Effects of Relaxation Techniques on Women Volleyball Players

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ABSTRACT

It is an experimental study conducted in BPS Women's University, India. The sample consists of 12 women Volleyball players of 18 to 23 years of age, having minimum three years of playing experience. Women Volleyball players were exposed to a self-designed progressive muscle relaxation and autogenic training programme, after the normal routine practice sessions, for four week. Six sessions of progressive muscle relaxation and autogenic training programme, per week, were given to sample subjects with regular coaching of various Volleyball skills. Pre-intervention and post-intervention Volleyball playing ability was observed by three Volleyball experts. The results revealed that progressive muscle relaxation and autogenic training has positive effects on Volleyball playing ability; and it is statistically significant at level of .05. It is concluded that progressive muscle relaxation and autogenic training are beneficial techniques/methods and it must be combined with Volleyball training micro sessions for reducing fatigue and for improved Volleyball playing ability in different game situations. The present paper has its sports implications and is operative for all the stakeholders concerned with Volleyball training and coaching especially for Volleyball coaches, Volleyball trainers, sport trainers, Volleyball players along with physical education teachers.

Key Words

Relaxation techniques, progressive muscle relaxation, autogenic training, Volleyball playing ability

BACKGROUND

Usually Indian sports persons pay attention on skill perfection and fitness training as measures of performance and hardly look beyond physical involvement in their sport. They hardly understand that sport is much more than fitness, training and technical ability. Kamlesh (2013) argued that sport performances are 90% mental, and many great athletes - Frederer, Tiger Woods, Pele, O'Brien, Rahul Dravid, Saina Newhal, and scores of others - also credit the mental side of the game as crucially important in determining the outcome". It is acknowledged by scholars that psychological traits are important for players' performance. One who has requisite mental preparation is more likely to be successful. Psychological skills training aim to improve the mental skills, such as self-confidence, motivation, the ability to relax under great pressure, and the ability to concentrate.

Anxiety is the psychological factor

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that affects Volleyball players. The actual reason of anxiety is unknown but reasons like lack of safety, fatigue, no rest, nervousness, strain etc. The symptoms of anxiety are feeling of restlessness, strain in muscles, body pain, sweating, high heart rate/blood pressure and numbness in arms/legs, which are cause of an uncomfortable feeling among Volleyball players and especially among novice players.

Volleyball is one of the flourishing, admired, aggressive sports and it involved high-speed, thrilling and explosive action that leads to physical and psychological fatigue. To remove this fatigue and improve Volleyball playing ability we need to develop some of the relaxation techniques/methods like progressive muscle relaxation and autogenic training.

Keeping in view the relaxation of the players broadly there are three types of techniques of relaxation in Volleyball i.e. physical, mental and therapeutic technique. The physical relaxation techniques includes progressive muscle relaxation that involve loosening and holding of particular muscles/ group of muscles and then slowly relaxing those same muscles. The movement follows top to bottom muscles and feel a profound sense of relaxation. The aim of this training is relaxation of the individual muscles. Progressive muscle relaxation and autogenic training are the best options for anxiety reduction. Cox (2007) argued that autogenic training and progressive relaxation both elicit the relaxation response; whereas, progressive relaxation relies upon dynamic contracting and relaxing of muscles, autogenic training relies upon feelings associated with the limbs and muscles of the body.

Autogenic Training

Weinberg and Gould (2007) defined Autogenic training as series of exercises designed to produce sensation, specifically of warmth and heaviness. Nasiri (2012) argued that autogenic training is a technique to make an active connection between mind and body to reduce excessive arousal and passive attentive concentration.

"Autogenic", as reflected from its name, involves self-suggestions and self-directives. In this technique, the relaxation is achieved from oneself from within. It gives and relaxes mind and muscles deeply. It is the combination of autogenic phrases. During competition, when one is nervous, the phrases may be very significant for stopping negative thinking about sports performance. The autogenic phrases may include commands like: my arms and legs are heavy, my arms and legs are warm, my heart is calm and regular and my breathing is calm and regular. These simple commands/ phrases help one to overcome negative thoughts and relax body and mind for sports performance.

