

# THE EFFECT OF SHUTTLE RUN TRAINING ON AGILITY STUDENTS' GOBAK SODOR GAME

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**Abstract**— The research was conducted to determine the effect of Shuttle Run training on agility in gobak sodor sports players at Setia Budhi University Rangkasbitung. So a research was conducted, as an effort to find out the effect of Shuttle Run training methods carried out on these students through Agility tests on gobak sodor Sports Players. The effect of Shuttle Run Training on Agility in Gobak sodor Sports Players at Setia Budhi University Rangkasbitung was conducted. The research uses quantitative research. The method used is an experimental method. The variable of this research is the effect of Shuttle Run training on agility in the gobak sodor sports players at Setia Budhi University Rangkasbitung, totaling 20 students. The results of the research show that the t value is 3,933 with df 19. Then the t score is consulted with the t table at a significance level of 5% and df 19 is 2,093. This shows that the calculated t is greater than the t table ( $3,933 > 2,093$ ). From the table it is known that the p value = 0.000, this shows sig. (2-tailed) < 0.05. It can be seen from the difference in the average value of the pretest and posttest which is 10.85 and 10.24 which is smaller after being given Shuttle Run Training on Agility in Gobak sodor Sports Players at Setia Budhi University Rangkasbitung by 5.62%. It can be concluded that there is an influence.

**Keywords**— *Agility; Gobak sodor Game*

## I. INTRODUCTION

Traditional games are physical activities through playing that are very different from other sports, and are a form of original regional games in each province of the Republic of Indonesia (NKRI) which have their own characteristics and diversity [1] [2]. There are many traditional games in Indonesia. The types of games that may still be played by children are: bebentengan, congklak, dogdog lojor, ecor, gatrik, kobak, meong bangkok, ngadu karbit, ngadu muncang, oray-orayan, pal-palan, prang-pring, pacublek-cublek suweng,

sar-sur, serok, susumputan, turih oncom, ucing kalangkang, ucing peungpeun, ucing kuriling and galah bandung [3].

Basically, traditional games are a cultural heritage of the nation and a legacy from ancestors whose existence must be preserved, some of the nation's children have become an obligation to maintain these traditional games, traditional games are not just games, but there are values and cultural elements inherent in them [4][5]. Throughout Indonesia, each region has a traditional game that is characteristic of the region. In other words, there must be conservation of the traditional games themselves starting from the games in the region. This is done to anticipate the loss or extinction of traditional games in Indonesia.

At this time the Lebak district government began to develop and preserve traditional sports by collaborating with the Youth and Sports Service (DISPORA) and the Indonesian Community Recreational Sports Committee (KORMI). In addition to government organizations, there are also organizations founded by great people who also help the government in developing traditional games, namely the Indonesian Traditional Games and Sports Committee (KPOTI), Indonesian Traditional Sports Conservation (PORTINA) so that traditional games throughout Indonesia, especially Lebak district, are starting to be recognized again and noticed.

Traditional sports began to be redeveloped by several youth organizations that were enthusiastic in developing and preserving the nation's culture such as the Indonesian Traditional Sports Committee (KPOTI) and the Indonesian Traditional Sports Conservation Association (PORTINA), so that the existing national culture began to be noticed again. In addition to being introduced through educational seminars, traditional sports also began to be involved in events held by related institutions such as the Regency-level Santri Sports Week (POSPEKAB), the Regional-level Santri Sports Week (POSPEDA), and the National-level Santri Sports Week (POSPENAS) which were under the auspices of the Youth and

Sports Service (DISPORA), the Indonesian Community Recreational Sports Committee (KORMI) and the Ministry of Religion (KEMENAG).

Even in recent years, traditional games have begun to exist in sports events or competitions such as the Regional Islamic Boarding School Sports and Arts Week (POSPEDA), the National Islamic Boarding School Sports and Arts Week (POSPENAS), the Regional Traditional Sports Week (POTRADDA), the National Traditional Sports Week (NASIONAL) so that with the many traditional game events, they are able to produce athletes who excel at all levels of education (schools) from elementary school, junior high school, high school and college levels.

One of the traditional sports that is often played by children and adults is Gobak Sodor, this traditional sport is one of the traditional sports that does not use any equipment in the game. The traditional sport of Gobak Sodor is played in teams, both male and female. The number of team members is 8 people, consisting of 5 people as core players and 3 people as reserve players [6]. This traditional sport of Gobak Sodor can be made in an open space (stadium, open field, yard, field, or highway if possible) or closed (sports building, meeting hall). It is better if the arena to be used has a flat or even surface [7].

