RESEARCH
www.commprac.com
ISSN 1462 2815

THE IMPACT OF TRAINING METHODS AND ENDURANCE ON DEVELOPING BASIC FOOTBALL TECHNICAL SKILLS IN EXTRACURRICULAR FOOTBALL PROGRAMS

Khairil Insani [1], Wilda Welis [2]*, Ridho Bahtra [3], Aldo Naza Putra [4], Yovhandra Ockta [5], Hosni Hasan [6] and Bekir Erhan Orhan [7]

[1] Magister Programme Sport Education, Faculty of Sport Sciences, Universitas Negeri Padang, Indonesia.
[2,3,4,5] Faculty of Sport Sciences, Universitas Negeri Padang, Indonesia.
[6] Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia.
[7] Faculty of Sports Sciences, Istanbul Aydın University, Istanbul, Turkey.
*Corresponding Author Email: wildawelis@fik.unp.ac.id

DOI: 10.5281/zenodo.11239182

Abstract

Background Problems: Extracurricular sports activities, particularly football, play a vital role in the holistic development of students, impacting their physical, mental, and social well-being. Despite its significance, challenges persist in optimizing football achievements at the school level, as evidenced by observations at State Junior High School 2 Sungai Penuh, where suboptimal performance in regional tournaments was noted due to deficiencies in basic technical abilities and endurance among players. **Research Objective:** This study aims to investigates the effects of training methods and endurance on the basic football technique abilities of passing control and dribbling among students participating in extracurricular football activities, focusing on State Junior High School 2 Sungai Penuh. **Methods:** A quasi-experimental research design with a 2x2 treatment by level design was employed, utilizing small-sided games and drill training methods, with endurance as a moderator variable. Data collection involved various tests including dribbling, passing control, and the Yo-Yo Intermittent Recovery Test. Statistical analysis, was conducted using SPSS software version 26, including ANOVA and Tukey tests. **Finding/Result:** The study revealed significant differences in basic football technique abilities based on the training methods employed. Small-sided games were found to be more effective than drills in enhancing passing-control and dribbling skills. Furthermore, an interaction effect was observed between training methods and endurance, emphasizing the importance of considering players' physical condition in training programs. **Conclusion:** In conclusion, small-sided game training methods, coupled with increased endurance, proved to be more effective in improving basic football technique skills among State Junior High School 2 Sungai Penuh players. Coaches should tailor training programs to suit players' characteristics and endurance levels, emphasizing discipline, nutrition, and structured coaching for optimal results. Future research should explore additional variables and expand the scope of the study while addressing existing limitations

Keywords: Training Method, Endurance, Extracurricular, Football.

INTRODUCTION

Sport is not only about physical activity, but also an essential part of human life that affects physical, mental, and social health [1], [2], [3] [4], [5], [6]. Involvement in sports at the school level has far-reaching implications such as student involvement in extracurricular activities [7], [8], [9], [10]. In schools, especially at the junior high school level, there is extracurricular football which is not just a recreational event it is also a place for the development of students' character and abilities [11], [12]. In football, achieving achievements requires a deep understanding of effective training methods and the development of optimal physical endurance [13], [14], [15] [16], [17]. Through purposeful and disciplined practice, students learn about hard work, teamwork, and responsibility, then hone the technical and tactical skills needed in football [18], [19].

Sports also provide opportunities for social and emotional growth. In football, students learn to manage emotions, overcome failure, and celebrate successes together. They also build strong social relationships with fellow players and coaches [20], [21].

