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The Effect of Speed and Agility Training Variations on Dribbling Skills in Soccer Games for Extracurricular Students at SMA Negeri 1 Berau

Rian Bayu Indrawan[1*], Heryanto Nur Muhammad[2]
Universitas Negeri Surabaya, Indonesia
Email: rian.19142@mhs.unesa.ac.id[1], heryantomuhammad@unesa.ac.id[2]
Correspondence: rian.19142@mhs.unesa.ac.id[*]

KEYWORDS
Speed Training; Agility Training; Dribbling; Extracurricular

ABSTRACT
Football requires more player skills compared to other sports, where players must perform well, handle pressure during the game, have sufficient stamina, and have strong resilience. The key aspects of this sort include basic techniques consisting of ball dribbling skills, passing, heading, throwing, and so on. Dribbling is the most important skill among many basic skills because it is the most frequently used technique during a match. Dribbling involves controlling the ball while moving, and this technique helps create space for shooting. The purpose of this study is to determine the effect of speed and agility training on dribbling skills among extracurricular student at SMA Negeri 1 Berau. This research method is a quantitative Quasi-Experimental design. Data were collected using a nonequivalent pretest-posttest group design technique based on Bobby Charlton's football dribbling test. The first stage of the design is to establish two experimental groups. The second stage is conducting an identical pretest for related groups. Then, both experimental groups are given two treatments, namely speed training variations and agility training variations. After that, both experimental groups are given the same posttest. The research result showed that the t-value (8.323) was greater than the t-table (2.201) with a determination coefficient of 14,9%. Thus, speed and agility training variations affect dribbling skills in football among extracurricular students at SMA Negeri 1 Berau.

Introduction

Football requires more player skills than other sports, where players must play well, be able to withstand pressure when playing, have sufficient stamina, and have strong toughness. Therefore, understanding tactics, strategies, and techniques is vital. As a result of the changes in the situation that often occur during the match, the player's attention to decision-making is constantly tested.

Coordination skills in body movements, tactics, and mentality are very important in developing football playing skills. Basic skills and learning are needed from an early age to improve the quality of movement.

Football is also said to be a two-team game with 11 people each. One team plays on the bench while the other plays against its opponent to score goals (Aprianova & Hariadi, 2016). A vital aspect of this sport is that it includes basic techniques (Irawan & Hariadi, 2019). The basic technique consists of dribbling, passing, heading, throwing, and so on. Dribbling is the most important of many basic skills, as it is the most common technique when playing. Dribbling is winning the ball when moving, through which this technique can create space to shoot (Gunawan & Mahfud, 2022). The dribbling technique is a method of carrying the ball from one area to another. Dribbling is a mechanism using the feet to move the ball from various areas on the court. In addition, this technique is important, where each player must be able to control the ball in any situation. The player's contribution to the game will be huge if they are proficient in dribbling. With his best dribbling skills, one can get ahead of the opponent faster, control the course of the match, and more easily break through the opponent's defense. This definitely allows for a win.

Physical conditions influence the basic technique of optimal dribbling. Physicality affects a person's speed and agility, both of which are needed when dribbling (Sutirta et al., 2023). Speed is the skill of switching places in a short time (Adiatmika & Santika, 2015; Widiastuti, 2015). Agility, on the other hand, Winarto in (Hasanuddin & Hasruddin, 2018) stated that agility is an individual's skill in changing the direction of his movement quickly and in a balanced manner. This agility creates the potential for spontaneous opening of space and position, which can result in a goal (Akmal & Lesmana, 2019).

The results of interviews conducted with coaches and coaches in Berau district during extracurricular football training actually got the basic movement of student dribbling was still minimal, this reality was shown by the number of students who lost their balance when dribbling even though there were no obstacles. They often do improper techniques when defending the goal or attacking, mistakes include movements with or without the ball, namely when running fast in search of a free position, deceptive movements, and so on. The lack of agility when dribbling the ball is there even though they are fast. Actually, this technique is a fundamental thing that must be learned when playing football and is supported by aspects of agility and speed. In addition to factors such as techniques, supporting aspects such as the facilities and infrastructure of this school training are not optimal for training students. The inability of students to master this technique can be seen from the many errors made when practicing against opponents. Mastery of basic football techniques must be instilled to achieve achievements. The most basic problem is related to mastering basic football techniques. Therefore, training is none other than preparing players to mature their physical skills, techniques, and mentality.

