

IMPACT OF MAP TRAINING ON AGGRESSION AND SPORTS COMPETITIONS ANXIETY OF CRICKET PLAYERS

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Abstract: A innovative treatment intervention known as mental and physical (MAP) training mixes aerobic exercise for physical training and meditation for mental training. The intervention was developed based on neuroscientific research showing that adult brain neurogenesis is increased by MAP training. Every session included 30 minutes of moderate-intensity aerobic exercise and 30 minutes of focused-attention (FA) meditation. The main objective of this study was to investigate and assess the impact of MAP training on aggression and sports competition anxiety of cricket players. Thirty national-level cricket players (18-25 years of age) were randomly selected and divided into experimental and control groups of fifteen. Only the experimental group was treated with the MAP training intervention for eight weeks, and the control group was kept without any specific training except regular cricket practices. Both group's pre and post-test data were collected before and after the training schedule. The pertaining data of aggression and sports competition anxiety were collected using a standardized questionnaire namely, Sports Aggression Inventory and SCAT. There were found significant differences among the pre and post-test means comparison of aggression and sports competition anxiety between experimental and control groups ($P < 0.05$). Appropriate MAP training can be treated to develop aggression and sports competition anxiety and may impact the improvement of the performance of cricket players and other similar games. MAP training can be introduced to others parameters of psychology also in other to improve performances of cricket players in different level.

Keywords: *Cricket, MAP training, Aggression, Sports Competition Anxiety.*

1. Introduction

The sport of cricket played between two teams of eleven players, is a highly demanding and multifaceted game that places significant emphasis on both physical fitness and technical skill execution. In the ever-evolving landscape of international cricket, players are subjected to more intense schedules, with longer seasons, frequent touring, and the demand for peak performance in a highly competitive environment. To meet these demands, modern cricket requires players to excel in various domains, including batting and bowling skills, agility, strength endurance, speed, and power. Cricket is a bat-and-ball team sport played between two teams of eleven players each, with the objective of scoring more runs than the opposing team. It is typically played on a pitch with a rectangular 22-yard-long wicket, and the game involves

various aspects, including batting, bowling, and fielding (International Cricket Council 2021). Bowling in cricket refers to the act of delivering the ball to the batsman with the goal of dismissing them. Bowlers use various techniques, including pace, spin, and swing, to outwit the batsmen and take wickets (Espnricinfo, 2021). Batting in cricket involves the act of the batsman using a cricket bat to face the bowler's deliveries and score runs. The primary goal is to protect the wicket while accumulating runs through well-timed shots and placement (BBC Sport 2021). MAP training stands for Mental and Physical training and is based on the idea that mental and physical training together is more beneficial than either alone. Mental and physical (MAP) training is a novel clinical intervention that combines mental training through meditation and physical training through aerobic exercise. The intervention was translated from neuroscientific studies indicating that MAP training increases neurogenesis in the adult brain. Each session consisted of 30 min of focused-attention (FA) meditation and 30 min of moderate-intensity aerobic exercise (Alderman, 2016). Mental and physical training are crucial components of a comprehensive training regimen for cricket players, and they can significantly impact various psychological parameters. The integration of mental and physical training in cricket can lead to a holistic development of players, enhancing their psychological parameters. A well-rounded approach prepares players to handle the mental demands of the game while ensuring they are physically capable of meeting the challenges on the field. This synergy ultimately contributes to improved performance, resilience, and overall well-being among cricket players.

2. Objectives

The objective of this study was to investigate and assess the impact of MAP training on aggression and sports competition anxiety of cricket players.

3. Methodology

This study follows an experimental design with two groups: Group 1 (Experimental) and Group 2 (Control). The purpose of the study is to assess the impact of MAP training on aggression and sports competition anxiety of cricket players using standardized questionnaire namely Sports Aggression Inventory and SCAT. The study involves a pre-test and post-test design with an 8-week training intervention. A total of 30 cricket players from Manipur age between 18-25 years were recruited for the study. The participants were divided into two groups. Group 1 (Experimental): This group consisted of 15 participants who underwent MAP training. Group 2 (Control): This group also had 15 participants, but they did not receive any training and acted as a control group. Group 1 (Experimental) underwent 8 weeks of MAP training, focusing on Aggression and sports competition anxiety. The questionnaire namely Sports Aggression Inventory and SCAT was administered to assess the participants aggression and sports competition anxiety. ANCOVA was employed to compare the post-training scores of Group 1 (Experimental) and Group 2 (Control) while controlling for the pre-training scores as covariates through statistical software, such as SPSS.

4. Results and Interpretation

The analysis of covariance on the pre and post-test aggression and sports competition anxiety scores of the MAP training group and the control group has been conducted and is presented in Tables I. and II.

