



The Influence of Traditional Games on The Agility of Rugby Athletes in Sumedang Regency

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Abstract

This research is motivated by the importance of improving the physical condition component, especially agility, in rugby and the need for innovative and non-monotonous training methods. Traditional games are seen as an interesting and effective alternative to exercise because they have dynamic movement characteristics. The purpose of this study is to determine the influence of traditional games on the increase in the agility of rugby athletes in Sumedang Regency and the amount of contribution given. This study uses a quantitative approach with experimental methods and one group pretest-posttest design. The research sample amounted to 10 rugby athletes who were selected using the purposive sampling technique. The instrument used is the Illinois Agility Test to measure the level of agility of athletes. Treatment was given through a traditional game training program (boy-boyan, galah salt, and ucing bancakan) for 12 meetings. Data analysis was carried out using descriptive and inferential statistics with paired sample t-tests. The results showed a significant increase in athletes' agility after being given treatment, with a significance value of $0.000 < 0.05$. This shows that traditional games have a significant effect on the increase in the agility of rugby athletes. Thus, traditional games can be used as an effective alternative method of exercise, not only to improve physical ability, but also to increase motivation and reduce boredom in the training process.

How to Cite

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INTRODUCTION

The development of sports in Indonesia shows a significant increase in line with the increasing public awareness of the importance of physical activity, both for health and achievement. One of the sports that is starting to develop is rugby. Although rugby is a fairly popular sport in the world, its existence in Indonesia is still relatively new. Rugby began to enter Indonesia about 30 years ago through expatriates from Australia, New Zealand, and the United Kingdom, and began to be known to the wider community in the early 2000s (Zahra et al., 2021). As a team sport, rugby demands physical strength, speed, teamwork, and complex game strategies.

Rugby is a game that uses a ball as the main object to be carried through the opponent's defensive line, then touched to the ground or kicked to earn points (Barnaman & Priambodo, 2020). The sport is under the auspices of the International Rugby Board (IRB) and is universal as it can be played by different age groups as well as by both men and women (Miftahudin & Barata, 2022). In team sports, athletes' performance is supported by various components of physical condition such as strength, speed, and agility. One of the most important components of rugby is agility, which is the ability to move quickly, change direction suddenly, and respond appropriately to situations without losing balance (Sheppard & Young, 2006). This ability is needed in game situations, such as avoiding opponents, chasing the ball, or defending positions (Nurdin et al., 2014).

Exercises to increase agility are generally done through conventional methods such as ladder drills, cone drills, and zig-zag runs. However, monotonous training can cause boredom in athletes so that it has an impact on less than optimal ability improvement (Syahab et al., 2024). Therefore, it is necessary to innovate training methods that are not only effective, but also attractive and able to increase athlete motivation.

One alternative that can be used is the use of traditional games. Traditional games have dynamic movement characteristics, such as running, jumping, dodging, and rapid changes of direction that are relevant to the need for agility in rugby. In addition, traditional games also contain the values of cooperation, sportsmanship, and communication between players (Nugrahastuti et al., 2012). Some traditional games such as boy-boyan, galah salt, and ucing bancakan have

movement patterns that support increased agility because they involve speed, change of direction, and response to game situations (Nugraha et al., 2016).

The use of traditional games in practice has several advantages, both from physical, psychological, and social aspects. In line with the word Triansyah & Gustian, (2020). Which says that in traditional games it can foster improvements in basic movement skills, especially in students. Physically, the game can train speed, coordination, balance, and agility. Psychologically, traditional games are able to increase motivation and reduce boredom in practice (Faradila et al., 2024). In addition, socially the game can strengthen teamwork and communication between players (Istirahyu et al., 2024).

Sumedang Regency is one of the areas that has potential in the development of rugby. However, in the process of coaching athletes, there are still obstacles, especially in the variety of training methods used. This condition shows the need for alternative training methods that are more varied, effective, and attractive to athletes. A training model that is still less varied can lead to low results in athletes' skills, so more varied exercises are needed to improve their ability (Nur et al., 2023).

In line with this, exercise variations have been proven to have a significant influence on improving athletes' skills and performance because they are able to increase exercise adaptation and reduce boredom (Bottoms & Muniz-pumares, 2023). In addition, innovative and non-monotonous training methods can increase the effectiveness of learning movement skills as well as athletes' involvement in the training process. Furthermore, the level of pleasure and motivation in training is also an important factor that affects the success of an exercise program, where an engaging program tends to increase athlete participation and consistency (Sharp et al., 2022).

Some previous research has shown that traditional games are able to improve basic motor skills, including agility. However, there has been no study that specifically tests the influence of traditional games on the agility skills of rugby athletes, especially in Sumedang Regency. Therefore, this study was conducted to fill this gap by examining the influence of traditional games as an alternative training method in increasing the agility of rugby athletes.

Based on this description, the research question is whether traditional games influence

the agility skills of rugby athletes in Sumedang Regency and to what extent they contribute. This study aims to determine the effect of traditional games on agility skills and analyze their contribution to improving agility in rugby athletes in Sumedang Regency.

