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The Influence of Imagery on The Improvement of Three Point Shoot Ability in Basketball Games

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Abstract

The purpose of this study was to determine the effect of imagery on improving the three point shoot ability. The population of this study are extracurricular participants of men's basketball SMK Negeri 1 Gombong with twenty number of students and the sampling technique used is total sampling. The research method using True Experimental method, that is Pretest-Posttest Control Group Design. The control and experimental group was divided by matched by subject (M-S) method. The data analysis used are normality test, homogeneity test and hypothesis test. The results showed that the exercise of imagery has a significant effect on the improvement of basketball three point shoot skills. The average of pretest is 14,3 and the average of posttest is 17,7, therefore the influence of imagery to improve three point shoot ability is 19,5%. The conclusion of this research that there is significant influence from imagery exercise to increase basketball three point shoot ability of SMK Negeri 1 Gombong's extracurricular participants.

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INTRODUCTION

Basketball is one of the many extracurricular activities carried out by secondary schools. By participating in basketball extracurricular activities, it is expected that the participants can improve the basic skills and techniques of playing basketball, becoming the school's core team that represents basketball matches, and is expected to gain achievement in basketball.

One of the main goals in basketball games is the creation of scores, namely by shooting. (Abdul Rohim, 2008) One type of shot in a basketball game is a three-point shot. (Kosasih,2008; Ambler, 2008 ; Oliver, 2007)

In accordance Hopla(2012) with the relevant basketball game style. That is simple basketball, three-point shots today are used as the main weapon for scoring numbers. At a sports analysis conference in the United States held in 2017, Seth Partnov, one of the speakers who is the Research Director of Milwauke Bucks, stated that in the present era the fundamental defense in basketball games that is applied is to protect the paint area. Therefore, the three-point shot is now increasing in frequency. In one team there can be four shooter players. This is shown by the role of power foward which now concludes as a three-point shooter.).

Even statistics show that this year the center position scored 1479 three-point shots. More than the previous four seasons combined. In the present era almost all basketball teams apply a simple philosophy of basketball. Drives and lay-up shots are now rarely used. While the medium shot from the perimeter area and the three point shoot has a larger portion. This is marked by the increase in the three point shoot trend since 2011 until now. And inversely, the portion of two-digit shots has decreased.

Cooper (1975) said the results of the analysis of the three-point shots show that the movement in this shot is more difficult than other shots because of the longer distance, making it more difficult to adjust the coordination and rhythm of the shot. There is a form of training that is still not well known among the basketball team, namely the exercise of imagery.

Seikh & Korn (1994) stated that Imagery exercises occur in the brain and muscles. When an athlete imagines a particular exercise skill, the muscle will contract, this is the same condition as the athlete displays a range of skills in the actual context. It's just that the magnitude is smaller so it doesn't cause any physical movement. Imagery training is one of the effective training methods to be given to anyone, including basketball players who want to improve their three point shoot skills. Because in practice imagery someone will imagine and put each movement according to the limbs that work, so that the nerves that move the body members will be used to a technique that is being studied in his mind. Neuromuscular stimulation associated with the brain in our body will make it easier for the person concerned to transform something imagined into actual physical action or movement. And in the end the movements that have been stored in the minds of players can become easier to do while practicing actual techniques in the field. (Fauzee , 2009; Abdin, 2010, Kosslyn et al, 2001)

Three-point shoot skills of extracurricular participants at SMK 1 Gombong are still not consistent and need to be improved. Based on the observations that the authors did, at the 2016 AOS Cup basketball event the average for three point shooting attemps was a lot in each match, but the comparison between the three point shoot made and the three point shoot attemp was still very small at around 5%. Therefore imagery training is expected to be applied to facilitate basketball extracurricular participants in SMK Negeri 1 Gombong in an effort to increase the ability of three-point shots.

METHODS

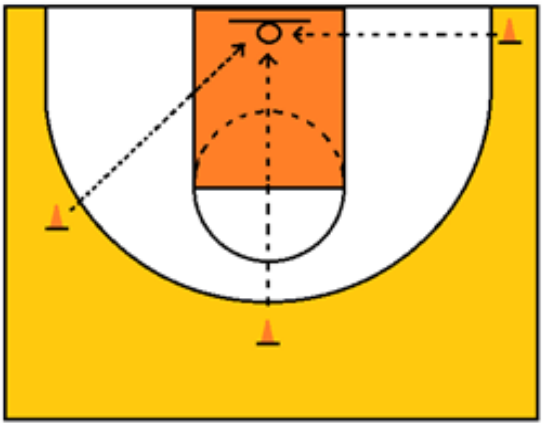
This study uses a quantitative approach or numbers because the research conducted is a type of experimental research. So the analysis is based on numbers using statistical analysis. That is a research activity that begins with an initial test then gives treatment or exercises to the subject and ends with a test to be tested for the truth. The experimental method is the most appropriate method to investigate the causal relationship (causal relationship) between two factors that are deliberately generated by researchers by reducing or eliminating other factors that can interfere (Suharsimi Arikunto, 2006: 12).