TABLE I

ANALYSIS OF COVARIANCE OF THE DATA ON AGGRESSION OF PRE AND POST TESTS SCORES OF MAP TRAINING AND CONTROL GROUPS

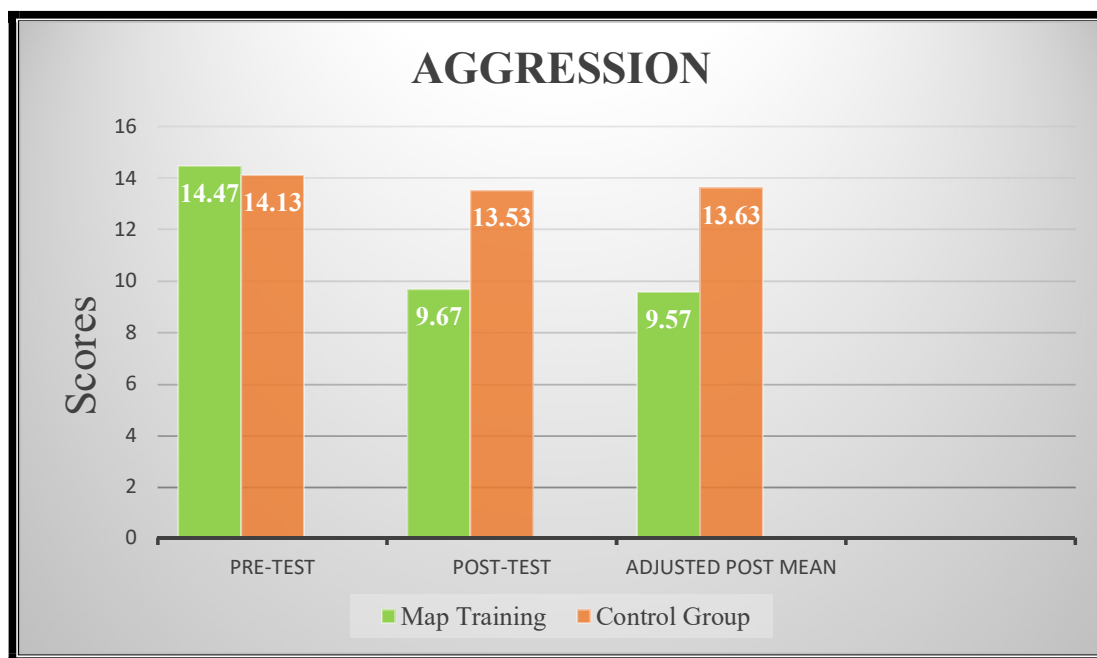
TEST	GAME SPECIFIC GROUP	CONTROL GROUP	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARE	'F' ratio
Pre test							
Mean	14.47	14.13	Between	0.83	1	0.83	0.22
S.D	2.29	1.50	Within	105.47	28	3.77	
Post test							
Mean	9.67	13.53	Between	112.13	1	112.13	59.17*
S.D	1.29	1.46	Within	53.07	28	1.89	
Adjusted Post			Between	122.29	1	122.29	167.09*
Mean	9.57	13.63	Within	19.76	27	0.73	

**Significant at .05 level of confidence.*

(The table values required for significance at .05 level of confidence for 1 and 27 and 1 and 28 are 4.21 and 4.20 respectively).

Table I displays that the initial mean scores for aggression in both the MAP training group and control group were 14.47 and 14.13, respectively. The pre-test "F" ratio of 0.22 falls below the critical value of 4.20 for significance at the 0.05 confidence level. In contrast, the post-test aggression means for the MAP training group and control group were 9.67 and 13.53, respectively, with a post-test "F" ratio of 59.17, surpassing the significance threshold. Additionally, the adjusted post-test averages for the MAP training group and control group were 9.57 and 13.63 for Aggression. The adjusted post-test "F" ratio of 167.09 exceeded the critical value of 4.21 for significance at the 0.05 confidence level.

For the better understanding of the result the pre-test, post-test and adjusted post-test mean for Aggression were presented below through graphical chart in figure-I.

Figure I**TABLE II**

ANALYSIS OF COVARIANCE OF THE DATA ON SPORTS COMPETITION ANXIETY OF PRE AND POST TESTS SCORES OF MAP TRAINING AND CONTROL GROUPS

TEST	GAME SPECIFIC GROUP	CONTROL GROUP	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARE	'F' ratio
Pre test							
Mean	20.67	20.87	Between	0.30	1	0.30	0.038
S.D	3.10	2.50	Within	223.07	28	7.97	
Post test							
Mean	17.00	19.67	Between	53.33	1	53.33	7.27*
S.D	2.59	2.82	Within	205.33	28	7.33	
Adjusted Post			Between	46.49	1	46.49	36.62*
Mean	17.09	19.58	Within	34.28	27	1.27	

