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Effects of Training Methods and Achievement Motivation on Badminton Skills

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Abstract

The purpose of this study was to determine the effect of training methods and achievement motivation on badminton skills. The method used in this study was an experimental research method with a factorial design. Participants of this study were 28 badminton athletes chosen using a systematic sampling technique. The instruments used were the badminton games performance test and achievement motivation questionnaire. Data analysis techniques used statistical descriptions, the two-way ANOVA test, and the Tukey test. The results of the study concluded that there was an effect of training methods and achievement motivation on badminton playing skills. It is suggested that further research is conducted by involving more participants, thus the results can be more generalized.

INTRODUCTION

In connection with the increasing achievement, badminton becomes a popular sport among Indonesian people. It is proven by the number of badminton athlete involved in every event or match held at international championships. Badminton is a game that uses a racket as a bat and a shuttlecock as an object to hit. (Yane, Cahyadi, & Razikin, 2021). It can be played on a closed or open court with a rectangular playing field marked with lines, bounded by a net to separate the playing area and the opponent area; this game can be played by men and women, both individually or in pair as well as in mixed pairs (Yane et. al. 2021). One can be said to be able to play badminton when they can make several strokes, such as service, lob, drive, netting, dropshot, and smash (Cahyadi, Subarjah, Yudiana, & Hidayat, 2019).

The Indonesian Badminton Association is the main badminton organization in Indonesia that advances badminton achievements by holding championships or competitions at various regional levels and ages. In this case, it is intended to find good seeds of players who will of course be projected to become national players representing Indonesia at the international level. The Badminton Association club accommodates it. Therefore, it is necessary to continue coaching program in badminton. Player regeneration must be considered so that Indonesia badminton achievements do not decline in performance. This could be related to what was stated by the Head of the Development and Achievement Division of the Indonesian Badminton Association that regeneration can also be caused by the lack of junior tournaments which is quite a hindrance to the regeneration program for badminton athletes (Permana, 2021).

One of the psychological factors in improving achievement is motivation. Motivation is the impetus that exists within humans to achieve a goal leading to the results to be obtained (Ginanjar, 2015). In badminton, the quality of the training is the main support for achieving sports achievement, while the quality of the training itself is supported by internal factors, namely the athlete ability, talent and motivation, as well as external factors, including the knowledge and personality of the coach, facilities and infrastructure, utilization of research results, and competitions. One of the factors in athletes that determines the success or failure of the

athletes in achievement is achievement motivation. Achievement motivation is an encouragement that a person has to realize in work so that the results exceed the results of other people, while the amount of encouragement to achieve depends on the magnitude of the expectations to be achieved (Mubarok, 2021). Furthermore, achievement motivation is a person encouragement to do their best and it will become an achievement if the person outperforms others and gives himself satisfaction (Efendi, 2016).

Besides that, the training program also has a vital influence on an athlete performance and playing skills. To increase the athlete ability, all training activities must be planned and arranged in a short, medium, and long term training program (Mubarok, 2021). Furthermore, Harsono stated that, in training, there are four aspects, namely physical training, technical training, tactical training, and mental training (Mubarok, 2021). The success of technical mastery in badminton is obtained from a regular correct practice supported by the right training program. Therefore, by practicing diligently and being discipline and directed under the guidance of a qualified trainer, you can master various basic techniques of playing badminton properly. Thus, to become a good and accomplished badminton player, it is required to master the basic badminton techniques. The basic technique does not only involve the mastery of hitting techniques, but also involves techniques related to badminton games.

In the badminton training program, the method of conducting training should be used. The drill and playing training methods are the methods used to conduct trainings in badminton games. The drill method is an exercise that prioritizes not only on one trial, but also in each exercise (Haris, Wahyudi, & Yudasmar, 2020). Furthermore, according to Sugiyono, in the drill method, athletes perform movements according to the trainer instructions and do them repeatedly (Atmaja & Tomoliyus, 2015). Meanwhile, the playing method is an exercise for beginners because it emphasizes on fun, challenges, creativity, problem solving, and motivation activities (Haris et al., 2020). Furthermore, the playing method is an effective step to help improve sport achievements and maintain the athlete physical condition (Junaidi, 2019).

