

Influence of Mental Training on Aggression and Sports Competition Anxiety among Volleyball Players

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Abstract: The purpose of the study was to find out the influence of mental training on aggression and sports competition anxiety among volleyball players. To achieve the purpose of this study, twenty (n=20) female intercollegiate volleyball players were randomly selected from Manonmaniam Sundaranar University, Tirunelveli District, Tamilnadu, India. The age of subject's was ranged from 18 to 22 years old. The selected participants were randomly divided into two groups such as Group 'I' underwent mental training (n=10) and Group 'II' acted as control group (n=10). Group 'I' underwent mental training for five days and one session per day and each session lasted between 45-60 minutes for six week period. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on aggression and sports competition anxiety were collected and administered by standardized questionnaire such as Agnihorhty Rekha questionnaire and SCAT questionnaire respectively. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the training programme. The pre and post-test scores were statistically examined by the dependent-'t' test and Analysis of Covariance (ANCOVA) for each and every selected dependent variable separately. It was concluded that the mental training group had shown significantly better result in aggression and sports competition anxiety. However the control group had not shown any significant improvement on any of the selected variables such as aggression and sports competition anxiety.

Keywords: Mental Training, Aggression, Sports Competition Anxiety, Agnihorhty Rekha Questionnaire, SCAT Questionnaire, Volleyball Players.

1. INTRODUCTION

Psychology is the newest science, what needs to be trained and taught to well known or understand. It is the service which provides step-by-step process for training the positive mental skills and reducing anxiety that will improve capabilities using the convenience of individual's [1]. The mental training focuses on the positive aspect of athlete's mental performances, physical abilities, and preparation skills [2]. There are four mental training techniques motivational-specific, motivational general, cognitive-specific and cognitive-general. The first two are used to improve motivation and emotional control capacity, respectively [3]. Cognitive-specific and cognitive-general mental training techniques are adopted by athletes in order to maximize the performance of a motor task or solve a situation that occurs in competition [4].

Mental training also contributes to the feeling of more confidence, focusing on positive aspects that work on better expectation for good performance and prevent negative perception that harms performance through negative feelings that cause more anxiety and failure expectations which reduce opportunities of right performance [5]. However, it has only been compared recently that western countries have begun to fully appreciate the significant role that serious mental skills training can play in the performance of a sports competitor [6].

Volleyball is a team sport. The game volleyball has offensive and defensive play which is differed in nature. The abilities of spiking, serving, passing and setting are fundamental skills in game volleyball. Psychologically, the attitude and approach of a player determine

the effectiveness of player's skills [7]. The development of mental skill for a volleyball player is as important as the development of physical skills. A player should be able to think, understand and analyses each movement during the game and act. This enables them to make split-second decisions on the spot and develop determination and will power [8].

Aggression in sports is described as the one or several of athlete, trainer or watchers who act in contemplation of damage someone by the effect of psychological, biological or environmental factors during a sportive competition [9]. When anxiety is not managed or explained correctly, athletes lose control and their performance levels decrease [10].

2. METHODS

2.1 Subjects and Procedures

Twenty (n=20) female intercollegiate volleyball players were randomly selected from Manonmaniam Sundaranar University, Tirunelveli District, Tamilnadu, India. The age of subject's was ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'I' underwent mental training (n=10) and Group 'II' acted as control group (n=10). Group 'I' underwent mental training for five days and one session per day and each session lasted between 45-60 minutes for six week period. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on aggression and sports competition anxiety were collected and administered by standardized questionnaire such as Agnihortry Rekha questionnaire and SCAT questionnaire respectively. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the training programme.

2.2 Determination of Aggression and Sports Competition Anxiety

Aggression Scale created by Buss, A. H., and Perry, M. (1992) was utilized to gather the information on the animosity of the subjects. This inventory was accepted to the adept for this investigation. This inventory was scored according to the reactions the subjects. The reactions comprise of 29 things. Everything was evaluated utilizing the scale where 1 = "slightest normal for me" to 5 = "most normal for me". The questionnaire was controlled to each subject with a demand to react to every one of the announcements in the survey. The summation of all got score was the sign of the aggression level of the subjects [11].

