THE EFFECT OF IMAGERY ON BEGINNER TENNIS PLAYERS' FOREHAND DRIVE SKILL

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Abstract

Objectives: The objective of this study is evaluating the effect of imagery on beginner tennis players' forehand drive skill

Methods: In this study, 32 beginner tennis players, whose ages ranged from 20 to 22 yr, recruited as purposive random sampling, were divided into two groups. Sixteen beginner tennis player were in the experimental group and sixteen beginner tennis player were in the control group. The experinmental group received both imagery and technical practice and the control group performed technical practice only without received imagery. Both groups performed forehand drive test (hewitt tennis test), pre- and post-intervention. Changes in performance (pre- vs. post-intervention) of each group were analyzed using paired t-test and independent t test.

Results: The forehand drive skill (p=0.002) of the eksperimental group increased significantly. The control group showed increases in the forehand drive skill (p=0.026). independent t-test analysis showed a significant (p= 0,021) different mean between experimental group and control group. The result of data analysis indicated that the experimental group had increasing the forehand drive skill higher than control group.

Conclusions: imagery can improve forehand drive skill. Imagery can be implemented as alternative training to improve tennis skill performance

Keywords : imagery, beginner tennis players, forehand

INTRODUCTION

Tennis is one of the most popular sports worldwide. Many people across the globe are becoming tennis fans, not exception in Indonesia. Tennis growing rapidly in indonesia. The fact showed that all universities in Indonesia who have a sports faculty make tennis as one of the course. The goal of tennis courses is that students can play tennis well. To be able to play tennis have to master the basics of tennis technique (Khaled, Amin, & Samir, 2015: 78). There are five basics tennis stroke technique. The five basic tennis shots technique are: serve, groundstroke (forehand and backhand), volley (foredand and backhand), slice and smash.

One of the important basic shot in tennis is forehand. Forehand groundstroke in the tennis is the most common use in the field and also most player strongest shot because it utilitises the dominat hand of the tennis players. Brown (2007: 31) also said that at least half of all shot in tennis game was forehand, therefore forehand stroke is very important. Forehand drive is often used as weapons because the stroke is harder tan other strokes. The key to a good forehand groundstroke is perform the stroke with the correct technique. When learning a new stroke or trying to refine a new technique on a particular stroke, it is important to focus on body mechanics and the feel of the movement (Renstrom, 2002).

There are four aspects that are very important in helping and supporting students in an effort to improve skills and achievements as much as possible (Harsono: 1988). To achieve good tennis performance it is necessary to consider the following four aspects: 1) physical exercise, 2) technical training, 3) tactical exercises and 4) mental exercises. The practice method applied is a factor that affects the player's ability to do forehand drive. The success of a coaches or lecturer in improving the skills of motion exercises is influenced by the method of training exercised. Appropriateness in applying the exercise methods applied in the exercise will affect the achievement of the child during the training process.

However, in general the current training methods still often result in less effective exercise. Based on observations of the tendency of trainers or teachers only focus on physical exercise or technical training and rule out psychological exercise. One of the best methods for improving motion skills is an exercise that directly studies the activity / activity of motion skills with repeated practice. With repetitive practice one will get an automatic pattern of motion skills techniques learns.

Tennis performance not only requires correctly performed skill-related motor patterns but also goal direction skills. For instance, tennis players need to see the ball flying to a place in their own court and hit the ball toward a targeted place in their opponents' court. Goal-directed ability is the capability of the nervous system to target localization, define the initial state of the motor apparatus, and form a hand trajectory to generate a movement (Desmurget, PeLisson, Rossetti, & Prablanc, 1998). In accordance with the statement of restrom (2002) that when learning a new stroke, it is important to focus on body mechanics and the feel of the movement. It is mean that physical exercise or technical training is required and is also accompanied by psychological exercises to train cognitive skills in order to master optimal stroke skills. Ekeocha (2015: 1) also asserts that psychologycal training methods are very important to enhance sports performance.

There are various methods of psychological exercise. Imagery, in the context of sport, may be considered as the neural generation or regeneration of parts of a brain representation/neural network involving primarily top-down sensorial, perceptual and affective characteristics, that are primarily under the conscious control of the imager and which may occur in the absence of perceptual afference functionally equivalent to the actual sporting experience (Holmes & Calmels, 2008: 433). Butt et al (2016: 3681) said that imagery is one of the essential part of sport psychology. Through systematic proceder all players have the power to increase their imagination abilities. Imagery is one of the training methods that can be used to improve the mastery of tennis playing skills. Imagery is mental technique which helps mind and body to produce desired reaction (Lang et al, 1980; Williams, 1994). The imagery is based on the memory that humans are capable of imitating the motor actions of others. It is the utilization of all senses to recreate or produce associate degree expertise within the mind.