Progressive Muscle Relaxation

Edmund Jacobson (1939) developed the progressive muscular relaxation technique. Nasiri (2012) stated that progressive muscle relaxation is a technique that causes deep muscular relaxation in muscle groups that tensed under stressful condition. Progressive Muscle Relaxation process is a technique composed of two-steps. At first-step one steadily tenses particular muscle groups in one's body, such as gluteus or thigh muscles and in second-step one releases the tension. It can also help in reducing physical problems such as stomachaches and headaches, as well as improve your sleep.

METHODOLOGY

It is an experimental study conducted in BPS Women's University, India. The purposive sampling technique was used for sample selection. The sample consist of 12 women Volleyball players of 18 to 23 years of age, having the minimum three years of playing experience. Women Volleyball players were exposed to a self-designed four-week progressive muscle relaxation and autogenic training programme, after the normal routine practice sessions. Six sessions of progressive muscle relaxation and autogenic training programme (three each on alternative day) per week, were given to sample subjects with regular coaching of various Volleyball skills. Pre-intervention and post-intervention Volleyball playing ability was observed by three Volleyball experts. The weekly schedule for intervention programme was as follows:

Table-1: The weekly schedule for intervention programme

Sr. No.	Days	Intervention Programme
1	Monday	Progressive Muscle Relaxation
2	Tuesday	Autogenic Training
3	Wednesday	Progressive Muscle Relaxation
4	Thursday	Autogenic Training
5	Friday	Progressive Muscle Relaxation
6	Saturday	Autogenic Training
7	Sunday	Rest

Table-2: The micro Schedule for Daily Autogenic Training

Sr. No.	Autogenic Training steps	Detailed Explanation
1	Suggestions of the sensation of heaviness	i. Think of your right arm (strong arm whichever arm is strong for left hander left arm) as being very heavy and heavier. Five repetitions of self command, "*My right (left) arm is very heavy and heavier*". ii. At the end of each self suggestion , give self command *"I am completely calm".* iii. Leave all thoughts aside and do it for each leg and arm one by one and at last for both.

2	Suggestions of a sense of warmth	i.	Think of your right arm (strong arm whichever arm is strong for left hander left arm) as being very warm and warmest. Five repetitions of self command, "*My right (left) arm is very warm and warmest".*
		ii.	At the end of each self suggestion, give self command *"I am completely calm".*
		iii.	Heaviness was followed by warm commands and further followed by calm commands for every limb/ body part.
		iv.	Leave all thoughts aside and do it for each leg and arm one by one at last for both.
3	Suggestions for Heartbeat	i.	Above two steps were followed by suggestions for heartbeat/ pulse rate. Further five repetitions of self command *"all my heartbeat is stable and calm".* All heart beat suggestions was followed by command of "I am completely calm".
		ii.	Start was from limbs (each arm and l egs) *heaviness* and end was with *calm* commands.
4	Suggestions for Breathing	i.	Keep deep breathing and a t the end of the training programme its breathing.
		ii.	The five repetitions of self command *"all my breathing is stable and calm".*
5	Suggestions for abdomen (Solar plexus)	i.	The focus area between thoracic cavity and navel point is called solar plexus
		ii.	Think of solar plexus as being heavy and then warm and warmest. Five repetitions of self command, "*My* solar plexus *is very warm and warmest.*
6	**Suggestions for Head and brain**	**i.**	**Think of head and give self command *"I am cool and calm".***
		ii.	**Think of forehead and give self command *"my forehead and brain is cool, relax and calm".***

Table -3 : The micro Schedule for Progressive Muscle Relaxation

Sr. No	Targeted Muscle Area	Activity
A. Start from right side followed by left lower limbs		
1	Foot	Tense and bend down your toe away from tibia bone

