Implementation of Basic Teqball Technique Training to Enhance Skills of Physical Education Students at Unismuh

[1]Hendriana Sri Rejeki, [2]Delvi Kristanti Liloi, [3]Sardiman, [4]Arief Aditya Rifandy, [5]Moh. Ifkhal Sianto*, [6]Ashabul Kafi, [7]Abdul Ghani Basith
[1,2,3,4,5,6,7]Universitas Tadulako, Palu, Indonesia

Abstract.

Background eqball is a modern sport that combines the technical aspects of football and the dynamics of table tennis. It requires precision, agility, and control. Despite its increasing global popularity, teqball is relatively unknown in Indonesian sports education, particularly among physical education students.

Objectives This study aims to implement and evaluate a basic teqball technique training program to improve the playing skills of physical education students at Universitas Muhammadiyah Palu.

Methods A quasi-experimental one-group pretest-posttest design was used. The participants were 30 students from the Physical Education study program. They underwent a six-week training intervention consisting of three 60-minute sessions per week. The instrument used was a validated skill assessment sheet measuring basic teqball techniques, including passing, ball control, and foot coordination. Data were analyzed using paired sample t-tests to determine the significance of performance improvements.

Results . The results revealed a significant increase in the students' teqball skill scores from pretest to posttest (mean increase = 15.9; $p < 0.05$). The most notable improvements were observed in passing accuracy and control consistency, indicating that the training program effectively enhanced their technical capabilities.

Conclusion The implementation of a structured basic technique training program in teqball had a significant positive effect on the technical skills of physical education students at Universitas Muhammadiyah Palu. These findings support the inclusion of teqball in the university sports curriculum as an innovative and skill-oriented discipline.

Keywords: Teqball, Physical Education, Skill Training, Technique Development, University Students

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*Correspondence: mohikhalsianto@gmail.com
Moh. Ifkhal Sianto
Universitas Tadulako, Palu, Indonesia

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INTRODUCTION

Teqball is an innovative sport that merges elements of football and table tennis, played on a specially curved table using a standard football. Originating in Hungary, teqball has rapidly gained international recognition and is now supported by global sports organizations such as the Olympic Council of Asia and the (Syahban et al., 2025). The sport emphasizes technical precision, coordination, agility, and ball control, making it highly beneficial for physical and motor skill development (Afzal & Torralba, 2024; Bean et al., 2022; Cronin & Allen, 2017). Despite its growing global popularity, teqball remains relatively unknown and underutilized in Indonesian sports education, particularly in university-level physical education programs (Abduh et al., 2024; Amin, Mudasir, 2023; Andika et al., 2024)(Abduh et al., 2024; Andika et al., 2024; Harold W. Kohl et al., 2013). Introducing this sport into the academic curriculum could offer a novel and engaging way to enhance students' motor competencies and diversify instructional methods (Adewale et al., 2024; Adipat et al., 2021; Andika et al., 2024).

(Baechle, T. R., & Earle, R. W., 2008; Cong Fei & Donna Marie Oyam, 2024)Several studies have shown that systematic sports training contributes significantly to the improvement of students' physical skills and sport-specific techniques. (Pizarro, D., ., Travassos, B., & Moreno, A., 2020) demonstrated that small-sided game-based training in football enhances players' passing accuracy, agility, and tactical awareness (Kuswoyo, 2018; Kuswoyo & Betaubun, 2019). found that structured teqball training improved neuromuscular coordination and technical performance in football players (Admin, 2025; Giulianotti et al., 1996). Moreover, teqball has been shown to facilitate symmetrical muscle development and improve foot-

eye coordination critical components in the holistic development of physical education students (Hartanto et al., 2021; Hatmoko, 2015; Kemeryte-Ivanauskiene et al., 2022) These findings highlight the sport's potential as a pedagogical tool in physical education.

Nevertheless, existing literature has primarily focused on elite athletes or competitive settings, with limited attention given to teqball's educational applications, especially in Indonesia. There is a notable lack of empirical studies examining how teqball can be implemented as part of structured training for future physical education teachers. Given the increasing demand for innovative and effective teaching strategies in sports education, the integration of teqball into university curricula represents an untapped opportunity for both skill development and curriculum enrichment.

