

THE EFFECT OF SKIPPING EXERCISE ON IMPROVING THE PHYSICAL CONDITION COMPONENT IN BADMINTON SPORT

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Abstract

This research started from illustration and analysis of the writer about the importance of physical condition in Badminton. A Badminton athlete need a good physical condition component, there are flexibility, endurance, agility, and leg power. Refer to the movement, an athletes should has an agility and endurance to reach the shuttlecock and get to the middle position after shot to get ready, the wrist flexibility also will affect the shot and a strong leg power result in high jump and affect their Badminton. For improving endurance, agility, empower the foot and leg, also train the wrist flexibility, writer give a treatment such as practice with skipping. The method used in this research is experimental in testing hypothesis with sample t test. The participants is 18 athletes. The instrument is used goniometer test (wrist flexibility), vertical jump test (leg power), badminton shadow test (agility), bleep test (endurance). While tabulation of data and data analysis used descriptive technique is percentage of minimum, maximum, average, standard deviation and pre test with post test. According to the average basic movement skill in pre test to the post test, showing a significant upgrade. The result of this research explain that skipping significantly affect the upgrade of wrist flexibility component, leg power, agility and endurance in badminton sport. This research expected will be useful for the coach or builder of badminton.

Keyword:

badminton sport, influence of skipping exercise, physical condition component.

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Introduction

The success of a badminton athlete is achieved from regular and earnest training, systematically and continuously supported by the quality of coaching, sports coaching management, improvement in the procurement of adequate facilities and infrastructure. Judging from the characteristics of the badminton game, a type of sport that requires many athletes to master techniques and have excellent physical condition, without neglecting the tactical and mental aspects, Aksan (2012, p. 14) stated "at a high level of games, especially in singles, this sport demands excellent fitness requiring aerobic stamina, explosive strength, speed, and accuracy". Regarding this, Harsono (1988, p. 100) stated that "there are four aspects of training that athletes need to pay close attention to and train, namely (1) physical training, (2) technical training, (3) tactical training, and (4) mental training".

Physical condition training is the process of developing the ability of physical movement activity that is carried out systematically and progressively improved to maintain or improve the degree of physical fitness, in order to achieve optimal physical work ability. The main goal is to increase the functional potential of athletes and develop biomotor abilities to the highest degree. Physical condition is one of the important elements in every sport. Therefore, the exercise of physical condition needs to receive serious attention carefully and systematically planned so that the level of physical freshness and functional ability of the body's tools is better. As Satriya et al. (2010, p. 51) expressed, "physical exercise is the most important part for all sports. The goal is to shape the condition of the body as a basis for improving endurance, fitness, and achievement of an achievement".

Based on the explanation above, physical condition is one of the important aspects in sports including badminton, therefore as a badminton athlete it is very important to have a degree of excellent physical condition. Through a well-programmed process of physical training, such factors can be mastered. In other words, the debtor must have excellent physical fitness qualities. This will have a positive impact on mental fitness, psychic, which ultimately has a direct effect on the appearance of playing techniques. Satriya et al. (2010, p. 61) stated that "the components of physical condition that need to be trained consist of, (1) Strength (strength), (2) Flexibility (flexibility), (3) Speed (speed), and (4) Endurance (endurance)".

A badminton player needs the ability of good physical condition components, including flexibility, endurance, agility, and leg power muscles. Judging from the movement, an athlete must have agility and endurance in chasing the shuttlecock and returning to the middle after hitting to prepare to return, as well as the flexibility of the wrist will affect the blow and strong limb power will produce a high jump and will affect the quality of the punch in badminton.

The description above and judging from the movement, a badminton athlete must precisely have flexibility, endurance, agility, and good leg power. In badminton games, an athlete must be able to move quickly in different directions, have the endurance to do work for a relatively long time, have the ability to move in the widest possible joint space and have the ability of the leg muscles to exert maximum

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stepping in a very fast time, therefore an athlete to achieve high achievements must have all four components of good physical condition.

