



Impact Of Six Weeks Of Mental Rehearsal Intervention Programme On Selected Psychomotor And Game Skill Variables Of Women Basketball Players

¹Sangeetha K, ²Kannadasan K

¹Assistant Professor, ²Associate Professor

¹Department of Physical Education, ²Department of Sports Psychology & Sociology,

¹Providence Women's College, Calicut, India

²Tamil Nadu Physical Education and Sports University, Chennai, India

Abstract: The purpose of the present study was to find out the impact of mental rehearsal intervention programme on selected psychomotor and game skill variables among women basketball players. To achieve the purpose of the present study, twenty women basketball players from the Providence women's college, Calicut were selected as subjects at random and their age ranged between 18 and 23 years. The subjects were randomly divided in to two equal groups namely experimental (Mental Rehearsal) and control group (CG). The experimental group underwent Mental Rehearsal intervention programme for three days a week for a period of 6 weeks in addition to their regular training program. The control group was not exposed to any experimental training. Before the intervention programme pretest was conducted to assess the psychomotor variables namely differentiation ability, orientation ability and reaction ability and game skill variables namely passing, shooting and dribbling. Differentiation ability was measured using medicine ball throw, orientation ability assessed using numbered medicine ball test reaction and reaction ability was measured using ball reaction exercise test. The game skills variables were assessed using AAHPERD Basketball skills test battery for females for both the groups. After the experimental training period of 6 weeks, the post test was conducted. To find out the significant improvement suitable statistical tool was applied and the level of significance was tested at 0.05 level. It was concluded that there was significant improvement on selected psychomotor variables namely differentiation ability, orientation ability and reaction ability also it was concluded that the game skill variables passing, shooting and dribbling had no significant improvement.

Key words: Mental Rehearsal, Psychomotor and Game Skill.

I. INTRODUCTION

Basketball is an extremely dynamic sport that requires movements in multiple planes of motion as well as rapid transitions from jogging to sprinting to jumping. The ability to quickly elude defenders, rapidly decelerate to take a jump shot, or explosively jump up to grab a rebound are all skills required to effectively play the sport.

Mental rehearsal is intentionally employed by the individual with the purpose of achieving specific cognitive or motivational outcomes. Cognitive outcomes are usually connected with the learning and performance of skills, strategies, and routines. A figure skater might observe someone successfully perform an axel to learn how it should be perfectly executed. Motivational outcomes naturally include managing thoughts and emotions as well as goal setting. Someone attempting to become

more active to lose weight might visualize him or herself looking thinner for motivation to be more physically active. Mental rehearsal is not necessarily limited to a particular outcome. Rather, it is possible to obtain numerous outcomes—for example, observing a meticulous skill to obtain improvements to both technique and confidence of performing the skill.

Systematic use of mental rehearsal is one of the qualities that differentiate elite athletes from those who do not excel in their field. The benefits of mental rehearsal are gaining credits within an exercise context, with more active individuals reporting greater use of the quality to self-regulate their thoughts, feelings, and behaviours.

Imagery involves creating or re-creating of a situation through multiple sensory modalities (e.g., visual, kinesthetic). It is well known that when combined with physical practice, imagery leads to greater enhancement of a motor skill compared to physical practice alone. The proposed mechanism underpinning these improvements is the commencement of some common neural networks during imagery and actual execution of the same skill and it is resulted in imagery being viewed as an effective mental rehearsal technique that complement and improves training and can even stand in or be replaced for some amount of actual practice. Beyond these cognitive outcomes, imagery is also well recognized as a confidence-enhancing technique that enables individuals to manage symptoms associated with anxiety.

When imagery is combined with relaxation, this subtype of mental rehearsal is called as visual motor behavior rehearsal. The two-step procedure begins with relaxation (e.g., take a deep breath) followed by imagery to fully re-create an event or situation (e.g., you are standing on the green again, holding the putter). It can be used to make stronger desirable responses (e.g., you are confident as you take the shot) and/or eliminate undesirable ones (e.g., reducing or reappraising symptoms associated with anxiety). While this standardized training method might be useful for altering thoughts and feelings, it is not always appropriate to relax individuals before they engage in imagery. This is because activation levels might fall below those normally experienced in the real-life situation, which can make imagery less effective.

Psychomotor variables act as the medium for the realization of cognitive and affective domains of learning and motor behavior. All these domains of learning are inseparable identities and work in perfect harmony and unison with one another. The psychomotor variables are primarily concerned with muscular contraction. Performance of motor skills involves neural, physiological and psychological aspects and is a continuum that runs the gamut from physical to cognitive and there is always integration between these aspects of human behavior.

Basketball is a fast-paced game that requires the knowledge and instinct to perform quickly and properly. The sport of basketball requires five basic skills. While some players might be more experienced with some skills than others, it is best to have at least some ability in all five areas namely dribbling, running, and passing, shooting and jumping.

