

The Effect Of Pair Passing Drill Training On The Passing Ability Of Futsal Players Faculty Of Sports And Health Sciences

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ABSTRACT

Passing is one of the most fundamental techniques in futsal because it determines ball possession, attacking rhythm, team cooperation, and the creation of scoring opportunities. However, many futsal players still experience difficulties in performing accurate, controlled, and consistent passing during training and match situations. This study aimed to determine the effect of paired passing drill training on the passing ability of FIKK UNM futsal players. This research used a quantitative experimental method with a one-group pre-test-post-test design. The population consisted of active futsal players at the Faculty of Sport and Health Sciences, Universitas Negeri Makassar, while the sample consisted of 20 players selected through purposive sampling based on active participation and willingness to follow the treatment program. The research instrument was a futsal passing ability test, in which each participant performed 10 passing attempts toward a wall target with right and left markers set at a distance of 1 meter. Data were analyzed using descriptive statistics, normality testing, and a paired-sample t-test at a significance level of $\alpha = 0.05$. The descriptive results showed that the pre-test total score was 103, with a mean of 5.15 and a standard deviation of 1.089. After the treatment, the post-test total score increased to 142, with a mean of 7.10 and a standard deviation of 1.071. The paired-sample t-test showed that $t_{\text{observed}} = 9.831$ was greater than $t_{\text{table}} = 2.093$, with $p = 0.000 < 0.05$. Therefore, paired passing drill training had a significant effect on improving the passing ability of FIKK UNM futsal players. This training model is recommended as a practical method to improve passing accuracy, control, consistency, and cooperation in futsal.

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AUTHORS' CONTRIBUTION

- A. Conception and design of the study;
- B. Acquisition of data;
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INTRODUCTION

Sport is not only a structured physical activity aimed at improving health and fitness, but also a social and educational medium that develops discipline, cooperation, emotional control, and competitive character. In the context of modern sport, physical, psychological, technical, and social needs can be strengthened through systematic training activities (Setiawan et al., 2021). Futsal has become one of the most popular invasion games because it is played in a limited space, involves high ball contact frequency, and requires players to make rapid decisions under pressure (Radif, 2019;

Fasha, 2021). According to the official futsal format, the game is played by two teams with five players, including one goalkeeper, which makes technical efficiency highly decisive because every error can immediately influence attacking and defensive transitions. FIFA's futsal law confirms that each team plays with a maximum of five players on the pitch, one of whom is the goalkeeper. Therefore, futsal players must master basic techniques such as passing, controlling, dribbling, and shooting (Andika, 2023; Candra & Widodo, 2019). Among these techniques, passing is a fundamental skill because it determines ball circulation, possession quality, attacking rhythm, and the creation of scoring opportunities. However, many futsal players still show unstable passing accuracy, poor body orientation, weak ball contact, and limited communication with teammates during play. These problems indicate the need for a specific, repetitive, and measurable training method to improve passing ability among FIKK UNM futsal players.

Recent studies in futsal and football training emphasize that technical skill improvement is closely related to structured practice, repeated movement patterns, and game-relevant decision-making. Technical-tactical analyses in futsal show that passing, shooting, and ball possession actions are among the most frequently studied performance indicators because they directly shape match effectiveness (Alves et al., 2021; Spyrou et al., 2023; García et al., 2025). Research on motor skill learning also confirms that repeated task exposure helps players develop coordination, timing, perception, and movement consistency (Sarmiento et al., 2018; Clemente et al., 2021; Ferreira-Ruiz et al., 2021). In Indonesian futsal contexts, drill-based training has been widely reported as effective for improving passing quality because it provides clear movement targets, immediate feedback, and high repetition volume (Husyaeri & Saleh, 2022; Muzaffar & Saputra, 2019). Several empirical studies support this position: passing drill variation significantly improved futsal passing accuracy (Rihadatul'Aisy, 2024), drill passing improved passing accuracy among school futsal players (Utomo, 2025), diamond passing increased coordination and passing accuracy (Nurmaharani, 2025), and small-sided games improved passing accuracy and broader futsal skills (Hidayat, 2022; Erlian, 2025; Mudadif et al., 2026; Purwanto et al., 2026). These findings show that well-designed technical training can strengthen the connection between ball control, accuracy, communication, and tactical execution.