Basically, Football is a team sport that requires cooperation to get interesting games and victories (Bayan et al., 2020). Therefore, the success or failure of a team depends not only on one player but also on the cooperation of the players in one team. The skills that must be mastered include heading, holding the ball, dribbling, and kicking (Tarju et al., 2017), and also cheating and

stopping the ball (Erfayliana & Wati, 2021). In football competitions, when we pay attention, the most common thing we see is the dribbling expertise. The development of student's skills in dribbling in the game of football can be done through extracurricular activities, which is a coaching tip held at school. In extracurricular activities, students form their training patterns that are able to create increased skills and achievements.

Dribbling agility exercises can be carried out with a variety of methods. One of the methods that can be done is dribbling the ball through a cone that has been provided and set at a distance. Agility training involves comprehensive movements that involve the ankles, hips and spine to rotate. Dribbling agility can help players save energy, while balance also affects an individual's agility. Agility, of course, depends on a combination of flexibility and speed. The factors that affect speed include the quality of the coach, as well as the existing facilities, and the quality of the person itself. Regarding tips to improve the quality of players, quality coaches, and adequate facilities are needed.

The statement is corroborated by the results of research by Satriaputra and Widodo (2019) showing a significant effect of zig-zag running training on increased agility. Also, research from Habibi Sutirta (2023) concluded that there is a significant correlation between skill variables and dribbling. It can be concluded that speed and agility are vital devices when dribbling (Purnomo & Irawan, 2021). Based on the above presentation, the researcher was enthusiastic in carrying out the research entitled "The Effect of Speed and Agility Training Variations on Dribbling Skills in Soccer Games for Extracurricular Students at SMA Negeri 1 Berau".

Research Methods

According to Sugiyono (2019), the experimental research method is a method applied to examine the impact of specific treatments on others in a controlled state. Quasi Experimental was applied to this study. This is because researchers do not have control over external variables that can affect the course of the experiment. The experimental method is a component rather than a quantitative method, which is characterized by the presence of a control group. The disadvantage of this design is that it is difficult to obtain accurate results because many external variables bring influence and are difficult to control. Research design involves the process of planning and researching to reduce errors. The design of this experimental research is a nonequivalent pretest-posttest group design. From that design, the first stage is to determine experimental groups 1 and 2. The second stage is carried out by giving identical pretests to related groups. Then, the two experiments were given 2 treatments, namely a variation of speed training and a variation of agility training. After that, both experimental groups were given a similar posttest.

The research was held at SMA Negeri 1 Berau. The implementation time in the experimental method involves a treatment trial of 16 meetings. This is in line with the research of Nia Lavenia (2020) where the exercise was carried out with a duration of 16 meetings and has been proven effective because significant changes have occurred. According to Handayani (2020), a population is the sum of the elements to be studied that have the same characteristics, such as individuals in a

group, event, or object to be studied. The study population was composed of 20 students who were active in football extracurricular at SMA Negeri 1 Berau.

Results and Discussion

Research Results

Based on the research carried out, data were taken from pretest and posttest related to football extracurriculars. The results of the study related to the influence of speed and agility training variations on dribbling skills in football at SMA Negeri 1 Berau are as follows.

Table 1. Pretest Data Analysis

Description	Pretest
Maximum Value	11,75
Maximum Value	9,39
Mean	10,365
Median	10,355
Standard Deviation	0,71871

The above data is defined by descriptive statistical analysis, namely, the minimum value or the shortest time obtained in the dribbling pretest is 9.39 seconds, the maximum value or the longest time obtained in the dribbling pretest is 11.75 seconds. The minimum value is the best value compared to the maximum value because it is a speed test in dribbling the ball. The mean value of the entire pretest sample was 10.37 seconds, the median value was 10.36 seconds, and the standard deviation was 0.72 seconds.