Through participation in school football activities, students hone sports skills and enrich their overall life experience [22]. With the right guidance and strong commitment, they can achieve outstanding achievements, both on and off the field. Sports involve physical activity and contribute to the body's overall health, such as mind, body, and spirit, in an integrated manner to develop physical, spiritual, social, and cultural potential [23], [24]. In addition, sports activities are also an integral part of national education that aims to educate the nation's life [22]. Physical education in schools is not only related to the development of physical fitness and health but also closely related to achieving achievements [25], [26]. Through football extracurricular programs, students have the opportunity to pursue achievements in this sport. Intensive practice and competition in local, regional, or even national tournaments can bring prestige to the school and rewards for outstanding students. Achievements in football can also open up opportunities for sports scholarships or recognition from sports institutions or communities. Thus, physical education involving extracurricular football not only creates healthy and sportsmanlike students, but also helps them achieve proud achievements. However, a comprehensive approach is needed to achieve this goal, including extracurricular football activities. Based on observations in January 2024, State Junior High Schools 2 Sungai Penuh football achievements still need to be improved, as seen from their participation in regional tournaments that did not reach the final stage. One of the factors that causes low achievement is the need for more basic technical abilities such as passing, control, and dribbling, as well as the low physical endurance of players. Therefore, a proper training approach is needed to improve the players' basic technical abilities and endurance. Some recommended exercise methods to improve basic technique skills and endurance are Small Sided Games, Drills, Rondo, and Zig-zag runs [27], [28]. The Small Sided Games method, for example, allows players to practice in game situations close to natural conditions while increasing their endurance [29], [30], [31].

On the other hand, Drill methods focus on systematically repeating movements to improve technical expertis [32]. In addition, the Rondo practice method can help improve a player's technique and physique through game situations, emphasizing ball control and fast movement [33]. Zig-zag Run is an agility exercise that can help improve a player's speed and balance [34]. By considering these various training methods, this study will examine the effect of training methods and endurance on the ability of basic passing, control, and dribbling techniques in students who engage in extracurricular football, especially in State junior high schools 2 Sungai Penuh. This research is expected to develop effective and efficient training programs for the players so that the football achievements of State Junior High Schools 2 Sungai Penuh can be significantly improved. Thus, this research is expected to be a valuable reference for improving school sports achievement, especially in football. Through a comprehensive and targeted approach, players are expected to develop their maximum potential and achieve proud achievements at regional and national levels. This research brings novelty by proposing a comprehensive approach to improve football achievement in State junior high schools 2 Sungai Penuh. This research provides integrated strategies to improve the essential technical skills and physical endurance of students participating in extracurriculars through exercise methods such

as Small Sided Games, Drill, Rondo, and Zig-zag Run. Thus, this study not only identifies existing problems but also provides concrete and structured solutions to improve football achievement at the school level through extracurricular activities.

METHODS

Research Design and Procedures

This study uses quasi-experimental research methods to identify cause-and-effect relationships between specific variables [35]. This study tested the effect of training (treatment) on the ability to use basic techniques such as passing, control, and dribbling. The training methods are small-sided games and drills, while endurance is a moderator variable. The participants were involved in the training program for 8 weeks with a frequency of training conducted 2 weeks. Each training session lasts 720 hours. The research design used a treatment design by level 2 x 2, where each independent variable (exercise method and endurance) was divided into two levels. This creates four different treatment conditions. The exercise method is divided into small-sided games (A1) and drills (A2), while endurance is divided into high (B1) and low (B2). More details can be seen in the table below:

Table 1: Design Treatment by Level 2x2

Training Method(A) / Endurance (B)	Small Sided Games Method (A1)	Drill Method (A2)
High Endurance (B1)	(A1B1)	(A2B2)
Low Endurance (B2)	(A1B2)	(A2B2)

Information:

A1 : Group of small-sided games exercise method.

A2 : Drill exercise method group.

B1 : High Endurance Group.

B2 : Low Endurance Group.

A1B1 : Group of small-sided games training methods on high endurance ability.

A2B2 : Group of Drill exercise methods on high Endurance ability.

A1B2 : Group of small-sided games exercise methods on low endurance ability.

A2B2 : Group of Drill exercise methods on low Endurance ability.

