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CONSEQUENCES OF PUSH UP ON INSIDE THROWS OF FOOTBALL ATHLETES

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Abstract

This study aims to find information about the effect of push ups on the results of throw-ins at SSB Putra Balung Jaya. The method used in this study is an experimental method to find a causal relationship (causal relationship) between two factors and the design of this study uses PreTest - Posttest Design. There are two variables in this study, namely push up training is an exercise that is carried out in a prone style with the hands as a support which strengthens the biceps and triceps muscles and the distance of the throw is the ability of SSB Balung Jaya players to throw the ball into the field with both hands as far as possible without initial movement until the ball touches the ground and is measured in meters. The population in this study were SSB Putra Balung Jaya players with a sample of 12 players, using a saturated sampling technique. The data collection technique used test and measurement techniques while data analysis was carried out using descriptive analysis techniques. The results of the descriptive test showed an average value in the pretest of throwing in 11.66 and an average value in the final posttest of throwing in training of 15.25. Looking at the results of the study, it can be concluded that push up training can affect the distance of throw-ins compared to before doing push up training.

Keywords: Push Up, Throw-in, Experimental Method

INTRODUCTION

Sports comes from the word olah which means movement and the word raga which means body (Pranata 2022). There are many benefits that can be obtained through exercise, such as maintaining a healthy body, preventing various diseases, and improving physical health. Sport is an activity that uses physical elements to gain joy and restore physical and mental health. In addition, sports activities for humans can keep the body in prime condition and fit. And sports activities also form a sportsmanlike spirit, personality, and good disposition, which ultimately forms quality human beings**.**

In sports in Indonesia today, achievements in sports are highly prioritized. Because of this, it can have a positive impact on all aspects of sports in this country. If the achievement increases, it will raise the good name of the region or nation. Optimal Indonesian achievement can be achieved by an approach to training using physical, technical and mental exercises. In improving physical condition, components that are very important for exercise consist of strength, flexibility, speed, agility, endurance, muscle strength, and power. Mandatory in a sport, these components are needed. Physical condition is also a prerequisite for an athlete to have in improving and developing optimal sports performance, therefore physical condition must be developed and improved according to the characteristics, characteristics, and needs of each sport. Physical condition is a unity of physical conditions owned by a person. Physical condition is one of the prerequisites that are indispensable in every effort to improve achievement (Prima and Kartiko 2021).

The dominant branch of football is indeed the limbs, but the upper body cannot be underestimated because the upper body and lower body are interconnected and work together (Ratiyono et al. 2022). Usually the arm is rarely noticed by players and coaches, even though the arm has an equally important role, especially in the fight for the top ball and throwing in (throw in) (Ramdan 2024).

SSB is the most appropriate forum for early childhood football coaching, currently football schools are flooded with students (Irfan Muhammad 2020). This makes a good idea considering the role of football schools as one of the habituation of achievements in national football, so that it is able to provide players to clubs in need. The purpose of an SSB is to accommodate and provide opportunities for its students to develop their talents and then provide the basics of how to play football which should also be the formation of

personal character as well as providing commendable behavior to the students. SSB is used as a place to coach Indonesian footballers.

Physical condition is a whole of components that cannot be separated just like that, both improvement and maintenance (Usman and Argantos 2020). This means that in an effort to improve physical condition, all of these components must be developed. Physical condition is a requirement that must be possessed by an athlete in improving and developing optimal sports performance (Wenly, Pelana, and Wasan 2021), so that all physical conditions must be developed and improved according to the characteristics, characteristics, and needs of each sport. Physical condition is a necessary requirement in an effort to improve athlete achievement, and it can even be said to be a basic need that cannot be postponed or negotiated (Sukiri et al. 2023).

