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## Effect of mental imagery intervention on anxiety, self-confidence and basketball free throw performance

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### Abstract

Mental imagery, also called visualization and mental rehearsal is defined as experience that resembles perceptual experience, but which occurs in the absence of the appropriate stimuli for the relevant perception Imagery is the mental creation or recreation of sensory experiences that appear to the person imagining them to be similar to the actual event. (Suinn 1993) Whenever we imagine ourselves performing an action in the absence of physical practice, we are said to be using imagery. Mental Practice of specific performance skills. 1) Improving confidence and positive thinking, 2) Problem solving, 3) Controlling arousal and anxiety, 4) Performance review and analysis.5) Preparation for performance and 6) Maintaining mental freshness during injury. The present study is related to the mental imagery intervention training to basketball players for the period of six weeks on an age group of 14-17. The participants are 12 male basketball players in Palakkad dist, Kerala. 24 male basketball players of school level divided into two groups of 12 players each for the experimental and control group. Age of the players ranged between 14 to 17 Pre-test Post-test design Six weeks mental imagery intervention along with physical practice for the experimental group. The six weeks mental imagery training programme (exp. group) and the physical practice group significantly improved the self-confidence and free throw performance of male basketball players. The six weeks mental imagery programme was effective in increasing self-confidence and basketball free throw performance as compared to the physical practice group. Mental imagery training programmes can be effective in learning of closed skills such as basketball free throw performance.

**Keywords:** Anxiety, self- confidence, basketball

### Introduction

Mental imagery, also called visualization and mental rehearsal is defined as experience that resembles perceptual experience, but which occurs in the absence of the appropriate stimuli for the relevant perception Imagery is the mental creation or recreation of sensory experiences that appear to the person imagining them to be similar to the actual event. (Suinn 1993) Whenever we imagine ourselves performing an action in the absence of physical practice, we are said to be using imagery.

### Different uses of imagery in sports includes:

1. Mental Practice of specific performance skills
2. Improving confidence and positive thinking
3. Problem solving
4. Controlling arousal and anxiety
5. Performance review and analysis
6. Preparation for performance and
7. Maintaining mental freshness during injury
8. The present study is related to the mental imagery intervention training to basketball players for the period of six weeks on an age group of 14-17. The participants are 12 male basketball players in Palakkad dist, Kerala

### Objectives

1. To assess the effect of imagery intervention on free throw performance of basketball players.

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2. To assess the effect of imagery intervention on psychological state of basketball players;
  - Cognitive Anxiety
  - Somatic Anxiety
  - Self Confidence

**Methodology**

**Sample**

1. 24 male basketball players of school level divided into two groups of 12 players each for the experimental and control group.
2. Age of the players ranged between 14 to 17

**Experimental Design**

1. Pre-test Post-test design
2. Six weeks mental imagery intervention along with physical practice for the experimental group
3. Six weeks physical practice without imagery intervention for the control group

**Tools and tests employed**

CSAI 2-D by Reainer Martins

1. Cognitive Anxiety
2. Somatic Anxiety
3. Self Confidence

Basketball free throw performance (Ten trials)

**Scoring**

1. Ball goes out without touching any part-0
2. Touches the board and goes out -1
3. Touches the ring and goes out -2
4. Touches the board and goes in -3
5. Touches the ring and goes in - 4
6. Swish throw -5

**Statistical Techniques**

1. t- test
2. Analysis of Covariance

**Begins with Progressive Muscle Relaxation Training**

1. begin to focus on deep and rhythmic (slow) breathing
2. Beginning with the muscles in your face, tense the muscles....hold for 2 to 3 seconds....then relax....you should notice the difference between tension and relaxation...
3. Continue it up to lower part of the body

**Free throw imagination techniques**

**Body Position**

1. To be able to shoot the basketball effectively, you need to start with proper balance.
2. The body should be properly balanced from front to back and side to side.
3. The shoulders and hips are square to the basket.

**Hand Position**

1. The fingers of the shooting hand should be spread out on the basketball.
2. The palm of the hand should not touch the ball.
3. The non-shooting hand should be on the side of the ball and is there to hold the ball in place.
4. Once the ball is shot, the non-shooting hand is entirely off the ball.