Participants

Population is the entire subject of research and is the source of research components that are the target conclusions of the final results of a study. In this study, the population was students involved in extracurricular football activities at State Junior High School 2 Sungai Penuh, comprising 60 people. While the samples were taken, as many as 32 people, with an age range of 13-17 years, were selected using the purposive sampling method. The endurance test results of the 60 players were sorted from highest to lowest scores, and to divide them into high and low categories, a percentage technique was used by dividing group members into 27%, highest and lowest. The samples taken from each group were then divided into four groups using matching techniques. Two groups were for the small-sided games exercise method, and the other two groups were for the drill method, each with high and low endurance categories.

Data Collection

Research instruments are tools used by researchers to collect data to make research activities more systematic [36]. This study used several instruments, including a dribbling test to measure dribbling ability and avoid obstacles, a passing-control test to assess basic technical abilities in passing and controlling the ball, and a Yo-Yo Intermittent Recovery Test to measure endurance. The dribbling test utilizes a flat field with a minimum size of 10x10 meters, while the passing-control test is carried out with the test position standing behind the firing line, which is 4 meters away from the target. At the same time, the Yo-Yo Intermittent Recovery Test utilizes a 25-meter track, with 20 meters for running track and 5 meters for recovery. The data collected is primary, directly from State Junior High School 2 Sungai Penuh students, with preparation involving explanation of the test to students and procurement of necessary test kits. The test process involves collecting data recorded systematically by two testers.

Data Analysis

Several requirements testing was conducted first before conducting analysis with two-track ANOVA on the research design of treatment experiments by level 2 x 2. It involves a normality test with the Liliefors technique and a homogeneity test with a Bartlett test. The success criterion of the normality test is if Lcount < Ltabel, indicating a normal distribution of data. In contrast, the homogeneity test is considered satisfied if $\chi 2$ counts < $\chi 2$ tables, indicating homogeneity of variance. Once both tests are qualified, a two-path ANOVA analysis can be performed. Suppose the results show the primary influence between the independent and bound variables. Further tests, such as the Tukey test, are performed to determine significant differences between groups, with significance levels $\alpha = 0.05$. Data analysis was performed using SPSS software version 26.

RESULT & DISCUSSION

This study aims to identify the difference in the results of basic football technique abilities (passing control and dribbling) between small-sided game training methods and drill training methods associated with endurance. This study used a 2x2 by-level design with two-way ANOVA. The research data were divided into four groups: (1) basic technique results from the small sides games method, (2) basic technique results from the drill training method, (3) basic technique results with high endurance, and (4) basic technique results with low endurance. Each group was further divided based on the method of exercise. In total, there are eight groups of data to be analyzed. The following are the results of a general description of the data of each group:

Table 2: Results of the ability group Basic techniques of football

Group	N	Min	Max	M ± SD
A1	16	13,0	18,0	15,0 ± 1,46
A2	16	12,0	15,0	14,12 ± 0,81
B1	16	12,0	18,0	14,87 ± 1,54
B2	16	13,0	16,0	14,25 ± 0,77
A1B1	8	14,0	18,0	15,87 ± 1,35
A2B1	8	12,0	15,0	13,87 ± 0,99
A1B2	8	13,0	16,0	14,12 ± 0,99
A2B2	8	14,0	15,0	14,37 ± 0,51