This experimental research design uses the Pretest-Postest Control Group Design. In this design there are two groups selected through ordinal pairing. Previously the pretest was carried out to find out the initial state. After going through a certain treatment, posttest was carried out to find out the condition after the treatment. And in the end the results are to find out the difference between the experimental group and the control group.

The population in this study were all male students who took basketball extracurricular activities at SMK Negeri 1 Gombong, amounting to 20 students. In this study the sampling technique used is saturated sampling. According to Soegiyono (2010: 61) saturated sampling is a

sample determination technique if all members of the population are used as samples. This is often done if the population is relatively small, less than 30 people. Another term saturated sample is a census, where all members of the population are sampled. Then the sample used in this study is all male students of SMK Negeri 1 Gombong who take basketball extracurricular activities. The number of students consists of 20 students consisting of tenth grade students and eleventh grade students.

The research instrument used in this study was a three-point shot with an angle of 0, 90 and 135 degrees. This instrument is taken from previous research conducted by M. Dzul Fikri in 2013. Assessment is the number of scores obtained during the three point shoots as much as 15 times, and each ball gets a score of one. Here you will see more scores, the results will be better. The test was started with a warm up and continued by trying to do a three-point shot several times, then carried out a three-point shot test 15 times.



Picture 1. Test position for three point pada sudut 0^o, 90^o and 135^o

Instrument testing tests were carried out on the members of the Gombong Basketball Enthusiast community to find the validity and reliability of the instruments that will be used in this skill test. The amount of validity in the trial of this instrument is 0.731 and the reliability in the trial of this instrument is 0.813, with r-table at 5% significance is 0.444. Because r-count is greater than r-table, the instrument is said to be valid and reliable. So that it can be used for research.

RESULTS AND DISCUSSION

From the results of data analysis can be known, the results of the control group normality and experimental groups are normally distributed. This is shown from the test value of the significance of normality of the control group 0.968 and the experimental group 0.505. The homogeneity test serves to test the similarity of the sample, namely the uniformity of the sample variants taken from the population. The results of this test provide information that the p value (Sig.) Is 0.840, because p (Sig.)> 0.05, it is said that a variant of two or more data population groups is the same or homogeneous, so data analysis can be continued with parametric statistics.

The t-test in the analysis of this study was conducted twice. Based on the results of the t-test it is known that the mean (mean) pre-test of the experimental class is 14.3 and the average pre-test value of the control class is 14.0. The t-count value obtained is 0.213. The value of t-table at a significance level of a = 0.05 is 2.101. From this description it can be seen that t-count is smaller than the t-table, this means there is no significant difference between the experimental group and the control group, both have the same level of ability before the experimental group is given imagery training treatment. This means that if there is an increase in value after treatment, it is assumed that the increase in value is due to the treatment given.

Furthermore, based on the results of the t-test it is known that the average post-test experimental class is 17.7, while the average post-test of the control class is 14.6 and the t-count value is 2.798 with a significance of 0.012. The value of t table with df = 18 at a significance level of a = 0.05 is 2.101. From the explanation above it is known that the t-count value is greater than the t-table value of 2.798> 2.101. If the t-count value is greater than the t-table value, then there is a difference in significance. Thus the null hypothesis (Ho) which states "The absence of the influence of imagery training on increasing the three-point skills of basketball basketball shoots for male extracurricular participants of SMK Negeri 1 Gombong" was rejected. The results showed that the average value of the post-test experimental class was 17.7 greater than the average (mean) post test in the control class which was 14.6. This means that imagery training has a significant effect on increasing the three-point shoot results of male extracurricular participants of SMK Negeri 1 Gombong.

Aiming to find out how much skill improvement is in the form of percentages, a percentage analysis of influence is needed. The results of the analysis can be seen in the table below.

