The Effect of Multiball Training on The Target Accuracy of Forehand Strokes and Backhand Drives of Table Tennis Games: Literature Review

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KEYWORDS	ABSTRACT
multibal training; forehand; backhand	Table tennis is a sport that has been popular in the community and loved by the community. This can be seen both in cities and in the countryside, where people of different ages participate in table tennis games, both men and women. The purpose of using this method is to obtain information by the power of scientific sources. This research review is taken from journals, articles, books or literature reviews that are relevant to the content of related problems. Analysis data collection techniques using Google Scholar Database, Science Direct and Pubmed. Meta-analysis is a method for summarizing various research results quantitatively. After reviewing research materials from selected journals, the next step is to analyze and discuss the journal. In this review, 10 journals were examined in an article analysis, consisting of five international journals and five national journals Peer-reviewed journals have publication years between 2015 and 2022. experiments, surveys, and meta - Analysis is used as a research method. The average subject in this study was about 5 to 40 subjects. Based on a review of data analysis results from 10 journals, it can be concluded that training using the multiball method can provide results and increase skills or skills in forehand drive and backhand drive of table tennis games

Introduction

Table tennis is a sport that has been popular in the community and loved by the community. This can be seen both in cities and in the countryside, where people of different ages participate in table tennis games, both men and women. According to Mochammad Sajoto that: "The rapid development of sports activities today is not only due to the application of modern technology, but more importantly, the termination of these activities is carried out jointly by experts who uniquely know human science." (Asri et al., 2017)

Table tennis is a type of game with a fast tempo. In order for you to play the game with a fast tempo, it needs reaction speed and also coordination between limbs well. One of the most powerful forms of coordination needed when playing table tennis is eye-hand coordination. The movement of the ball punch in table tennis is aimed at a fast-moving ball. To be able to hit a fast-moving ball well requires a good level of hand-eye coordination. Accurate hits on fast-moving targets require precise hand-eye coordination and timing.

Table tennis is one of the fastest racquet sports in the world, where players do not have much time to plan and launch strokes (Padulo et al., 2016). Table tennis can run optimally if coaching is done from an early age, there is time and opportunity to practice more so that it is hoped that these children can grow into good table tennis athletes and can master all the basic techniques of playing table tennis. One of the most important basic techniques to master in table tennis, without ruling out other techniques.

The basic technique in table tennis that is often practiced and mastered is the forehand technique. Forehand punches are considered the basis of hitting because these punches are easy to understand, forehand punches are generally among the strongest blows because the body is not an obstacle when making a punch, in contrast to backhand punches. Method is a method used in a predetermined training or teaching process and serves as a bridge that connects training or teaching material with the goals to be achieved (Tarju & Wahidi, 2017).

There are several methods of table tennis training according to (Hodges et al., 2007), table tennis training methods include practicing with other players, practicing with coaches, practicing alone, machines and also multiball. Various training methods in table tennis, one of the exercise methods used to improve the accuracy of forehand and backhand strokes is the multiball training method. The goal to be achieved from the following multiball training is to determine the effect of multiball training on the results of forehand and backhand drive skills.

Training using the multiball method has the aim of knowing the magnitude of the increase in forehand and backhand skills through the multiball training method in table tennis games to add insight into the practice method using the multiball method for forehand and backhand punch skills in table tennis games with the multiball method It is expected that later students will have a much better hitting accuracy ability than before.

Research Methods

The research method used is literature review. The following article review uses the meta-analysis method, which is a method used to evaluate several research findings on the same problem (Muktiani et al., 2020). According to (Muktiani et al., 2020) there is a meta-analysis method measuring analysis that must be done as follows:
1. Determine the problem or topic to be assessed
2. Determine the analysis period
3. Find analytics reports related to key topics
4. Read the title and abstract of the review article
5. Focus on problems, data analysis methods and findings from review articles
6. Compare all analysis findings by category
7. Review the data analysis methods used in article reviews
8. Drawing conclusions

The purpose of using this method is to obtain information by the power of scientific sources. This research review is taken from journals, articles, books or literature reviews

that are relevant to the content of related problems. Analysis data collection techniques using Google Scholar Database, Science Direct and Pubmed. Meta-analysis is a method for summarizing various research results quantitatively. The data collection technique is a meta-analysis method using Google Scholar and Database (Science Direct). The search used keywords Indonesian multiball exercises, forehand and backhand drives in table tennis, a study conducted in the last 15 years. From these criteria, 10 articles were obtained that were used as review references with research journal criteria using the keyword multiball as an instrument to measure forehand and backhand skills in table tennis.