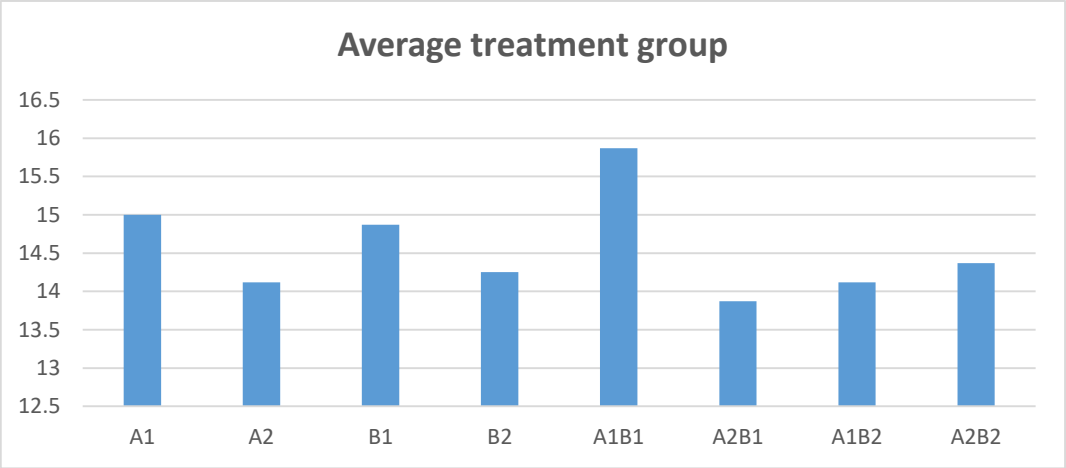

Figure 1: Average treatment group

The inferential analysis in this study used the Analysis of Two-Way Variance with Interaction (ANOVA), followed by a test of the difference in the average value of the two treatment groups. Data requirements are required to run this analysis, including sample randomness, normal distribution, and homogeneity of population variance. The normality test using the Liliefors test shows that all data groups are normally distributed. Next, homogeneity tests were performed using Levene's tests of treatment groups and attributes, as well as cells in the experimental design. The results showed that all data groups were homogeneous based on their test criteria, with significance (Sig.) greater than α=0.05. Thus, it can be concluded that the data homogeneity requirements have been met for this ANOVA analysis. More details can be seen in the table below:

Table 3: Normality and Homogeneity Test Results

Normality Test						Homogeneity Test		
Kolmogorov-Smirnov			Shapiro-Wilk			Technical Skills	Sig.	Conclusion
Statistics	df	Sig.	Statistik	df	Sig.	Passing-Control	0,157	Homogenous
0,36	32	0,142	0,973	32	0,577	Dribbling	0,051	Homogenous

Hypothesis analysis using the two-way Analysis of Variance (ANOVA) revealed important findings regarding the influence of independent variables on experimental results and interactions between treatments. The results of the two-way ANOVA table highlight that if the p-value < 0.05, there is a significant difference in the results of basic football technical ability based on factor variables, while if the p-value> 0.05, there is no significant difference. The study showed that p values for both factor variables, passing-control and dribbling, were lower than 0.05, indicating a significant difference in basic football technical ability depending on the training method given. In addition, there is a significant interaction between training methods (small side games and drills) and endurance to the basic technical ability of football passing-control and dribbling football players, as evidenced by a p-value of less than 0.05 for both factor variables. With these findings, the interaction between training methods and endurance significantly affects basic football technique ability. These results support the research hypothesis that proposes a significant interaction between small-side games and drills training methods, as well as endurance, to the basic technical abilities of football passing-control and dribbling football players.

Table 4: Hypothesis Test Results

Uji Hipotesis			
Passing Control		**Dribbling**	
Source	**Sig.**	**Source**	**Sig.**
Training Method	0,021	Training Method	0,006
Endurance	0,091	Endurance	0,790
Training Method*Endurance	0,004	Training Method*Endurance	0,00

The next step is to conduct a follow-up test (Tukey Test) to further explore the differences between the treatment groups and gain additional insight into each factor's influence on football's basic technical ability.

Table 5: Tukey Test Result

Tukey Test							
Passing-Control				**Dribbling**			
Post Hoc	**Post Hoc**	**Sig**	**Conclusion**	**Post Hoc**	**Post Hoc**	**Sig**	**Conclusion**
A1B1	A2B1	0,002	Significant	A1B1	A2B1	0,00	Significant
A1B2	A2B2	0,959	Insignificant	A1B2	A2B2	0,00	Significant

In this study, the statistical analysis results showed a significant difference between two training methods, Small Sided Games (SSG) and Drill, on the basic technical skills of football passing-control and dribbling extracurricular football students of State Junior High School 2 Sungai Penuh. From the ANOVA and Tukey test results, the Small Sided Games training method is more effective than the Drill method in improving this ability.

