

The Effect of Imagery Psychological Skill Training in Handball Game Penalty Shooting: The Case of Hawassa City Administration U-17 Male Handball Project

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ABSTRACT: The main purpose of this study was to investigate the effects of imagery skills training in handball game penalty shooting. For this purpose, Hawassa city administration U-17 male handball projects were selected. To collect the necessary data, all total of 30 U-17 male handball project players and a coach were selected as participants of the study. The study used a pre-test post-test experimental research design and the data were collected using multiple methods. All the selected subjects participated in the designed imagery skills program for consecutive twelve weeks, three days per week and for 15 minutes per day. Pre and post training test was conducted to measure the variables of the study. The collected data were analyzed using statistical package for social science (SPSS) version 20. Thus, paired-t test analysis and independent sample test were used to compare the mean difference of pretest and posttest and independent-t test to compare the mean of experimental and control group in relation to confidence interval consecutively. The level of significance was set at 0.05. After the twelve weeks training, the significant improvement was observed on posttest of experimental group. As a result, the mean difference value of paired test of pre and posttest is 1.96 and independent sample test the mean difference of experimental and control group is 3.6. Thus, the mean difference implies significance difference in pre and posttest of control and experimental group. The mean result of experimental group is pretest is 9.06 ± 0.79 whereas 12.86 ± 0.63 posttest; it shows a 3.8 difference on experimental group of the study. This result indicates that the effective change was observed on experimental group than control group. Based on the findings of this study, i recommend that applying imagery, as part of the training, at different levels plays a vital role for the success of the team.

KEY WORDS: Imagery, psychological skill, penalty shooting

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I. INTRODUCTION

All sport and exercise participants fall victim to mental letdowns and mistakes (Robert and Daniel 2011). Handball is one of these sport games. Handball has today definitely become a tough and uncompromising sport requiring from players enviable physical, mental, and technical preparedness (Bilge, 2012). In this case it provides an advantage of psychological skill training. Psychological training is implementation of mental strategies that aim to enhance the athlete's or team's performance (Leffngwell, T., Durand-Bush, N., Wurzberger, D., & Cada, P., 2005). In this regard Vealey, (2007) propose five basic techniques that athletes must learn: goal setting, relaxation skills, visualization/mental rehearsal, self-talk/positive thoughts, and biofeedback techniques. Imagery, in the context of sport, may be considered as the voluntary or involuntary creation or recreation of an experience generated from memorial information, involving quasi-sensorial, quasi-perceptual, and quasi-affective characteristics which may occur in the absence of the real stimulus antecedents normally associated with the actual experience and which may have physiological and psychological effects on the imager (Morris, Spittle and Watt, 2005). Further Weinberg, (2008) defined as imagery is a key psychological skill, with a remarkable array of studies testifying to its efficacy in enhancing performance of a wide variety of motor skills. To achieve optimal benefit from imagery training, it should be combined with physical training. It is not appropriate to replace physical training by imagery training (except where injury is involved), according to research findings. Imagery has been widely used in combination with physical practice to improve performance (Schuster et al., 2011) and to improve motor learning reported that imagery is effective in enhancing overall performance, but not as effective as physical practice (Schuster et al., 2011). Imagery and physical practice together have been demonstrated to be superior to physical practice or imagery practice alone (Darling, 2008), while the use of imagery alone does not usually lead

to superior performance to physical practice alone (Feltz & Landers, 1983) However, some studies did not find a significant difference in using imagery with or without physical practice (Taktek, 2004).

II. OBJECTIVE OF THE STUDY

General Objective

The general objective of this study is to investigate the effect of imagery psychological skills training in handball game penalty shooting.

Specific Objective

- To investigate the effect of imagery psychological skills training on the performance of male handball project penalty shooting.
- To identify the significance of psychological skills training on the penalty shooting performance of male handball project players.
- To suggest strategies on applying imagery psychological skills training relative to physical practice on their training program.

III. RESERCH METHOD

Design and period of the study

The quasi-experimental design was employed under this study. The experiment was held for 12 weeks, 3 days per week and 15 minute per day. The pre and posttests of imagery psychological skill tests were administered for selected subjects. The penalty shooting test was used to measure the project players' imagery skill in comparison between pre and posttest.

Source of Data

The sources of data for this study are 30 under 17 male handball projects players of Hawassa city administration. The data was collected from experimental and control groups through pre and posttests of penalty shooting performance of project handball players.

Sample Size and Sampling Technique

The study used a total of 30 under 17 young male handball players who are participating in the handball project of Hawassa city administration. Out of these, fifteen project players served as experimental group and the remaining as control group. For this study census method was used for entire populations (trainees) was included in the study and simple randomizing technique was used to divide the trainee in to experiment and control group.

Data Gathering Instrument

For the research the quantitative data was used collected through experimental penalty shooting (16 shoot for each trainees, 4 penalty shoot for each angle).

Method of data Analysis

The T- test was employed for the study, paired t-test to compare pre and posttest and independent t-test to compare result of control and experiment group in posttest.

IV. RESULT AND DISCUS

The study was conducted in southern Ethiopia, Sidama zone at Hawassa city administration male handball project players. The total participant of this study was 30 male U-17 handball payers of Hawassa city administration which was swerved as experimental and control group. The age of the player whom completes the study was 16-17.

