

**The Relationship of Eye and Hands Coordination on Badminton Netting Shots
at Tamasya PB Guardians Oku****Ibnu Yasa¹, Syafaruddin^{2✉}, Meirizal Usra³**Physical Education and Health, Sriwijaya University, Indonesia, Indonesia¹²³**Article History**

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Abstract

Net shots in a match play a very important role because they can make it difficult for the opponent to take the shuttlecock properly if they hit the net correctly. In netting, the coordination of the eyes and hands plays a very important role when the opponent's ball comes towards the front, the hand starts the stance to hit the shuttlecock slowly and in a straight or crossed direction, either to the right or left. This study aims to determine the relationship between eye-hand coordination and netting shots. This research is quantitative research with correlational techniques. The research sample consisted of 30 respondents who were assisted by PB Tamasya OKU. Sampling used the total sampling method. Data collection used the tennis ball throwing and catching test as an instrument to test hand-eye coordination and the netting test as an instrument to test netting hitting ability. Data analysis was carried out univariately and bivariately with the Chi Square test at a confidence level of 95% with a significance value of $p \text{ value} \leq 0.005$, then H_a was accepted and $p \text{ value} > 0.005$, then H_a was rejected. The results of the statistical test between the independent variable and the dependent variable obtained a significant value ($p \text{ value}$) of 0.000, which shows that there is a relationship between eye and hand coordination and netting strokes in PB Tamasya OKU's coaching staff.

How to Cite

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INTRODUCTION

Sport is a body movement activity, starting from the upper and lower limbs. It is said to be an activity because it has a goal in the end, namely the quality of life increases, thereby making the body healthy and fit. Sport is physical activity carried out regularly to maintain body fitness, improve health, and achieve welfare goals (Syafaruddin et al., 2021). Exercise needs to be done in everyday life to maintain a healthy and fit body, but we also have to arrange a regular schedule to get maximum results (Nababan, 2022). One of the sports that can be used as a vehicle to improve physical fitness and performance is badminton (Usra et al., 2020).

Badminton is a game that involves one person against one person or two people against two people, using a racket and a shuttlecock as playing tools, which is individual and is played on a closed field or an open field in the form of a flat field made of concrete, wood, carpet. marked with a line as the boundary of the field and limited by a net in the middle of the playing field (Syafaruddin et al., 2022). Badminton is a sport that uses tools called rackets and shuttlecocks, which are played by two people or four players (Shofiana, 2021). Badminton is a racket sport played by two players (singles) or two pairs (doubles). The aim of this game is to hit the shuttlecock (cocktail or badminton) towards the opponent, over the net, and fall on the opponent's court, thereby getting a score (Majid et al., 2021).

From the opinion above, it can be concluded that badminton is a sport or game that uses a racket to hit a shuttlecock into the opponent's area with the aim of gaining points and winning the match.

According to the (Setiawan et al., 2020), it states that Coordination is an adjustment affects a group of muscles and during the movement that gives indication of various skills. Coordination is the ability to unites various motor nervous systems, which separately, into an efficient movement pattern (Usra et al., 2022). Meanwhile, according to (Haekal & Basri, 2021) coordination is coordinating, eyes are sense to see, sense of sight. Hand-eye coordination is a skill vision system to coordinate information received through the eyes for manage, guide, and direct hands in the fulfillment of assigned tasks, in this case badminton netting (Kadir et al., 2018). Eye-hand coordination uses the eyes for immediate attention and hands to do netting (Wacono, Janiarli, 2021).

When playing badminton, good eye and hand coordination will help the player to hit the

target correctly. In badminton netting, eye and hand coordination is needed when the ball from the opponent comes towards the front with the hand starting the hitting stance. shuttlecocks slowly and in a straight direction or across either to the right or left. Netting shots can be done effectively if the eyes and hands are well coordinated (Syafaruddin, Hartati, et al., 2020).

According to the (Marzuki, 2023), netting is a shot made near the net, directed as close to the net as possible, hit with a very fine touch of force. A good netting shot is if the ball is hit smoothly and rolls slightly close to the net. Meanwhile, according to the (Syafaruddin, Aryanti, et al., 2020), netting is a shot made close to the net and aimed as close as possible with a smooth stroke. The net shot in badminton is a basic stroke apart from the service and lob, because apart from defending, the net stroke can also be used to attack by directing the shuttlecock in a cross direction (right or left) in order to outwit the opponent (Sukmawati & Tarmizi, 2022).

In badminton, netting is a key element because it can be a way to dominate the game by controlling the net area (Wali et al., 2021). According to (Yundarwati & Hariyanto, 2023), players or pairs who have good netting skills can force opponents to make defensive moves and take advantage of opportunities to score points. On the other hand, errors in netting can give the opponent an advantage. Therefore, netting techniques and strategies are an important part of badminton skills.

Based on the definition above, you can concluded that netting is a a soft blow but can be deceptive opponent because the ball fell near the net area and can be directed/crossed to the left or to right.

METHODS

This research is a correlation research by connecting the independent variable with the dependent variable, namely data collection is carried out at one time with the aim of finding out the relationship between eye and hand coordination on netting strokes in students assisted by PB Tamasya OKU. The method used is a quantitative method with (Assyakurrohim et al., 2022) correlational techniques. The relationship between hand-eye coordination as an independent variable (X) and the netting strokes of students assisted by PB Tamasya (Y) is dependent.

