

Differences in the Effects of Imaginary Exercises, Real Exercises, and the Combination of Imaginary Exercises and Real Exercises to Improve Basketball Free Throw Result

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Abstract - Differences Between the Effects of Imaginary Exercise, Real Exercise, and the Combination of Imaginary Exercise and Real Exercise to Improved Basketball Free Throw Result. Postgraduate Program Unimed, 2019. This study aims to determine the Differences in the Effects of Imaginary Exercise, Real Exercise, and the Combination of Imaginary Exercise and Real Exercise to Improved Basketball Free Throw Result. The difference in effect of this exercise was given to 30 trainees. Next they were divided into 3 groups, each group consisting of 10 people. The division of groups using matching by pairing techniques. The first group was given treatment of imaginary exercises, the second group was given treatment of real exercises and the third group was given a combination of imaginary and real exercises. All three groups were given treatment training for 6 weeks. This research method is experimental. The research design is Posttest-Only Control Design. In this design there are 3 groups selected proportionally. The effect of the treatment is (X1: X2), (X1: X3), (X2: X3), and (X1: X2: X3). The effect of treatment was analyzed by Comparative Hypothesis Testing of Two Samples with Polled Variant Formula, and Testing of Comparative Hypothesis of Three Samples Together with One Way Anova Analysis. The results showed that (1) There was no difference in the effect of imaginary exercises with real exercises, (2) There was no difference in the effects of imaginary exercises with imaginary and real combination exercises, (3) There was no difference in the effect of real exercises with imaginary and real combination exercises, (4) There was no influence of imaginary exercises, real exercises, and a combination of imaginary and real exercises to improve basketball free throw results.

Keywords: *imaginary exercise, real exercise, the combination of imaginary exercise and real exercise to improve basketball free throw*

I. INTRODUCTION

Free throw is a penalty given to one team in a basketball game. This penalty is given, because one of the defenders made a foul (mistake) to the player who did shooting (shot). In addition, free throws can also be given to each team that has done foul 5 times.

Free throwing carried out without guard, from a distance of about 4.75 meters (Hartayani, 2014: 36), should be done easily. Players who will do free throw can do it calmly without any

disturbance from the opposing player. But in reality, not all free throws that are done can get into the basketball hoop shot easily.

From the few free throw basketball data that the writer collected, there is no basketball team that can do a free throw 100% success. Here the authors present the data free throw results in several Basketball League in the 2016-2017 season:

Percentage of Free Basketball Throw in some Basketball Competitions (Source: nba.com; ibl.com)No Percentage Competition Free Throw

If analyzed, why do free throws often fail? Even though the implementation is without guard and with a fairly close range of fire. The answer, trainees feel the tension when doing the free throw. If you want to get rid of tension, give mental exercise. Some mental exercises that can reduce tension in doing free throws are self talk, imagery training, progressive muscle relaxation, and others. Of the several forms of mental training above, imaginary training is very suitable to be trained for trainees in basketball at SMAN-1 Medan.

Imaginary exercise according to Komaruddin (2015: 82) "is an effort to create or repeat experiences in the mind, which is to create / re-create an experience in the brain. The process is by recalling information or experience stored in memory and shaping it into the shadow of meaningful patterns of motion. "

Lutan (1988: 327) added "Imaginary exercise of a term which is roughly the same understanding as other terms such as mental practice, introspection or conceptualization. The use of the term imaginary training means to distinguish it from the actual practice that appears in physical demonstration. "

The implementation of imaginary exercises according to Komaruddin (2016: 93) can be done by: "(1) Sit as you like and close your eyes. (2) Try to relax first, (3) Breathe deeply several times, (4) Try to imagine and make imagination one by one experience related to the five senses. "

So that imaginary exercises can be seen increasing, imaginary exercises should be compared with other types of exercises. Like real exercises and a combination of imaginary exercises and real exercises.

Real practice is learning and getting used to being able to do something that is brightly visible, can be seen, heard and clearly and there is evidence.

Combination training means learning and getting used to being able to do something, or acting to be able to form activities that combine several things. In this study, the combination that is trained is a combination of exercises between imaginary exercises and real exercises.

II. METHODS

The design used in this study is True Experimental Design.

In this study the research design was carried out: Posttest-Only Control Design. In this design there are 3 groups selected proportionally. Group-1 (X1) was treated with imaginary free throw training, group-2 (X-2) was treated with real free throw training, and group-3 (X-3) was given with free throw combination training between imaginary and real training .

To analyze the data in this study a t-test testing technique was used. Two-sample comparative hypothesis testing with the pooled variant formula and three-sample comparative hypothesis testing together with One Way Anova Analysis.

III. RESULTS AND DISCUSSION

From the data normality test results calculated with the helping of the program IBM SPSS Statistics 22 , the results of the normality test data are as follows:

TABLE 1. NORMALITY

One-Sample Kolmogorov-Smirnov Test		
	Unstandardized Residual	
N		30
Normal Parameters ^{a,b} <small>basket</small>	Mean	,0000000
	Std. Deviation	,97036167
Most Extreme Differences	Absolute	,206
	Positive	,206
	Negative	-,126
Test Statistic		,206
Asymp. Sig. (2-tailed)		,002 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

A. Data Normality Test

Based on the data normality test using the kolmogrof-smirnof for variables:

- GROUP-1: Significant value of 0.198 > 0.05, data is normally distributed.
- GROUP-2: Significant Value of 0.854 > 0.05, data are normally distributed.
- GROUP-3: Significant value of 0.441 > 0.05 normal distribution data.