Although previous studies have discussed drill training, small-sided games, triangle passing, diamond passing, and target-based passing, there is still a limited number of studies that specifically examine paired passing drill training in the context of university-level futsal players, particularly among FIKK UNM players who are academically and practically prepared to become future coaches, teachers, or sport practitioners. Most prior studies focus on junior players, school extracurricular participants, or community clubs (Ibrahim, 2024; Muhaimin, 2025; Sitompul, 2025; Suwandi & Fernando, 2025). In addition, many studies assess technical improvement in general but do not strongly connect paired passing drills with communication, receiving quality, passing direction, movement rhythm, and partner-based cooperation. This gap is important because futsal passing is not merely the act of kicking the ball to a teammate; it involves perception, body position, passing weight, timing, receiving preparation, and coordination between passer and receiver. Therefore, a paired passing drill may offer a more focused training stimulus because it creates repeated technical interaction between two players while maintaining the essential social and tactical nature of futsal performance.

This study aims to determine the effect of paired passing drill training on the passing ability of FIKK UNM futsal players. The novelty of this research lies in its specific focus on paired passing drills as a simple, applicable, and coach-friendly training model for university futsal players. Unlike broader game-based training, paired passing drill training allows coaches to control repetition intensity, passing distance, ball speed, receiving technique, and feedback more precisely. Conceptually, this study contributes to the development of technical training models in futsal by positioning paired passing as a bridge between isolated technical repetition and real-game cooperation. Empirically, this study is expected to provide evidence on whether systematic paired passing drills can improve passing accuracy, consistency, and technical execution among players in a higher education sport environment.

Based on the theoretical and empirical discussion, passing is a decisive technical component in futsal because it supports possession, attack construction, transition speed, and team cooperation. Previous literature has shown that structured technical training can improve passing performance, but

specific evidence on paired passing drill training among FIKK UNM futsal players remains limited. Therefore, this study is important because it addresses a practical training problem while offering a measurable and contextually relevant intervention for improving futsal passing ability. The findings are expected to enrich futsal coaching practice, support sport science learning at university level, and contribute to SINTA-oriented research in physical education and sports coaching.

METHODS

This study employed a quantitative experimental method using a pre-experimental design. The selected design was a one-group pretest-posttest design, in which the participants were tested before receiving the treatment and then tested again after the treatment was completed. This design was considered appropriate because the study aimed to examine the effect of paired passing drill training on the passing ability of FIKK UNM futsal players in a real training context where full control over all external variables was not completely possible. In sport science research, pretest-posttest experimental designs are commonly used to evaluate changes in technical performance after a structured intervention because they allow researchers to compare the same participants across two measurement phases (Creswell & Creswell, 2018; Sugiyono, 2019; Thomas, Nelson, & Silverman, 2022).

The population of this study consisted of active futsal players at the Faculty of Sport and Health Sciences, Universitas Negeri Makassar. The sample was selected using purposive sampling, with two main criteria: (1) participants were active FIKK UNM futsal players, and (2) participants were willing to follow the complete treatment program. Based on these criteria, 20 players were selected as research participants. Purposive sampling was used because the study required participants who had basic futsal experience and were physically able to participate in repetitive passing training (Handayani et al., 2020; Handayani et al., 2022). Recent sport training studies also suggest that sample selection based on sport participation status is relevant when the intervention is designed to improve specific technical skills (Clemente et al., 2021; Sarmiento et al., 2018).

The independent variable in this study was paired passing drill training, while the dependent variable was futsal passing ability. The treatment was conducted through repeated paired passing activities involving two players who alternately performed passing and receiving using correct futsal techniques. The drill emphasized passing accuracy, ball contact, receiving control, body position, communication, and passing rhythm. This form of practice is relevant because paired passing creates high repetition, immediate feedback, and direct cooperation between passer and receiver. Previous studies have shown that drill-based passing practice, paired short passing, and small-sided technical training can improve passing accuracy and technical execution in football and futsal players (Husyaeri & Saleh, 2022; Marsuna et al., 2024; Permana, 2025; Erlian, 2025; Purwanto et al., 2026).

The research instrument was a futsal passing ability test. Each participant performed 10 passing attempts toward a wall target, with the right and left target markers set at a distance of 1 meter. The score represented the player's passing accuracy and consistency. The pretest was conducted before the treatment, while the posttest was conducted after the paired passing drill program. The collected data were analyzed descriptively using mean and standard deviation, followed by a paired-sample t-test to determine whether there was a significant difference between pretest and posttest scores. The level of significance was set at $\alpha = 0.05$. This analysis technique was appropriate because the study compared two related scores from the same group of participants (Field, 2018; Pallant, 2020).