The novelty of this research lies in the application of traditional games as an alternative training method specifically for rugby athletes, particularly in improving agility skills. Previous research generally examines traditional games in the context of children's motor development or physical education learning. This study focuses on competitive rugby athletes and integrates traditional games such as boy-boyan, galah asin, and ucing bancakan into a structured agility training program. Furthermore, this study provides empirical evidence regarding the effectiveness and contribution of traditional games to improving agility in rugby athletes in Sumedang Regency, an area that has not been widely explored in previous research.

METHOD

This study uses a quantitative approach with an experimental method. The research design used is one group pretest-posttest design, i.e. an experimental design involving a group of subjects who were given measurements before and after treatment. Initial measurements (Pre-test) was carried out to determine the initial condition of agility skills, then given treatment in the form of exercises using traditional games, and ended with final measurements (post-test) to find out the changes that occur after the treatment (Nurdiansyah, 2018).

The population in this study consisted of rugby athletes from Sumedang Regency. The research sample was determined using a purposive sampling technique, which is the deliberate selection of subjects based on criteria relevant to the research objectives (Subhaktiyasa, 2024). The criteria used included athletes actively participating in training, being in good health, and willing to participate in the entire research process. Based on these criteria, a sample of 10 rugby athletes aged 18–23 years was obtained, consisting of 10 male athletes., .

Data collection was carried out through experimental techniques to test the cause-and-effect relationship between the treatment variables and the results obtained. The independent variable in this study was the traditional game (boy-boyan, galah salt, and ucing bancakan), while the bound variable was the athlete's agility skills.

Treatment was given in the form of a training program that was carried out over 12 meetings, consisting of one pre-test, ten training sessions, and one post-test. Each training session lasts 90 minutes with a variation of traditional games modified to train aspects of agility, speed, coordination, and reaction. The training program is arranged in stages starting from low, medium, to high intensity, with the aim of progressively improving agility skills.

The instruments used to measure agility skills are Illinois Agility Test, which is one of the commonly used measuring tools to assess agility by measuring the time traveled by participants in completing a certain trajectory (Istirahyu et al., 2024). The test was carried out in the field using equipment in the form of cones, stopwatches, meters, and other supporting tools. Participants are required to warm up before the test and follow the predetermined implementation procedures to maintain the validity of the measurement results.

Data analysis was carried out using descriptive and inferential statistical techniques with the help of the Statistical Package for Social Science (SPSS) software. Descriptive statistics are used to describe pre-test and post-test results data in the form of average values, standard deviations, and minimum and maximum values. Furthermore, a normality test was carried out to determine the distribution of data and a homogeneity test to see the similarity of variance. To test the hypothesis, the paired sample t-test is used if the data is normally distributed, or the Wilcoxon Signed Rank Test if the data is not normally distributed. Decision making is carried out based on significance values with a level of $\alpha = 0.05$. If the significance value is less than 0.05, then there is a significant influence of the treatment given on the improvement of rugby athletes' agility skills.

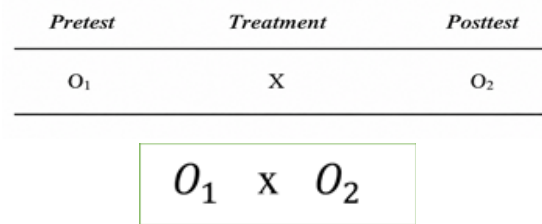


Figure 1. Experimental Research Design
Description:
O1 Pretest: Initial test using Ilinios Agility Test as many as one meeting before the subject gets treatment (treatment).
X : Treatment (treatment) by using Traditional Games
O2 Posttest : Final test using Ilinios Agility test after the subjects received experimental treatment.

RESULTS AND DISCUSSION

This study was conducted on 10 rugby athletes in Sumedang Regency with the aim of measuring the initial agility ability through a pre-test before being given treatment. The initial data describes the physical condition and agility skills of athletes, especially in the ability to change direction quickly. Furthermore, treatment is given in the form of an exercise program that systematically integrates traditional games. The research was carried out in 12 meetings consisting of one pre-test, ten treatments, and one post-test. The results of the pre-test and post-test are then used to compare the performance of athletes based on travel time in the implementation of the Illinois Agility Test.

The systematics of writing in this study began with the formulation of a problem that focused on the influence of traditional games on the agility skills of rugby athletes in Sumedang Regency and the amount of contribution given. Furthermore, the purpose of the research is formulated to find out and analyze these influences scientifically. In the next stage, the study uses quantitative data analysis procedures through descriptive and inferential statistical techniques with the help of SPSS software. The data obtained from the pre-test and post-test results were analyzed to describe the initial and final conditions of the athlete's agility skills. The test was carried out through normality, homogeneity, and significance tests using the paired sample t-test or Wilcoxon test, to determine the significant influence of the application of traditional games on improving the agility skills of Sumedang rugby athletes.