The results of previous studies, both related to drill and playing methods, had not revealed the athlete

achievement motivation used in these two methods and were directed to the skills of various sports, such as table tennis drive skills (Atmaja & Tomoliyus, 2015), passing skills in futsal games (Haris et al., 2020), tennis groundstroke skills (Irawadi & Yusuf, 2021), shooting skills in soccer games (Istofian & Amiq, 2016), service skills in volleyball games (Agasy & Asim, 2022), physical conditions of players in volleyball games (Junaidi, 2019), football passing skills (Syahputra, Yenes, Irawann, & Padli, 2021), and basic short distance running techniques (Podungge & Liputo, 2021). Therefore, this research aimed to find out the impact of achievement motivations and training methods on badminton skills.

METHODS

The method used in this study was experimental research method using a factorial design. Basically, the factorial design is a modification of the posttest-only group or pretest-posttest control group design with or without random assignment which allows the addition of additional independent variables or sometimes called moderator variables which can affect the results of the dependent variable (Fraenkel, Wallen, & Hyun, 2012). This study used a 2x2 factorial design, so it had two independent variables, namely the drill method and playing method. Meanwhile, the moderator variable consisted of high and low achievement motivation groups. Previously, all participants filled out the achievement motivation questionnaire to determine the level of achievement motivation using the split-half method. Thus, there were four research groups, including high motivation drill method group, low motivation drill method group, high motivation playing method group, and low motivation playing method group.

Participants

The research participants were 28 male athletes in one of the Badminton Association clubs in Pontianak.

Instrument and Procedure

Related to the sampling technique, this study used systematic sampling according to the research design by paying attention to with or without random assignment statements (Fraenkel et al., 2012). In systematic sampling, all samples are given serial numbers using odd and even numbers (Ginanjar, 2019). This research used a systematic sampling technique for selecting par-

ticipants. The odd serial numbers were for the high motivation drill method group and even serial numbers were for the high motivation playing method group. Meanwhile, for participants with low achievement motivations, the odd serial numbers were for the low motivation drill method group and even serial numbers were for the low motivation playing method group. Each of group in this research consisted of 14 people.

Materials and Apparatus

The instrument used to determine badminton playing skills in this study was badminton playing tests, consisting of long serve, defensive lob, dropshot, and smash (Hidayat, 2011). Meanwhile, to find out achievement motivations, an achievement motivation questionnaire, based on McClelland and consisted of 24 valid test items and a reliability of 0.92, was used (Ridho, 2020). The lattice of achievement motivation instrument can be seen in Table 1.

Table 1. The lattice of achievement motivation instrument

Variable	Indicator	Test items	
		Positive	Negative
Achievement motivation	Responsibility	1,2	13,14
	Considering the risks	3,4	15,16
	Creative-Innovative	5,6	17,18
	Paying attention to feedback	7,8	19,20
	Task completion time	9,10	21,22
	Having realistic goals	11,12	23,24

Table 2. Program

Week	Drill	Playing
1-3	Service practice using targets in the service field area with a 30 cm high rope	Playing badminton using service shots by inserting the shuttlecock into the box in a 4 vs 4 format
4-6	Lob practice with variations in pairs	Playing badminton using a combination of Lob, Dropshot, and Underhand shots in a 2 vs 2 format
7-9	Dropshot practice with variations in pairs	Playing badminton using a combination of Lob, Dropshot, and Underhand shots in a 2 vs 2 format
10-12	Practicing Netting Shots with Variations in pairs	Playing badminton using a combination of Lob, Dropshot, Netting, and Underhand shots in a 2 vs 2 format
13-15	Smash Punch Practice with Variations in pairs	Playing badminton using a combination of Lob, Dropshot, Netting, Underhand, and Smash punches in a 2 vs 2 format

Procedures

This research was conducted for 1.5 months, 3 days a week. Differences of training programs can be seen in Table 2.

Data Analysis

Data analysis techniques employed statistical descriptions (mean and standard deviation), two-way Anova test, and Tukey test using SPSS according to the calculation procedure (Ginanjari, 2021).

RESULT

The results of the statistical description of each research group related to the mean and standard deviation can be seen in Table 3. The results of the hypothesis test using the two-way Anova test can be seen in Table 4.