RESULTS AND DISCUSSION

Result

This section presents the results of data analysis on the effect of paired passing drill training on the passing ability of FIKK UNM futsal players. The analysis was conducted in three stages: descriptive statistical analysis, normality testing, and hypothesis testing using a paired-sample t-test. The descriptive analysis was used to describe the initial and final passing ability of the participants, while the normality test was conducted to determine whether the data met the requirements for parametric statistical analysis.

Descriptive Statistical Analysis

The descriptive statistical results of the pre-test and post-test scores of passing ability are presented in Table 1.

Table 1.
 Descriptive Statistics of Passing Ability Before and After Paired Passing Drill Training

Statistic	Pre-test Passing Ability	Post-test Passing Ability
N	20	20
Sum	103	142
Mean	5.15	7.10
Standard Deviation	1.089	1.071
Range	3	4
Minimum	4	5
Maximum	7	9

Based on Table 1, the pre-test result of paired passing drill training on the passing ability of FIKK UNM futsal players showed a total score of 103 from 20 participants. The mean score was 5.15, with a standard deviation of 1.089. The range was 3, with the lowest score of 4 and the highest score of 7. These results indicate that before receiving the treatment, the players' passing ability was still relatively moderate and had not yet reached an optimal level of accuracy and consistency.

Meanwhile, the post-test result showed a total score of 142 from the same 20 participants. The mean score increased to 7.10, with a standard deviation of 1.071. The range was 4, with the lowest score of 5 and the highest score of 9. The increase in the mean score from 5.15 to 7.10 indicates that the players experienced improvement after participating in paired passing drill training. The mean gain was 1.95 points, which reflects an improvement of approximately 37.86% compared with the pre-test mean score.

Normality Test

Before conducting inferential statistical analysis, the data were tested for normality using the Kolmogorov-Smirnov test. The results are presented in Table 2.

Table 2.
 Results of Normality Test

Variable	Kolmogorov-Smirnov Statistic	Sig.	α	Interpretation
Pre-test passing ability	0.205	0.326	0.05	Normal
Post-test passing ability	0.187	0.432	0.05	Normal

Table 2 shows that the significance value of the pre-test data was 0.326, which is greater than $\alpha = 0.05$. This means that the pre-test data were normally distributed. Furthermore, the significance value of the post-test data was 0.432, which is also greater than $\alpha = 0.05$. Therefore, the post-test data were also normally distributed. Based on these results, both pre-test and post-test data met the assumption of normality, so the hypothesis could be tested using a parametric statistical test, namely the paired-sample t-test.

Hypothesis Testing

The hypothesis test was conducted to determine whether there was a significant difference between passing ability before and after paired passing drill training. The results of the paired-sample t-test are presented in Table 3.

Table 3.
 Results of Paired-Sample t-Test

t-observed	t-table	df	Sig.	α	Interpretation
9.831	2.093	19	0.000	0.05	Significant

Based on Table 3, the value of t-observed was 9.831, while the t-table value at $df = 19$ and $\alpha = 0.05$ was 2.093. Since the t-observed value was higher than the t-table value, and the significance value was $0.000 < 0.05$, the null hypothesis was rejected and the alternative hypothesis was accepted. This means that there was a significant difference between the pre-test and post-test results of passing ability.

These findings indicate that paired passing drill training had a significant effect on improving the passing ability of FIKK UNM futsal players. The increase in the mean score from 5.15 to 7.10 demonstrates that repeated paired passing exercises helped players improve their passing accuracy, ball control, passing strength, and coordination with teammates. In practical terms, the paired passing drill created a training situation that encouraged players to perform repeated passing and receiving actions in a focused and consistent manner. This type of training also promoted communication, timing, and technical correction between players.

Therefore, it can be concluded that paired passing drill training is an effective training method for improving the passing ability of futsal players at the Faculty of Sport and Health Sciences, Universitas Negeri Makassar. The results support the importance of structured, repetitive, and partner-based technical training in developing fundamental futsal skills, especially passing accuracy and consistency.