The Sport Competition Anxiety Test commonly known as just the SCAT test. It was a self-reporting questionnaire about anxiety. The SCAT contains 15 items, 10 of which measure symptoms associated with anxiety, with five others that are not scored included to reduce the likelihood of an internal response-set bias. The scores for the 10 items are summed to provide an overall measure, with a high score reflecting a greater tendency to experience competitive anxiety. Use the following table to calculate a total score. A score of less than 17 indicates a low level of anxiety, 17 to 24 was average level of anxiety, and more than 24 a high level of anxiety [12].

2.3 Statistical Tools

For analyzing the collected data, the researcher gone through paired sample-'t' test to find out the significant improvement of mean score between pre and post-test of the selected groups. And the researcher chose analysis of covariance (ANCOVA) to find out the significance difference between both groups at the 0.05 level of confidence was fixed to test the level of significance difference.

3. RESULT AND FINDINGS

The influence of mental training on aggression and sports competition anxiety were analyzed and presented in the below table,

Table-2: Computation of 't' - ratio between Pre and Post-Test Means of Experimental and Control Groups on aggression and sports competition anxiety (scores)

Criterion Variables	Test	Experimental Group		Control Group	
		Mean	SD	Mean	SD
Aggression	Pre test	85.43	3.11	86.07	3.18
	Post test	75.44	2.98	85.11	2.75
	't'test	11.85*		1.05	
Sports Competition Anxiety	Pre test	18.86	3.45	19.01	3.75
	Post test	16.72	2.63	18.98	3.41
	't'test	15.49*		0.78	

*Significant at 0.05 level. (Table value required for significance at .05 level for 't'-test with df 11 is 2.20)

The table 2 shows that the pre-test mean values on aggression and sports competition anxiety among experimental and control groups were 85.43 & 86.07 and 18.86 & 19.01 respectively and post-test mean values are 75.44 & 85.11 and 19.01 & 18.98 respectively. The obtained dependent t-ratio values between pre and post-test means of experimental and control groups are 11.85 & 1.05 and 15.49 & 0.78 respectively. The table value required for significant difference with df 11 at 0.05 level is 2.20. Since, the obtained-'t' ratio value of experimental group was greater than the required table value, it was concluded that experimental group had significantly improved on aggression and sports competition anxiety due to the influence of mental training programme. However, the control group has not improved significantly. The obtained 't' value is less than the table value, as they were not subjected to any specific training.

Table-3: Analysis of Covariance on aggression and sports competition anxiety of Experimental and Control Groups

Test	Experimental Group	Control Group	SOV	SS	Df	MS	F-ratio
Adjusted Post-Test Mean							
Aggression	75.39	85.08	B.M	228.54	1	228.54	20.24*
			W.G	237.09	21	11.29	
Sports Competition Anxiety	16.70	18.99	B.M	111.06	1	111.06	38.43*
			W.G	60.69	21	2.89	

* Significant at 0.05 level. Table value for df 1, 21 was 4.32.

From the table 3 shows that the adjusted post-test mean values on aggression and sports competition anxiety. The obtained f-ratio for selected dependent variables was 20.24 and 38.43 the required table value of df 1 and 17 was 4.32. It shows that the obtained f ratio values were greater than the required table value at 0.05 level of confidence. The result of the study indicated that there was significant mean difference existed between the experimental and control groups on aggression and sports competition anxiety. The below figure 1 & 2 shows the pre, post and adjusted post-tests mean values of experimental and control groups on aggression and sports competition anxiety.