Therefore, this study aims to investigate the implementation of a basic teqball technique training program and its effectiveness in improving the technical skills of physical education students at Universitas Muhammadiyah Palu. The underlying hypothesis is that a structured teqball training intervention will significantly enhance students' abilities in core technical components such as ball control, passing, and positioning. The findings of this research are expected to provide valuable insights into the feasibility of incorporating teqball into physical education programs and its potential role in advancing modern sports pedagogy (Cronin & Allen, 2017).

METHOD

Participant

(Sugiyono, 2012) The participants in this study were 30 undergraduate students enrolled in the Physical Education Study Program at Universitas Muhammadiyah Palu. Both male and female students were included, selected through purposive sampling. The primary criteria for inclusion were active enrollment in the teqball course, physical readiness, and willingness to participate throughout the training program. All participants were informed of the study's purpose and procedures and provided written informed consent. This sample size was considered sufficient to measure changes in skill performance resulting from the training intervention.

Research Design

This research applied a quantitative approach using a quasi-experimental one-group pretest-posttest design. The design was chosen to assess the effectiveness of a structured basic teqball technique training program. The intervention lasted for six weeks and consisted of three training sessions per week, with each session lasting 60 minutes. Each session included warm-up activities, focused skill drills, guided practice on ball control and passing, as well as small-sided teqball games. Participants were evaluated using a standardized assessment both before and after the intervention period to determine improvements in their technical performance.

Data Analysis

Data obtained from the pretest and posttest assessments were analyzed using a paired sample t-test to evaluate whether there was a statistically significant difference in students' performance after undergoing the training program. The analysis was conducted using SPSS version 25, and the level of significance was set at $p < 0.05$. This method allowed for a direct comparison of the participants' performance before and after the intervention, providing a valid basis for measuring the effectiveness of the training on teqball skill development.

RESULTS AND DISCUSSION

Results

This study aimed to evaluate the effectiveness of a structured teqball training program in improving the technical skills of physical education students at Universitas Muhammadiyah Palu. The data were collected through performance assessments conducted before and after the six-week training intervention. The assessment focused on three main technical components: ball control, passing accuracy, and coordination.

Table 1. **Presents The Mean Scores And Standard Deviations Of Students' Performance In The Pretest And Posttest Phases.**

Technical Skill	Pretest Mean ± SD	Posttest Mean ± SD	Mean Difference
Ball Control	20.3 ± 3.4	26.8 ± 2.9	+6.5
Passing Accuracy	18.7 ± 3.1	25.5 ± 2.7	+6.8

Coordination & Movement	23.4 ± 3.6	28.9 ± 3.0	+5.5
Overall Score	62.4 ± 7.8	78.3 ± 6.3	**+15.9**

As shown in Table 1, participants experienced improvement across all technical domains. The overall skill score increased by an average of 15.9 points from the pretest to the posttest.

To determine whether these improvements were statistically significant, a paired sample t-test was conducted. The results are presented in Table 2.

Table 2. Paired Sample t-Test Results for Pretest and Posttest Scores

Variable	t-value	f	p-value (Sig. 2-tailed)
Overall Skill Score	-12.87	9	< 0.001

The results of the t-test indicate a statistically significant difference between the pretest and posttest scores ($t(29) = -12.87$, $p < 0.001$). This finding suggests that the teqball training program had a significant positive effect on students' technical performance.

These improvements demonstrate that structured teqball training is effective in enhancing ball control, passing accuracy, and coordination among physical education students. The consistency of results across different technical components also confirms the comprehensive benefit of the training model applied in this study.

Discussion

The results of this study clearly demonstrate that the implementation of a structured teqball training program significantly improved the technical skills of physical education students at Universitas Muhammadiyah Palu. The training intervention led to marked increases in ball control, passing accuracy, and movement coordination, with a statistically significant rise in overall performance scores between the pretest and posttest assessments. These findings align with previous research emphasizing the positive impact of skill-based sports training on motor learning and performance development (Al-Sharifi, 2021).