Table 1. The Influence of the Control and Experiment Group

Group	Mean Pre test	Different Post test-Pre test	Influence (%)
Control	14,0	0,6	4,2%
Experiment	14,3	3,4	23,7%

From the **Table 1** above it can be seen that

the use of imagery training in three-point basketball ball training increased 23.7%. Whereas in the control group who did the three point shoot exercise without imagery exercise also experienced an increase of 4.2%. The difference in the percentage of the process between the experimental group and the control group was 19.5%. So it can be concluded that imagery training has an effect of an increase of 19.5% on increasing the three point shoot skills of male basketball extracurricular members of SMK Negeri 1 Gombong in 2017.

Discussions

This study aims to determine the effect of imagery training on improving the three-point shoot skills of the extracurricular participants of SMK Negeri 1 Gombong. Treatment for 16 meetings with frequency of 2 to 3 times a week for 90 minutes per session. The analysis was carried out using the t-test to determine the effect of imagery training on increasing the three point shoot skill. Based on the results of the analysis that has been obtained, it can be seen that the three-point shoot exercise accompanied by imagery training has a significant effect on the results of the three-point shoot basketball basket for extracurricular participants at SMK Negeri 1 Gombong. The results of the t test showed that there were an increase in the three point shoot results of the extracurricular participants of SMK Negeri 1 Gombong. This is indicated by the value of t-count = 2.789> t-table = 2.101, meaning that there is a significant influence. Thus the null hypothesis (Ho) which reads "There is no influence of imagery on the increase in the ability of three points of basketball shoots for extracurricular participants in SMK Negeri 1 Gombong" was rejected. This means that imagery training has a significant effect on increasing the three-point shoot results of extracurricular participants at SMK Negeri 1 Gombong.

The group that did the basketball three-point shoot exercise which was accompanied by imagery training increased 23.7%. Whereas in the control group who did the three point shoot exercise without imagery exercise also experienced an increase of 4.2%. The difference in the percentage of the process between the experimental group and the control group was 19.5%. So it can be concluded that imagery training gives an effect of an increase of 19.5% on the increase of three point shoots for male basketball extracurricular members of SMK Negeri 1 Gombong in 2017.

Imagery training itself is one way to help improve the skills of a player or athlete in the process of mastering difficult techniques in the sport he is practicing. According to Komarudin (2013: 85) imagery exercises proved to provide benefits for athletes / students to re-create the motion experience in their brains, so that the athlete made it possible to display the motion patterns well. Furthermore Hopla (2012) states that a basketball player can improve their overall skills through mental imagery. For example, players who want to improve their shooting skills can take a few minutes and imagine becoming a successful shooter. Each step in the shooting process is visualized and felt in the imagery exercise.

According to Wissel (2000) today some practitioners basketball have used mental imagery exercises that describe structured mental training techniques to create an optimal exercise performance. Based on research that has been conducted on students of basketball extracurricular participants at SMK Negeri 1 Gombong, it is known that imagery exercises can improve the three point shoot skills. This is because imagery exercises provide a deeper experience not only in the experience of physical motion, but also the experience of motion in students' cognitive. So that students will find it easier to master difficult and complex movements. However, students must be really serious when doing this exercise if they want to get maximum results, because imagery training requires good concentration in the process.

The study of the effect of imagery training on the improvement of three-point bolabket basketball technique for extracurricular participants at SMK Negeri 1 Gombong provides an opportunity for students to be able to master and improve the three-point shoot skill well. Besides intu students also get knowledge about what is imagery training and its uses related to efforts to improve mastery of techniques that exist in basketball. The results of this study also inform that the treatment of imagery exercises can be used as an effective way to improve the mastery of the three point shoot skills of basketball extracurricular participants.

From the discussion above, it can be concluded that imagery training has an effect on increasing the three-point skills of basketball extracurricular participants in SMK Negeri 1 Gombong. Thus this imagery exercise can be a solution for students of basketball extracurricular participants in an effort to improve the ability of the three point shoot. This was indicated by the results of the study which showed that there were differences in the improvement of three point shoot technique skills between students who were given imagery exercise and students who were not given imagery exercise treatment.

DISCUSSION

In accordance with the result findings elaborated in the previous part, some aspects related to this research implementation are presented as fol-

lows.

First, the aspect of social behavior is categorized as good. Human is a growing being that always thrive on living. Children's growth and development are rapid and fundamental in their early age. The children's development depends greatly on the stimulation given in the early age. It is in line with Singh (2016: 282) opinion stating that

"… the important part of social development is on how children interact in their environment to serve the children's need on developing their social skill and mental."