2	Lower leg and foot	Tense your calf muscle by pulling toes towards tibia bone
3	Entire leg	Constrict you thigh muscles while by pulling toes towards tibia bone
B. Start from right hand side followed by left		
4	Hand	Tighten your fist
5	Entire right arm	Constrict your biceps by drawing your forearm in curling position by folding it towards your shoulder with tightened fist
C. Develop tension and relax following parts of the body		
6	Buttocks	Squeeze both buttocks by pulling them collectively
7	Stomach	Suck your stomach in side as in kapalbhati pranayama of Yoga
8	Chest	Make tighter by taking a deep breath
9	Neck and shoulders	Upward shoulders raise
10	Mouth	Wide open your mouth to have enough stretch of your jaw
11	Eyes	Clench/ close your eyelids tightly and relax
12	Forehead	Maximum eyebrows raise as far as you can

Table-4: Tool for Measurement of Volleyball Playing Ability

Serial Number	Instruction	Points
1	Excellent in all aspect of the game	50
2	Very good in all aspect of the game	40
3	Good in all aspect of the game	30
4	Above average in all aspect of the game	20
5	Average in all aspect of the game	10

Criteria given in Table 4 was applied keeping in view the following points: i) Skill proficiency, ii) Anticipation and quick reaction, iii) Tactics and strategies Interactions, iv) Knowledge of rules and games, v) Ability to change tactics when new situation demands, vi) Ability to analyze opponent's move and respond accordingly, vii) Overall rational of the game.

RESULTS & DISCUSSION

Table-5: Paired Samples Statistics

Items	Mean	N	Std. Deviation	Std. Error Mean
Pre-Test Volleyball Playing Ability	27.7500	12	4.93416	1.42437
Post-Test Volleyball Playing Ability	29.3889	12	3.99958	1.15458

The Table 5 shows the results of paired samples statistics and the mean for Pre-Test Volleyball Playing Ability is 27.7500. The mean for the Post-Test Volleyball Playing Ability is 29.3889. The standard deviation for Pre-Test Volleyball Playing Ability is 4.93416 and for the Post-Test Volleyball Playing Ability also 3.99958. The number Volleyball players who took part as sample (N) are 12.

Table-6: Paired Samples Correlations

Items	N	Correlation	Sig.
Pre-Test Volleyball Playing Ability & Post-Test Volleyball Playing Ability	12	.871	.000

Table 6 concluded that the correlation between Pre-Test Volleyball Playing Ability & Post-Test Volleyball Playing Ability was found. 871 and that is statistically highly significant

Table-7: Paired Sample "t" Test

Items	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre-Test Volleyball Playing Ability - Post-Test Volleyball Playing Ability	-1.638	2.443	.705	-3.191	-.086	-2.32	11	.040

The above Tables 7 revealed that mean differences between Pre-Test Volleyball Playing Ability and Post-Test Volleyball Playing Ability were found statistically significant as Table p-value .040. and is less than level of significance i.e. .05. The t –value of Table is depicted as 2.32 and it is greater than Table value 2.20 for degree of freedom 11 and significance i.e. .05. This shows the overall effectiveness of intervention programme.

CONCLUSION

The results revealed that progressive muscle relaxation and autogenic training has positive effects on Volleyball playing ability and it is statistically significant at level of .05. Therefore, it is concluded that progressive muscle relaxation and autogenic training are beneficial techniques/methods and it must be combined with Volleyball training micro sessions for reducing fatigue and for improved Volleyball playing ability, in different game situations. Few players reported that after intervention programme they themselves felt more relaxed for next training session. Keeping in view the encouraging results of this research it is recommended that bigger sample size may be used for generalization of results. The present paper has its sports implications and is operative for all the stakeholders concerned with Volleyball training and coaching especially for Volleyball coaches, Volleyball trainers, sport trainers, Volleyball players along with physical education teachers.

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E- Resource

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