INDONESIAN JOURNAL OF SPORT MANAGEMENT
Department of Physical Education, Universitas Majalengka, Indonesia
ISSN 2776-706X.

The effect of applying the training circuit model to increase agility in futsal extracurricular participants

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ABSTRACT

Sport is a place for humans to explore motion. To improve agility in futsal, researchers will apply a circuit training model, Which offers many positive changes in students. This study is because agility in extracurricular futsal participants at SDN Ambit is still lacking, and agility training is not good because players do not master futsal. This study aims to determine the effect of applying the training circuit model in increasing agility in extracurricular futsal participants of SDN Ambit. This study used a pre-experimental method with the "One Group Pretest-Posttest Design" design. The population of this study was extracurricular participants of SDN Ambit. The data analysis technique used by this study is a paired sample t-test. The results were obtained to determine the effect of applying the training circuit model in increasing agility in futsal extracurricular participants. Until this research, the number of 16 students from Situraja sub-district of SDN Ambit Ambit Village. This study is a population because the entire sample is the total population. The research instrument uses an Illinois run test. After the students were given the treatment given to the research subjects, which showed a value of t = -6.536 with a significance value of 0.001 < 0.05, if < 0.05, it can be concluded that H1 is accepted. The conclusion obtained is that there is a significant influence on the results of applying the training circuit model in increasing agility in doing futsal sports, apply the training circuit model first.

Keywords: circuit training; agility; futsal

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Article History:
Submitted: February, 2024
Accepted: April, 2024
Published: May, 2024

Authors' contribution:
A) Conception and design of the study;
B) Acquisition of data;
C) Analysis and interpretation of data;
D) Manuscript preparation;
E) Obtaining funding

Cite this article:
Taradipa, A., Lengkana, A. S., & Saputra, Y. M. (2024). The effect of applying the training circuit model to increase agility in futsal extracurricular participants. *Indonesian Journal of Sport Management*, 4(2), 292-297. https://doi.org/10.31949/ijsm.v4i2.8888

INTRODUCTION

Sport is a place for humans to explore motion. Even in early childhood, sports can help a person become fit and improve his quality of life. Children's motor skills can be more developed, and growth and development can be maximized when doing motion activities (Rismayanthi, 2013). Sport is a periodic necessity of life, meaning that exercise cannot be abandoned as a tool to maintain and foster health (Gandasari, 2022). Sports are tools that stimulate physical, spiritual, and social growth and development.

Futsal is a new sport. At first, futsal was considered a mini-game of football. The difference is only in the field's size, the ball's type and size, the game's duration, and the number of players (Hasyim & Haris, 2022). Because the size of the field is smaller, the intensity of the game is very high (Akhmad et al., 2023). According to (Soniawan, V., &; Irawan, R., 2018) in sports activities, many supporting factors influence achievements, such as physical condition, technique, tactics, and mental (Roni, Basrizal, 2020).

According to (Juniarsyah, 2019) Physical condition is one of the supports to improve physically to achieve achievement. According to (Harsono, 2001) in (Bompa, 2009) physical condition is a unity of components, including strength (strength), speed, endurance (endurance), flexibility (flexibility), and coordination (Silado & Wiriawan, 2021). This futsal

sport requires movement patterns such as sprinting and quick decision-making to gain or maintain ball possession (Sekulic et al., 2019). However, the fact in the field of futsal extracurricular participants at Ambit State Elementary School has a problem, namely the need for more agility in doing futsal sports. Thus, there are still many students who need help passing opponents; it is easy to lose the ball, it is difficult to change direction, and it is also challenging to accelerate when one-on-one (Asshiddiqi Wahyudi, 2016). Previously, students at SDN Ambit still needed to improve in futsal games, especially regarding agility. Research on the effect of application through this training circuit model can increase agility in futsal games. This can be caused by one of the physical conditions abilities of elementary school students who are still less agile in playing futsal games (Kusuma & Irawan, 2022).