Results and Discussions

Researcher (Year)	Heading	Purpose	Design / Population	Result
(Kadeira & Hafidz, 2021)	The Effect of Multiball Training on the Target Accuracy of Forehand Punches and Backhand Drive in Makota Malang Table Tennis Athletes	To improve the quality of forehand strokes and backhand drives through *multiball exercises*	Experiment / 15 poor city table tennis athletes	Research shows that the comparison of variables of target accuracy ability forehand drive strokes has an influence on multiball training on table tennis playing skills, with the results of the correlation analysis obtained a correlation coefficient of 0.230, meaning low or weak categories. While the backhand drive has an influence on multiball training on table tennis playing skills, a correlation coefficient of 0.972 is obtained, meaning that it is a strong category. The relationship between the two given is quite strong and needs to be considered in multiball training on the skills of table tennis athletes in Makota Malang.
(Nikolakakis et al., 2020)	Effect of an intervention program that uses elastic bands on the improvement of the forehand topspin stroke in young table tennis athletes	To determine the effect of training programs with elastic bands on increasing table tennis topspin forehand strokes	Experiments / 24 athletes	Shows that both groups there is a statistically significant improvement regarding Topspin Forehand strokes because it helps athletes to respond

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Researcher (Year)	Heading	Purpose	Design / Population	Result
				more effectively and adapt more easily
(Agustiawan et al., 2022)	The Effect of Multiball Training Method and Hand Eye Coordination on Skill Improvement Forehand Drive Tenis Meja	To find out the difference between multiball massed practice and multiball distributed practice through hand eye coordination.	Experiment/ 26 athletes	Shows that there is a difference in influence between the multiball massed practice and multiball distributed practice FHitung (65.346) > Ftabel (4.49) methods, meaning that the multiball distributed practice exercise method has a better influence than multiball massed practice.
(Gu, 2019)	Effects of table tennis multi-ball training on dynamic posture control	The purpose of this study was to assess the effects of multiball exercise and dynamic balance on SEBT performance measures of Men and women	Experiment / 12 athlete tennis limits	The study showed that during table tennis multiball exercises, men should have a regulatory protocol to compensate for the deficit observed in phase II, but girls should be given a protocol in phase I.
(Jumarsa & Murniat, 2020)	The Effect of Multiball Training Method Against Backhand Drive Stroke Accuracy in Table Tennis	Aims to determine the effect of the multiball training method on table accuracy drive backhand tenis.	Experiment / 20 athlete tennis limits	The results showed that there was a significant influence of the multiball training method on Table tennis backhand drive accuracy of 22%.
(Anggara, 2021)	Effects of Forehand Exercises Smash Multiball Against Table Tennis Performance	Know the effect of exercise forehand smash Multiball to Table Tennis sports achievements in Improving Ability Forehand Smash	Experimental / 15 People	Statistically that practice method forehand smash multiball dapat provide meaningful improvements to sporting achievement Table Tennis in improving forehand smash ability by gaining value t count of 3.92 and t table α = 0.05 of 2.05

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Research er (Year)	Heading	Purpose	Design / Population	Result
(Mahyudi & Donie, 2019)	The Effect of Multiball Training Method on the Accuracy of Forehand Drive Strokes	To know the effect of exercise multiball against shot accuracy Forehand Drive in Table Tennis Athletes	Experiments / 25 athletes	There is an increase in the accuracy of the shot Significant forehand drive through exercise methods multiballs in table tennis athletes, with the acquisition of tcount test coefficient = 2.92 > ttable = 1.833 with the average Pre test and Post test Multiball training method 78.6
(Budi & Arwandi, 2020)	The effect of multiball training methods on the accuracy of forehand strokes and backhand drives in table tennis games	to find out how much influence the multiball training method has on the accuracy of forehand and backhand drive strokes in Table Tennis Games	Experimenter / 6 people	Based on the results of the data that Multiball Training has a significant effect on the accuracy of forehand drive and backhand drive strokes.
(Cao et al., 2020)	The impact of eye-closed and weighted multi-ball training on the improvement of the stroke effect of adolescent table tennis players	Knowing the impact of eye-closed and weighted training (EWMT) on the effects of punching teenage table tennis players	Experiments / 24 athletes	Based on the results that by using the EWT method, the stability of the backspin stroke has improved more significantly than topspin, compared with the traditional exercise method, the EWMT method can improve the hitting effect of teenage table tennis players in terms of accuracy and stability more significantly; thus the EWMT method can prove the effect of backspin strokes is more significant than topspin in terms of stability.
(Babar et al., 2021)	Analysis of table tennis skills: an assessment of shadow practice in	To find out the performance of college female athletes,	Experiments / 20 athletes	The study revealed that both the Experimental Group and the Control Group had significant

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Research er (Year)	Heading	Purpose	Design / Population	Result
	learning forehand and backhand drive	especially those who use shadow practice in learning forehand and forehand standard table tennis.		changes in their scores in the post-test testing phase. Both the Experimental Group and the Control Group were able to maintain their scores. However, the Experimental Group was only able to maintain their scores on RT.

After reviewing research materials from selected journals, the next step is to analyze and discuss the journal. In this review, 10 journals were examined in an article analysis, consisting of five international journals and five national journals Peer-reviewed journals have publication years between 2015 and 2022. experiments, surveys, and meta - Analysis is used as a research method. The average subject in this study was about 5 to 40 subjects. After reviewing the data and the results of the analysis, it was found that from 10 journals that had been studied stated that training using the multiball method could effectively affect the level of forehand drive and backhand drive proficiency. Forehand drive and backhand drive skills when playing table tennis can be improved through repetitive practice methods effectively and efficiently. Athletes' differences in hand eye coordination will be a very important assessment when determining training methods that match the character of each athlete to achieve optimal training results in accordance with their potential. The training method that is often used to provide increased proficiency in table tennis is the multiball training method. The success of an athlete can be obtained by training that is carried out systematically and structured.

Conclusion

Based on a review of data analysis results from 10 journals, it can be concluded that training using the multiball method can provide results and increase skills or skills in forehand drive and backhand drive of table tennis games.

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