**Ball Position**

The basketball should be held above the forehead and on a line above the nose.

**Shooting Motion**

1. The elbow and wrist do the basic work on the shot.
2. The elbow should be bent, the wrist should be cocked, and the ball should be above the forehead.
3. As you shoot, extend the elbow up and snap the wrist forward.

This follow-through motion will allow you to generate good power on your shot, which increases your range. This also gives you a soft touch on your shot.

Significance of Difference between the Pre Test and Post Test and Post Test Means of Experimental and Control Group of Male Basketball Players on Selected Variables

	Pre-test mean	Post-test mean	D m	D m	t- ratio
Cog. Anx Exp Control	20.91 19.50	19.08 19.00	1.83 0.5	1.15 1.11	1.60 0.45
Som. Anx Exp Control	18.33 16.92	17.92 18.50	0.41 1.58	1.33 1.2	0.30 1.32
Self. Con. Exp Control	22.50 19.08	26.50 23.33	4.0 4.25	1.44 1.67	2.77* 2.54*
Basket ball Free Throw Exp Control	14.92 14.17	22.42 17.33	7.5 3.16	1.87 1.46	4.01* 2.16

**Table 1:** Analysis of Covariance for Pre to Post Test Scores of Experimental and Control Group on Cognitive Anxiety

	Mean		SV	SS	df	MSS	Σ F-ratio
	Exp.	Control					
Pre	20.91	19.50	Between Within	12.04 179.92	1 22	12.04 8.178	1.472
Post	19.08	19.00	Between Within	0.042 158.92	1 22	0.042 7.223	0.006
Adj Post	18.74	19.35	Between Within	2.094 115.79	1 21	2.094 5.514	0.380

**Table 2:** Analysis of Covariance for Pre to Post Test Scores of Experimental and Control Group on Somatic Anxiety

	Exp.	Control	SV	SS	df	MSS	$\Sigma$ F-ratio
Pre	18.33	16.91	Between Within	12.04 187.58	1 22	12.04 8.527	0.247
Post	17.91	18.50	Between Within	2.042 237.92	1 22	0.042 10.814	0.668
Adj Post	17.66	18.75	Between Within	6.675 214.12	1 21	6.675 10.195	0.428

**Table 3:** Analysis of Covariance for Pre to Post Test Scores of Experimental and Control Group on Self Confidence

	Mean		SV	SS	df	MSS	$\Sigma$ F-ratio
	Exp.	Control					
Pre	22.50	19.08	Between Within	70.042 311.917	1 22	70.042 14.178	4.94*
Post	26.50	20.17	Between Within	240.667 214.667	1 22	240.667 9.758	24.67*
Adj Post	26.27	20.39	Between Within	169.12 209.056	1 21	169.124 9.955	16.99*

**Table 4:** LSD Post Hoc Test for the Difference between the Paired Means of Experimental and Control Group on Self Confidence

Paired Adjusted Post Means		Mean Difference	Significance level
Experimental	Control		
26.27	20.39	5.88*	0.05

**Table 5:** Analysis of Covariance for Pre to Post Test Scores of Experimental and Control Group on Basketball Free Throw Performance

	Mean		SV	SS	df	MSS	$\Sigma$ F-ratio
	Exp.	Control					
Pre	14.92	14.17	Between Within	3.375 302.58	1 22	3.375 13.754	0.245
Post	22.42	17.33	Between Within	392.04 433.58	1 22	392.042 19.708	19.89*
Adj Post	22.22	16.53	Between Within	350.89 350.29	1 21	350.89 16.681	21.04*

**Table 6:** LSD Post Hoc Test For The Difference Between The Paired Means of Experimental and Control Group on Basketball Free Throw Performance

Paired Adjusted Post Means		Mean Difference	Significance level
Experimental	Control		
22.22	14.53	7.69*	0.05

**Conclusions**

1. The six weeks mental imagery training programme (exp. group) and the physical practice group significantly improved the self confidence and free throw performance of male basketball players.
2. The six weeks mental imagery programme was effective in increasing self confidence and basketball free throw performance as compared to the physical practice group.
3. Mental imagery training programmes can be effective in learning of closed skills such as basketball free throw performance.

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