Small-sided games, played on smaller courts with fewer players, allow players to interact with the ball more often and hone their technical skills intensively. On the other hand, the Drill method, which emphasizes technical drills repetitively, provides a different experience regarding diverse ball interactions. This indicates that variability in training plays a vital role in improving basic football technical skills.

In addition, this study also found a significant interaction between training methods (Small Sided Games and Drills) and the level of endurance of the basic technical skills of football passing-control and dribbling students.

This shows that the player's endurance level affects each training method's effectiveness. For example, in the group with a high level of endurance, the Small Sided Games exercise method improved basic technique skills more effectively than the Drill method.

However, in the group with low endurance, significant differences were only seen in dribbling ability, while for passing-control ability, there was no significant difference between the two training methods.

This shows the need to adjust the training program according to players' physical and mental conditions to achieve optimal results. It is essential to consider that practice is one of many factors affecting basic football technique ability.

Other factors such as motivation, quality of instruction, and environmental support also play an essential role in improving players' skills [37], [38], [39]. In addition to focusing on the type of training used, coaches and team managers must pay attention to other aspects that can affect training results.

This aligns with research conducted by McCann et al (2022) that creating a supportive environment, providing constructive feedback, and motivating players to practice in earnest can help improve the overall effectiveness of practice.

It is also necessary to consider the limitations and weaknesses of the methodology used. Although statistical analysis shows significant differences between exercise methods, other factors such as exercise duration, intensity, and individual physical fitness may also affect the final results.

Therefore, advanced research with a more sophisticated design and more detailed monitoring can provide a deeper understanding of the relationship between training methods, endurance, and the basic technical abilities of football.

As such, this research makes a valuable contribution to understanding how appropriate training strategies can improve the technical skills of football players at the junior high level.

CONCLUSION

Based on the research findings and discussion of the research results, it was concluded that the small sides games training method is more effective than the drill training method in improving the ability of basic football techniques, such as passing control and dribbling, in State Junior High School 2 Sungai Penuh football players.

There was also an interaction between small-sided game training methods, drill training methods, and endurance to basic football technical abilities. The results showed that the group that underwent the small-sided games training method with high endurance was more effective than the drill training method in terms of the ability to use basic football techniques.

However, in players with low endurance, there was no significant difference in passing-control ability, but there was a significant difference in dribbling ability between the group trained with the small sides games training method and the drill training method.

This finding implies that small-sided game training methods, drill training methods, and increased endurance can improve basic football technique skills in State Junior High School 2 Sungai Penuh players. However, discipline, good nutritional knowledge, and structured and programmed coaching are needed to achieve goals in football.

Coaches need to understand the advantages and disadvantages of each training method and consider players' physical and mental condition. Suggestions include using training methods appropriate to the player's characteristics and considering endurance, discipline, and motivation factors.

Players are expected to attend training regularly and consistently. In addition, attention is needed to factors that affect exercise results, such as physical, mental, and motivational conditions. For future research, it is recommended to involve other variables, expand the research object, and consider existing limitations.

References

1) A. Risyanto, H. Subarjah, A. Ma'mun, Nuryadi, and I. Prabowo, "The effect of student-centred learning approaches in physical education on positive youth development," *Edu Sport. Indones. J. Phys. Educ.*, vol. 5, no. 1, pp. 10–21, 2024, doi: 10.25299/esijope.2024.vol5(1).14532.