To find out the development of the athlete, a simple training method and tool is needed, namely jumping using a rope or skipping. Badminton players are encouraged to be skilled and master this form of rope jumping exercises. The influence of this exercise is very helpful for fostering the strength of the feet, ankles, endurance, coordination of movements, and helps to improve the quality of wrist movement. Aksan (2012, p. 92) suggests "this exercise is excellent for fostering endurance, leg agility, and speed and training the ability to move the wrist more flexibly and strongly. The exercise process can be done by jumping one leg, alternately (like a regular run), jumping two legs, and still the shape of the variation". As stated by Hetti (2010, p. 47) "the rope jumping or skipping exercise program is excellent for fostering endurance, foot agility, leg strength, coordination of movement, and speed and training the ability to move the wrist more strongly and flexibly". Meanwhile, according to Usman (2010, p. 50) "rope jumping exercises have many benefits, including to foster endurance, agility, wrist flexibility, strengthen the feet and legs and toes". From the opinions that have been explained, it can be concluded that skipping exercises are one type of exercise that is very good for fostering endurance, limb strength, agility and training the ability to move the wrist to be more flexible and strong.

Based on the description that has been described, the researcher intends to conduct a study with the title "the effect of skipping exercises on the improvement of the physical condition component in badminton".

Methods

In this study, the authors used experimental methods. This method is used on the basis of the consideration that the nature of experimental research is to try something to find out the influence or consequences of a treatment or treatment. On the other hand the author wants to know the influence of the bound variables that are investigated or observed. Sugiyono (2015, p. 107) explains as follows "experimental research can be interpreted as a research method used to find the influence of certain treatments on others under controlled conditions". Meanwhile, Lutan et al (2014, p. 146) explain "experimental research is only a type of research that directly seeks to influence the main variables and the type of research that can actually test hypotheses about causal relationships". Based on the above opinions it can be given rise to that the experimental research method is a type of research used to look for the influence of certain treatments so that his research can actually test hypotheses about causal relationships.

The population used in this study was students who took part in Badminton UKM at the Indonesian University of Education (UPI) which amounted to 256 people. The reason for choosing this population is because the author is a coach at the UPI Badminton UKM. So that regarding the licensing of this research can be easier and faster. Then the authors are easier to collect research data.

In this study, the sampling technique that the author used was the Purposive sampling method (aimed sample), which was carried out by taking the subject not

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based on strata, random, or regions but based on the existence of a certain purpose. Furthermore, Sugiyono (2011, p, 85) explained that purposive sampling is a sample determination technique with certain considerations. Based on this opinion, the determination of the sample in this study was badminton UKM athletes totaling 18 people, 10 sons and 8 daughters. The research instruments used are the Goniometer test (Wrist Flexibility), the Vertical Jump test (Limb Power), the Badminton Shadow test (Agility), and the Bleep test (Endurance).

Result

Tables and figures should be embedded in the text. Tables should be created in open form with a word processor and cited consecutively in the text. The table title should be written at the top with Bookman Old Style 9 and fill the table with Bookman Old Style 8. Image titles are written at the bottom with the same font conditions as the table. The data obtained from the test results and measurements is still meaningless because it is still basic data that has not been processed. To provide a clearer picture the basic data must be processed and analyzed statistically. The data collected in the study will be processed and analyzed based on the research steps, the results of the data processing and analysis can be seen in the table below.

Table 1
Minimum Gain, Maximum, Average and Standard Deviation, Wrist Flexibility

Test	n	Minimum	Maximum	Average	Standard Deviation
<i>Pre test</i>	18	39	70	55.83	9.79
<i>Post test</i>	18	47	80	64.72	10.95

Table 2
Minimum, Maximum, Average and Standard Deviation Gains, Limb Power

Test	n	Minimum	Maximum	Average	Standard Deviation
<i>Pre test</i>	18	29.40	45.30	39.35	4.68
<i>Post test</i>	18	31.60	55.10	44.79	6.64

Table 3
Minimum, Maximum, Average and Standard Deviation Gains, Agility

Test	n	Minimum	Maximum	Average	Standard Deviation
<i>Pre test</i>	18	21.70	29.30	25.16	2.32
<i>Post test</i>	18	20.10	27.60	23.42	2.52

