

Training Method Eksperiment and Motor Ability towards Playing Futsal Ability

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Abstract: The purpose of this research is to compare random practice and blocked practice in high- and low ability motor group to the ability of futsal playing. The samples of this study were twenty futsal players with three months training experience. The 2x2 factorial design was applied in the experiment method. SPSS version 16 was used to analyse the data with hypothesis testing through two way anova. The results of data analysis and calculation revealed that the method of random practice is better than the practice of blocked practice towards the ability in playing futsal and there is interaction in training method with motor ability. Hence, random practice training method is more appropriate to be applied to high motor ability while the blocked practice method is more appropriate to be applied to low motor ability.

1 INTRODUCTION

The futsal game is a sport that is performed by two different teams in order to win the game by inserting the ball into the opposing goal as much as possible. The process is to apply the strategies and tactics that have been developed through the stages of the training process (Sarmiento, Bradley and Travassos, 2015). The development of futsal games in Indonesia over the years has spawned a new energy in the world of sports games, why? because this is marked by some of the futsal competitions that spread in Indonesia ranging from amateur to professional level (Sharp, 2011), so the players have a platform to show their best performance and achieve their aims in futsal sports (Choi, Johnson and Kim, 2014). In conjunction with the holding of tiered competition, the coaching process already had a good framework for the development of the process of achieving the aims that was planned for the futsal sport, the more competitively managed, the better the process and the results to be achieved in the future (Wood and Danylchuk, 2015). In addition, the organizers must also support in the establishment of the base through a process of good competition so that there will be no obstacles at the time of the event take place (Verdot and Schut, 2012).

In addition to the growing competition factor in Indonesia, there is another side that should be known by the futsal coaches. It is related to the characteristics of futsal game which is very fast and dynamic so that the players are required to make the right decision, so that they will not disadvantageous their own team (Marasso *et al.*, 2014). Since the size of futsal court is smaller than the size of football field, the characteristics of the futsal games are fast and dynamic (Naser and Ali, 2016). The players must have good technical basic skills, so futsal games will run properly (Corrêa *et al.*, 2016). It is because the basic movement component is a foundation in sports (Maxwell, Capio and Masters, 2017).

If a futsal player has good basic movement skills, the coach will easily uses the various applied training methods (Wulf and Lewthwaite, 2009; Santos *et al.*, 2016). Because of that, a coach will be able to design the training objectives according to the needs of the team (Wang *et al.*, 2015). However, in the basic techniques of futsal training, there are several applied training methods, such as random practice and blocked practice method. The training method is a way to perform a series of movement activities that are performed systematically and support in the process of achieving certain goals (Schoeb *et al.*, 2014; Cope, Harvey and Kirk, 2015). This exercise

method can be applied in several sports, and can be applied to the athletes, so that it has a positive impact during the given training period (Baker and Young, 2014; Falcous and Booth, 2016).

The method of random practice is a randomized exercise method with a certain amount and time as well as a predetermined training objective. For instance, when doing a passing, dribbling, and shooting exercise, in the case while performing a random method, the movement tasks are passing, then proceed with dribbling and then shooting consecutively in one time (Wilde, Magnuson and Shea, 2005). This random practice method has the advantage that athletes can perform some motion skills at one time (Li and Wright, 2000). Another method is blocked practice method, which is an exercise concept that done by completing a movement task first and then moving on to the next movement task (Giuffrida, Shea and Fairbrother, 2002). Blocked practice training method has advantages, i.e. players that are trained using this method will be more focused on one movement skill (Shakir, 2008).

Both of those methods have the influence on the ability of playing futsal (Han and Shea, 2008). This influence gives positive impact to the development of futsal games, the better the basic techniques mastered, the quality better and more skilled the futsal players. Therefore, the futsal coach only needs to develop and apply them to various competitions that are held in Indonesia (Abeza *et al.*, 2015). In connection with the above explanation, this study examined the motor skills, as well as training methods in futsal sport. Thus, the title of the present research that related to the issue is the influence of exercise methods and motor ability towards the ability of playing futsal.

2 METHOD

2.1 Participant

The participants were twenty futsal players with a three month training experience. They were the members of futsal extracurricular at SMAK BPK 2 Penabur Bandung with the age range of 16-18 years old. All of participants had never received random practice and blocked practice training previously.

2.2 Instrument

2.2.1 Motor Ability (Barrow Motor Ability)

The instruments that used in this research, which measured the movement ability (motor ability), referred to Nurhasan and Cholil (2014, pp. 130-135), which is the motor ability instrument using Barrow motor ability test. It is because this instrument is in accordance with the need to measure a person's basic movement skills and according to Nurhasan and Cholil (2014, p. 130) "*tujuan dari tes ini adalah membuat klasifikasi, bimbingan dan penentuan prestasi, serta level nya adalah siswa pria Sekolah Menengah Atas*". Hence, this instrument is appropriate with the sample of this study.

2.2.2 Game Performance Assessment Test (GPAI) Futsal

This instrument was used for various forms of play, as mentioned by Griffin, Mitchell, and Oslin (1997) in Metzler's book (2000, p. 362) states that: "have devised a valid authentic system for assessing tactical knowledge in a wide variety of games typically taught". Then, there are seven components that were observed to get the portrayal of the players' performance level.

According to Metzler (2000, p. 363), from the seven playing assessment components, there are three aspects of performance "the GPAI focuses on three aspects of performance on each component: decision-making (appropriate or inappropriate), execution skills (efficient or inefficient), and support (appropriate)."