This opinion supports the research findings in which respondents learn to provide curriculum which enables children to learn to interact and exercise and then develop their emotional and social skills. The environment this study took place enables children to interact with each other, so it can develop good social and emotional skills. On the contrary, Su et al. (2016: 159-160) argues that the inability to interact in physical activities through sports causes inadequacy of social behavior including the lack of self-conception. The argument concludes that the high level of self-conception will improve children motivation to be actively participate in physical activities and exercise.

The development of human resources who are physically, psychologically, mentally, and emotionally healthy depends on the growth and development processes. The development involves physical, cognitive, emotional, and psychological growth of children at the age of infancy and toddlerhood (0-3 years old), early childhood (3-6 years old), and middle childhood (6-11 years old). A study done by Güçlü (2016: 2) proves that the social skill level and the personality of an athlete enhance as his/her physical and sport abilities are improving. It proves that movement development is closely related to children's social and character development. Moreover, it is supported by a research finding revealed by Vlahov (2014: 289) that early age children's movement development can predict their physical fitness and health when they are in senior high school.

Second, regarding the aspect of fine motor skill, it can be concluded based on the obtained mean score that the children's motor skills are categorized as good. It indicates that children of early age get opportunities to develop fine motor skill in a good education. Early childhood is the golden age of individual development span. At this period, children have the greatest motor skills, emotional, cognitive, and psychological growth. Children's development is a holistic process. Thus, stimulation should be provided in holistic activities. Perceptual motor skill can be used to develop fine motor skill as Hong (2010: 77) says that activities, such as arranging blocks, building Legos, drawing, or playing games requiring fingers usage are essential in improving children's fine motor skill.

Third, based on the research findings, it is concluded that the children's language skill aspect is categorized as good. 61.91% of the children have good vocabulary mastery. Besides, in relation with children's cognitive and language skills, Santrock(2017) said its (50) states that language skill is influenced by other developmental aspects especially physical and intelligence aspects. Children who interact using different languages show significant language skill development. As it is shown from the research findings, each child's development has different physical development as in language skill development. There are children who grow rapidly or slowly. Fourth, in accordance with the children's gross motor skill, the respondents of the study (4-6 years old) have well-coordinated gross motor skill. Their movements are in accordance with their need and desire. This period is shown with hyperactive and movements. The children tend to perform plenty agile and energetic gross motor skill movements. Hence, the age range (4-6 year old) is the ideal period to learn motor skills in some activities such as: writing, drawing, painting, swimming, playing football, and doing athletics activities. Kelly (2010: 20) states that in that period children have mastered locomotors skills in order to participate in various games, sport, and physical fitness activities.

The understanding of children growth and development pattern is really needed by parents and teachers in order to take care of the environments where children are stimulated to learn. Children's growth and development are rapid processes. Every process leads to the skills. However, there is no sufficient evidence in relation to benefits of children's physical activities and sports. Vella (2014; 6) states maintaining information on children's development on report cards can help parents and teachers in optimizing children's movement development.

Children's motor skills development, social and emotional development, and abilities to acquire and use language are very essential in developing new skills needed for their growth in every stage of development to become the pinnacle of future generation. Parents and teachers can enhance children's exploration and curiosity by improving their growth and development holistically. Jarani (2015: 11) states that there needs to be an intervention on physical education program and curriculum to improve children's physical abilities. It is in line with the research done with children in Albania. Based on the explanation, children's motor skills development will become a good potential when supported

with sufficient preparation on a good physical education program and a curriculum that is developed based on children's movement development.

Based on the previous discussion, it can be inferred that children's motor skills development is an important part in the human life span. On the other hand the more important thing is how children innate motor skills can be optimized in a program suitable with children needs, so they can benefit from doing appropriate physical activities. Veldman et al. (2017:53) states that children's physical and sports inactivities should be noticed; especially when they are incapable in most everyday life skills. This indicates that motor skills development is an aspect people should focus on in order to make sure that children will grow as qualified and competitive human resources.

CONCLUSION

Based on the research results obtained with the data analysis and hypothesis testing, it can be concluded that there is a positive and significant effect of treatment of imagery exercises to increase the ability of three point shoot the basketball game participants extracurricular student of SMK Negeri 1 Deal. Basketball extracurricular student participants who obtain additional imagery exercises on an exercise program three point shoot, was found to increase the ability of the more significant when compared with students in extracurricular basketball participants who do not obtain additional imagery exercises on an exercise program three point shoot .

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