

Brain Jogging Training to Improve Motivation and Learning Result of Tennis Skills

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Abstract. This research is aimed to determine the effect of brain jogging towards improvement of motivation and learning result of tennis skills. The method used in this research is experimental method. The population of this research is 15 tennis athletes of Core Siliwangi Bandung Tennis Club. The sampling technique used in this research is purposive sampling technique. Sample of this research is the 10 tennis athletes of Core Siliwangi Bandung Tennis Club. Design used for this research is pretest-posttest group design. Data analysis technique used in this research is by doing Instrument T-test to measure motivation using The Sport Motivation Scale questionnaire (SMS-28) and Instrument to measure learning result of tennis skill by using tennis skills test, which include: (1) forehand test, (2) backhand test, and (3) service placement test. The result of this research showed that brain jogging significantly impact the improvement of motivation and learning result of tennis skills.

1. Introduction

One's success in various aspects of life are not only influenced by the quality of their knowledge and skills, but also influenced by their mental quality. Mental strength is a very important aspect because it could determine either people's success or failure in life. Mental strength is closely related to brain. Someone whose brain is healthy and smart will have mental resilience so they will feel more confident and able to produce his best performance so as to create success.[1]

Brain jogging is mental exercise that is still relatively new in Indonesia. At first, this method of exercise is developed in Germany and used to train one's mental strength especially on professional athletes. [2]This method of exercise offer a new inspiration to be applied in Indonesia on each person to train their mental strength and also their brain. This exercise is an innovative training technique and especially designed to improve cognition, multitasking, and concentration so that a person could develop their brain quality and potential to the fullest. [3]

Brain jogging on its implementation combines three important elements, which is: cognition, multitasking, and physical activity. This exercise aims to stimulate the brain work system resulting in the improvement of cognitive ability, human's five senses, and mental strength. In detail, the objective of brain jogging is to improve concentration, motivation, intelligence, the ability to multitask, memory ability and attention, resistance to stress, and fitness.[4]

In tennis, basic strokes are a decisive technique to ensure success in mastering the game itself. Basic strokes have to be learned, known and practiced correctly, so one could avoid mistakes while playing tennis. In order to play well, there are various types of strokes that must be mastered, so as to achieve the optimal result.[5]



Proper training is needed in order to improve motivation and learning result of tennis skills. Based on the above explanation, it's suspected that brain jogging training is one of the exercise method that could improve athletes' motivation and tennis skill because said exercise could stimulate brain cell.[6]

2. Methods

Method used in this research is experimental method. Sugiyono stated that: "Experimental method is a research method which is used to find effect of certain treatment towards others under maintained condition."

The population of this research is 15 tennis athletes of Core Siliwangi Bandung Tennis Club. The sampling technique used in this research is purposive sampling technique. Sample of this research is the 10 tennis athletes of Core Siliwangi Bandung Tennis Club. Design used for this research is pretest-posttest group design. Said sample is a sample group that will receive Brain Jogging training.

The instrument used to measure athletes' motivation in this research, writers use "The Sport Motivation Scale" questionnaire (SMS-28) from Vallerand (1995) and the instrument to measure tennis skills, writers use Hewitt Tennis Achievement Test (Collins & Hodges, 1978; in Lacy 2011) which ini aim to measure service placement ability, service's speed, forehand drive, and backhand drive.

3. Result

The result of calculation average score in the initial test, final test also standard deviation in each of research variables could be seen on Table 1.

Table 1. Calculation result of average score early test, ending test also standard deviation on motivation and learning process of tennis skill

Variable	Initial Test		Final Test	
	Average	Standard Deviation	Average	Simpangan Baku
Motivation	83,800	2,573	87,800	1,813
Tennis Skill	69,400	4,706	89,567	7,058

To see the score improvement from the result of early test and ending test, accomplished by reducing the final test result score with a score initial test results. The result of the reduction between the test score improvement is called also called the difference in the score. For more details on the results of the calculations can be seen in Figure 1 and 2..

