



## **How the Comparison of Small Side Games with Team Game Tournament to Improv Handball Playing Skills?**

**Mukhlisin\*, Dede, Suherman Slamet**

Universitas Pendidikan Indonesia, Indonesia

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### **Abstract**

Using the right training method can maximize an athlete's talents and achievements to peak performance, the training method used can optimize a skill. The aim of this research is to determine the comparison of the SSG and TGT training methods on handball playing skills. The method used in this research was an experiment. Sampling used a saturated sampling technique. The instrument in this research for Handball playing skills uses The Handball Tactical Performance Evaluation (HTPE). The results of the analysis of athletes belonging to the SSG and TGT groups experienced a more significant increase in playing handball with a sig value of 0.000, however those belonging to the SSG group did not have a significant effect on the Sig value. of 0.859 which is greater than  $\alpha$  0.05. However, the SSG group gave an increase, although not big. The use of SSG training can be examined further across age and gender ranges at a later date to maximize research results.

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## INTRODUCTION

Differences among athletes represent the uniqueness of human beings, thus creating a training program requires more detailed handling to achieve maximum performance. Elite and non-elite handball players have different physical performance characteristics, so the training process requires different approaches (Grujić, 2018). Adequate physical and motor endurance is one of the supporting factors in playing handball. Because handball requires good motor ability and psychomotor skills for effective gameplay (Živković, 2019). Several factors that should be considered in selecting handball players include various things including body size, strength, height and body length (Lijewski, 2019). Therefore, to become a handball player, one must have a high level of ability (Zwierko, Florkiewicz, Fogtman, & Kszak-Krzyżanowska, 2014). Handball athletes must also have good throwing ability and accuracy (Vila, 2020). Because position in a handball game greatly influences throwing capacity (Rivia, 2016) The results revealed before that anthropometric variable such as height, arm span, trochanter height, thigh girth, and leg girth were more influential at handball players (Fernández, 2016)

The use of appropriate training methods can maximize the talents and achievements of athletes up to peak performance. Solutions frequently discussed in learning theories guide us to understand effective methods for teaching motor skills. These methods can be divided into several types, including whole versus part methods, distributed versus massed practice methods, drill versus problem-solving methods, or programmed instruction methods (Vanagosi, 2016). Another solution that can be used is to combine technique and physical training sessions simultaneously. This approach aims to meet both physical strength and technical needs together, ensuring time efficiency in training sessions.

Handball is considered an open skill. Open skills are those whose execution is greatly influenced by unpredictable and changing envi-

ronmental conditions (Vanagosi, 2016). Training in handball requires a slightly different approach because it involves full-body contact and the game conditions are difficult to predict, both in terms of technique and tactics.

Handball is considered an open skill, so the training process should resemble the actual game. This type of training arrangement is intended to provide experience in real game situations. If coaches have a comprehensive understanding of the nature and characteristics of open skills, they can grasp the key principles of motor skill training to maximize athlete performance, since handball is classified as an open skill (Wang, 2016).

The training methods frequently used in handball in Indonesia are still very limited, so the application of training methods is mostly confined to conventional methods. One training method often used in sports games is Small-Sided Games (SSG). The use of SSG promotes the development of adaptive movement behaviors in handball (Santos, 2020). Using SSG will modify and enhance technical and tactical skills in playing handball (Belka, 2021).

SSG is implemented to optimize skills, making them more refined by fulfilling various fitness requirements without diminishing or reducing skill activities and decision-making (Aguiar, Botelho, Lago, Maças, & Sampaio, 2010). The use of SSG is very effective compared to other training methods. SSG seems highly effective in combining motor learning, teamwork, and aerobic training (Halouani, Chtourou, Gabbett, Chaouachi, & Chamari, 2014). The use of SSG in handball training is very relevant because handball involves many tactical, technical, and muscle fitness elements, and SSG is considered very appropriate. Scientific literature often highlights the benefits of SSG application from technical, tactical, and physiological perspectives (Halouani et al., 2014). Another positive effect of SSG application is its significant impact on the number of passes and playing motivation, and it can also improve physical fitness levels (Sahli, 2022). Literature indicates a significant improvement

in handball performance with the use of SSG training methods and match simulations (Ramdhani, 2023).