II. STATEMENT OF THE PROBLEM

The purpose of the present study was to find the impact of mental rehearsal intervention programme on selected psychomotor and game skill variables among women basketball players.

III. METHODS

To achieve the purpose of the present study, twenty women basketball players from the Providence women's college, Calicut were selected as subjects at random and their age ranged between 18 and 23 years. The subjects were randomly divided in to two equal groups namely experimental (Mental Rehearsal Intervention) and control group (CG). The experimental group underwent mental rehearsal intervention programme for three days a week for a period of 6 weeks in addition to their regular training program. Experimental treatment was given only in the evening between 4.45.p.m. and 5.30.p.m. The control group was not exposed to any experimental training. Before the training, pretest was conducted to assess the psychomotor variables namely differentiation ability, orientation ability and reaction ability and game skill variables namely passing, shooting and dribbling. Differentiation ability measured using medicine ball throw, orientation ability assessed using numbered medicine ball test reaction and reaction ability was measured using ball reaction exercise test. The game skills variables were assessed using AAHPERD Basketball skills test battery for females for both the groups. After the experimental training period of 6 weeks, the post test was conducted. To find out the

significant improvement suitable statistical tool was applied and the level of significance was tested at 0.05 level.

IV. ANALYSIS OF THE DATA

The data collected from the basketball players on selected criterion variables were statistically examined by using analysis of Covariance (ANCOVA) to determine the impact of mental rehearsal intervention programme on selected psychomotor and game skill variables among women basketball players. The level of significance was tested at 0.05 level.

Table I
Computation of Mean and Dependent ‘t’ Test of Experimental and Control Group on Selected Psychomotor and Game Skill Variables of Women Basketball Players

S.No	Variable	Test	Mental Rehearsal Intervention Group	Control Group
1.	Differentiation Ability	Pretest Mean	15	14.6
		Posttest Mean	17.3	14.9
		‘t’ test	15.06*	1.96
2.	Orientation Ability	Pretest Mean	10.24	10.41
		Posttest Mean	9.43	10.36
		‘t’ test	10.71*	1.28
3.	Reaction Ability	Pretest Mean	3.52	3.31
		Posttest Mean	2.88	3.30
		‘t’ test	7.57*	1.30
4.	Passing	Pretest Mean	34.2	32.9
		Posttest Mean	34.7	33.3
		‘t’ test	2.24	1.81
5.	Shooting	Pretest Mean	16	15
		Posttest Mean	16.4	14.9
		‘t’ test	1.81	0.32
6.	Dribbling	Pretest Mean	10.84	10.88
		Posttest Mean	10.85	10.86
		‘t’ test	0.38	1.74

*significant at 0.05 level

Table - I shows that the pre-test mean value of psychomotor and game skill variables namely differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling of mental rehearsal intervention programme and control groups are 15, 10.24, 3.52, 34.2, 16 & 10.84 and 14.6, 10.41, 3.31, 32.9, 15 & 10.88 respectively. The Post-test means are 17.3, 9.43, 2.88, 34.7, 16.4 & 10.85 and 14.9, 10.36, 3.30, 33.3, 14.9 & 10.86 respectively. The obtained dependent t-ratio values of mental rehearsal intervention group on differentiation ability, orientation ability, & reaction ability are 15.06, 10.71 & 7.57 which was found to be

greater than the required table value of 2.26 with df 9 at 0.05 level of significance while passing, shooting and dribbling are 2.24, 1.81 & 0.38 which was found to be lesser than the required table value of 2.26 with df 9 at 0.05. The obtained dependent t-ratio values of control group on differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 1.96, 1.28, 1.30, 1.81, 0.32 and 1.74 respectively which was found to be less than the required table value of 2.26 with df 9 at 0.05 level of significance.

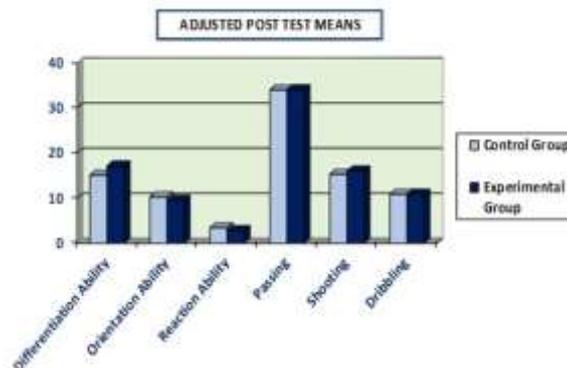
Table II

Analysis of Covariance of Experimental and Control Groups on Selected Psychomotor and Game Skills Variables of Women Basketball Players

