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IMPACT OF MENTAL TRAINING AND YOGA PRACTICES ON SELECTED VARIABLES OF INTER-COLLEGIATE LEVEL WOMEN PLAYERS

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Abstract

Purpose

The aim of this study was to investigate the impact of mental training and yoga practices on selected performance variables of 60 women volleyball players before and after 12 weeks training.

Material

The study included 60 female volleyball players equally divided into four groups (mean age 17.25 ± 2.15), AAHPER passing test was used to determine the passing and AAPHER set up test was used to measure the set-up and a total of 48 Mental training yogic practices and combined training were conducted four days a week for 12 weeks.

Results

According to the findings of the study, during the twelve weeks Mental training, yogic practices and combined program, it is seen that it provided statistically significant improvement in passing skill p = 0.000 and set up ability p = 0.000.

Conclusions

It was found that the twelve weeks mental training, yogic practices and combined training program had positive impacts on selected performance variables.

Keywords: Mental training, yogic practices, volleyball, pass and set-up.

I. INTRODUCTION

Mental training is about improving one's attitude and mental skills to help them perform their best by identifying limiting beliefs and embracing a healthier philosophy about their sport. Mental skills, just like physical skills, take repetition, practice, and game-time application to develop [1]. Yoga practices helps to improving sports performance of USA national team volleyball players. The team players before and after their training schedule must include meditation in morning and evening sessions to improve some psychological aspects. Yoga and meditation are the main part of developing flexibility, balance and injury prevention of players [2]. Attention focus - Attention focus is the ability to focus one's attention on the proper cues in the environment, Self-talk - In self-talk, a sportsman talks to himself in an attempt to build up his confidence and convince himself that he can succeed, Imagery - Imagery is one of the popular mental preparation strategies where sports persons try to mentally picture themselves (going through the actual movement in their mind) competition / training, Preparatory arousal - Preparatory arousal involves getting mad, charged- up, excited, pumped – up and/ or aroused just prior to performance. Preparatory arousal means raising one's level of arousal, Progressive Relaxation - In this relaxation technique, focus on slowly tensing and then relaxing each muscle group [3]. The season-long mental training program (MTP) can eliminate specific performance problems on selected junior tennis players. In the season-long mental training (MTP) exposed concentration, self-talk, goal setting, positive thinking and routines [4]. A yearly mental training program could change on pregame anxiety, game performance, overall evaluation and game performance among college basketball [5]. Two individualized mental training programs for NCAA division basketball female players. The selected players participated in group mental training from preseason and post season. The mental training focused on centring, focusing and imaginary. The NCAA division 1basketball female players had a better significant improvement in game performance [6]. Effect of mental training program on relaxation, behaviour modelling video and imagery among volleyball players. This study concluded that experimental group had positive in salivary cortisol concentration. Multiple models and programs are available in the literature to help athletes, coaches, and consultants integrate mental and physical training in specific sport environments in creative and user-friendly ways. Professional development resources are available for mental training consultants to enhance their interpersonal and technical skills and to increase their awareness of and commitment to ethical practice [8]. The study investigates six weeks mental skill training on precompetitive anxiety and performance among dressage riders. The experimental group had better results on precompetitive anxiety and performance [9]. Relationship between mental training with biofeedback and performance on 11-14 years swimmers. The study thirty-eight subjects were included. Swimmers had a statistically significant improvement through mental training with biofeedback [10]. Ten minutes over a period of 7 weeks mental training program on psychological variables and penalty stroke among hockey players. In the study had better improvement on selected psychological and performance variables of hockey players [11,18]. The mental training program can better improvement on state anxiety, respiration rate