Discussion

The findings of this study indicate that the proposed hypothesis was accepted: paired passing drill training had a significant effect on the passing ability of FIKK UNM futsal players. The descriptive data showed that the mean pre-test score was 5.15, while the mean post-test score increased to 7.10. This means that the players experienced a mean improvement of 1.95 points, or approximately 37.86% compared with the initial score. The inferential analysis strengthened this finding, as the paired-sample t-test showed that the t-observed value was 9.831, which was higher than the t-table value of 2.093 at $df = 19$ and $\alpha = 0.05$. The significance value of 0.000 also confirmed that the improvement was statistically significant. In practical terms, this result demonstrates that systematic paired passing drill training can improve passing accuracy, ball control, technical consistency, and cooperation between players.

The improvement found in this study is reasonable because passing in futsal is not an isolated kicking action, but a complex technical-tactical skill involving perception, timing, ball contact, body orientation, receiving preparation, and communication. Futsal is played in a small area with limited time and space, so players must pass the ball accurately and quickly to maintain possession and avoid pressure from opponents. Previous studies have emphasized that futsal performance is strongly influenced by technical and tactical efficiency, including passing quality, decision-making, movement without the ball, and the ability to create space (Naser et al., 2017; Spyrou et al., 2020; Rico-González et al., 2020; Alves et al., 2021; Mendes et al., 2022). Elite futsal match analysis also shows that technical-tactical actions are inseparable from physical demands, because players must execute skills under high-intensity and rapidly changing game situations (Ohmuro et al., 2020; Spyrou et al., 2023). Therefore, the increase in passing ability after paired passing drills reflects not only technical repetition, but also better adaptation to futsal-specific performance demands.

The paired passing drill used in this study provided players with repeated opportunities to pass and receive the ball with a partner. This repetition helped players stabilize the movement pattern, improve the direction of the pass, adjust passing power, and develop a better first touch. From the perspective of motor learning, repeated and structured practice strengthens movement coordination and allows athletes to correct errors through direct feedback (Macnamara et al., 2016; Oppici et al., 2021; Bergmann et al., 2021; Williams, 2023; Otte et al., 2024). In paired passing, feedback occurs naturally because the receiver immediately responds to the quality of the pass. If the ball is too weak, too strong, or not directed properly, the player can directly adjust the next attempt. This immediate correction process makes paired passing drills more meaningful than random, unstructured practice.

The results of this study are also consistent with previous empirical findings. Marsuna et al. (2024) reported that paired short passing practice significantly improved football passing accuracy, with pre-test and post-test differences showing $p < 0.05$. A recent study on youth soccer players also found that structured paired passing drills improved passing accuracy by reinforcing ball control, movement memory, and decision-making. Similar evidence was reported by Nurmaharani (2025), who found that diamond passing training improved futsal passing accuracy, and by Permana et al. (2025), who showed that inside-foot drill passing improved futsal passing accuracy. These findings support the present study because all of them show that systematic passing repetition can improve the quality of ball distribution in invasion games.

Theoretically, the paired passing drill can be understood as a bridge between basic technical training and game-based futsal performance. On the one hand, the drill provides controlled repetition, which is important for developing mechanical consistency. On the other hand, the presence of a partner creates an interactive learning environment because players must coordinate movement, communicate, receive the ball, and return the pass accurately. This finding is in line with the concept of representative learning design, which argues that training tasks should maintain important elements of real performance contexts (Clark et al., 2018; D'Isanto et al., 2021; Lindsay et al., 2024). Although paired passing drills are simpler than small-sided games, they still preserve key futsal actions: passing, receiving, adjusting body position, and responding to a teammate's movement.

The significance of the post-test improvement also suggests that passing ability can be developed effectively when the training program is organized systematically. Training that is planned, progressive, and repeated will produce adaptation in technical execution and player confidence. In futsal, good passing ability helps a team maintain possession, build attacks, change the direction of play, escape pressure, and create scoring opportunities. This is supported by research on small-sided games and futsal-based training, which shows that technical and tactical behaviors improve when players are exposed to repeated ball-related actions in structured practice settings (Sarmiento et al., 2018; Clemente et al., 2021; Hidayat, 2022; Suryadi et al., 2023; Gomes et al., 2024; Purwanto et al., 2026; Putra et al., 2026). The umbrella review by Clemente et al. (2021) also reported that small-sided games have positive effects on technical and tactical behaviors, while another systematic review confirmed that SSG programs improve technical execution among young players.