Traditional gobak sodor sport is a sport that requires a good level of physical condition, the main components of physical condition that players must have are speed and agility, of the two components of physical condition, the most important thing for players to have is agility [8], this is proven when the game is in progress, agility is the main factor for players to win the game, Agility is very much needed by a Hadang player in dealing with certain situations and in match conditions that require elements of agility in moving to pass opponents or in defending against opponents. So this ability has a big influence on the implementation of the Hadang game. Agility or agility is a set of complex skills performed by a person to respond to external stimuli by decelerating, changing direction, and reaccelerating (Lubis) in (Suwo, R. et al. 2023:69). According to Suwo. R. et al (2023:70) Agility is the ability to move, stop, and change speed and change direction quickly and precisely, to be agile athletes need to be strong, fast, skilled, and balanced. It can be concluded that agility is the ability to change the position of the body's direction of movement quickly which affects skills in sports. Agility is a set of complex skills performed by a person to respond to external stimuli with deceleration, change of direction and reacceleration. Agility is influenced by perception and the ability to make decisions quickly. Therefore, agility can be trained specifically in order to get maximum results.

There are several exercises to train agility, including shuttle run exercises in the form of a series of physical exercises designed to improve changes in direction, quick reactions, balance, coordination, and overall agility [9]. However, although shuttle run exercises are an important part of many handball athletes' training programs, there is still a need to better understand their effectiveness. That the most combined biomotor component is agility, which is a combination of speed, coordination, flexibility and explosive power (power). The quality of good physical condition

components is very much needed to support traditional sports, especially gobak sodor which is greatly influenced by the strength, agility, and concentration of the players.

Shuttle Run is a form of training that develops speed and agility where this training is assumed to be able to train what is needed in the game of gobak sodor. The distance between line A and line B in the shuttle run is 5 meters [10]. This is in accordance with what was stated by Harsono (1988: 172) "the distance between the two points should not be too far, around 4-5 meters is enough". This is because if the distance is too far, it is feared that players or students after several times running back and forth will not be able to return their bodies quickly due to fatigue. How to do it is to run back and forth as fast as possible 8 times in a distance of 5 meters. Every time you reach a point as a limit, immediately try to change direction to another point. It should be noted that the distance between the two points is not too far and the number of repetitions is not too much so that it will not cause fatigue for the perpetrator. In this case, what needs to be considered is the ability to change direction as quickly as possible when moving. According to Sajoto (1995) agility is a person's ability to change direction, in positions in a particular arena.

based on the results of observations conducted by researchers on players at Setia Budhi Rangkasbitung University, on April 12, 2024 researchers conducted interviews with traditional sports coaches, stating that athletes have poor agility as evidenced by when playing Gobak Sodor, the level of poor body agility is seen when athletes make movements to avoid opponents, many are touched and even some players fall when avoiding. In addition, the coach has not implemented shuttle run training so far the coach has only provided basic technique training followed by games, this training makes players feel bored because the training is monotonous. Furthermore, the researcher conducted interviews with players and stated that they had never been given shuttle run training, special training to improve player agility had not been carried out during the training session.

## II. METHOD

This type of research is experimental. Experimental research is basically testing the relationship between cause and effect variables. One or more variables are manipulated to determine their effect on other variables, but variables that are not related to the main problem must be controlled to a minimum. In other words, experimental research is making changes to one or more variables and studying their effects, namely changes that occur in other variables. The manipulated variable is called the independent variable or cause variable, other variables that are influenced by the independent variable are called dependent variables or effect variables. Manipulated, meaning that the variable can be changed according to the problem being studied [11] [12].

The design used in this study is "One Groups Pretest-Posttest Design". One group pretest-posttest design is a research activity that provides an initial test (pretest) before being given treatment, after being given treatment then giving a final test (posttest). This research method is quantitative which can be interpreted as a research method based on the philosophy of positivism. The method as a scientific method because it has met

scientific principles, namely concrete/empirical, objective, measurable, rational, and systematic and Replicable/can be repeated. The population is the entire research subject [13]. The population in this study were 20 gobak sodor players at Setia Budhi Rangkasbitung University. Sampling using a total of 20 players, the data collection technique used a zig-zag run agility test, then the data was obtained and analyzed using a 5% significance level t test.

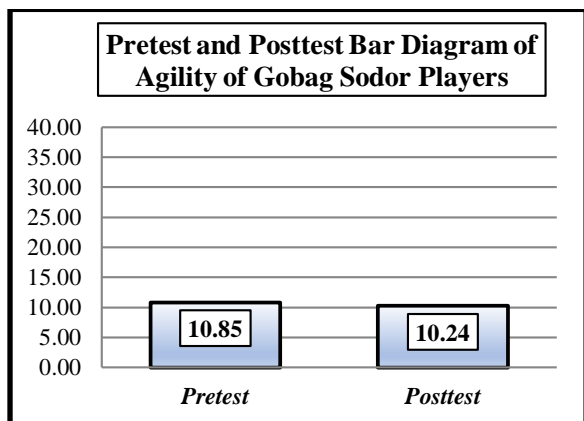
### III. RESULTS AND DISCUSSION

The descriptive results of the pretest and posttest of the agility of Gobag Sodor players at Setia Budhi University, Rangkasbitung are explained as follows:

**TABLE I. PRETEST AND POSTTEST OF AGILITY OF GOBAG SODOR PLAYERS AT SETIA BUDHI RANGKASBITUNG UNIVERSITY**

Statistics	Pretest	Posttest
N	20	20
Mean	10.85	10.24
Median	10.86	10.07
Mode	9.53	11.23
Std. Deviation	1.14	0.99
Minimum	9.06	9.02
Maximum	12.70	12.28

The bar diagram of the pretest and posttest agility of Gobag Sodor players at Setia Budhi Rangkasbitung University is presented in Figure 1 as follows:



**Figure 1. Pretest and Posttest Bar Diagram of Agility of Gobag Sodor Players, Setia Budhi Rangkasbitung University**

Based on Figure 1 above, it shows that the pretest and posttest agility of gobag sodor players from Setia Budhi Rangkasbitung University averaged 10.85 seconds and increased during the posttest by 10.24 seconds.

The normality test is intended to determine whether the variables in the study have a normal distribution or not. The calculation of this normality test uses the Shapiro-Wilk formula. The results are presented in Table 2 as follows.

**TABLE II. NORMALITY TEST RESULTS TABLE**

Data		p	Sig.	Information
Agility	Pretest	0.145	0.05	Normal
	Posttest	0.119	0.05	Normal

Based on Table II above, it can be seen that the Pretest and Posttest data of the agility of Gobag Sodor players at Setia Budhi Rangkasbitung University have a p value (Sig.) > 0.05. So the variables are normally distributed.

**TABLE III. TABLE OF HOMOGENITY TEST RESULTS**

Data	Sig.	Information
Pretest-posttest agility	0.05	Homogeneous

Based on Table III above, the data can be seen Pretest and Posttest agility of Gobag Sodor players at Setia Budhi University sig. p value > 0.05, so the data is homogeneous.

The hypothesis in this study was tested using t-test analysis, namely paired sample t-test (df = n-1) using SPSS 23. The conclusion of the study is stated as significant if the calculated t value > t table and sig value < 0.05. Based on the results of the analysis, the data in Table IV were obtained. The results of the hypothesis test are explained as follows:

**TABLE IV. PRETEST AND POSTTEST PRETEST AND POSTTEST AGILITY OF GOBAG SODOR PLAYERS AT SETIA BUDHI RANGKASBITUNG UNIVERSITY**

Agility	Average	t count	t table	sig	%
Pretest	10.85	3,939	2,093	0.001	5.62%
Posttest	10.24				

Based on the results of the analysis in Table IV above, it can be seen that the t count is 3.939 and the t table (df 19) is 2.093 with a significance value of p of 0.001. Therefore, the t count is 3.939 > t table 2.093, and the significance value is 0.001 < 0.05, then this result shows that there is a significant difference. Thus, it can be concluded that there is a significant difference, which means that the shuttle run training has an effect on the agility of gobag sodor players at Setia Budhi Rangkas Bitung University with an increase of 5.62%.

In gobak sodor players do not only move in one direction and do not only run straight ahead. If the player has good agility then the player can make a sudden change of direction in avoiding the opponent's touch, it makes it difficult for the opponent to touch when facing each other because a player who has a high level of agility can change direction without being realized by the opposing player. In addition, players who have a good level of agility have foot dexterity or agility in moving, the ability to change direction so easily for players to master high-level techniques.

Agility is a person's ability to change direction quickly and precisely while moving without losing balance.[14] argues that agility is a complex set of interconnected skills for athletes to respond to external stimuli with rapid deceleration, change of direction, and reacceleration. Agility is the ability to change body position quickly while moving quickly, without losing balance with respect to body position.[15].

Agility is the ability to change the direction and position of the body quickly and precisely while moving, without losing balance and awareness of one's body position. Agility is important in all daily activities and sports activities. In both individual and group sports, agility plays an important role in starting or stopping movements suddenly, changing direction quickly, and controlling the body or limbs.[16].

#### IV. CONCLUSIONS

Based on the results of data analysis, description, testing of research results, and discussion, it can be concluded that there is an influence of shuttle run training on the agility of gobak sodor players at Setia Budhi Rangkas Bitung University with an increase of 5.62%. This increase can be seen from the difference in the average value during the pretest and posttest, apart from that, looking at the results of the t test, we can get a tcount of 3.939 and a t table (df 19) of 2.093 with a significance value of p of 0.001. Because tcount is  $3.939 > t_{table} 2.093$ , and the significance value is  $0.001 < 0.05$ , then this result shows that there is a significant difference. Based on the research findings above, by carrying out agility training using Shuttle Run training with a good training program it has been proven to increase agility in Gobak Sodor players. Furthermore, future researchers hope to be able to modify players' agility training with exercises that resemble the Gobak Sodor playing field.

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