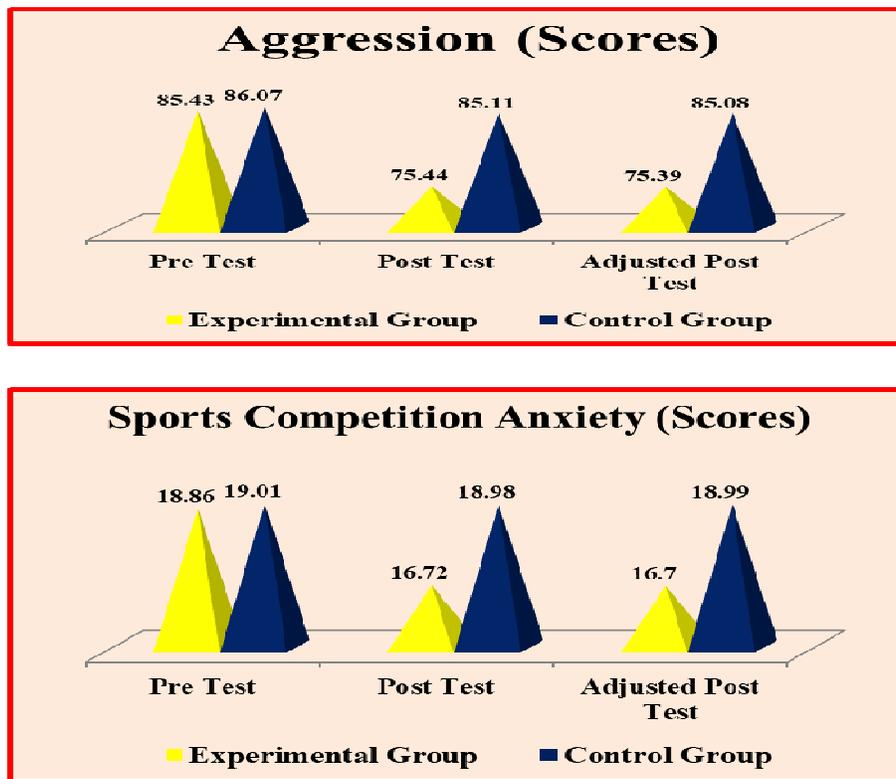


Fig 1 & 2: Pre, Post and Adjusted Post Tests Mean Values of Experimental and Control Groups on aggression and sports competition anxiety.

4. DISCUSSION ON FINDINGS

The aim of the present study was to observe significant improvement on the selected variables such as aggression and sports competition anxiety performance of the young volleyball players due to influence of mental training program. The result of study indicates that there were significant differences between experimental and control groups on aggression and sports competition anxiety among intercollegiate female volleyball players. The following studies are supported to the result of this investigation were Fortes, (2016) conducted the study on mental training generates positive effect on competitive anxiety of young swimmers [13]. Frankland, (2012) evaluated the effects of mental training on competitive state anxiety in collegiate equestrian athletes [14]. Mamassis & Doganis, (2004) analyzed the effects of a mental training program on junior's pre-competitive anxiety, self-confidence, and tennis performance [15]. Trajkovic, (2020) conducted the study on reducing aggression and improving physical fitness in adolescents through an after-school volleyball program [16]. Jain, Phogat & Kumar, (2015) conducted the study on to find out the interactive effect of mental skills training and anxiety on Indian athlete's performance [17]. Amuthambihai, Sivagnanam & Arumugam, (2018) evaluated the study on the impact of fast suryanamaskar practices on anxiety and self-confidence among school girls [18]. From above those supportive studies I intent to conduct this study, this study shows positive support for mental training programme among female intercollegiate volleyball players. This shows, the result of my study indicates that there was a significant improvement on aggression and sports competition anxiety due to the influence of six weeks of mental training programme among volleyball players when compared to control group.

5. CONCLUSIONS

1. There was significant better improvement on aggression due to the influence of six weeks of mental training programme among female intercollegiate volleyball players.
2. There was significant better improvement on sports competition anxiety due to the influence of six weeks of mental training programme among female intercollegiate volleyball players.
3. There was a significant difference between experimental and control groups on aggression and sports competition anxiety due to the influence of six weeks of mental training programme among female intercollegiate volleyball players.
4. However the control group had not shown any significant improvement on any of the selected variables.