2) S. Buecker, T. Simacek, B. Ingwersen, S. Terwiel, and B. A. Simonsmeier, "Physical activity and subjective well-being in healthy individuals: a meta-analytic review," *Health Psychol. Rev.*, vol. 15, no. 4, pp. 574–592, 2021, doi: 10.1080/17437199.2020.1760728.

3) B. Tarigan and R. A. Lardika, "Physical education learning outcomes: Does it have a correlation with nutritional status, physical activity, and students' cognitive function?," *Edu Sport. Indones. J. Phys. Educ.*, vol. 4, no. 2, pp. 159–168, 2023, doi: 10.25299/es:ijope.2023.vol4(2).12722.

4) E. Sepdanius *et al.*, "Exploring Factors Affecting Physical Health Perception Through Sports Participation: A PLS-SEM Approach," *Retos*, vol. 51, pp. 1210–1219, 2024.

5) A. Chaeroni, N. Kusmaedi, A. Ma'mun, and D. Budiana, "Physical Fitness and Mental Health in Urban and Rural Areas," *Malaysian J. Med. Heal. Sci.*, vol. 17, no. 16, pp. 66–71, 2021.

6) B. Apriyano, Z. A. Zainuddin, and A. H. M. Hashim, "Physical Activity Module in Health Sports Physical Education Learning on Physical Fitness and Health," *Int. J. Hum. Mov. Sport. Sci.*, vol. 10, no. 4, pp. 716–722, 2022, doi: 10.13189/saj.2022.100412.

7) É. Thouin *et al.*, "School-based extracurricular activity involvement and high school dropout among at-risk students: Consistency matters," *Appl. Dev. Sci.*, vol. 26, no. 2, pp. 303–316, 2022, doi: 10.1080/10888691.2020.1796665.

8) L. F. P. Maciel, G. O. Farias, E. J. Dallegrave, M. C. Flach, J. V. do Nascimento, and A. Folle, "Sports and school involvement and performance: a systematic review of literature," *Retos*, vol. 47, pp. 12–24, 2022, doi: 10.47197/retos.v46.90498.

9) D. Suryadi, "Analisis kebugaran jasmani siswa: Studi komparatif antara ekstrakurikuler bolabasket dan futsal," *Edu Sport. Indones. J. Phys. Educ.*, vol. 3, pp. 100–110, 2022, doi: 10.25299/es:ijope.2022.vol3(2).9280.

10) C. Septiadi, O. Maliki, and Y. Ratimiasih, "Survei minat pelajar dalam mengikuti kegiatan ekstrakurikuler hockey," *Edu Sport. Indones. J. Phys. Educ.*, vol. 2, no. 2, pp. 125–130, 2021, doi: 10.25299/es:ijope.2021.vol2(2).6971.

11) D. Whitfield, "Education and football: a history of the cultural accommodation of British association football into Japanese society," *Sport Hist.*, vol. 42, no. 1, pp. 1–23, 2022, doi: 10.1080/17460263.2021.1919188.

12) A. Akhiruyanto, T. Hidayah, Z. Amali, D. Yudhistira, and A. B. Siwi, "Evaluation on the Physical Condition of Football Extracurricular Participants before and during the COVID-19 Pandemic," *Int. J. Hum. Mov. Sport. Sci.*, vol. 10, no. 2, pp. 303–308, 2022, doi: 10.13189/saj.2022.100221.

13) Rubiyatno, R. P. Perdana, E. Supriatna, N. Yanti, and D. Suryadi, "Team Game Tournament (TGT)-type cooperative learning model: How does it affect the learning outcomes of football shooting?," *Edu Sport. Indones. J. Phys. Educ.*, vol. 4, no. 1, pp. 86–96, 2023, doi: 10.25299/es:ijope.2023.vol4(1).12130.

14) A. Hakman, I. Vaskan, O. Kljus, T. Liasota, Y. Palichuk, and M. Yachniuk, "Analysis of the acquisition of expertise and mastery of physical skills for performing techniques by young footballers," *J. Phys. Educ. Sport*, vol. 18, no. 2, pp. 1237–1242, 2018, doi: 10.7752/jpes.2018.s2184.