2.3 Focus of the Research

This research explained about playing futsal. In futsal games, there are three basic techniques, such as passing, dribbling and shooting. Therefore, the focus of the study was only on the three basic techniques.

2.4 Procedure

The sample completed a pretest of basic motion skills using a motor ability test. The result of motor ability test was used to divide the sample into high ability motor group and low ability motor group. Median split method was used to divide high and low confidence. The results of the questionnaire were

sorted by the highest and lowest score then divided into high and low categories (Mills, et al. 2000).

The specified samples were divided into 4 groups based on the motor ability test results, namely a) a group of students with high ability motor were given the random practice (n = 5), b) a group of students with low ability motor were given random practice (n = 5), c) a group of high ability motor students were given blocked practice training method (n = 5) and d) a group of low ability motor students were given blocked practice training method (n = 5).

The samples that participated in this research were asked not to add the training outside the predefined research schedule. The treatments in this research were conducted 3 times a week for 16 meetings. The total duration of the treatment of exercise method was 85 minutes.

After 16 meetings, the participants completed the final test (posttest) of futsal playing ability. The data were analyzed and concluded by using SPSS version 16.

3 RESULTS

The obtained results of (GPAI) futsal research were analyzed by 2 ways anova and tukey test with the help of SPSS version 16. A summary of the calculation results in table 1 is, as follows:

Tabel 1: Data of research result.

Motor Ability (B)	Training Method (A)	
	Random Practice	Blocked Practice
High Motor Ability	5,17	2,08
Low Motor ability	1,91	3,09
Total	3,54	2,59

Because the value of Sig. is larger than the value of t_{table} (12.39 > 2.71), consequently H0 is rejected and H1 is accepted. Hence, the hypothesis “there is the effect of different methods of random practice and blocked practice training on the ability to play futsal” is accepted at the level of significance $\alpha = 0.05$.

Because the value of Sig. is larger than the value of t_{table} (63.23 > 2.71), so H0 is rejected and H1 is accepted. Thus, the hypothesis “there is interaction

between motor ability with the method of training on the ability to play futsal” is accepted at the level of significance $\alpha = 0.05$.

Since the value of q is greater than the value of q table (11.48 > 4.23), subsequently H0 is rejected and H1 is accepted. Therefore, the hypothesis of research that states: there are significant differences between random practice and blocked practice training methods in high ability motor group is accepted at the level of significance $\alpha = 0.05$

Since the value of q is greater than the value of q table (4.37 > 4.23), thus H0 is rejected and H1 is accepted. Consequently, the research hypothesis that states: there are significant differences between random practice and blocked practice training methods in low motor ability group is accepted at significance level $\alpha = 0,05$.

4 DISCUSSION

The aim of the research findings discussion was to illustrate the results of the research that has been done. In this case, it was shown that the exercise method had an influence on the ability to play futsal (Fuller-Tyszkiewicz, Skouteris and McCabe, 2013), consequently, a futsal coach should utilize the training methods (Skultety, 2011). In addition, a coach must also know the basic movement skills of every athlete, so that the athletes would be able to perform in a training process that had both high basic and low basic motion skills (Volman, Visser and Lensvelt-Mulders, 2007; Maxwell, Capio and Masters, 2017). Once the coach knew the portrayal of the basic movement skills of the futsal players, the next step was to provide a different training method based on motor ability test results. Why was it different? Because the results of this study showed the differences of the influence between the method of training and the ability to play futsal.

The results of this study indicated that participants with high basic movement ability were better to use the random methods. Because the characteristic pattern of randomized training methods was almost the same with the ability of playing futsal, unlike the centralized training method (Wilde, Magnuson and Shea, 2005). The random method was more challenging, because at one time the players must perform three motion skills, such as passing, dribbling, and shooting. Therefore, it was true that the players required the high basic movement skills (Bertollo *et al.*, 2010; Breivik, 2016). In addition, the characteristics of futsal games also required the players to perform different skills

in the unpredictable situations (De Oliveira Bueno *et al.*, 2014; Naser and Ali, 2016).

Concurrently, the block method was less challenging than the random method. The block method characteristics is relatively easy (Bennett and Maynard, 2016). Besides that, the of blocking method only do one movement skill in one time, such as passing first, then dribbling, then shooting. In this case, a futsal player can focus more on the learned of movement skill (Li and Wright, 2000; Giuffrida, Shea and Fairbrother, 2002; Rad *et al.*, 2012); Article, 2014). In accordance with the characteristics of the block method, which only focuses on one skill and is not challenging, the need of basic movement skill the current study was relatively low. Thus, the use of the block method was more appropriate for the players who had low basic motion skills (Birnbaum *et al.*, 2017). In this case, the characteristics of futsal playing differed from the centralized training methods and the need for futsal playing was higher and challenging than the concept of centralized training methods, so it was reasonable if the low-level basic ability group suitable with the centralized training methods.

5 CONCLUSIONS

It can be concluded that the method of random practice was better than the blocked practice method towards the ability to play futsal. Furthermore, there were interactions between training methods with motor ability, so that the random practice method was more suitable to be applied to the players who had high motor skill, while the blocked practice method was more suitable to be applied to the players who had low motor skill.

Based on the results of data processing and analysis that had been done, it can be concluded that the training method was inseparable part which facilitate the training process, since the use of appropriate training methods would provide better training results. On the present study, random practice method was much better compared to the blocked practice method with the purpose of improving the skill of playing futsal when it was applied to the groups which had high skill of motor ability. Whereas, it was more suitable to use blocked practice training methods for the groups which had low ability motor skills. Therefore, it is important to figure out the things that related to the potential development of the athletes earlier, especially the skill of motor ability.

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