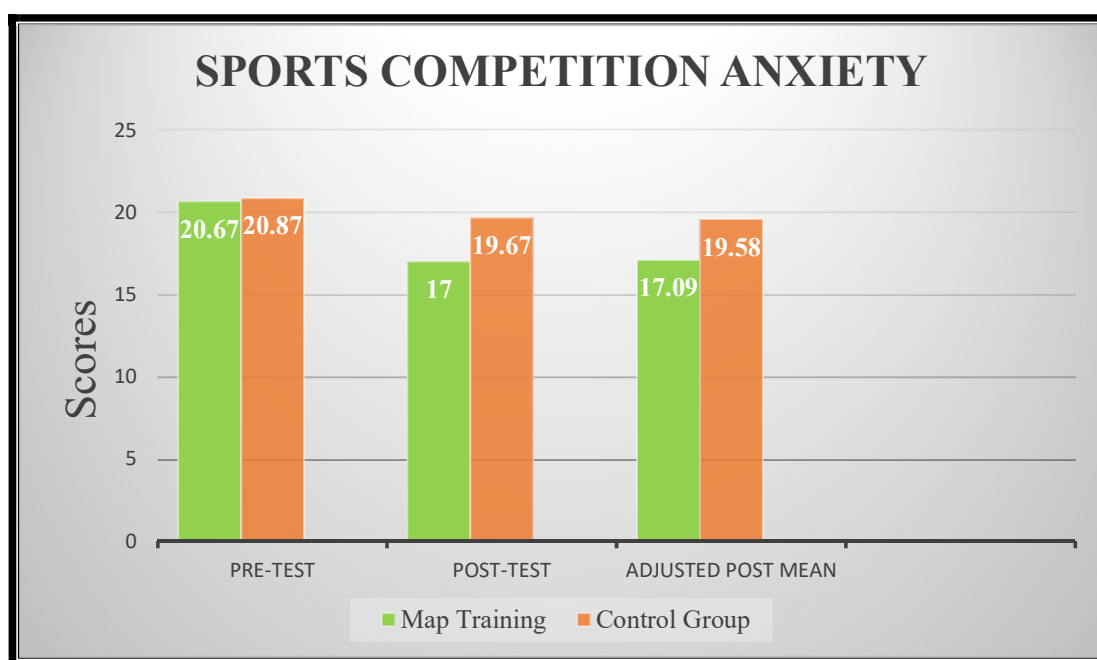
* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 1 and 27 and 1 and 28 are 4.21 and 4.20 respectively).

In Table II, displays that the initial mean scores for sports competition anxiety in both the MAP training group and control group were 20.67 and 20.87, respectively. The pre-test "F" ratio of 0.038 is below the critical value of 4.20 for significance at the 0.05 confidence level in bowling. Conversely, the post-test sports competition anxiety means for the MAP training group and control group were 17.00 and 19.67, respectively, with a post-test "F" ratio of 7.27, surpassing the significance threshold. Additionally, the adjusted post-test averages for the MAP training group and control group were 17.09 and 19.58 respectively for sports competition anxiety. The adjusted post-test "F" ratio 36.62 exceeded the critical value of 4.21 for significance at the 0.05 confidence level.

For the better understanding of the result the pre-test, post-test and adjusted post-test mean for Sports competition anxiety were presented below through graphical chart in figure-II.

Figure II



5. Discussion

Embarking on a journey to unravel the transformative influence of mental training on athletes, diverse studies have ventured into the realms of sports and psychological well-being. Subathra et al. (2021) navigated the terrain of female intercollegiate volleyball players, unveiling significant enhancements in aggression and sports competition anxiety through mental training. Shifting focus to cricket, Rajaram (2017) discovered the formidable impact of yogic training in controlling anxiety and aggression among cricketers, emphasizing the holistic benefits on psychological parameters and performance. Venturing into aquatic realms, Fortes et al. (2016) explored mental training's prowess in alleviating cognitive and somatic anxiety while bolstering self-confidence in young swimmers. Pushing boundaries beyond specific sports, Alderman et al. (2016) introduced the innovative fusion of meditation and aerobic exercise in Mental and Physical (MAP) training, supported by neuroscientific studies. This

novel intervention not only alleviated depressive symptoms but also heightened cognitive control processes, revealing the synergies achievable when mental and physical elements intertwine. Transitioning seamlessly, Watson and Nesti's (2016) systematic review delves into mindfulness-based interventions, illuminating their impact on cognition and performance in competitive sports, thereby broadening the scope of mental training in sports settings. Simultaneously, Craft and Perna's (2004) exploration into the psychological benefits of aerobic exercise provides a sturdy foundation for integrating such exercises into the multifaceted approach of Mental and Physical (MAP) training. Adding a neuroscientific dimension, McMorris and Hale (2015) delve into the optimal neurocognitive profile for critical-velocity running events, underscoring the intricate dance between cognitive processes and physical activities in the pursuit of sports excellence. Together, these studies paint a vibrant tapestry, showcasing the diverse avenues where mental training not only nurtures psychological well-being but also elevates performance across a spectrum of domains.

6. Conclusion

It was concluded that eight weeks of MAP training helped improve aggression and sports competition anxiety of cricket players. ANCOVA analysis revealed significant improvements in both aggression and sports competition anxiety among the experimental group when compared to the control group. These study reveals that MAP training can be implement to cricket player in order to improved their cricketing skills and also in cognitive abilities of the players. These findings may can implications for mental development of the players in different level of cricket as well as can implement to others sports in order to enhance the performance of the players.

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