Tabel 2. Analisis Data Posttest

Description	Posttest
Maximum Value	8.87
Minimum Value	7.02
Mean	7.602
Median	7.545
Standard Deviation	0.47469

The data above is defined by descriptive statistical analysis, namely, the minimum value or the shortest time obtained in the dribbling posttest is 7.02 seconds, the maximum value or the longest time obtained in the dribbling posttest is 8.87 seconds. The minimum value is the best value compared to the maximum value because it is a speed test in dribbling the ball. The mean value of the entire pretest sample was 7.60 seconds, the median value was 7.54 seconds, and the standard deviation was 0.47 seconds.

1. Speed Group

Table 3. Results of Pretest-Posttest Data Analysis of Speed Group

Description	Pretest	Posttest
Maximum Value	11.75	8.35
Minimum Value	9.39	7.02
Mean	10.383	7.548
Median	10.22	7.445

Standard Deviation	0.90553	0.43815

From the results of the pretest and posttest in the speed group, it was found that there was an increase in ball dribbling skills in the students of the Special Sports Class of SMA Negeri 1 Berau. In the pretest, the mean value was 10.38 seconds, while in the posttest it was 7.55 seconds from the results of the SPSS analysis.

2. Agility Group,

Table 4. Results of Pretest-Posttest Data Analysis of Agility Group

Description	Pretest	Posttest
Maximum Value	10,92	8,87
Minimum Value	9,57	7,06
Mean	10,347	7,656
Median	10.435	7,615
Standard Deviation	0,51940	0,52654

From the results of the pretest and posttest in the agility group, it was found that there was an increase in ball dribbling skills in students of the Special Sports Class of SMA Negeri 1 Berau. In the pretest, it is a mean value of 10.35 and in the posttest is 7.66 from the SPSS test results. Related diagrams can be seen below.

Analysis

1. Analysis Prerequisite Test

Before carrying out statistical analysis, an assumption test, which included normality and homogeneity tests, was first carried out. The normality test is used to check whether the data is distributed normally. Meanwhile, the homogeneity test is applied to determine whether the research sample is homogeneous.

a. Normality Test

The table below shows that the sample was analyzed using the One-Sample Kolmogorov-Smirnov Test. It shows that the data was normally distributed and met the criteria in the next test model.

Table 5. One Sample K-S Test

Variable	Z	p	Sig	Description
Pretest	0,146	0,200	0,05	Normal
Posttest	0,127	0,200	0,05	Normal

In the table above, it is shown that the results of the value of $p > 0.05$ or $p < 0.05$, indicating that the test carried out has a value higher than 0.05 or $p > 0.05$, through which the data tested in normality is normal.

b. Homogeneity Test

The prerequisite for statistical analysis is through a homogeneity test of data variations. This test is calculated using the Homogeneity of Variance test. The test results showed that when the significance > 0.05, the data was homogeneous, and vice versa.

Table 7. Test of Homogeneity of Variance Results

Variable	Df	Sig	Description
Pretest	18	0,126	Homogen
Posttest	18	0,160	Homogen

From the above results, it can be observed that in the Homogeneity test table in SPSS related to the pretest value, the significance is 0.126 > 0.05, showing that the tested data is homogeneous. Regarding the posttest value, the sig. is 0.160, which is higher than 0.05, indicating that the tested data is homogeneous. Therefore, the data tested can be said to be homogeneous. This means that the data tested, whether it is a pretest or posttest, is Homogeneous.

2. Hypothesis Test

This hypothesis test aims to assess whether agility and speed training significantly influence ball dribbling skills. It was carried out using the T-Paired Sample Test using SPSS 27 software.

Table 8. Paired Sample Test Results

Variable	t_{table}	t_{count}	Sig.	df	Mean
Pretest – Posttest	2,093	18,595	0,00	19	2,7630

From the results of the t-test, it can be concluded that the t-value is calculated at 18.595 > t-table 2.093 or a significance of 0.00 < 0.05 with a degree of freedom (df) of 19. Thus, the null hypothesis (Ho) was rejected, which means that agility and speed training significantly affected the improvement of dribbling ability in extracurricular students at SMA Negeri 1 Berau.

