledgment

Thanks are extended to all parties who have assisted in this research, the Department of Physical Education, Jakarta State University and the entire research team.



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

References

- Aboulfaraj, A., Laziri, F., Haddou, S. E., Lahlou, S., & Aghrouh, M. (2025). Effect of Linear Sprints and Change-of-Direction Training Versus Small-Sided Soccer Games on Physical Performance in Highly Trained Young Female Soccer Players : A Randomized Cross-Over Study. *Sport*, 13(12), 1–25. <https://doi.org/10.3390/sports13120445>
- Araújo, D., Brito, H., & Carrilho, D. (2023). Team Decision-making Behavior : An ecological Dynamics Approach. *Asian Journal of Sport and Exercise Psychology*, 3(1), 24–29. <https://doi.org/10.1016/j.ajsep.2022.09.005>
- Arslan, Y., & Ermis, E. (2023). The Effects of Life Kinetic Exercises on Technical Skills and Motor Skills Performance in Young Football Players. *European Journal of Physical Education and Sport Science*, 9(4), 132–144. <https://doi.org/10.46827/ejpe.v9i4.4732>
- Bekris, E., Gioldasis, A., Souglis, A., Zacharakis, E., & Smirniotou, A. (2023). Enhancing Soccer-Specific Motor Skills Through Visual Training: A Quasi-Experimental Study in Young Soccer Players. *Journal of Sport & Health Sciences*, 2(129), 28–38. <https://doi.org/10.33607/bjshs.v2i129.1381>
- Brink, L., Ha, S. K., Snowdon, J., Codina, F. V., Rauch, B., Wang, F., Wu, D., Felip, M. A. L., Clanet, C., & Hosoi, A. E. (2023). Measuring Skill Via Player Dynamics in Football Dribbling. *Scientific Reports*, 1–12. <https://doi.org/10.1038/s41598-023-45914-6>
- Cassidy, J., Kadlec, D., & Fransen, J. (2025). Exploring Convergence and Divergence in Seemingly Contrasting Perspectives on Training Perceptual-Cognitive Abilities for Sports Performance Through Moderated Dialogue. *Sport Medicine*, 11, 1–14. <https://doi.org/10.1186/s40798-025-00904-y>
- Cauševi, D., Covic, N., Abazovi, E., Rani, B., & Manolache, G. M. (2023). Predictors of Speed and Agility in Youth Male Basketball Players. *Applied Sciences*, 13(13), 1–9. <https://doi.org/10.3390/app13137796>
- Collins, D., Carson, H. J., Rylander, P., & Bobrownicki, R. (2024). Ecological Dynamics as an Accurate and Parsimonious Contributor to Applied Practice : A Critical



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Appraisal. *Sports Medicine*, 55(4), 799–810. <https://doi.org/10.1007/s40279-024-02161-7>

Coutinho, D., Kelly, A. L., Santos, S., Figueiredo, P., Pizarro, D., & Travassos, B. (2023).

Exploring the Effects of Tasks with Different Decision-Making Levels on Ball Control , Passing Performance , and External Load in Youth Football. *Children*, 10(2), 1–16. <https://doi.org/10.3390/children10020220>

Dinnick, I., Noor, M., Borinca, I., & Halabi, S. (2025). Replicating , Refining and Extending the Reconciliation Orientation Model (ROM): The Contributions of Multidimensional Identity and the Role of Conflict Type. *European Journal of Social Psychology*, 55(7), 1354–1368. <https://doi.org/10.1002/ejsp.70015>

Eraslan, M., Gürkan, A. C., Aydın, S., Sahin, M., Çelik, S., & Söyler, M. (2025). The Effect of Proprioceptive Training on Technical Soccer Skills in Youth Professional Soccer. *Mediciana*, 61(2), 1–23.

<https://doi.org/10.3390/medicina61020252>

Esposito, G., Ceruso, R., Aliberti, S., & Raiola, G. (2024). Ecological-Dynamic Approach vs . Traditional Prescriptive Approach in Improving Technical Skills of Young Soccer Players. *Journal of Functional Morphology and Kinesiology*, 9(3), 1–12.

<https://doi.org/10.3390/jfmk9030162>

Fortunato, Á., Gonçalves, C., & Lopes, V. P. (2024). Relationship Between Motor Competence and Soccer-Specific Skills: A Longitudinal Study With Young Players. *Human Kinetics*, 12(3), 455–468. <https://doi.org/10.1123/jmld.2023-0063>

Friebe, D., Banzer, W., Giesche, F., Haser, C., Hülsdünker, T., Pfab, F., Rußmann, F., Sieland, J., Spataro, F., & Vogt, L. (2024). Effects of 6-Week Motor-Cognitive Agility Training on Football Test Performance in Adult Amateur Players – A Three-Armed Randomized Controlled Trial. *Journal of Sports Science and Medicine*, 23(3), 276–288. <https://doi.org/10.52082/jssm.2024.276>

Hall, E. C. R., John, G., & Ahmetov, I. I. (2024). Testing in Football : A Narrative Review. *Sport*, 12(307), 1–34. <https://doi.org/10.3390/sports12110307>

Klotzbier, T. J., & Schott, N. (2024). Skillful and Strategic Navigation in Soccer A Motor Cognitive Dual Task Approach for The Evaluation of A Dribbling Task Under



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n.º 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Different Cognitive Load Conditions. *Frontiers in Psychology*, 15(6), 1–16.