In the context of FIKK UNM futsal players, the improvement from 5.15 to 7.10 has important practical meaning. These players are not only participants in sport activities, but also students in a sport and health sciences environment who are expected to understand training principles academically and apply them practically. Therefore, the success of paired passing drill training indicates that simple technical drills can become effective training content when implemented with clear objectives, adequate repetition, proper correction, and performance measurement. The large *t*-observed value also suggests that the treatment had a strong effect on the players' passing performance. If interpreted using the dependent-sample effect size formula, the result produces an estimated *d_z* of approximately 2.20, which indicates a very strong practical effect. This strengthens the argument that paired passing drill training is not only statistically significant, but also meaningful for futsal coaching practice.

Another important point is that paired passing drills may improve psychological and social aspects of performance. Passing requires trust between teammates. A player must believe that the receiver is ready, while the receiver must adjust movement and body position to support the passer. Through repeated paired practice, players become more confident, more communicative, and more disciplined in executing basic techniques. This supports the view that sport training develops not only physical and technical components, but also cooperation, responsibility, and tactical awareness (Setiawan et al., 2021; Muzaffar & Saputra, 2019; Husyaeri & Saleh, 2022; Suwandi & Fernando, 2025). In futsal, this cooperation is essential because the game is fast, compact, and highly dependent on collective movement.

Nevertheless, the findings should be interpreted within the scope of the research design. This study used a one-group pre-test-post-test design with 20 participants. This design is suitable for identifying improvement before and after treatment, but it does not fully control external factors such as additional practice, motivation, fatigue, or prior playing experience. Therefore, future studies are encouraged to use a control group, larger sample size, longer intervention duration, and additional variables such as passing speed, decision-making accuracy, receiving quality, and game performance indicators. Recent futsal performance studies also recommend combining technical tests with match-based indicators so that training effects can be understood more comprehensively (Plakias et al., 2024; Baek, 2025; Barreira et al., 2025).

Overall, the results of this study confirm that paired passing drill training significantly improves the passing ability of FIKK UNM futsal players. The improvement occurred because the training provided repeated technical execution, direct partner feedback, better ball control, improved passing

direction, and stronger cooperation between players. These findings support previous SINTA- and Scopus-indexed literature showing that structured technical training, paired practice, drill passing, and futsal-based exercises can improve passing accuracy and broader playing performance. Thus, paired passing drill training can be recommended as an effective, practical, and easily applied training model for developing fundamental futsal passing skills, especially in university-level sport coaching environments.

CONCLUSION

Based on the results of the study, it can be concluded that paired passing drill training had a significant effect on the passing ability of FIKK UNM futsal players. The descriptive analysis showed a clear improvement between the pre-test and post-test results. Before the treatment, the total pre-test score of 20 players was 103, with a mean score of 5.15 and a standard deviation of 1.089. After participating in the paired passing drill training program, the total post-test score increased to 142, with a mean score of 7.10 and a standard deviation of 1.071. This indicates an average improvement of 1.95 points, or approximately 37.86%, after the training intervention.

The results of the paired-sample t-test further confirmed this improvement. The t-observed value was 9.831, which was higher than the t-table value of 2.093 at $df = 19$ and $\alpha = 0.05$. In addition, the significance value was $0.000 < 0.05$. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. These findings prove that paired passing drill training is effective in improving passing accuracy, ball control, passing consistency, and player cooperation. Thus, this training model can be recommended as a practical and systematic method for developing fundamental futsal passing skills among FIKK UNM players.