Small-Sided Games are a viable training method solution for team sports. In team sports, players must practice in situations that mimic the actual game environment (Coutinho et al., 2016). The SSG training method also optimizes time by combining technical, tactical, competitive motivation, and fitness training simultaneously, allowing all these aspects to improve (Coutinho et al., 2016). This training method is considered very effective and efficient for addressing game situations and providing athletes with experience in real game scenarios. The application of SSG can have a positive impact on tactics and techniques, enhancing both physical abilities and handball playing positions on the field (Gümüş, 2020). SSG provides exclusive benefits for proficiency in playing handball (Bělka, 2023).

The application of Small-Sided Games (SSG) in Indonesia is still considered less popular compared to other training methods, due to the limited information about the SSG method. This is despite the fact that the application of SSG offers many significant benefits in handball (Sahli, 2023). Another training method often used in practice is the Team Games Tournament (TGT) method. This method is considered more engaging than SSG because athletes are required to compete with their teammates during training. The steps for implementing the TGT model include placing athletes in teams, providing training material, allocating learning time, and making decisions (Casey, 2014). The use of TGT highly motivates athletes in playing the game, as shown by their determination to earn points, since every game will earn points for the team's victory. This point system drives athletes to train earnestly because the total points determine which team becomes the champion for that season.

Many factors underlie the implementation of the TGT method in training or learning. According to Slavin (as cited in Casey, 2014), the TGT method consists of five components in

its execution, including class presentations, team learning, games, tournaments, and team awards. Indirectly, athletes are required to earn as many points as possible to achieve the best scores, motivating them to play earnestly. Score calculation can be utilized for the overall score and used to determine the ranking of competing teams (Harrison, Gill, Kinugasa, & Kilding, 2015). This approach is capable of stimulating the development of athletes' competitive skills, thus allowing their skills to be honed effectively during training sessions.

The SSG and TGT methods are considered very beneficial in the training or learning process for athletes, allowing training sessions to maximize the time and potential of the participants. SSG significantly influences the development of athletes' techniques, tactics, and fitness levels (Iacono, Eliakim, & Meckel, 2015). Meanwhile, TGT can stimulate athletes to be more active in playing to earn as many points as possible.

## **METHOD**

### **Population and Sample**

The method used in this research is the Quasi-Experimental research method. The design employed in this study utilizes Factorial Designs (Fraenkel, Wallen, & Hyun, 2012).

The population in this study consists of all Handball Athletes in Cirebon Regency. The sample in this study is a subset of the population; thus, the sample in this study consists of 28 athletes divided into two groups, each group categorized using a random sampling system as follows: group a consists of 14 individuals treated with Small-Sided Games, while group b consists of 14 individuals treated with Small-Sided Games and Team Games Tournament. The treatment began with conducting the initial ability test (pretest) by engaging in games for 10 minutes. After the pretest, the participants then underwent the treatment according to their respective groups for fourteen sessions. Once the treatment was completed, a posttest was conducted by engaging in games for 10 minutes.

## Instrument

The instrument used in this study utilizes the Handball Tactical Performance Evaluation (HTPE), developed from GPAI and GPET (Ferreira, Graça, & Estriga, 2018). With a validity value of 0.85, this instrument can be employed. In data analysis, data processing in this study employs quantitative methods with descriptive and inferential statistics. Data tabulation is conducted using Microsoft Excel 2013, followed by descriptive statistical analysis using IBM SPSS version 23 software. Statistical prerequisites tests include tests for normality and homogeneity using SPSS version 23. Hypothesis testing statistically employs the independent sample t-test.