Some things can affect the agility of futsal games, such as the influence of facilities and infrastructure, motivation in a player, and training methods in refusal sports (Bernhardin et al., 2022). To overcome this, it is necessary to have a method of improving physical condition widely used in team sports circuit training because it consists of many posts and can be carried out with many athletes. Each exercise is performed for a certain number of repetitions or for a set time before moving on to the next exercise(Sahabuddin et al., 2023) Training consists of six to ten posts; athletes must complete training per exercise in a series of separated by short rest periods (A-e & Ala, 2023). The number of circuits performed during a training session can vary from two to six circuits depending on the level of training (beginner, intermediate, or advanced), the training period (preparation or competition), and the purpose of the training (Rahman, 2018).

According to Morgan and Adamson (1953)) at the University of Leeds in England (Wilmore: 1977) it is becoming increasingly popular and recognized by many coaches, physical education experts, and athletes as an exercise system that can simultaneously improve the overall fitness of the body, i.e., the components of power, endurance, speed, flexibility, mobility, and other physical components, therefore, the forms of exercise in circuit training are usually a combination of all elements physical (Kusumawati, 2013). can be done as follows: 1) the frequency of training three times per week, 2) the circuit is carried out 2-3 times per post, 3) consists of 6-15 posts, 4) the intensity of training is 60%-80% of the maximum reps, 5) the number of repetitions in each post is 75% - 100% of the maximum number that can be achieved when performing, and 6) the work period is 15-30 seconds and the rest period is 15-60 seconds (Wahyudi, 2018).

Based on the explanation above, researchers can formulate this study: "Is there a significant influence in the application of the training circuit model in increasing agility in extracurricular futsal participants of SDN Ambit?". Thus, this study aims to determine the effect of applying the training circuit model in increasing agility before and after the application of the training circuit model given to the futsal extracurricular participants of SDN Ambit.

METHOD

This research was carried out in the field of SDN Ambit. This research was carried out for two months, from December 2023 to February 2024. This type of research uses pre-experimental research, a study in which the selection of research subjects is not random and does not have a control or comparison group. The study used a group pretest–posttest design without using a control comparison group. According to (Sugiyono, 2018 the One Group Pretest-Posttest research design is a research design with a pretest before treatment. Thus, treatment results can be known more accurately because they can be compared with the situation before treatment. The population in this study was extracurricular futsal participants of SDN Ambit because they wanted to increase agility in doing futsal sports.

The sample used amounted to 16 students using a saturated sampling technique. The instrument used in this study was the Illinois run test (Muzaki et al., 2020). This study aimed to determine the effect of increased agility in the application of circuit training in extracurricular futsal participants of SDN Ambit.

Data collection techniques are carried out at the beginning and end of the study as pretest and posttest data. His quantification technique uses the Illinois run test. Data collection through primary data by measuring each sample's speed (seconds) (pretest and posttest data). The analysis was carried out using a t-test, a paired test of t-test samples assisted by SPSS software version 25.

RESULTS

Based on the analysis obtained earlier, we present the results of the t-test regarding the application of the training circuit model in increasing agility in extracurricular futsal participants of SDN Ambit. Table 1 will be given descriptive data from the analysis that has been carried out. The data can be seen in Table 1 below. Based on Table 1 above, descriptive results are presented as simple pretest and posttest results tables. The pretest results show a minimum of 15.96, a maximum of 20.14, a mean of 17.95313, and std. Deviation 0.980221. Then, descriptive posttest results with a minimum value of 15.20, a maximum of 18.33, a mean of 16.91313, and std. Deviation 0.889846.

Table 1. Result Data Description

	N	Minimum	Maximum	Mean	Std. Deviation
Pre Test	16	15.96	20.14	17.95313	0.980221
Post Test	16	15.20	18.33	16.91313	0.889846

Based on Table 2 above, it can be seen that the normality prerequisite test results were analyzed using Shapiro-Wilk with a pretest significance value of 0.017 > 0.05 and a posttest value of 0.006 > 0.05. So, the data is usually distributed. Typical results can be obtained if the data has undergone the prerequisite analysis test before performing the t-test. After presenting the normality result data, the next step is to give the data on the t-test to determine the effect of applying the training circuit model in increasing agility.