REFERENCES

- Al Ghani, M. A., Yulianingsih, I., & Mulyana, I. H. (2024). Passing practice using targets to improve the results of futsal game passing accuracy in extracurricular Elementry Labschool UMJ. *Jurnal Pendidikan Jasmani (JPJ)*, 5(1), 17–25. <https://doi.org/10.55081/jpj.v5i1.2230>
- Alves, M. A. R., da Graça, D. C., Feitosa, M. C., & Soares, B. H. (2021). Scientific production on technical and tactical performance analysis in futsal. *Research, Society and Development*, 10(12), e365101220450. <https://doi.org/10.33448/rsd-v10i12.20450>
- Amani-Shalamzari, S., Khoshghadam, E., Doniaee, A., Parnow, A., Bayati, M., & Clemente, F. M. (2019). Generic vs. small-sided game training in futsal: Effects on aerobic capacity, anaerobic power and agility. *Physiology & Behavior*, 204, 347–354. <https://doi.org/10.1016/j.physbeh.2019.03.017>
- Bergmann, F., Gray, R., Wachsmuth, S., & Höner, O. (2021). Perceptual-motor and perceptual-cognitive skill acquisition in soccer: A systematic review on the influence of practice design and coaching behavior. *Frontiers in Psychology*, 12, 772201. <https://doi.org/10.3389/fpsyg.2021.772201>
- Candra, Mulyono, D., & Syahputra, W. (2022). Pengaruh latihan passing berpasangan terhadap keterampilan passing kaki bagian dalam siswa ekstrakurikuler futsal SMP. *Jurnal Muara Pendidikan*, 7(2), 378–385. <https://doi.org/10.52060/mp.v7i2.903>
- Clemente, F. M., Afonso, J., Castillo, D., Arcos, A. L., Silva, A. F., & Sarmento, H. (2021). Small-sided games: An umbrella review of systematic reviews and meta-analyses. *PLOS ONE*, 16(2), e0247067. <https://doi.org/10.1371/journal.pone.0247067>
- Clemente, F. M., Ramirez-Campillo, R., Sarmento, 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>

- Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications. <https://us.sagepub.com>
- Farhan, A., Tarigan, H., Kurniawan, C., & Priyono, D. (2025). The effect of moving and stationary paired passing training on improving the accuracy of futsal passing for extracurricular students SMPN 22 Bandar Lampung. *Jurnal Pendidikan Jasmani (JPJ)*, 6(2), 474–486. <https://doi.org/10.55081/jpj.v6i2.4446>
- Fernández-Espínola, C., Robles, M. T. A., & Fuentes-Guerra, F. J. G. (2020). Small-sided games as a methodological resource for team sports teaching: A systematic review. *International Journal of Environmental Research and Public Health*, 17(6), 1884. <https://doi.org/10.3390/ijerph17061884>
- Fian, M. I. Al, Sudarmono, M., Annas, M., & Fahmi, M. (2024). Pengaruh small sided games dan rondo terhadap kemampuan passing futsal MAN Tegal. *Indonesian Journal for Physical Education and Sport*, 5(2), 763–773. <https://doi.org/10.15294/inapes.v5i2.9598>
- Fitrian, Z. A., Manopo, B. A. H., & Fitrianto, E. J. (2022). Pengaruh latihan small sided games dan latihan rondo terhadap ketepatan passing pada pemain klub futsal Aldifa Banjarmasin. *Journal of Sports and Exercise Science*, 5(2), 50–58. <https://doi.org/10.26740/jses.v5n2.p50-58>
- Hidayat, R., Febriani, A. R., Listiandi, A. D., Festiawan, R., & Khurrohman, M. F. (2022). Futsal training based on mini game situation: Effects on mastery of athlete techniques. *Journal Sport Area*, 7(1), 117–124. [https://doi.org/10.25299/sportarea.2022.vol7\(1\).7725](https://doi.org/10.25299/sportarea.2022.vol7(1).7725)
- Karim, A. (2025). The effect of rondo training model on passing ability in futsal games of State Senior High School 2 Takalar. *Journal Physical Health Recreation (JPHR)*, 5(2), 313–319. <https://jurnal.stokbinaguna.ac.id/index.php/JPHR/article/download/3959/1835/>
- Khurrohman, M. F., Yudanto, Marhaendro, A. S. D., Festiawan, R., & Hidayat, R. (2021). Small-sided games: Alternative exercise to improve cognitive performance of youth futsal players. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, 7(1), 37–50. https://doi.org/10.29407/js_unpgri.v7i1.15667
- Kuroma, R. Z., & Adi, S. (2025). Analysis of training methods for passing accuracy in futsal sports: Systematic literature review. *COMPETITOR: Jurnal Pendidikan Kepelatihan Olahraga*, 17(1), 65–71. <https://doi.org/10.26858/cjpk.v17i1.70010>
- Malik, F. G., Badaru, B., Arimbi, Hudain, M. A., & Sudirman. (2024). Effect of drill passing practice on the level of passing accuracy in futsal games of futsal extracurricular participants SMP Negeri 2 Sungguminasa. *COMPETITOR: Jurnal Pendidikan Kepelatihan Olahraga*, 16(3), 603–609. <https://doi.org/10.26858/cjpk.v16i3.64698>
- Naser, N., Ali, A., & Macadam, P. (2017). Physical and physiological demands of futsal. *Journal of Exercise Science & Fitness*, 15(2), 76–80. <https://doi.org/10.1016/j.jesf.2017.09.001>
- Nua, A. A., Wani, B., Rewo, J. M., & Natal, Y. R. (2026). The implementation of futsal-based training to enhance passing skills of extracurricular students. *COMPETITOR: Jurnal Pendidikan Kepelatihan Olahraga*, 18(1), 1583–1593. <https://doi.org/10.26858/cpjok.v18i1.664>
- Oppici, L., Panchuk, D., Serpiello, F. R., & Farrow, D. (2019). Futsal task constraints promote the development of soccer passing skill: Evidence and implications for talent development research and practice. *Science and Medicine in Football*, 3(3), 259–262. <https://doi.org/10.1080/24733938.2019.1609068>
- Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS (7th ed.). Routledge. <https://doi.org/10.4324/9781003117452>
- Permana, R., Saputra, Y. M., & Nugraha, E. (2025). Drill passing using the inside foot to improve futsal passing accuracy. *Jurnal Pendidikan Jasmani dan Olahraga*, 10(1), 45–53. <https://ejournal.upi.edu/index.php/penjas>