Very good physical condition is a fundamental factor for every individual. Uintuik wants to carry out activities as a football player, so it is necessary to have a good physical condition so that the activities can be maximally followed, the sports branch has characteristics and characteristics that are khuisuis that meet the physical requirements of football players. The physical condition that football is used to improve endurance, muscle strength (eixsplosif poweir), agility (speieid), and agility (agilily) (Karomi, 2024). One of the efforts that can improve football playing skills is not enough just with passion and fun, but many factors must be trained and processed both physically and mentally. One of the elements that needs to be trained in the game of soccer is how to train the arm muscles, if a person is able to have good arm muscle strength, the ball throw will be maximized. On the other hand, if the player's arm strength is weak, then the ball throw obtained will be less than optimal. Strength is one of the physical requirements that is useful to make a soccer athlete have good technique, such as being able to throw inside proficiently because it has strong arm muscle strength. However, to gain good strength, an athlete must do regular training in accordance with the program that has been made by a coach (Bete 2020).

Practice is an organized and deliberate series of game actions that are completed over a long span of time, which means training physical, special, strategic, and mental abilities to help competitors make the most extreme game progress. Exercise can also be interpreted as a program of "activities" that is meant to help learning, ability, work on actual health, to plan competitors for a particular contest. As shown by (Parlindungan,

2022) Exercise is the development of exercises that efficiently and deliberately further develop the body's capacity. Long-term, stable and depersonalizing basic exercises, which lead to the formation of physiological and mental capacity. Push-ups are well-known and widely used because they don't require any tools to do it. One of the benefits of push-ups is that they work the muscles of the chest, shoulders, and arms. Push-ups are actual exercises that highlight the preparation of the arm muscles.

There are 10 principles of exercise in sports activities, including; the principle of readiness, the principle of active participation in training, the principle of multilateral, the principle of specialization, the principle of individualization, the principle of overload, the principle of improvement, the principle of variation, the principle of heating and cooling and the principle of long-term training". In swimming, excellent physical condition is very important, this has been explained before. Physical exercise in its implementation is more focused on fostering physical condition (Zahrani 2013).

The development of football game techniques, one of the important things to be fostered among them is the throw-in. Throw-in is a very important basic technique, to be a good soccer player, this basic technique must be mastered well. Because in the game of football the goal is to create as many goals as possible and a good and strong throw-in is one of the basic techniques given to friends to be able to create goals. The basic practice of throwing the ball in a soccer game will certainly increase the ability to throw the ball in terms of the distance of the throw, so that an attacking player can benefit when the throw is used to start an attempt to score a goal or make it easier for a goal to occur, usually also with throwing the ball just Giving the ball to a friend after the ball leaves the field, of course this is not the case because not all basic techniques in the game of football are interrelated. Of the various elements of physical condition, strength is one of the most decisive and plays the most role in football in terms of achievement if a football player is supported by other physical conditions (Averina and Widagda 2021).

Throw-in is an important basic technique; To be a good soccer player, these basic techniques must be applied correctly. Throw-ins typically focus on the biomechanical analysis of throwing the ball for as long as possible with the idea of creating scoring opportunities similar to corner kicks (i.e. the ability to pass the ball into an 18-yard box with a pre-planned routine) (Pokhrel 2024). The throw-in is the only technique in the game of football that is played from outside the playing field. The throw-in can be done

with or without a prefix, either with an aligned position or one foot in front. Throw-ins are useful for making close and long-range passes according to the desired target. Even throw-ins can be used as a pass in the opposing team's penalty box (Dixion 2020).

As previous research conducted by (Parlindungan, 2022) In his research, he explained that push-up exercises can increase the ability to throw in the ball speak game. This happens because with push-up exercises, the hand muscles will increase in mass and strength. Testing this study used an all-out population testing procedure with a sample of 40 people. The exploratory instrument is that all instances take a straight forward kick test. Information and test speculation using the t-test recipe, that push up exercises affect the extension of the consequences of throwing into football. This can be seen from the results of the information testing through the estimation of the t-test equation with the t-model calculation is more attention to the t-table (13.730, 1.70) with a certainty level of 0.95 ($\alpha = 0.05$) and the number of tests (N = 40). Push up training affects the improvement of throwing results at the Bimantara Musi Rawas football club.