Table 3. Description of statistics

Variable	Mean	Std. Deviation
High motivation Drill method	9.14	7.57
Low motivation Drill method	3.79	5.38
High motivation play method	4.71	2.99
Low motivation play method	4.93	3.27

Table 4. Two-way Anova test

Variable	F	Sig.
Method	4.25	0.04
Motivation	7.83	0.01
Method*Motivation	4.71	2.99

Table 5. Tukey test

Variable	Mean Difference (I-J)	Sig.
Drill >< High Motivation Playing Method	6.36	0.00
Drill >< Low Motivation Playing Method	-1.14	0.92

From Table 3, in the method column, an F value of 4.25 was obtained with a significant 0.04 <0.05, meaning that there was an effect of the training method on badminton playing skills. In the motivation column, an F value of 7.83 was obtained with a significant value of 0.01 <0.05, meaning that there was an influence of achievement motivations on badminton playing skills. In the method*motivation column, an F value of 8.8 was obtained with a significant 0.01 <0.05, meaning that there was an interaction between the effect of training methods and achievement motivations on badmin-

ton playing skills, which can also be seen in Figure 1. Because there were interactions, further tests were continued using the Tukey test (Ginanjari, 2021). The calculation results can be seen in Table 5.

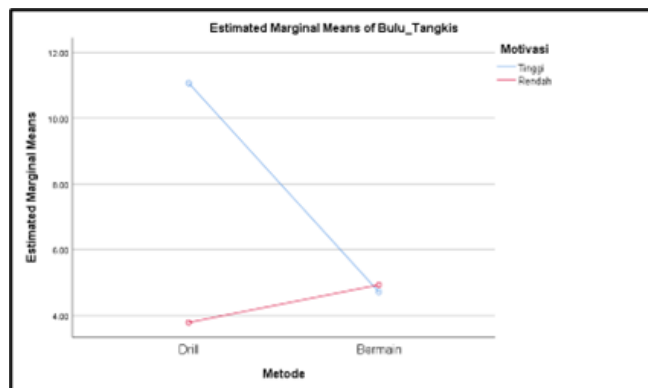


Fig 1. Interactions between method and achievement motivation

DISCUSSION

From the results of the study, it was found that there was an effect of training methods on badminton skills. It indicates that the training method has a positive impact on badminton skills. In this case, the training method had a significant role. In addition, this study also provided data that drill and play methods had different impacts on badminton skills. The results of previous research also stated that the drill method had a significant effect on table tennis drive skills (Atmaja & Tomoliyus, 2015), passing skills in futsal games (Haris et al., 2020), tennis groundstroke skills (Irawadi & Yusuf, 2021), shooting skills in soccer games (Istofian & Amiq, 2016), and underhand service skills in volleyball games (Agasy & Asim, 2022). In addition, the playing method also has a significant effect on the physical condition of players in volleyball games (Junaidi, 2019).

Interaction is the action of two or more types of objects that mutually influence or have an effect on one another. Based on the results of the research, it was found that there was an interaction between training methods and achievement motivations on badminton skills. It might be because there was a collaboration between training methods and achievement motivations that affected badminton skills. It can be said that training methods and achievement motivations are related to

each other. This is in accordance with the opinion stating that motivation can influence athlete behaviors both in trainings and competitions (Mubarok, 2021). Apart from that, using the drill method can motivate you to practice (Atmaja & Tomoliyus, 2015) and support the statement that the playing method is an exercise that places more emphasis on a method that generates motivation (Haris et al., 2020).

The results of the study, in general, showed that there was a difference between the drill and playing methods on badminton skills on high achievement motivation and low achievement motivation groups. The drill method made a better and significant contribution to both high achievement motivation and low achievement motivation groups. It could be caused by the nature of the drill method that was carried out repeatedly in a serious way aimed to perfect skills. By practicing repeatedly and increasing the intensity of the exercise, the movements will become skilled and automatic so that the quality of the movements will also increase. The drill method, which is conducted repeatedly, can basically build competencies related to student skills (Adamakis & Dania, 2020). Furthermore, the application of the drill method in physical education settings is an important step to give students the opportunity to reach their potential (Steinberg, Chaffin, & Singer, 1998). In addition, high achievement motivation groups also made an equally important contribution. In other words, it concludes that the higher the person achievement motivation, the more motivated he is to make a movement. It is relevant to Yusuf statement that students who have high motivation are better than those who have low motivation in participating in learning (Ginanjar, 2015). In addition, this study supports the statement that the drill method is better than the playing method for the underhand serve skills in volleyball (Agasy & Asim, 2022) and passing skills in futsal (Haris et al., 2020).

CONCLUSION

Based on the results of the research, this study concludes that there is an influence of training methods and achievement motivations on skills in playing badminton. These results also showed different results related to achievement motivation. Both students with high motivation and students with low motivation were better at using the drill method than the playing method.

This study provides suggestions to further research. Further reasearch should increase the number of participants involved, thus the results obtained can be more generalizable.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

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