- Prasetyo, A. T., & Abdulaziz, M. F. (2025). The effect of box pass and El Rondo training on passing accuracy in futsal extracurricular students at State Senior High School 1 Tunjungan, Blora District. *COMPETITOR: Jurnal Pendidikan Kepelatihan Olahraga*, 17(2), 1250–1259. <https://doi.org/10.26858/cpjok.v17i2.104>
- Rico-González, M., Pino-Ortega, J., Clemente, F. M., Rojas-Valverde, D., & Arcos, A. L. (2020). A systematic review of collective tactical behaviour in futsal using positional data. *Biology of Sport*, 38(1), 23–36. <https://doi.org/10.5114/biolsport.2020.96321>
- Rizqullah, D., Sidik, D. Z., & Mulyana. (2026). The effect of passing training using ankle weights with the rondo training method on improving futsal players passing accuracy. *Jurnal Pendidikan Jasmani (JPJ)*, 6(3), 604–612. <https://doi.org/10.55081/jpj.v6i3.4518>
- Saputra, K. G., & Mahfud, I. (2025). The effect of pass and move training on the passing skills of extracurricular futsal students of SMPN 13 Bandar Lampung. *Jurnal Pendidikan Jasmani (JPJ)*, 6(1), 157–163. <https://doi.org/10.55081/jpj.v6i1.4194>
- Sarmiento, H., Clemente, F. M., Harper, L. D., Teoldo, I., 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>
- Spyrou, K., Freitas, T. T., Marín-Cascales, E., & Alcaraz, P. E. (2020). Physical and physiological match-play demands and player characteristics in futsal: A systematic review. *Frontiers in Psychology*, 11, 569897. <https://doi.org/10.3389/fpsyg.2020.569897>
- Spyrou, K., Freitas, T. T., Marín-Cascales, E., & Alcaraz, P. E. (2023). Interpreting match performance in elite futsal. *Frontiers in Psychology*, 14, 1222343. <https://doi.org/10.3389/fpsyg.2023.1222343>
- Sugiyono. (2019). Metode penelitian kuantitatif, kualitatif, dan R&D. Alfabeta. <https://www.alfabeta.co.id>
- Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2022). Research methods in physical activity (8th ed.). Human Kinetics. <https://us.humankinetics.com>
- Utomo, M. P., Arifai, & Nugroho, R. A. (2023). Pengaruh latihan diamond passing terhadap ketepatan passing futsal SMAN 13 Bandar Lampung. *Journal of Physical Education*, 4(2), 8–16. <https://doi.org/10.33365/joupe.v4i2.4121>
- Zulkarnaim, M., Mas'ud, H., & Maemunah, M. (2022). Pengaruh latihan wall pass dan drill pass terhadap ketepatan passing siswa ekstrakurikuler futsal. *Jurnal Sosial Humaniora dan Pendidikan*, 1(3), 239–244. <https://doi.org/10.55606/inovasi.v1i3.661>