<https://doi.org/10.3389/fpsyg.2024.1356892>

Lucas, J. M. R., Montilla, J. A. P., Linares, J. C. C., & Román, P. Á. L. (2025). Enhancing Physical and Cognitive Performance in Youth Football : The Role of Specific Dual-Task Training. *Journal of Functional Morphology and Kinesiology*, 10(4), 1–17. <https://doi.org/10.3390/jfmk10040404>

Makhlouf, A. I., Tayech, A., Mejri, M. A., & Haddad, M. (2022). Reliability And Validity of A Modified Illinois Change of Direction Test With Ball Dribbling Speed in Young Soccer Players. *Biology of Sport*, 39(2), 295–306.

<https://doi.org/10.5114/biol sport.2022.104917>

Manouras, N., & Batatolis, C. (2023). The Reliability of Linear Speed with and without Ball Possession of Pubertal Soccer Players. *Journal of Functional Morphology and Kinesiology*, 8(147), 1–12. <https://doi.org/10.3390/jfmk8040147>

Marcojos, M. J. D. G., Labastida, M. P., Soriano, J. R. S., Degracia, J., Urboda, M. T., & Gula, L. P. (2025). Modified Training Drills in Improving The Dribbling Agility of Futsal Athletes. *Frontiers in Complex Systems*, 3(9), 1–10.

<https://doi.org/10.3389/fcpxs.2025.1666594>

Memain, G., Carling, C., Bouvet, J., Fourcade, P., Maille, P., & Yiou, E. (2025). Effect of a Visual Dual Task on Single Leg Countermovement Jump in Male Professional Soccer Players with Lower Limb Injuries : A Cross Sectional Observational Study. *Sport*, 13(12), 1–18.

<https://doi.org/10.3390/sports13120419>

Oonk, G. A., Buurke, T. J. W., Lemmink, K. A. P. M., & Kempe, M. (2025). The Interaction Between Attacker and Environment Predicts Successfulness in One on One Dribbles in Male Elite Football. *Journal of Sports Sciences*, 1–13.

<https://doi.org/10.1080/02640414.2025.2555117>

Park, J., & Jeong, J. (2023). Dribble Accuracy and Arm Coordination Pattern According to Motor Expertise and Tempo. *International Journal of Environmental Research and Public Health*, 20(10), 1–10. <https://doi.org/10.3390/ijerph20105788>

Renshaw, I., Davids, K., Sullivan, M. O., Maloney, M. A., Crowther, R., & Mccosker, C. (2022). An Ecological Dynamics Approach to Motor Learning in Practice :



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n. ° 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Reframing The Learning and Performing Relationship in High Performance Sport. *Asian Journal of Sport and Exercise Psychology*, 2(1), 18–26.

<https://doi.org/10.1016/j.ajsep.2022.04.003>

Robalo, R. A. M., Diniz, A. M. F. A., Fernandes, O., & Passos, P. J. M. (2021). The Role of Variability in The Control of The Basketball Dribble Under Different Perceptual Setups. *European Journal of Sport Science*, 21(4), 521–530.

<https://doi.org/10.1080/17461391.2020.1759695>

Sánchez-López, J., Raya, M. A., & Padrón-Cabo, A. (2023). Change of Direction Performance in Soccer Players : Comparison Based on Horizontal Force – Velocity Profile. *Applied Sciences*, 13(23), 1–10.

<https://doi.org/10.3390/app132312809>

Schumacher, N., Zaar, C., Kovar, J., Lahmann-Lammert, L., & Wollesen, B. (2024). Relation of General Perceptual Cognitive Abilities and Sport Specific Performance of Young Competitive Soccer Players. *European Journal of Sport Science*, 24(5), 1270–1277. <https://doi.org/10.1002/ejsc.12171>

Slidrecht, F., Schoof, S., & Hartman, E. (2025). The role of general motor skills in talent identification : A systematic review. *International Journal of Sport Science & Coaching*, 20(1), 357–374. <https://doi.org/10.1177/17479541241287176>

Sutherland, T., Reid, M., Lay, B., Kirkham, T., & Sutherland, T. (2025). Investigating The Influence of Ecological Dynamics on Player Density Metrics in Junior Australian Football. *Journal of Sports Sciences*, 43(17), 1808–1818.

<https://doi.org/10.1080/02640414.2025.2521209>

Szabo, D. A., Neagu, N., & Sopa, I. S. (2020). Research Regarding The Development and Evaluation of Agility (Balance , Coordination and Speed) in Children Aged 9-10 Years. *Health Sports & Rehabilitation Medicine*, 21(1), 33–40.

<https://doi.org/10.26659/pm3.2020.21.1.33>

Triggs, A. O., Causer, J., McRobert, A. P., & Andrew, M. (2025). Perceptual Cognitive Skills and Talent Development Environments in Soccer : A Scoping Review.

PLoS One, 20(7), 1–31. <https://doi.org/10.1371/journal.pone.0327721>



Original article. Multidimensional predictors of soccer dribbling performance: a motor control perspective in physical education students. Vol. 12, n.º 3; p. 1-15, July 2026.

<https://doi.org/10.55040/81bt4e61>

Zha, H., Ding, X., & Li, W. (2025). Innovative Approaches in Physical Education : Leveraging Cognitive Activation to Boost Student Outcomes. *Frontiers in Psychology*, 16(7), 1–14. <https://doi.org/10.3389/fpsyg.2025.1481381>