S.No	Variable	Adjusted Post Test Means		Source of Variance	Sum of Squares	df	Mean Squares	F
		Ex.Group	Control Group					
1.	Differentiation Ability	17.13	15.07	B	20.89	1	20.89	135.31*
				W	2.62	17	0.15	
2.	Orientation Ability	9.52	10.27	B	2.72	1	2.72	69.46*
				W	0.67	17	0.04	
3.	Reaction Ability	2.78	3.40	B	1.844	1	1.84	50.60*
				W	0.62	17	0.04	
4.	Passing	34.03	33.96	B	0.02	1	0.02	0.05
				W	8.80	17	0.52	
5.	Shooting	16.02	15.27	B	2.50	1	2.5	3.93
				W	10.80	17	0.63	
6.	Dribbling	10.87	10.85	B	0.002	1	0.0020	0.84
				W	0.041	17	0.0024	

*P < 0.05 Table F, df (1, 17) at (0.05) = 4.45

Table –II shows that the adjusted post-test means of mental rehearsal intervention and control group on differentiation ability, orientation ability, reaction ability, passing, shooting and dribbling are 17.13, 9.52, 2.78, 34.03, 16.02 & 10.87 and 15.07, 10.27, 3.40, 33.96, 15.27 & 10.85 respectively. The obtained 'F' ratio values of differentiation ability, orientation ability & reaction ability, 135.31, 69.46 & 50.60 respectively which are higher than the table value of 4.45 with df (1, 17) at 0.05 level of significance while passing, shooting and dribbling are 0.05, 3.93 & 0.84 which is lesser than the table value of 4.45 with df (1, 17) at 0.05.



V. DISCUSSION ON FINDINGS

The present research studied the impact of mental rehearsal intervention programme on selected psychomotor and game skills variables of women basketball players and found that differentiation ability, orientation and reaction ability were influenced due to the intervention programme whereas passing, shooting and dribbling did not find any difference even after intervention programme. These results are being studied with comparable and close researches. From the results of this research it is clear that mental rehearsal intervention had showed significant improvement on selected psychomotor and game skill variables of women basketball players.

The above said findings are supported by the available literature conducted by Trimble (1993) on the effectiveness of a season-Long mental training (MT) program on psychological preparation and basketball performance which revealed that the MT program had minimal statistically significant effects on the psychological preparation and basketball performance, but the basketball performance and psychological preparation data revealed enough interesting trends to warrant further investigations. According to Radhakrishnan (2008) mental imagery interventions were found to be effective in reducing the psychological variables such as cognitive anxiety and somatic anxiety of volleyball players. Imagery interventions significantly improved the psychological variables namely self-confidence and attention of volleyball players. It was found that the imagery intervention was effective in improving the performance in serve, pass, attack, and block of volleyball players in actual playing situation.

VI. CONCLUSION:

On the basis of the findings of the study, it was concluded that there was significant improvement on selected psychomotor variables namely differentiation ability, orientation ability and reaction ability due to the practices of mental rehearsal technique and also it was concluded that there was no significant difference in game skill variables such as passing, shooting and dribbling.

Conflict of Interest Statement

The authors declare no conflict of interest.

REFERENCES

- [1] Archana, S., & Kannadasan, K. (2024). NEURO LINGUISTIC PROGRAMMING AS AN EDUCATIONAL-THERAPEUTIC PROGRAMME: TWO CASE STUDIES. *European Journal of Physical Education and Sport Science*, 10(5). doi:<http://dx.doi.org/10.46827/ejpe.v10i5.5191>
- [2] Hanna Susan Saji, Dr. K. Kannadasan, "**Integrating Mindfulness-Acceptance-Commitment Treatment Into Sports: A Case Study**", *International Journal of Creative Research Thoughts (IJCRT)*, ISSN:2320-2882, Volume.12, Issue 7, pp.e186-e191, July 2024, Doi: <http://doi.one/10.1729/Journal.40600>
- [3] Kannadasan, K. (2023). Interpersonal relationship and locus of control among elite level football players at different playing position. *Int J Physiol Nutr Phys Educ*;8(2):44-46.
- [4] Radhakrishnan M K. (2008). "Effect of Mental Imagery Training Programme on Selected Psychological Variables and Skill Performances of Volleyball Players". Department of Physical Education, University of Calicut.
- [5] Trimble, Michelle, (1993). "Effects of mental training on psychological preparation and basketball performance" Ithaca College Theses. Paper 276.
- [6] Sangetha, K. impact of saq training with and without mental rehearsal technique on selected psychological psychomotor and game skill variables among women basketball players.
- [7] Sheedy, Jim (1986). Mental rehearsal and skill acquisition in sports, Master of Arts (Hons.) thesis, Faculty of Education, University of Wollongong, <https://ro.uow.edu.au/theses/2251>
- [8] Whetstone.T.S (1995). Enhancing Psychomotor Skill Development Through the Use of Mental Practice. *Journal of Industrial Teacher Education*. 32, 4.
- [9] Yobu, A (2010). Test, Measurement and Evaluation in Physical Education in Physical Education and Sports. New Delhi; Friends Publication.