Table 9. Linear Regression Test Results

Variabel	R	R^2	Adj. R^2	Std. Error
Pretest – Posttest	0,440	0,194	0,149	0,66303

Based on the linear regression test, the determination coefficient in the table above was obtained with an adjusted R-square value of 0.149 (14.9%). This shows that the speed and agility training applied in this study had an effect of 14.9% on the dribbling ability of extracurricular students at SMA Negeri 1 Berau. The remaining 85.1% (1-0.149) was influenced by other factors apart from speed and agility training.

Discussion

Speed is the duration required by the body to complete a specific physical task. Speed is key in various sports, it is important to allow rapid movement of the body or limbs from one position to another. Speed is an individual's skill in moving from one place to another in the shortest possible

time (Wardani et al., 2020). A person's ability to carry out repetitive sports activities in the shortest possible time and high-speed techniques is an explanation of speed.

Agility is closely related to flexibility. Without good flexibility, an individual is not able to move agilely. According to Harsono in Syamsudin (2017) Agility is a person's ability to change the direction of the body quickly and in a balanced manner. Then, according to Amiq in Winarno et al. Click or tap here to enter text., Agility is an individual's skill in managing his position in a moving condition. Agility is a person's expertise in changing his direction.

Football extracurricular students are given a variation of speed training and agility training, each encounter with different variations and a fixed time dose of 5-10 minutes with multiple repetitions. The variations given are in accordance with the variations of the exercises that have been made by the researcher based on the treatment of Bobby Charlton's football dribbling test by inserting tracks and cones as obstacles. The variation of speed and agility training was tested in as many as 16 meetings, where there was a pretest and posttest to find out the extent of the development of football extracurricular students of SMA Negeri 1 Berau.

Based on speed and exercise activities, it turns out that it influences ball dribbling skills, as seen through the results of the pretest and posttest conducted in this study. The average value of the pretest was 10.37 seconds, while the average posttest was 7.60 seconds, showing an increase of 26.71% faster. Assuming that the time or value produced is smaller, the dribbling ability of the ball is interpreted to be better. There are various other factors, such as food intake patterns, sleep patterns, mental states, and so on, which also influence this study.

The purpose of this study is to assess the impact of agility and speed training related to improving ball dribbling skills in students at SMA Negeri 1 Berau extracurriculars. Based on data analysis using SPSS 27, it was found that the results of agility and speed training showed a t count (18.595) > t table (2.093) and a significance value of (0.000) < (0.005). Thus, the alternative hypothesis (H1) is accepted, and the null hypothesis (H0) is rejected. This indicates that agility and speed training have a significant influence on ball dribbling skills in extracurricular participants at SMA Negeri 1 Berau. The results of this study are in line with the research of Saputra (2021) and Yustisi (2018), which found that speed training and agility training influence dribbling ability in football.

Thus, speed training and agility training, as many as 16 treatments, had an influence on improving the dribbling ability of extracurricular football students of SMA Negeri 1 Berau. A variety of speed exercises, agility exercises, and repetitions are carried out, which then build the basic ability of students to dribble better and faster. However, these abilities must also be supported by good physical and mental condition. With the results that have been obtained, teachers are able to develop their performance to remain consistent and avoid decline, as well as apply new methods so that students do not feel bored with the previous practice methods.

Conclusion

The research on the effect of speed and agility training variations on dribbling ability in football games in extracurricular students at SMA Negeri 1 Berau resulted in: 1) Agility training

and speed training are influential in improving dribbling skills. This is shown by the results of t calculation (18.595) > t table (2.093) and Sig value. (0.000) < 0.005.2) The magnitude of the influence of agility training and speed training in dribbling was 14.9%.

Based on the conclusion, the researcher provides suggestions that the process of training speed and agility variations on dribbling ability in football games can be applied to extracurricular students at SMA Negeri 1 Berau. 1) For students with low dribbling skills, it is necessary to improve their abilities with regular exercises, such as agility and speed training. 2) Teachers should bring variations in exercises to increase students' motivation to improve dribbling skills through agility and speed exercises. 3) For the next researcher, it is recommended to control the aspects that bring influence on the exercise and the process.

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