Table 1: Paired difference in mean of pretest and posttest

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair	posttest – Pretest	1.96	2.05	.37	1.19	2.73	5.2	29	.000

The mean difference between post and pre is 1.967 and it's CI (1.19, 2.73). Based on paired test at 0.05 level of significance; there is a significant difference between posttest and pretest since the p-value is less than 0.05 p-value=0.000<0.05.

Table 4.4: Mean difference of experimental and control group in independent sample test

		t-test for Equality of Means						
		T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI Difference	
							Lower	Upper
Post	Equal variances assumed	12.0	28	.000	3.6	.29	2.98	4.21

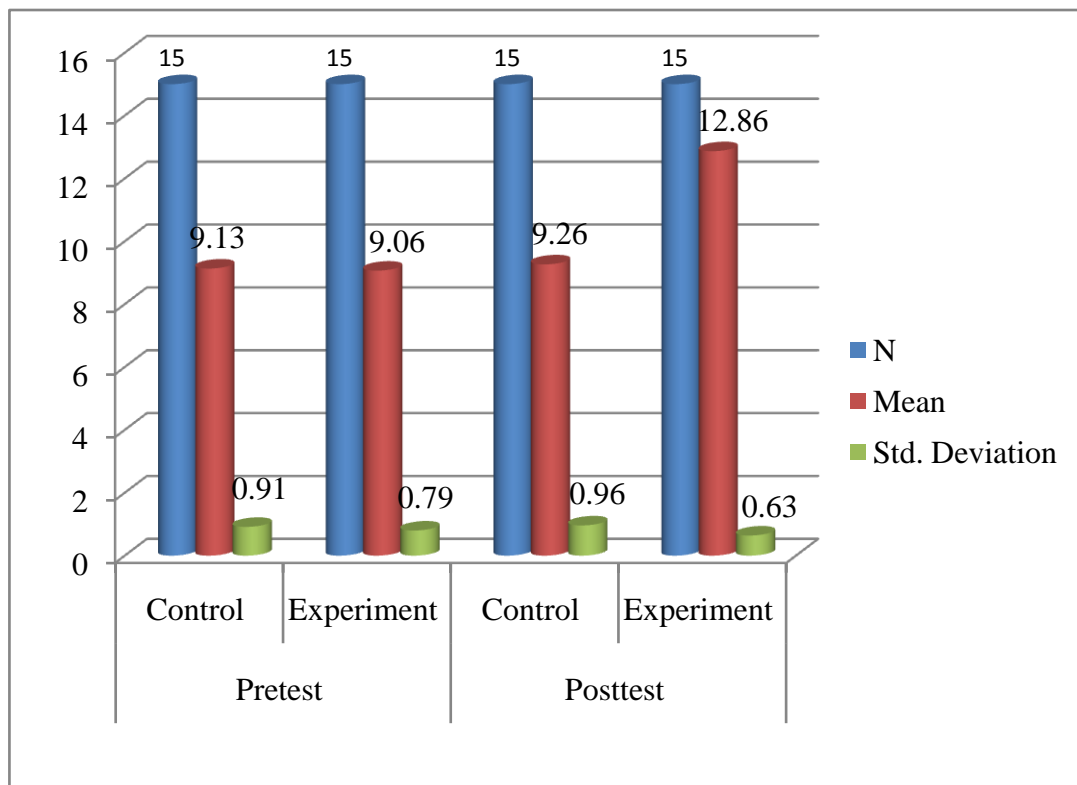
The mean difference between experimental group and control group is 3.6 with CI (2.98, 4.21), it shows that there is a significant difference between experimental and control group since p-values is less than at significant level 0.05 assuming variance. The result revealed that in posttest the experimental group showed an improvement of imagery skill which is in turn improved penalty shooting performance after taking the twelve week imagery skill training.

Table 1: Difference in mean of experimental and control groups

Test	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Control	15	9.1333	0.91548	0.23637
	Experiment	15	9.0667	0.79881	0.20625
Posttest	Control	15	9.2667	0.96115	0.24817
	Experiment	15	12.8667	0.63994	0.16523

The mean score value of control group in pretest is 9.13 ± 0.91 and posttest is 9.26 ± 0.96 . The mean score value of experiment group in pretest is 9.06 ± 0.79 and posttest is 12.86 ± 0.63 . The mean score value of experiment group shows a 3.8 change after taking the twelve week imagery skill training. This indicates that the experimental group shows an improvement on the skill. In general the mean value of experimental group shows an increment which indicates that improvement appears on the players. It can be said that this change is due to 12 week imagery skill training program that they were engaged in. The results clearly showed that giving imagery psychological skill training regularly improves player’s performance of visualizing creating an image in their mind related to their sport and help them to improve their penalty shooting skill.

Graphical illustration to mean difference of experimental and control group



V. CONCLUSIONS

Based on the finding of the study, the following points are stated as conclusions: an important finding emerged in this study was that the 12 weeks' imagery psychological skills training which showed a significant effect in U-17 male handball project players. Similarly, this study found that a progressive improvement in penalty shooting performance of the player after the intervention. Therefore, players those participated in imagery skills training (the experiment group) increased penalty shooting performance which is in turn did better in imaging (visualizing) skill. Contrary to this, the control group showed little change, might be the physical training they had similar before.

Generally, the study has shown that twelve weeks on imagery psychological skills training has brought significant change (penalty shooting performance improvement) on experimental groups. As a result, they out performed than the players in control group who didn't take part in training.

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