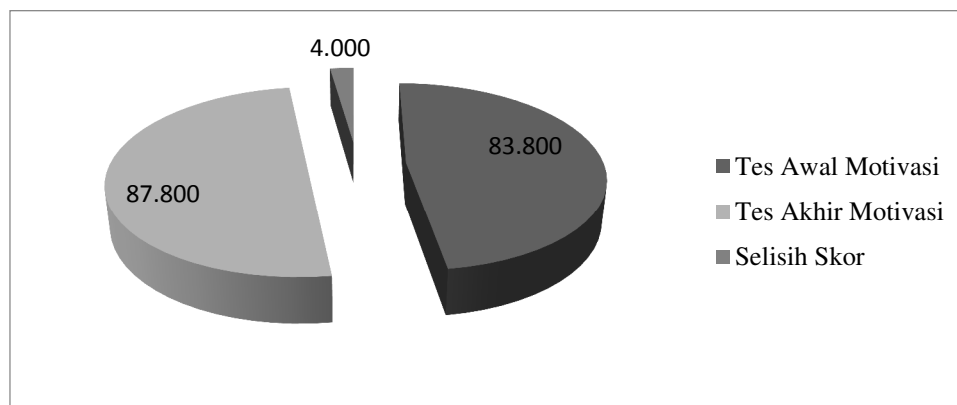


Figure 1. The result of the calculation of the difference in the average score of the initial test and final test on motivation variable

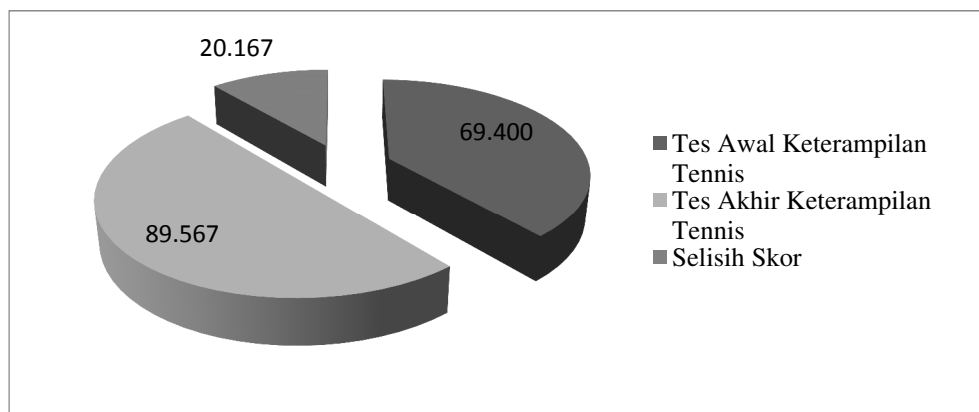


Figure 2. The result of the calculation of the difference in the average score of the initial test and final test on tennis skill variable

Hypothetical test on this research uses paired t test. The result of the test itself could be seen on Table 2.

Table 2. Test result comparing the average result of both test scores on variables of motivation and tennis skill

Item	Paired Differences					t	df	Sig. (2-tailed)
	95% Confidence Interval of the Difference							
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Initial Test Motivation Final Test Motivation	-6.20000	3.19026	1.00885	-8.48218	-3.91782	-6.146	9	.000
Initial Test Tennis Skill Final Test Tennis Skill	-20.16700	6.45888	2.04248	-24.78741	-15.54659	-9.874	9	.000

Based on the calculation of the test above, significance score of all research variables either motivation variables and tennis skills is $< \alpha 0,05$. Therefore, from this research it can be concluded that: "There's a significant effect of brain jogging training towards motivation and learning result of tennis skills".

4. Discussion

Brain jogging on its implementation combines three important elements, which is: cognition, multitasking, and physical activity. This exercise aims to stimulate the brain work system resulting in the improvement of cognitive ability, human's five senses, and mental strength. In detail, the objective of brain jogging is to improve concentration, motivation, intelligence, the ability to multitask, memory ability and attention, resistance to stress, and fitness.

The results of the study show that teaching association football by means of the Life Kinetik method increases the motor effectiveness of players, and searching for reserves in the sphere of mental disposition of players can help to increase the effectiveness of their training (Duda, 2015. Hlm.1).

Earlier research on body coordination has been done in Europe explains, "Body coordination training gives positive influence on the development of adults also children's brain." Said training is an exercise that involves complex movements and as the result this training stimulates cells in hippocampus which results in the improvement of one's memory capacity. If this training is given to athletes since they were young, they will develop an exceptional ability on cognitive and motivation aspect thus providing a tremendous advantage when they receive information given by their coach and they wouldn't face difficulties in mastering a skill they must possess.