Table 2. Normality Test

	Kolmogorov-Smirnov			Shapiro Wilk		
	Statistic	df	Say.	Statistic	df	Say.
Pre Test	0.234	16	0.020	0.856	16	0.017
Post Test	0.256	16	0.005	0.827	16	0.006

Based on Table 3 above, the hypothesis test results in this study used the Paired Sample T-test; this hypothesis test was carried out to determine the effect of the treatment given to the research subjects. The test results showed a value of t = -6.536 with a significance value of 0.000 < 0.05, so it can be concluded that there is a significant influence on the application of the training circuit model in increasing agility.

Table 3. T test

			95% Confidence Interval of the Difference				
Mean	Std. Deviation	Std. Eror Mean	Lower	Upper	t	df	Sig. (2-tailed)

Pre Test Post Test	-0.938	0.574	0.143	-1.243	-0.632	-6.536	15	0.000

Based on the table above, it is known that the significance value (p-value) produced by the experimental group and the control group, both pretest and posttest, is greater than 0.05 so that the data is considered to be normally distributed. The next step is to conduct a hypothesis test using the paired sample t-test in analyzing the difference between the two average scores obtained from the same sample. The data from the paired sample t-test can be seen in the following table.

DISCUSSION

According to Nurhasan (1986) agility is the ability to move in all directions easily and quickly. People who have high agility allow people to move in the direction quickly and easily. Agility means the ability and readiness of one's body to change direction quickly, in the shortest possible period, without the use of balance(Kesehatan et al., 2024).). Agility is also one of the indispensable components of athletic freshness for any activity that requires a rate of change in body position and its parts. This is supported by research from (Straudi et al., 2014) That testing physical condition training models with circuit-based training can improve agility.

Physical condition is always related to the ability of an athlete. Physical condition is one of the most critical factors for an athlete to follow various training programs. Good training will impact an athlete's ability to achieve the expected achievements and goals in a club. To talk about physical condition is to talk about physical fitness. It is no stranger that an athlete's physical fitness is crucial to achieving maximum achievement. This is because the application of the training recruitment model can increase maximum agility. This is in line with the study's results (Sunarto et al., 2023) which said that physical condition is a significant factor for a person, and a person must pass that factor before knowing or practicing technique, tactics, and mentality.

However, effectiveness in training physical conditions with circuit training models. Circuit training is a combined training program of several training items whose purpose in doing an exercise will not be tedious and more efficient. Circuit training is an exercise program consisting of several stations, and at each station, an athlete performs a predetermined type of exercise. One circuit training is said to be complete if an athlete has completed training at all stations according to a predetermined dose. This is reinforced by the results of the study (Annasai et al., 2023)) in applying the training circuit model. Based on the explanation and calculations above, the application of the training circuit model has an effect on agility in extracurricular futsal at SDN Ambit.

CONCLUSION

Based on the results of the analysis obtained, the application of the circuit training model carried out has an influence on increasing agility in the extracurricular futsal SDN Ambit. Agility is one of the physical conditions needed in futsal. The results of the study are expected to be a reference regarding the application of the training circuit model in increasing agility that the application of the training circuit model with the types of movements: In-In Out-Out Step, Scissor Step, Hoop Jump (Front Line), Hoop Jump (Side Line), Lateral In Out, Lateral High Knee, ZigZag Run and V Run, can affect increasing agility against futsal players with less good categories.

AKCNKOWLWDGEMENT

Thank you to all those who have helped in this research so that everything runs smoothly. Thank God SWT for making everything run smoothly, then to my parents who always pray and support me. Thanks to Dr. H. Anggi Setia Lengkana., M. Pd, and Prof. Yudha Munajat Saputra, M. Ed., for guiding me in this research. A big thank you is conveyed to all school principals, teachers, and supervisors in Sukamakmur District who have been willing to be the place and object of research. Finally, remember to thank yourself for fighting until now.

CONFLICT OF INTEREST

No conflict.

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