## RESULTS

The hypotheses for the research can be formulated as follows:  $H_0$  = Athletes given SSG and TGT treatment are not significantly better than athletes given SSG treatment alone in handball playing skills.  $H_1$  = Athletes given SSG and TGT treatment are significantly better than athletes given SSG treatment alone in handball playing skills. Decision Criteria: if the significance value  $> 0.05$ , then  $H_0$  is accepted, and if the significance value  $< 0.05$ , then  $H_0$  is rejected. Here is descriptive result, showed in table 1:

**Table 1.** Statistic Descriptive

		Mean	F	Sig.
SSG	Contrast	.163	.032	.859
	Error	5.072		
SSG & TGT	Contrast	207.438	40.901	.000
	Error	5.072		

Looking at Table 1, after conducting analysis using SPSS, it is concluded that the significance value 0.000 (Sig.)  $< 0.05$  (Alpha) = Significant, meaning  $H_0$  is rejected and automatically  $H_1$  is accepted. From the analysis results, athletes categorized in the SSG and TGT group experienced a more significant improvement in handball playing skills. However, those classified in the SSG group did not show

a significant effect, as evidenced by the Sig. value of 0.859, which is greater than  $\alpha 0.05$ . Nevertheless, the SSG group still showed improvement, albeit not significant. Furthermore, the researcher conducted further analysis using Tukey's test with the following results, it showed in table 2:

**Table 2.** Analisis Tukey Test

Analisis	Result	Q Table	Conclusion
SSG VS SSG & TGT	10,01996	4,95	Significant

The analysis using Tukey's test found that the use of SSG and TGT is superior to athletes given SSG treatment alone. This is because the data analysis results indicate that athletes given SSG treatment alone are not significantly better.

## DISCUSSION

From the data analysis results, it is stated that the group using the SSG and TGT training methods can improve handball playing skills. In game conditions, athletes are confronted with movement problems to analyze and adapt to movement challenge activities, whether they receive SSG or SSG & TGT training methods, because they have mature age, mental maturity, and good perceptual abilities. However, looking at the average score results, students treated with the SSG and TGT methods have higher average scores. This is because they are facilitated to develop their movement abilities, provided with problem-solving situations, given game forms, and through question-and-answer processes, even to the point of making hypotheses and testing them by direct practice. Scientific evidence shows that the use of small-sided games as a reference for early childhood learning has a significant impact and helps develop basic skills in playing handball (Fernández, 2020).

Training with the SSG & TGT method can provide guidance regarding decision-making because the TGT model, at the beginning of learning, starts with understanding the

form of the game they will play, such as understanding the shape and rules of the game, predicting what movements they should make, which direction they should move, how to score points without the ball they are playing being intercepted by opponents. Warm-ups using SSG are more effective in preparing the core training program in Handball Training (Iacono, 2021). These activities stimulate reasoning, planning, problem-solving, reflective thinking, and understanding concepts well. Students with high motor skills will certainly have an initiative impact in the game, such as finding empty spaces, advantageous positions to retain the ball, and making decisions related to point acquisition.

Meanwhile, the training process using the SSG training method always starts with a clear explanation and utilizes modeling as a demonstration of movements and determinants of playing positions and how to score points practiced in detail; these activities will be tried by the learners. When trying out the activities, learners will experience mismatches in movements and decisions that will be corrected in subsequent learning activities. Thus, the SSG and TGT learning models can influence motor skills. In addition to developing tactical and technical aspects, SSG can also develop fundamental movement aspects such as jumping, running, catching, and throwing (Mikalonytė, 2022).

The extensive drilling process enables athletes to easily correct their movements during the game, and the similar game patterns applied allow athletes to predict strategies during gameplay. Training arrangements emphasizing tactical issues and competition provide athletes with facilities to develop their critical thinking skills. This is because the steps of SSG and TGT involve many cognitive learning processes, meaning athletes are stimulated intellectually before training with game-based methods.

## CONCLUSION

The results of data analysis there is an influence on handball playing skills provided

by the Small-Sided Games (SSG) and Team Games Tournament (TGT) treatments. Meanwhile, the researcher found that the SSG training method provides more opportunities for athletes to improve basic and complex movements. Therefore, it can be concluded that SSG and TGT provide athletes with opportunities to enhance their handball playing skills.

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