PRETEST GROUP-1, 217 10, 200 *, 896 10, 198

TABLE 2. HOMOGENEITY TEST

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
PRETEST	Based on Mean	,024	2	27	,976
	Based on Median	,035	2	27	,966
	Based on Median and with adjusted df	,035	2	26,934	,966
	Based on trimmed mean	,027	2	27	,973

TABLE 3. ANOVA

ANOVA					
PRETEST					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,467	2	,233	,110	,896
Within Groups	57,400	27	2,126		
Total	57,867	29			

Test of Homogeneity of Variances

Levene Statistics df1 df2 Sig.

PRETEST Based on Mean, 024 2 27, 976

Based on Median, 035 2 27, 966

Based on Median and with adjusted df, 035 2 26,934, 966

Based on trimmed mean, 027 2 27, 973

ANOVA

PRETEST

Sum of Squares df Mean Square F Sig.

Between Groups, 467 2, 233, 110, 896

Within Groups 57,400 27 2,126

A total of 57,867 29

Obtained significance = 0.976 > 0.05, it was concluded that the group of imaginary trainings, real trainings and combinations of imaginary and real trainings have the same variance level or are called homogeneous.

B. Hypothesis testing

The results of group 1 and group 2 comparisons are as follows:

TABLE 4. HYPOTHESIS

No	X-1	X-2
	44	48
N	10	10
\bar{x}	4,4	4,8
s	1,7764	1,6193
s ²	3,1556	2,6222
t-hitung	(-0,52)	

Furthermore, the results of t-counts are compared with t-tables with $dk = n1 + n2 = 10 + 10 - 2 = 18$. With $dk = 18$ at 5% error level, the t-table value = 2.10 is obtained. The results of the comparison are: t-count (-0.52) < t-table (2.10) then Ho is accepted and Ha is rejected.

In conclusion: There is no difference in the effect between imaginary training and real practice on improving basketball free throw results.

The results of group-1 and group-3 comparisons are as follows:

TABLE 5. RESULT GROUP 1 AND 3

No	X-1	X-3
	41	59
N	10	10
\bar{x}	4,1	5,9
s	1,7764	1,66333
s ²	3,1556	2,766667
t-hitung	(- 1,94)	

Furthermore, the results of t-counts are compared with t-tables with $dk = n1 + n2 = 10 + 10 - 2 = 18$. With $dk = 18$ at 5% error level, the t-table value = 2.10 is obtained. The results of the comparison are: t-count (-1.94) < t-table (2.10) then Ho is accepted and Ha is rejected.

In conclusion: There is no difference in the effect between imaginary training and the combination of imaginary and real training to improve basketball free throw results.

The results of group-2 and group-3 comparisons are as follows:

TABLE 6. RESULT GROUP 2 AND 3

No	X-2	X-3
	48	59
N	10	10
\bar{x}	4,8	5,9
S	1,6193	1,66333
s ²	2,6222	2,766667
t-hitung	(- 1,49)	

Furthermore, the results of t-counts are compared with t-tables with $dk = n1 + n2 = 10 + 10 - 2 = 18$. With $dk = 18$ at 5% error level, the t-table value = 2.10 is obtained. The results of the comparison are: t-count (-1.49) < t-table (2.10) then Ho is accepted and Ha is rejected.

In conclusion: There is no difference in the effect between real practice with a combination of imaginary and real practice to improve basketball free throw results.

The results of the comparison between group-1, group-2 and group-3 together can be seen in the following summary of calculation results:

TABLE 7. COMPARISON BETWEEN GROUP 1, 2, AND 3

Sumber Variasi	dk	Number of Squares	MK	Fh	Ftab	Decision
Total	30-1=29	1731,87	-	0,094	See table 5% = 3,35	Fh < Ftab
Between Groups	3-1=2	12,067	6,034			0,094 < 3,35
In Groups	30-3=27	1719,8	64,143			So, Ha rejected

From the results of the statistical calculations above, the F-value of 0.094 is obtained. Because the F-count value is 0.094 < F-table 3.35 with the numerator dk m-1 (3-1 = 2) and the denominator N-m (30-3 = 27). Because F-count < F-table at 5% error, H0 is accepted and Ha is rejected. So the conclusion is: There is no difference in the effect of imaginary training, real and combination of imaginary training and real together to improve basketball free throw results.

IV. CONCLUSIONS

1. There was no difference between imaginary Training and real practice to improve basketball free throw results.
2. There was no difference between imaginary training and the combination of imaginary and real training to improve basketball free throw results
3. There was no difference between real training and a combination of imaginary and real training to improve basketball free throw results
4. There was no effect of training between imaginary training, real training and the combination of imaginary and real training together to improve basketball free throw results.

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