Table 4
Minimum, Maximum, Average and Standard Deviation Gains, Durability

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Test	n	Minimum	Maximum	Average	Standard Deviation
Pre test	18	40.10	54.50	47.30	4.71
Post test	18	44.30	56.80	50.87	4.20

Table 5
Wrist Flexibility T-test Results

Test	Average	Standard Deviation	Gain	t _{test}	P-value	Notes
Pre test	55.83	9.79	1.88	-	2.566	0.015
Post test	64.72	10.95				

Based on the table above, it is known that the sig value (p-value) for pre-test testing with post test = 0.015, it can be concluded that the sig value (p-value) for pre-test testing with post test is 0.015 and $0.015 < \alpha = 0.05$ means H_0 is rejected. So it can be concluded that there is a significant influence of skipping exercises to increase wrist flexibility in badminton.

Table 6
Limb Power T-test Results

Test	Average	Standard Deviation	Gain	T _{test}	P-value	Notes
Pre test	39.35	4.68	2.18	-	2.837	0.008
Post test	44.77	6.64				

Based on the table above, it is known that the sig value (p-value) for pre-test testing with post test = 0.008, it can be concluded that the sig value (p-value) for pre-test testing with post test is 0.008 and $0.008 < \alpha = 0.05$ means H_0 is rejected. So it can be concluded that there is a significant influence of skipping exercises to increase leg power in badminton.

Table 7
Agility T-test Results

Test	Average	Standard Deviation	Gain	t _{test}	P-value	Notes
Pre test	25.16	2.32	0.67	2.143	0.039	Ho rejected
Post test	23.42	2.52				

Based on the table above, it is known that the sig value (p-value) for pre-test testing with post test = 0.039, it can be concluded that the sig value (p-value) for pre-test

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testing with post test is 0.039 and $0.039 < \alpha = 0.05$ means H_0 was rejected. So it can be concluded that there is a significant influence of skipping exercises to increase agility in badminton.

Table 8
Endurance T-test Test Results

Test	Average	Standard Deviation	Gain	T _{test}	P-value	Notes
Pre test	47.30	4.71	0.90	-	0.022	Ho rejected
Post test	50.87	4.20		2.398		

Endurance Score Processing Data Based on the table above, it is known that the sig value (p-value) for pre-test testing with post test = 0.022, it can be concluded that the sig value (p-value) for pre-test testing with post test is 0.022 and $0.022 < \alpha = 0.05$ meaning H_0 was rejected. So it can be concluded that there is a significant influence of skipping exercises to increase endurance in badminton.

Discussion

Based on the results of the research that has been carried out, there are several things that researchers will convey as input and suggestions after carrying out a series of actions. Researchers hope that some of the following suggestions can be useful, especially for researchers and generally for all parties related to coaching. Some of the things that researchers will convey as input and suggestions are as follows:

1. For sports coaches or coaches, the author advises especially for badminton sports readers in general to apply the principles in training physical condition by using more effective and more efficient forms of exercise, rising in terms of the implementation of the exercise and understanding the purpose of the exercise, so that the athlete realizes the importance of the purpose of the exercise.
2. This form of exercise using skipping can be used in improving flexibility, leg power, agility and endurance. This exercise can also be one of the variations of the exercise and can be further varied by the coach so that it becomes a new variation for badminton athletes.

Conclusion

Based on the results of research, calculations, and data analysis, the author can draw conclusions about the effect of skipping exercises on improving the components of physical condition in badminton, as follows:

1. Skipping exercises have a significant effect on improving wrist flexibility in badminton.
2. Skipping exercises have a significant effect on increasing leg power in badminton.
3. Skipping exercises have a significant effect on increasing agility in badminton.



4. Skipping exercises have a significant effect on increasing endurance in badminton

This can be seen from the results of hypothesis testing showing that the value of the four components of the physical condition p -value < 0.05 , so it can be concluded that skipping exercises have a significant effect on improving the physical condition component in badminton.

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