REFERENCES

- [1]. Jain, S., Phogat, W. S., & Kumar, P. Interactive effect of mental skills training and anxiety on Indian athlete's performance. *International Journal of Physical Education, Sports and Health*, 1(4), (2015), Pp. 60-63.
- [2]. Porter, K. *The mental athlete: Inner training for peak performance in all sports*. Champaign, IL: Human Kinetics, (2003).
- [3]. Battaglia C, D'Artibale E, Fiorilli G, Piazza M, Tsopani D, Giombini A, Calcagno G, Di Cagno A. Use of video observation and motor imagery on jumping performance in national rhythmic gymnastics athletes. *Human Movement Science*, 38(2), (2014), Pp. 225-34.
- [4]. Brick, N., MacIntyre, T., & Campbell, M. Meta cognitive processes in the self-regulation of performance in elite endurance runners. *Psychology of Sport and Exercise*, 19, (2015), Pp. 1-9.
- [5]. Al Jubouri, I. H. S., & kareem Al Qaisib, M. T. A. The effect of mental training which accompanies a proposed training course on mental toughness of volleyball players–sitting. *The Swedish Journal of Scientific Research*, 3(1), (2016), Pp. 13-18.
- [6]. Bull, S. J., Albinson, J. G., & Shambrook, C. J. *The mental game plan: Getting psyched for sport*. *Sports Dynamics*, (1996).
- [7]. Yadav, K. R. Correlation between anxiety and mental skill in university volleyball male players. *Journal of Exercise Science and Physiotherapy*, 11(1), (2015), Pp. 17-21.
- [8]. SoundaraRajan, R. Effect of Psychological Skills Training on Selected Psycho physiological and Overall Playing Ability of Volleyball Players, *International Journal of Scientific Research*, 5 (8), (2016), Pp. 4367-4371.
- [9]. Isık, M., Kılıc, İ., & Aksoy, K. Aggression levels of hearing impaired athletes: A comparison on individual and team sports *İşitme engelli sporcuların saldırganlık düzeyleri: Bireysel ve takım sporu üzerine bir karşılaştırma*. *Journal of Human Sciences*, 14(4), (2017), Pp. 3221-3229.
- [10]. Weinberg, R. S., & Gould, D. *Foundations of sport and exercise psychology*, 5eds. Champaign, IL: Human Kinetics, (2010).
- [11]. Martens, R. *Sport Competition Anxiety Test*. Champaign, IL: Human Kinetics, (1977).
- [12]. Buss, A. H., & Perry, M. The aggression questionnaire. *Journal of Personality & Social Psychology*, 63, (1992), Pp; 452-459.
- [13]. Fortes, L. D. S., Lira, H. A. A. D. S., Lima, R. C. R. D., Almeida, S. S., & Ferreira, M. E. C. Mental training generates positive effect on competitive anxiety of young swimmers? *Rev Bras Cineantropom Desempenho Hum*, 18(3), (2016), Pp353-361.

- [14]. Frankland, E. *Effects of Mental Training on Competitive State Anxiety in Collegiate Equestrian Athletes* (Doctoral dissertation, Oklahoma State University), (2012).
- [15]. Mamassis, G., & Doganis, G. *The effects of a mental training program on juniors pre-competitive anxiety, self-confidence, and tennis performance. Journal of Applied Sport Psychology*, 16(2), (2004), Pp. 118-137.
- [16]. Trajkovic, N., Pajek, M., Sporis, G., Petrinovic, L., & Bogataj, S. *Reducing aggression and improving physical fitness in adolescents through an after-school volleyball program. Frontiers in psychology*, 11, (2020).
- [17]. Jain, S., Phogat, W. S., & Kumar, P. *Interactive effect of mental skills training and anxiety on Indian athlete's performance. international Journal of Physical Education, Sports and Health*, 1(4), (2015), Pp.60-63.
- [18]. Amuthambihai, S., Sivagnanam, P., & Arumugam, S. *Impact of fast suryanamaskar practices on anxiety and self-confidence among school girls. International journal of research and analytical reviews*, 5 (4), (2018), Pp. 155-158.