The sample in this study used the method total sampling that is, samples are taken from the total population if the population is less than

100 (Fadli, 2021). The total number of samples used in this research was 30 respondents who were assisted by PB Tamasya OKU.

Data collection techniques are carried out to obtain accurate data, so in collecting research data you must collect (Iyakrus et al., 2022) tests and measurements. In this research, the tennis ball throwing and catching test was used as an instrument to test hand eye coordination, and the netting test was used as an instrument to test netting hitting ability. Data analysis in this study was used to determine the frequency distribution of hand-eye coordination as well as the frequency distribution of netting strokes. Apart from that, this data analysis is also used to determine the relationship between two variables, namely between the independent variable and the variables they depend.

The statistical test used in this research is the testChi Square (Amrullah et al., 2020) at a confidence level of 95% with a significance value of $p \leq 0.005$ then H_a is accepted and $p > 0.005$ then H_a is rejected. This research was carried out in the Ozan Hall building, at the PB Tamasya OKU club on 14 August 2023-16 August 2023, Tj. Agung, District. West Baturaja, Ogan Komerling Ulu Regency, South Sumatra 32126.

RESULTS AND DISCUSSION

The results of this study prove that hand-eye coordination is related to netting strokes in badminton. Eye-hand coordination is the ability of the vision system to coordinate information received through the eyes to control, guide and direct the hands in fulfilling a given task, in this case badminton netting.

Tabel 1. Distribution of Eye and Hand Coordination

Eye and Hand Coordination	Frequency (n)	Percentage (%)
Good	17	56.7 %
Not Good	13	43.3 %
Total	30	100 %

The **Tabel 1** above shows that as many as 17 people (56.7%) from those assisted by PB Tamasya OKU have eye and hand coordination in the good category and as many as 13 people (43.3%) from those assisted by PB Tamasya OKU have eye and hand coordination in the poor category. Based on these data, the eye and hand coordination of PB Tamasya OKU's trainers is dominant in the good category.

Tabel 2. Netting Stroke Distribution

Eye and Hand Coordination	Frequency (n)	Percentage (%)
Netting Stroke		
Good	17	56.7 %
Not Good	13	43.3 %
Total	30	100 %

The **Tabel 2** above shows that as many as 17 people (56.7%) from those assisted by PB Tamasya OKU have netting ability in the good category and as many as 13 people (43.3%) from PB Tamasya OKU's assistance have netting ability in the poor category. Based on this data, the netting ability of the PB Tamasya OKU coaches is dominant in the good category.

Tabel 3. The Relationship between Eye and Hand Coordination on Badminton Netting Shots in OKU Tourism PB Coaches.

Eye and Hand Coordination	Netting Stroke						p-value
	Good		Not Good		Total		
	n	%	n	%	n	%	
Good	17	100%	0	0%	17	100%	0.000
Not Good	0	0%	13	100%	13	100%	

The results of the bivariate analysis between eye and hand coordination of badminton netting strokes in **Tabel 3** show that in the good eye and hand coordination category, 17 respondents also had good netting strokes. In line with these results, in the poor hand-eye coordination category, 13 respondents also had poor netting strokes.

Statistical test results with testchi squareobtainedp value ≤ 0.05 , namely 0.000, so it can be concluded that there is a significant relationship between eye and hand coordination on badminton netting shots.

The results of this study after a chi square correlation test between the independent variables, namely eye and hand coordination on the dependent variable, namely badminton netting shots, get a significant value (p value) of 0.000 < 0.005 which indicates that there is a relationship between eye and hand coordination on netting shots in PB Tamasya OKU.

The results of this study prove that eye-hand coordination is related to netting shots in badminton games. Eye-hand coordination is the ability of the vision system to coordinate informa-

tion received through the eyes to control, guide, and direct the hands in the fulfillment of a given task, in this case netting badminton. According to Mauludy (2017) Coordination is the ability to unite various motion nervous systems, which are separate, into an efficient pattern of motion. Crawford (in Setiawan, et al.2020) states that eye-hand coordination also known as (hand-eye coordination) is the coordinated control of eye movements with hand movements, and processing of visual information to achieve a person's ability to coordinate the eyes and hands into a series of movements that are intact, comprehensive and continuous precisely in a controlled rhythm of motion that gives rise to feedback reactions. As with netting shots, good eye coordination plays a big role in the accuracy of one's netting shots.

According to Hermawan Aksan (2012, in Astri & Zarwan, 2018) said netting is a shot that is carried out near the net, directed as close as possible to the net, hit with a touch of smooth power. A good netting shot is if the ball is hit smoothly and twists very close to the net. Based on the studies that have been found in this study, it is found that to get good netting shot results, eye and hand coordination also plays a role in performing netting shots so as to get good results as expected.

CONCLUSION

Based on the results of the research that has been carried out, the following results were obtained. Most of the respondents at PB Tamasya OKU have good eye and hand coordination, namely 17 respondents (56.7%). More than half of the respondents in PB Tamasya OKU had netting strokes in the good category, namely 17 respondents (56.7%). There is a relationship between eye and hand coordination on badminton netting strokes in the OKU Tourism PB with value 0,000.

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