Table 1. Normalitas

	Kolmogorof-Smirnov			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pretest	.254	10	.067	.833	10	.036
Posttest	.173	10	.200	.881	10	.136

Based on the **Table 1** above, it is known that the significance value (Sig.) in the Kolmogorov-Smirnov test for pretest data is 0.076 and posttest is 0.200, while in the Shapiro-Wilk test the significance value of the pretest is 0.103 and the posttest is 0.138. Since the total significance value is greater than 0.05 (Sig. > 0.05), it can be concluded that the pretest and posttest data are normally distributed.

Thus, the hypothesis test can be continued using a parametric test, namely a paired sample t-test.

Table 2. Homogenitas

	N	Min	Max	Mean	Hours of deviation
pretest	10	10	30	21.00	7.379
posttest	10	30	80	51.00	17.920

Based on the results **Table 2** of descriptive statistics, it is known that the number of samples (N) in the pretest and posttest data is 10 each. The standard deviation value of the pretest was 7,379, while the posttest was 17,920. In addition, the minimum and maximum values in the pretest are 10 and 30, respectively, while in the posttest are 30 and 80.

Although there is a difference in the standard deviation values between pretest and posttest, in general the data can still be said to have a relatively comparable spread. This shows that the variance of pretest and posttest data tends to be homogeneous.

Thus, it can be concluded that the data meets the homogeneity assumption, so that the next analysis can be continued using a parametric test, namely the paired sample t-test.

Table 3. Paired Sample T Test

	Paired Differences				t	df	Sig. (2-tailed)
	mean	Std. Deviation	Std. Error Mean	95% Confidence interval of the Difference			
				Lower Upper			
By 1 loan men	-30.000	14.142	4.427	-40.117 -19.883	-6.708	9	.000

The hypothesis test in this study was carried out to find out whether there was a significant difference between the results of the pretest and posttest using a paired sample t-test assisted by the SPSS program. Based on the results of the analysis, the mean difference between the pretest and posttest was -30,000, with a standard deviation of 14,142 and a standard mean error of 4,472. The value of the confidence interval (95% confidence interval) is in the range of -40,117 to -19,883.

Based on the results of the hypothesis test using a **Table 3.** Paired Sample T Test, a mean difference of -30.000 was obtained, indicating an improvement in agility performance after the treatment was given. The calculated t-value was -6.708 with a significance value of $0.000 < 0.05$, which indicates a difference between the pretest and posttest results. These findings show that the traditional game training program contributed to improving the agility skills of rugby athletes in Sumedang Regency. The increase in agility can be seen from the athletes' ability to move more

quickly, change direction effectively, and respond better during movement activities after participating in the training program.

The improvement in agility occurred because the traditional games used in this study, such as boy-boyan, galah asin, and ucing banakan, involve movement patterns that are closely related to agility components in rugby, including running, dodging, acceleration, and rapid changes of direction. Through repetitive and enjoyable movement activities, athletes became more active and motivated during training sessions. This finding supports the theory proposed by Young et al. (2021) that agility is closely related to the ability to move and change direction quickly and accurately. In addition, this result is consistent with previous studies by Purwanto et al., (2025), which found that traditional games can improve motor skills and agility through dynamic movement activities

Another important finding of this study is that traditional games not only improved physical performance, but also created a more enjoyable and less monotonous training atmosphere. During the treatment sessions, athletes showed higher enthusiasm and participation compared to conventional agility training. This indicates that traditional games may provide psychological benefits by increasing motivation and reducing boredom during exercise programs. This finding is supported by de Vries et al., (2025), who stated that enjoyable and varied training programs can increase athlete engagement and training consistency. In addition, Sari et al., (2025) explained that traditional games are effective in improving movement skills while also increasing participant motivation and active involvement in physical activities. Therefore, traditional games can be considered an alternative training approach that combines physical, social, and motivational aspects in athlete development.

However, this study also has several limitations. The number of participants was relatively small, consisting of only 10 athletes, so the findings cannot be generalized broadly to all rugby athletes. In addition, the study used a one-group pretest-posttest design without a control group, which limits the comparison of treatment effects with other training methods. According to Flannelly et al., (2018) experimental studies without a control group are more vulnerable to threats to internal validity because changes in participants may also be influenced by external factors outside the treatment. Another limitation is that the research duration was relatively short, with only 12 meetings, so the long-term effect of traditional

games on agility improvement could not be fully observed. Furthermore, not all athletes showed the same level of improvement, as differences in physical condition, training intensity, and individual motivation may have influenced the results. Therefore, future studies are recommended to involve larger samples, include control groups, and examine other physical components such as speed, coordination, or endurance to obtain more comprehensive findings regarding the effectiveness of traditional games in sports training programs.

CONCLUSION

Traditional games have been shown to have a positive effect on improving the agility of rugby athletes in Sumedang Regency. The increase in average scores from pretest to posttest indicates that the traditional games training program contributed to improving athletes' agility performance. The dynamic movement patterns found in traditional games, such as running, dodging, and rapid changes of direction, are closely related to the agility components required in rugby. Therefore, traditional games can be implemented as an alternative training method that not only supports improving athletes' physical abilities but also increases motivation and reduces boredom during the training process. Furthermore, this study shows that integrating traditional games into rugby training programs can provide practical benefits in developing athletes' agility in a more varied and enjoyable way.

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