According to Weinberg & Gould (2007: 296) imagery is a form of simulation. Purnama (2013: 40) states that the exercise of imagery is an exercise in the athlete's mind, which the athlete makes movements that are truly through the imagination and after being subsequently implemented. Rushall (2008: 57) Imagery exercise (mental imagery) is a form of mental exercise in the form of self-image and movement in the mind. The conclusión, imagery is a form cognitive exercise by imagine movements. To better understand about the imagery, can be seen from the characteristics. There are five characteristics of the imagery process: modality, perspective, angle, agency and deliberation (Callow, N & Roberts, 2010).

Table 1. Caracteristics of the imagery process

Characteristic	Definition	Components
Modality	The sensory modality (or modalities) involved.	Auditory Gustatory Kinesthetic Olfactory Tactile Visual
Perspective	The visual perspective adopted.	1PP (internal visual imagery) 3PP (external visual imagery)
Angle	The viewing angle when imaging in 3PP.	Above Front Behind Side on (from right or left)*
Agency	The author or agent of the behavior being imaged.	Self Other
Deliberation	The degree to which imagery is consciously and purposefully employed.	Spontaneous or triggered Deliberate mental practice

Several theories have been proposed to explain the benefit of imagery in sport. The main objectives of imagery are used in sports by Murphy (2005: 138), among which are: (1) learning new skills; (2) retraining skills over time; (3) rituals before appearing; (4) developing strategies and plans; 5) reduce the anxiety of the game, (6) increase the psychological, (7) set the tension, (8) increase the confidence, (9) increase motivation, (10) increase concentration, (11) rehabilitation from injury, and (12) team. This is also reinforced by Tenenbaum and Eklund (2007: 296) which states the benefits of imagery among them, namely for the development and improvement of mental skills, the introduction of the game to athletes, as well as mental warming.

There are four types of imagery: visual, kinesthetic, auditory and olfactory (Weinberg & Gould, 2007: 300). Visual and kinesthetic imagery is important in imagery. There are several methods in doing imagery among others is to install photos, pictures or posters idol tennis player; view videos and with script guides. This research will examine the script imagery. Each exercise method has a specific purpose in the preparation. According to Williams (2013: 114) the function of the imagery script is a specific function of cognitive (improving skills), general cognitive function (improving strategy and game plans), specific motivational functions, and general functions of motivation. In addition, imagery script can also facilitate the improvement of imagery process. From the technical implementation of the imagery script exercise described above, it can be seen that in its implementation requires a high degree of imagination, perception and coordination. The superiority of imagery script exercises is appropriately applied to trainers who have good perception and coordination skills; and can develop the imagination and the mind of the trainer.

According to Shearer et.al (2009: 3) imagery script is a traditional approach to imagery practice with a written script as a training guide. Before imagining a movement, a beginner must be given understanding and explanation or description of the movement to be imagined. According to Williams (2013: 110) imagery script is an imagery exercise that uses guidance experience in the form

of script. From some understanding of the above imagery script can be concluded that the script imagery is a form of imagery exercises that use the script as an implementation guide. There are several things to consider in compiling the imagery script. According to Williams (2013: 110) there are four things to consider in developing a script for imagery exercises: (1) who will use the script, (2) when and where the script is used, (3) why the script is used, 4) what would be imagined. The time taken to read and understand the script (script) is 2-3 minutes. Then proceed with imagining for 7 minutes. The purpose of the study was to examine the effect of imagery training on learning forehand groundstoke in tennis.

METHOD

Participants

Thirty two participant were recruited from the 3rd grade of the physical and health education program who take tennis course at Sport Science Faculty of Yogyakarta State University. Participant were non tennis athelete (age range 20 t0 22 years) with absolutely no experience palying tennis, begginer adult tennis player. Participant in this study were divided into 16 students for the experimental group and 16 student for the control group.

Research Design

The present study was a quasi experimental research design with pretest posttest plan and experimental-control treatments. The duration was approximately six weeks. The experinmental group received both imagery and technical practice and the control group performed technical practice only without received imagery. The frequency of the sessions was four times a week.

Measurement and Instrument

Before the experiment, participants completed forehand groundstroke test. The performance accuracy of the groups on forehand strokes was measured at pre- and posttest using Hewitt tennis test.