15) I. G. Lopategui, J. C. Paulis, and I. E. Escudero, "Physical demands and internal response in football sessions according to tactical periodization," *Int. J. Sports Physiol. Perform.*, vol. 16, no. 6, pp. 858–864, 2021, doi: 10.1123/ijspp.2019-0829.

16) A. Arsil *et al.*, "Effectiveness of teaching methods and motor abilities: an experimental study on football passing abil-ity," *Retos*, vol. 54, pp. 625–632, 2024, doi: 10.47197/retos.v54.104407.

17) Liza *et al.*, "Modified Warm-Up Model: A Development Study For Football Players Post Ankle Injury Modelo de calentamiento modificado: Un estudio de desarrollo para jugadores de fútbol tras una lesión de tobillo," *Retos*, vol. 55, pp. 710–717, 2024.

18) R. Silva, C. Farias, and I. Mesquita, "Cooperative learning contribution to student social learning and active role in the class," *Sustain.*, vol. 13, no. 15, 2021, doi: 10.3390/su13158644.

19) M. Blake and V. S. H. Solberg, "Designing elite football programmes that produce quality athletes and future ready adults: incorporating social emotional learning and career development," *Soccer Soc.*, vol. 24, no. 6, pp. 896–911, 2023, doi: 10.1080/14660970.2022.2149505.

20) R. Panda, "Impact Analysis on Importance of Sports on Education," *Int. J. Res. Eng. Sci. Manag.*, vol. 7, no. 3, pp. 11–15, 2024, [Online]. Available: file:///C:/Users/K00290712/Downloads/IJRESM_V7_I3_3.pdf

21) L. Ferguson, G. B. Epp, K. Wuttunee, M. Dunn, T. L. McHugh, and M. L. Humbert, "'It's more than just performing well in your sport. It's also about being healthy physically, mentally, emotionally, and spiritually': Indigenous women athletes' meanings and experiences of flourishing in sport," *Qual. Res. Sport. Exerc. Heal.*, vol. 11, no. 1, pp. 1–19, 2019, doi: 10.1080/2159676X.2018.1458332.

22) P. Velija and G. Allen, "'Every day we'd have an arranged activity, so she'd have football, swimming, dance, gymnastics': A sociological analysis of parenting and sports-based enrichment activities for the under-fives," *Int. Rev. Sociol. Sport*, 2024, doi: 10.1177/10126902241238236.

23) H. Morgan, A. Bush, and D. McGee, "The Contribution of Sport to the Sustainable Development Goals: Insights from Commonwealth Games Associations," *J. Sport Dev.*, vol. 9, no. 2, pp. 14–29, 2022.

24) A. Cerdá, S. Boned-Gómez, and S. Baena-Morales, "Exploring the Mind-Body Connection: Yoga, Mindfulness, and Mental Well-Being in Adolescent Physical Education," *Educ. Sci.*, vol. 13, no. 11, 2023, doi: 10.3390/educsci13111104.

25) Aningsih, M. S. Zulela, A. Neolaka, V. Iasha, and B. Setiawan, "How is the Education Character Implemented? The Case Study in Indonesian Elementary School," *J. Educ. Soc. Res.*, vol. 12, no. 1, pp. 371–380, 2022, doi: 10.36941/jesr-2022-0029.

26) M. Tilp, C. Scharf, G. Payer, M. Presker, and A. Fink, "Physical Exercise During the Morning School-Break Improves Basic Cognitive Functions," *Mind, Brain, Educ.*, vol. 14, no. 1, pp. 24–31, 2020, doi: 10.1111/mbe.12228.