Athletes in their process of training and competition must have a high motivation to do their daily task with a disciplines and responsibility. Motivation is the driving factor in any athlete's life, and for it to function properly, it needed fuel and the fuel our bodies needed which is our brain, is in the form of the hormone. A hormone that's needed as the fuel is the dopamine which functions as a neurotransmitter (signal carrier) and this hormone will be produced when there is a stimulus to the brain cells.

Good athletes are those who have good motivation. Good motivation enable each individual to perform better in their groups. Good performance will definitely be shown with good motivation and skills as well, thereby they could achieve the goals they set.

Each individual who has the motivation to train gains commitment to reach certain level of perfection to reach their goal, and so does athletes who could succeed if they keep learning and practicing until they own their values which are inspiration, perspiration and dedication. Thus, both internal and external motivation is the decisive factor for athletes to achieve the best ability in sports.

Related to the training process, athletes must have the self-motivation which is a very powerful source to form positive energy, because with no motivation athlete's performance will decline. When you lost your passion and couldn't further find the reasonable cause, you already stopped being a competitive athlete. Said opinion asserts the point that if an athlete doesn't have the urge to be a competitive athlete, they should stop being one.

Achievement motivation will give athletes chances to reach certain goal perfectly, improving their fitness to their highest level and to train to their best ability. In other words, achievement motivation in sport is a term equal to competitiveness in sports. Achievement motivation is essentially a desire, willingness, and a drive to be able to excel that surpass the achievements that either oneself ever accomplished or others. Achievement motivation is the urge to compete with either one's own excellence or others and also the need to carrying out certain tasks to its perfection.

Motivation is a fundamental mental skill that athletes has to have. Hence the motivation athletes should own is the achievement motivation because the athlete's achievement motivation would urge athletes to compete with either oneself excellence or others, even to achieve certain level of perfection in carrying out task also in competition. Said rationale should be used as a reference that achievement motivation is strongly effective for athletes to have in any activity. Motivation is an energy that makes everything works.

There's two important aspect of motivation in its correlation with learning. First, motivation is the driving force of psychic in the sense that during learning, it ensures the student's continuity of learning in order to achieve a goal. Second, motivation plays an important role in gaining passion, enthusiasm and joy in learning thus, students who have high motivation has a lot of energy to carry out their learning activities.

Said notion emphasized that motivation as the psychic driving force is able to produce learning activity and its continuity and reaching the goal. Students who have motivation will find joy in learning also has a lot of energy to learn. Therefore, motivation is essential for students to have for their learning process.

The role of motivation in learning is heavily tied to the reason of learning itself. Students are interested to study certain topic if they could understand and make us of the result of their study. Such result gives positive impact for students and it motivates them to learn because in the very least students already understand the meaning of their study. Motivated students learn and study their material with diligence with hope to produce the best result. Students that are motivated to learn produce studious students, on the contrary if students are having less to none motivation, students will not stay long to learn. Students will also be tempted to do another activity which results in them not learning.

5. Conclusion

According to the research result, it can be concluded that "There exists significant effect of brain jogging towards motivation and learning result of tennis skill".

References

- [1] Baltes, P. B. and Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. *Successful aging: Perspectives from the behavioral sciences*, **1**(1), 1-34.
- [2] Lawson, H. A. (2005). Empowering people, facilitating community development, and contributing to sustainable development: The social work of sport, exercise, and physical education programs. *Sport, Education and Society*, **10**(1), 135-160.
- [3] Oman, D, Flinders, T. and Thoresen, C. E. (2008). Integrating spiritual modeling into education: A college course for stress management and spiritual growth. *The International Journal for the Psychology of Religion*, **18**(2), 79-107.
- [4] Enriquez-Geppert, S, Huster, R. J. and Herrmann, C. S. (2013). Boosting brain functions: Improving executive functions with behavioral training, neurostimulation, and neurofeedback. *International Journal of Psychophysiology*, **88**(1), 1-16.
- [5] Locke, E. A. and Latham, G. P. (1985). The application of goal setting to sports. *Journal of sport psychology*, **7**(3), 205-222.
- [6] Day, D. (2011). Craft coaching and the 'Discerning Eye' of the coach. *International Journal of Sports Science & Coaching*, **6**(1), 179-195.