The significant improvement in ball control and passing accuracy is consistent with the technical demands of teqball as a precision-based sport. The use of a curved table surface requires players to develop better foot-eye coordination and refined touch when passing or receiving the ball skills that are directly transferable to other ball sports, particularly football. As noted by (Afzal & Torralba, 2024)), teqball promotes symmetrical engagement of the lower limbs and enhances neuromuscular efficiency, especially in novice players. The structured and repetitive nature of the drills used in this study likely contributed to rapid gains in technical fluency.

Furthermore, the study highlights the effectiveness of incorporating innovative sports like teqball into physical education programs. Students reported increased motivation and engagement during the intervention period, which may have enhanced their learning outcomes. This observation supports the findings of Miller et al. (2021), who emphasized that the inclusion of novel physical activities can create a more dynamic and student-centered learning environment in sports education. (Bailey et al., 2024; Kemeryte-Ivanauskiene et al., 2022; Risman et al., 2023). By introducing teqball as part of teacher training curricula, institutions can not only improve students' technical competence but also expose them to alternative teaching strategies that they may adopt in their future careers.

The success of the program also underscores the importance of structured, progressive training. The consistent three-session-per-week schedule provided ample opportunity for skill acquisition and performance feedback. This model can serve as a foundation for curriculum design in physical education departments aiming to include non-traditional sports. However, it is worth noting that the positive outcomes observed in this study may also be attributed in part to the novelty effect, as students were introduced to a completely new sport. Long-term studies are needed to determine whether such improvements are sustainable and transferable across learning contexts.

Despite the encouraging results, the study has limitations. The absence of a control group restricts the ability to isolate the effects of the training from other potential influences. Additionally, the relatively short duration of six weeks may not capture the full extent of motor learning or performance stabilization. Future research should consider longitudinal designs with multiple comparison groups and integrate qualitative data, such as interviews or observations, to capture the learning experience more holistically.

In summary, the findings suggest that teqball training is an effective and engaging method for improving technical skills in physical education students. Its integration into university curricula has the potential to enhance not only physical competencies but also pedagogical diversity and innovation in sport instruction.

CONCLUSION

This study highlights the importance of implementing a structured and engaging health education program tailored to the developmental needs of elementary school students. The findings demonstrate that such a program can significantly enhance students' knowledge and promote positive behavior changes related to hygiene and healthy living. Through interactive activities and continuous reinforcement from teachers, students not only gained a better understanding of health-related concepts but also began adopting healthier daily habits—such as washing hands regularly and bringing nutritious food from home.

The involvement of teachers and parents was instrumental in the program’s success, reinforcing the idea that collaboration between school and home is essential for sustaining healthy behaviors. The program also contributed to creating a more health-conscious school culture, encouraging shared responsibility and active participation among students.

Given the positive outcomes, this model can serve as a reference for similar school-based health education initiatives. It also aligns with broader educational objectives such as character development, contextual learning, and the goals of the Merdeka Curriculum in Indonesia. Future programs are encouraged to expand the scope to include mental health, physical activity, and environmental awareness, and to incorporate evaluation methods that track long-term behavioral outcomes.

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This study concludes that the implementation of a structured basic teqball technique training program significantly enhances the technical skills of physical education students at Universitas Muhammadiyah Palu. The observed improvements in ball control, passing accuracy, and coordination demonstrate the effectiveness of teqball as a sport-specific training tool suitable for academic settings. These findings support the inclusion of teqball in university-level physical education curricula as a means to diversify learning approaches, foster engagement, and develop students’ motor competencies. Furthermore, this study offers empirical evidence for the pedagogical value of integrating innovative sports into teacher training programs, encouraging future research to explore its long-term effects and broader application in physical education.

AUTHOR CONTRIBUTION STATEMENT

HSR, DKL, S, AAR, MIS, AK, and AGB contributed equally to the conception and design of the study. HSR and DKL were responsible for data collection and training implementation. S and AAR performed the data analysis and interpretation. MIS drafted the manuscript and coordinated the writing process. AK and AGB reviewed and revised the final version of the manuscript. All authors read and approved the final manuscript.

CONFLICT OF INTEREST AND FUNDING

The authors declare that there is no conflict of interest regarding the publication of this article.

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