Research conducted by (Zainuddin, 2022) who explained that push-up exercises have a significant effect on the distance of throw-in in the football game of SMAN 7 Gowa students as seen from the increase in the throwing distance into athletes or students of SMAN 7 Gowa. With data collection techniques using test and measurement techniques while data analysis is carried out with descriptive analysis techniques. The results of the descriptive test showed that the average score in the pretest threw in was 14.10 and the average score in the posttest at the end of the practice threw in 15.30. Looking at the results of the study, it can be concluded that push up exercises can affect the distance of the throw-in compared to before doing push up exercises.

Based on the researcher's observations during practice, the most dominant cause is the lack of skills of students in performing basic techniques of throwing the ball. The problem on the field for SSB Putra Balung Jaya players is to find an arm role. The role of a weak arm can result in throws into SSB Balung Jaya players not being optimal. The role of the player's arm Although it does not play much when playing football, the ability of the arm muscles is needed when throwing inside close to the opposing team's goalkeeper area. This opportunity often happens in every match. But on the other hand, the players could not take advantage of this opportunity due to the weakness of both arms in throwing in. Therefore, the evidence in the altals of this research is not to be studied by previous

researchers. This research was conducted to understand the Consequences of Push Up on the Results of Throw-In in SSB Putra Balung Jaya Players.

METHOD

The method outlined in the study is the experimental method. Further described in the research design of the observation experiment was carried out 2 times, namely before the experiment and after the experiment. Observation before the experiment is called *pretest* and observation after the experiment is called *posttest* Initial data or *pretest* taken from all samples are put together in one group, then in the next stage the treatment / treatment of push up exercises is carried out then in the last stage posttest is carried out after the treatment of push up exercises is carried out.

Experimental research aims to find out whether there is an effect of a treatment on changes in a certain condition or the symptoms of a certain group compared to other groups using different treatments (Ramdhan, 2021), Experimental research is carried out by comparing one or more control variables (which are not treated) with one or more experimental variables (which are treated). The results of the 2 groups were then compared with calculating the average results.

The first stage for data analysis in this study is to conduct a normality test. A normality test is needed to find out whether the data is normally distributed or not. Good data is data that is normally distributed. In this study, the normality test used the *Kolmogorov-Smirnov statistical test* with the help of the SPSS 25 program. The results of the data analysis with *the Kolmogorov-Smirnov* test are then compared with its critical value to make a decision on whether the data is normally distributed or not. The basis for decision-making in the *Kolmogorov-Smirnov* test is that if the significance value (Sig.) is greater than 0.05, the research data is normally distributed and if the significance value (Sig.) is less than 0.05, the research data is not normally distributed.

The next stage after it is known that the data is normally distributed, a parametric test can be carried out using a t-test for separate samples. This data analysis technique was used because the purpose of the study was to find out the Consequences of Push Up on the Results of Throw-In in SSB Putra Balung Jaya Players. The population of this study is 12 SSB Putra Balung Jaya players, therefore the sampling technique used is saturated sampling where all members of the population are sampled. From what was

conveyed above, the sample used in this study is all the number of SSB Balung Jaya players, namely 12 people. There are two variables in this study, namely push up training is an exercise that is carried out in a prone style with the hands as a support which strengthens the biceps and triceps muscles and the distance of the throw is the ability of SSB Balung Jaya players to throw the ball into the field with both hands as far as possible without initial movement until the ball touches the ground and is measured in meters (Lamusu and Lamusu 2021). Techniques for collecting data are test and measurement techniques. Before starting the initial test, students receive directions related to the throw-in test without a prefix. Once everything is clear, the initial test then begins. The preliminary test steps *are* as follows:

1. Each player is called in turn according to a list of names that have been compiled beforehand. Students are called to stand on the sideline (court line) with a ball and are ready to do a throw-in test without a prefix.
2. When the throw-in guard is ready, the player makes an in-throw without a prefix.
3. Each player throws 3 times. The score taken is the result of the farthest throw and the score is entered into the pretest table .
4. After the initial test data was obtained, the next step was treatment, namely 12 students doing push-up exercises for 8 meetings, after which they took the final test *(posttest).*

RESULTS AND DISCUSSION RESULTS

1. Descriptive Test

Tabel 1. Deskriptif Statistik *Throw in*

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
pretes	12	7	12	8.83	.423	1.467
postes	12	7	14	9.50	.515	1.784
Valid N (listwise)	12					

Based on the results of the descriptive test, it can be explained that: The initial test of the ability to make throw-ins was obtained from 12 football players, an average score of 8.83 with a standard deviation value of 1,467. The final test of the ability to throw in

the throw in by doing a push up treatment, from 12 football players obtained an average score of 9.50 with a standard deviation value of 1.784.