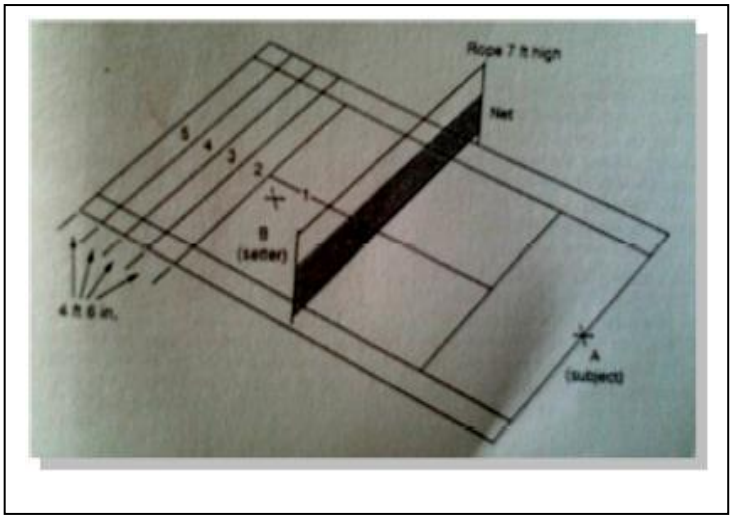

Fig. 1. Forehand Placement test (Hewitt Test)

Procedure

Participant in this study were divided into 16 students for the experimental group and 16 student for the control group.

Week 1- Pretest sesión: Participants performed 10 trials of Forehand groundstroke in hewitt forehand tennis test.

Week 2-5- imagery and physical/ technical training: The esperimental group have physical/ tecnical training and imagery training. The time taken to read and understand the script (script) is 2-3 minutes. Then proceed with imagining for 7 minutes, while control group only have physical/ tecnical training.

Statistical Analysis

Data are presented as Mean ± Standard Deviations. Changes in performance (pre- vs. post-intervention) of each group were analyzed using paired t-test and independent t test.

RESULT AND DISCUSSION

Result

Table 2 show the mean score pretest and posttest of forehand drive for the experimental group and control group. Data analysis result showed that there is significant effectiveness video imagery and script imagery on forehand skill.

Table2. Result of paired t tes for experimental group and control group

Group	*p*
Experimental	0,002
Control	0,026

Based on table 1, the data result showed a statistically significant effectiveness script imagery (p= 0,002) to improve forehand drive skill, and significant effectiveness also showed non script imagery group, only receive technical practice (p=0,026). That means both group significant effectiveness improve forehand drive skill.

In addition, statistically significant difference was found between experimental group and control group *P* value= 0,021 for the forehand drive skill. Data analysis result of difference between experimental and control group on table 3.

Table 3. Result of independent t test

Group	*p*
Experimental	0,021
Control	

Discussion

The purpose of this study was to compare the groups of student (1) physical practice with imagery (Experimental group) and (2) physical practice only (control group). Based on data analysis result there is a significant difference in influence between experimental group and control group. The final results show that the members of experimental group, improved their forehand skill and significant difference between pretest and posttest. Control group did not imagery practice but they improved forehand skill because they also got physical training (technical practice). the experimental group had increasing the forehand drive skill higher than control group.

The improvement in the technique of the tennis forehand produced by the combination of physical training and physcology training with script imagery clearly supports the use of script (auditory) in learning motor slulls for physical activity and sport, and, specifically, in the use of modeling which requires the participants to illustrate behaviors so that observers can improve their learning.

Imagery training methods has the advantage, the form script of exercise precisión forehand groundstroke presented similiar to the real conditions. Also in the imagery training methods is an integral part of overall psychological skills. When students imagine the perfect moment in forehand groundstroke. This activities it actually send nerve impulses from the brain to the muscles involved in the forehand groundstroke movement. When student imagine success in sequence the actual learning process take place and students has scratched it the exact picture of body movement should happen, so it can reach optimal achievement. Several reseach result showed that there is significant effect of imagery training on sport performance (ardehjani et al, 2013; Buck et al 2016; Nelson et al, 2008).

Imagery training in this study was series activities of imagining and bringing up back the movement of forehand stroke. repeating continuosly imagining forehand stroke within mind with relaxed state can making student more focused in doing activities and can build mindset (Sugiana, 2013). The function of the imagery script is a specific function of cognitive (improving skills), general cognitive function (improving strategy and game plans), specific motivational functions, and general functions of motivation (Williams, 2013: 114). In addition, imagery script can also facilitate the improvement of imagery process. From the technical implementation of the imagery script exercise described above, it can be seen that in its implementation requires a high degree of imagination, perception and coordination.

CONCLUSION AND SUGGESTION

The use of imagery with script-modeling appears to be an effective intervention to enhance tennis stroke skill. The application of mental skills, such as imagery, in the strength and conditioning field is growing but remains under-utilized at present. Mental skills are an important aspect of athletic development and, like physical skills, should be practiced often and with purpose. One benefit to imagery is that, once learned, it can be practiced anywhere at any time. Script supplemented imagery may be particularly useful for athletes who have difficulty in generating, maintaining, and controlling mental images. Finally, imagery training should be consideredas a part of tennis training programs with a goal to improve tennis performance.

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