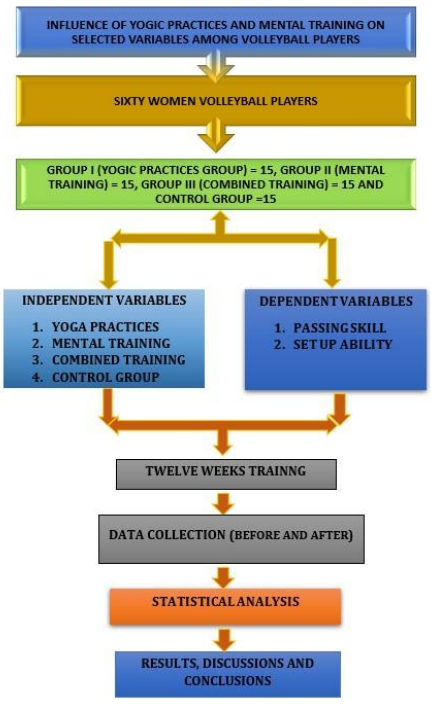
and performance of novice scuba divers [12,17]. Seventy five police trainees had good results through the mental imagery training [13]. The physical and mental training can expect changes on mental abilities among older adults [14]. Regular brief mindfulness training can change on visuo-spatial process, memory executive functioning [15].

Hypotheses

1. Regular participation in twelve weeks mental training, yogic practices and combined training program could improve passing of college level volleyball players to achieve better improvement.
2. Regular participation in ten weeks mental training and yogic practices program could improve set up of college level volleyball players to achieve better improvement.

Purpose: The study aimed to investigate on passing and set up performance related variables among college level volleyball players before and after twelve weeks mental training and yogic practices program within four groups pre and post-test experimental design.

II. MATERIALS AND METHODS



Participants:

For the study, 60 females (mean age 17.25 ± 2.15) volleyball players participated in the study.

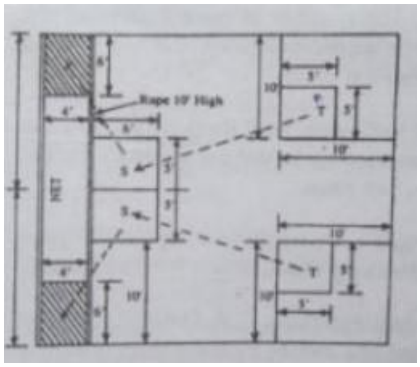
Test and Protocols

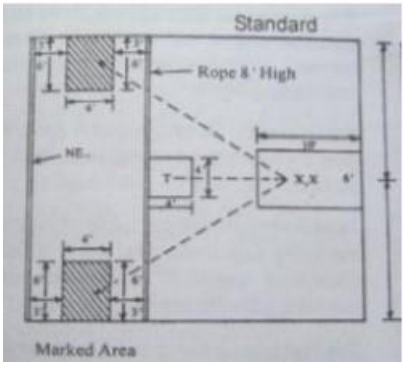
Data collection tools

The Modification in Brady wall volleying test (**Clifton 1962**) was used to determine the volleying skill and Serving test (**Russell & Lange 1940**) was used to measure the serving skill.

Table – 1 Test and administration

Variables	Tools administration	Unit of measurement
Passing	AAPHER passing	Points
Set up	AAPHER set up	Points





Data collection:

Sufficient warm up was given to all the subjects (volleyball players) pre and post that two trails given to all the subjects were made the better value was collected. AAPHER passing test was used to determine the passing skill and AAPHER set up was used to measure the set-up.

Statistical analysis

SPSS V22 2019 software was used to analyse the data by ANCOVA (Analysis of Covariance) the study, with a significant level at 0.05. Pre values of Modification in AAPHER passing test and AAPHER set up test showed normal distribution and Post values were not suitable for normal disturbance.

Training program

A total of forty-eight mental training and yoga practices program were conducted from four days a week for twelve weeks, and a certified Mental trainer and Yoga instructor held all the sessions as a 60-minute session (45 mins yoga training and 15 mins mental training) between 7.00 to 8.00 am.

III. RESULTS

According to the purpose of the research, the findings were as follows. The results of passing test and set-up test of the experimental groups and control group measurements are given in Table – 3 and Table - 4.