2. Homogeneity Test

Table 3. Homogeneity Test Results

	Levene Statistic	df1	df2	Sig.
Based on Mean	.257	2	6	.782
Based on Median	.176	2	6	.842
Based on Median and with adjusted df	.176	2	4.898	.843
Based on trimmed mean	.257	2	6	.782

Based on the results of the homogeneity test above, it is known that the data on the ability to throw in (throw in) was obtained with a significance value *of 0.782* for pretest *and* posttest data, where 0.782>0.05 so that it can be said that the *pretest data* is homogeneous.

3. Normality Test

Table 2 Normality Test Results

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretes	.215	12	.131	.911	12	.223
postes	.223	12	.102	.880	12	.088

The results in the normality of the initial test data of the ability to throw in before the statistical push up exercise were obtained with a Kolmogorov – Smirnov Z Test value = 0.215 with a probability level = 0.223 and greater than the α value of 0.05 or at a significant level of 95%. Thus, the initial test data of the ability to make *throw-ins obtained* was normally distributed. The results in the normality of the final test data of the throwing in ability after performing the statistical push up exercise obtained the Kolmogorov – Smirnov Z test value = 0.223 with a probability level = 0.088 and greater than the α value of 0.05 or at a significant level of 95%. Thus, the final test data of the ability to make *throw-ins obtained* is normally distributed.

4. 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			
Pair 1	pretes - postes	-.667	.651	.188	-1.081	-.253	-3.546	11	.005

Hypothesis testing uses t-tests. To test the effect of *pretest* and *posttest group treatment.* There is a significant effect of push up training with the distance of the throw *in.* The test of this research hypothesis is to determine the effect of push up exercises on the distance of *throw-in* statistical hypothesis. Based on the table above, the data from the statistical calculation of the "t-test" was obtained with a value of Sig. 0.000<0.05, meaning that there was a difference in the average result of throwing in between before and after the push-up exercise. In this study, an analysis was carried out on the ability to throw in in football players before and after being given push up training treatment.

DISCUSSION

The results of the descriptive analysis showed that the average score of the throw-in ability before the pretest was 8.83 with a standard deviation of 1.467. After the treatment of push ups, the average score increased to 9.50 with a standard deviation of 1.784. This average increase shows that push up training has a positive impact on the ability to throw into a soccer player. The higher standard deviation in the posttest also indicates a greater variation in the outcome after treatment, which may be due to the improvement of different individual abilities. The results of the normality test using Kolmogorov-Smirnov and Shapiro-Wilk showed that the pretest and posttest data were normally distributed, with significance values of 0.223 and 0.088, respectively, which were both greater than $\alpha = 0.05$. This is important because assumptions of normality are necessary for further analysis, including hypothesis testing. With normally distributed data, analysis can be carried out more precisely and validly. The homogeneity test showed that the pretest and posttest data had a homogeneous variance, with a significance value of 0.782, which was also greater than 0.05. This suggests that there is no significant difference in variance between the two groups, so the assumption of homogeneity is met. It is important to ensure that the comparison between the pretest and the posttest is valid.

Hypothesis testing using paired t-test showed a significant difference between pretest and posttest values, with a significance value (Sig.) of 0.005, which was smaller than 0.05. This shows that push up exercises have a significant influence on improving the ability to throw in in football players. The mean difference between pretest and posttest was -0.667, which indicates that the posttest score was higher than that of the pretest. The 95% confidence interval for this difference ranged from -1.081 to -0.253, which does not include zero, further reinforcing the finding that push up exercises are effective in improving the ability to throw in.