27) S. Pambudi Rilo, T. Rahayu, and R. Rumini, "The Influence of Training Methods and Agility Towards Futsal Dribbling Speed Result in High School Teams in Blora Regency," *J. Unnes*, vol. 10, no. 1, pp. 75–88, 2021, [Online]. Available: https://journal.unnes.ac.id/sju/index.php/jpes/article/view/44501

28) A. Z. F. Rambe, P. Y. Kiram, Arsil, R. Bahtra, and Y. Ockta, "Improvement of basic soccer techniques with training methods and physical condition," *J. Sport. J. Penelit. Pembelajaran*, vol. 10, no. 1, pp. 76–89, 2024.

29) F. M. Clemente and H. Sarmento, "The effects of small-sided soccer games on technical actions and skills: A systematic review," *Hum. Mov.*, vol. 21, no. 3, pp. 100–119, 2020, doi: 10.5114/hm.2020.93014.

30) F. C. Klingner, B. C. H. Huijgen, R. J. R. Den Hartigh, and M. Kempe, "Technical–tactical skill assessments in small-sided soccer games: A scoping review," *Int. J. Sport. Sci. Coach.*, vol. 17, no. 4, pp. 885–902, 2022, doi: 10.1177/17479541211049532.

31) A. Canton, C. Torrents, A. Ric, I. Guerrero, R. Hileno, and R. Hristovski, "Exploratory Behavior and the Temporal Structure of Soccer Small-Sided Games to Evaluate Creativity in Children," *Creat. Res. J.*, vol. 33, no. 1, pp. 16–25, 2021, doi: 10.1080/10400419.2020.1836878.

32) R. Aquino, E. F. Puggina, I. S. Alves, and J. Garganta, "Skill-related performance in soccer: A systematic review," *Hum. Mov.*, vol. 18, no. 5, pp. 3–24, 2017, doi: 10.1515/humo-2017-0042.

33) L. Mohamed Ashour Abbas and A. HussienAuraibi, “The effect of using Rondo training in creating mini-spaces to develop the level of tactical performance of football players,” *NeuroQuantology*, vol. 20, no. 10, pp. 610–621, 2022, doi: 10.14704/nq.2022.20.10.NQ55042.

34) D. Suryadi *et al.*, “Combination of varied agility training with small sided games: How it influences football dribbling skills?,” *Pedagog. Phys. Cult. Sport.*, vol. 27, no. 3, pp. 190–197, 2023, doi: 10.15561/26649837.2023.0302.

35) Sugiyono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, kualitatif, dan R & D*, 27th ed. Bandung: Alfabeta, 2018.

36) Sugiyono, *Metode Penelitian Pendidikan Kuantitatif, Kualitatif, dan R & D*. Bandung: Alfabeta, 2014.

37) V. Gesbert, F. C. von Roten, and D. Hauw, “Reviewing the role of the environment in the talent development of a professional soccer club,” *PLoS One*, vol. 16, no. 2 February, pp. 1–21, 2021, doi: 10.1371/journal.pone.0246823.

38) B. Teune, C. Woods, A. Sweeting, M. Inness, and S. Robertson, “The influence of environmental and task constraint interaction on skilled behaviour in Australian Football,” *Eur. J. Sport Sci.*, vol. 22, no. 8, pp. 1268–1275, 2022, doi: 10.1080/17461391.2021.1958011.

39) M. N. Nasiruddin, M. S. O. Fauzee, I. Sin, and M. N. Omar, “The motivation of football players: The impact of coach leadership style in malaysian sports schools,” *Int. J. Hum. Mov. Sport. Sci.*, vol. 8, no. 4, pp. 124–133, 2020, doi: 10.13189/saj.2020.080404.

40) B. McCann, P. J. McCarthy, K. Cooper, K. Forbes-McKay, and R. J. Keegan, “A retrospective investigation of the perceived influence of coaches, parents and peers on talented football players’ motivation during development,” *J. Appl. Sport Psychol.*, vol. 34, no. 6, pp. 1227–1250, 2022, doi: 10.1080/10413200.2021.1963013.