Table – 3: COMPUTATION OF ANALYSIS OF COVARIANCE ON PASSING TEST

Test	Yogic practices	Mental training	Combined training	Control group	Source of variance	Sum of squares	Df	Mean squares	F-ratio	P-Value
Pre - test mean	11.65	11.73	11.38	12.08	Between	3.781	3	1.260	0.48	.488
					Within	85.925	56	1.534		
Post-test mean	13.19	13.59	15.36	12.67	Between	61.719	3	20.573	13.17*	.000*
					Within	87.502	56	1.563		

*p<0.05, (df - 3,56 = 2.77)

The pre-test scores analysis proved the experimental groups and control group had a no significance difference on passing skill, F (3,56) = 2.77, p = 0.48.

The post-test scores analysis proved the experimental groups and control group had a significance difference on passing skill, F (3,56) = 2.77, p = 0.000.

Multiple Comparison test

Mean
Yoga – 13.19
Mental training – 13.59
Combined – 15.36
Control group – 12.67

Test	P - Value	Significant
Yoga vs Mental training	.815	No
Yoga vs Combined	.000	Yes (Yoga < Combined)
Yoga vs Control group	.667	No
Mental vs Combined	.001	Yes (Mental training < Combined)
Mental vs Control group	.193	No
Combined vs Control group	.000	Yes (Combined > Control)

Post hoc comparisons using the Tukey HSD test indicated yoga and mental training had no significance difference, yoga and combined training had a significance difference, yoga and control group had no significance difference, mental and combined had a significant difference mental had a no significance difference and combined and control had a significant difference.

When compare mean value between the groups the combined training group had better significant improvement on passing skill.

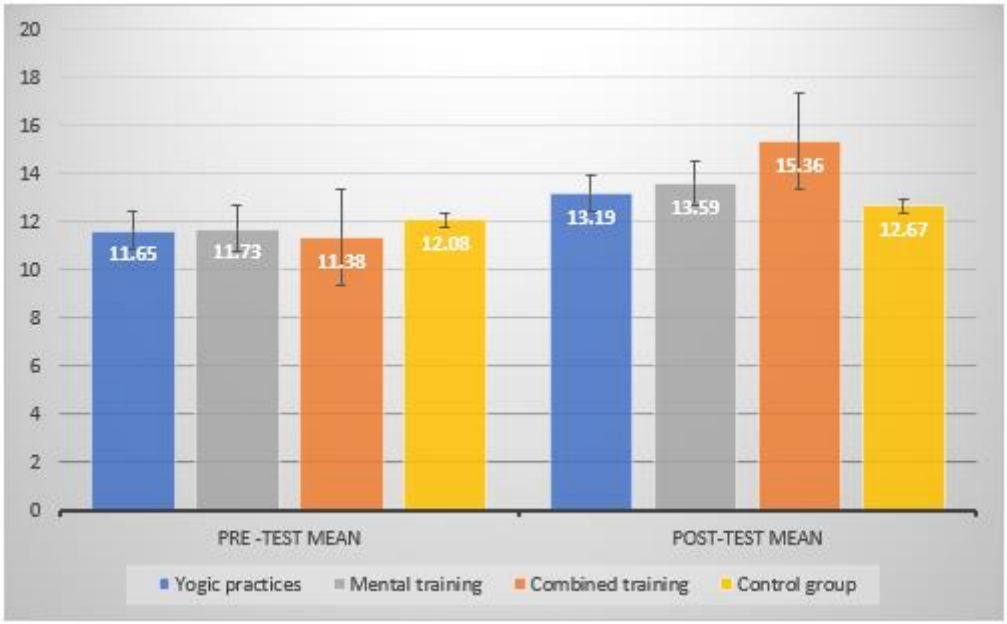


Table – 3: COMPUTATION OF ANALYSIS OF COVARIANCE ON SET UP TEST

Test	Yogic practices	Mental training	Combined training	Control group	Source of variance	Sum of squares	Df	Mean squares	F-ratio	P-Value
Pre - test mean	5.02	4.79	4.98	5.01	Between	.489	3	.163	.50	.681
					Within	18.138	56	.324		
Post-test mean	6.25	6.08	6.99	5.47	Between	17.716	3	5.905	10.65*	.000*
					Within	31.026	56	.554		

*p<0.05, (df - 3,56 = 2.77)