CONCLUSION

This study analyzes the effect of push up training on the ability to throw in in football players by comparing the results of the pretest and posttest. Based on the results of the analysis carried out, it can be concluded as follows, Improvement of Ability There was a significant increase in the ability to throw in after the treatment of push up exercises, with an average pretest score of 8.83 and posttest of 9.50. This shows that push up training has a positive impact on the performance of the deep throw technique. Data normality, pretest and posttest data are normally distributed, as evidenced by the results of the Kolmogorov-Smirnov and Shapiro-Wilk normality tests. This ensures that the statistical analysis carried out is valid and reliable. Homogeneity of Variance, the homogeneity test shows that the variance between the pretest and posttest is homogeneous, with a significance value of 0.782. This confirms that the comparison between the two groups can be made precisely. Significance of the Effect of Exercise, the results of the hypothesis test showed a significant difference between the pretest and posttest scores, with a significance value of 0.005. This confirms that push up exercises significantly improve the ability to throw inside in a soccer player. Overall, this study provides evidence that push up training is an effective method to improve the skills of the deep throw technique in soccer.

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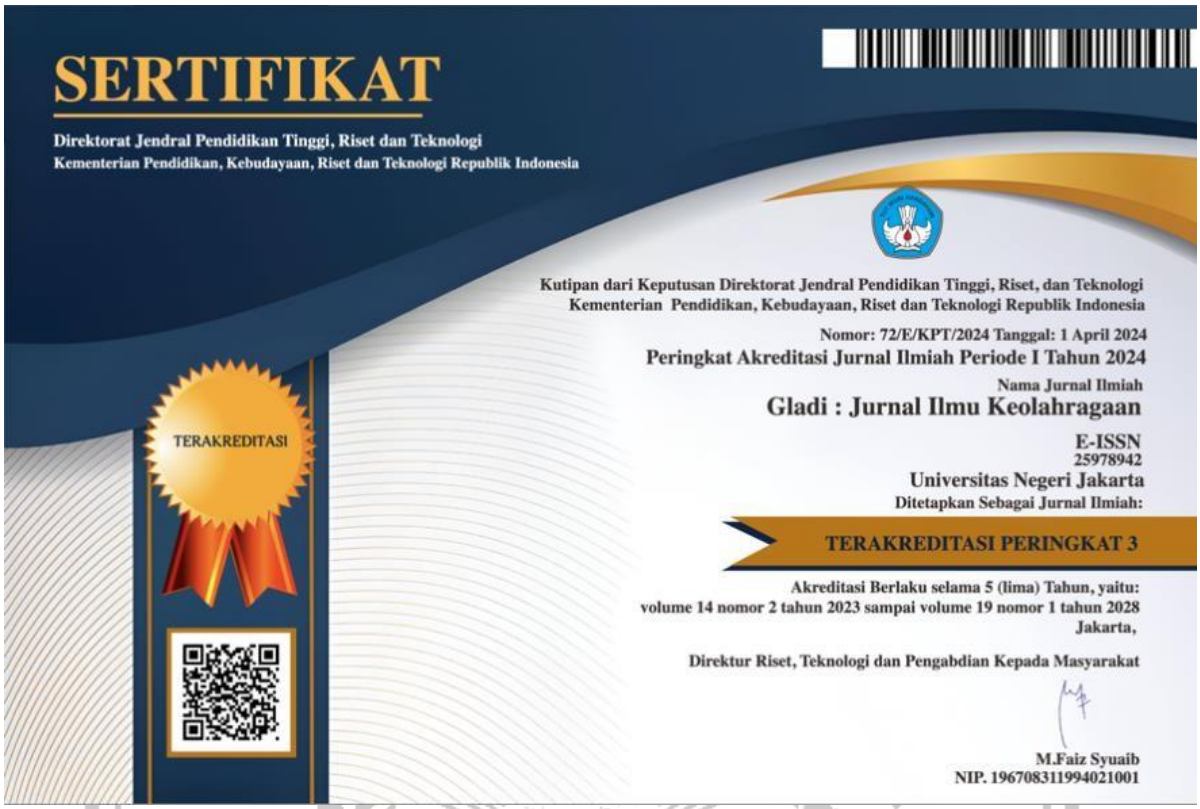

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