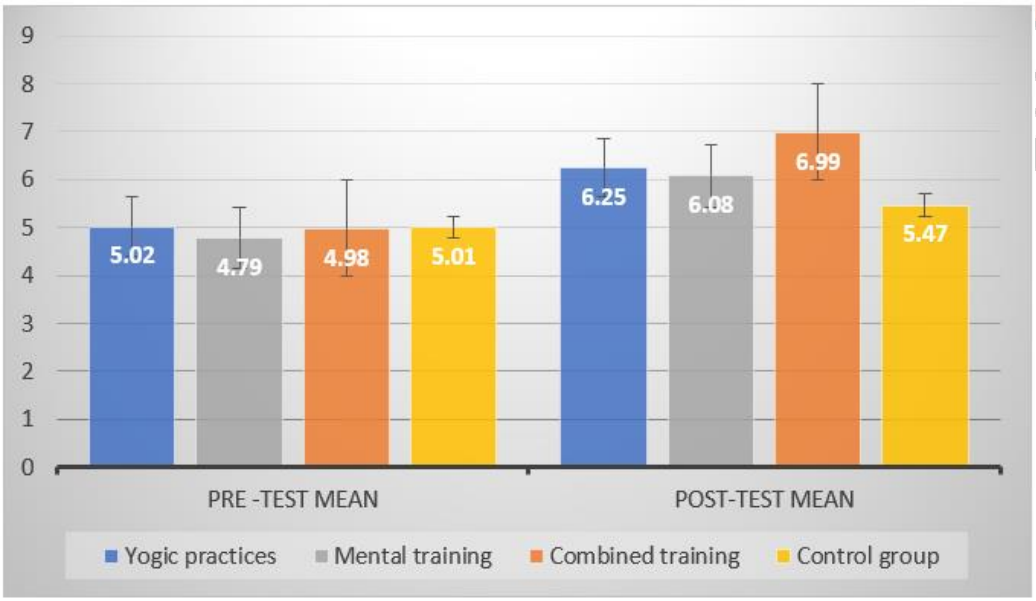
The pre-test scores analysis proved the experimental groups and control group had a no significance difference on set up ability, F (3,56) = 2.77, p = 0.50.

The post-test scores analysis proved the experimental groups and control group had a significance difference on set up ability, F (3,56) = 2.77, p = 0.000.

Mean
Yoga – 6.25
Mental training – 6.08
Combined – 6.99
Control group – 5.47

Multiple Comparison test

Test	P - Value	Significant
Yoga vs Mental training	.921	No
Yoga vs Combined	.041	Yes (Yoga < Combined)
Yoga vs Control group	.028	Yes (Yoga > Control)
Mental vs Combined	.007	Yes (Mental training < Combined)
Mental vs Control group	.124	No
Combined vs Control group	.000	Yes (Combined > Control)



Post hoc comparisons using the Tukey HSD test indicated yoga and mental training had no significance difference, yoga and combined training had a significance difference, yoga and control group had significance difference, mental and combined had a significant difference mental had a no significance difference and combined and control had a significant difference. When compare mean value between the groups the combined training group had better significant improvement on set up ability.

Discussion

The study purpose to analyse the impact of twelve weeks mental training and yoga practices program on passing and set up test values of college level volleyball players. The research supports "the hypothesis that regular practices in 12 weeks mental training and yoga practices program can improve passing and set up test among volleyball players"

According to the findings of the research during the twelve weeks combined, mental training and yoga practices program, it is seen that it provided statistically significant develop in passing (f=13.17*) and set up test (f=10.65*) Tables (2&3). At this point, it is possible to talk about the positive effect of the mental training, yoga practices and combined program.

IV. CONCLUSION

The results of the study clearly show that the twelve weeks mental training, yoga practices and combined program (4 days 60 mins per week) has produced significant improvement in volleying skill and serve skill of college female volleyball players. In line with this, mental training and yoga practices program could be suggested as an effective team training for this age group. Players are considering the improvement effective training for this age group, the importance of competition. A mental training and yoga practices program of the regular combined mental training and yoga practices program can be suggested as more effective training for encouraging volleyball players.

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