



ISSN: 2456-0057

IJPNPE 2019; 4(1): 1915-1918

© 2019 IJPNPE

www.journalofsports.com

Received: 19-11-2018

Accepted: 23-12-2018

**S Rajasuthakar**

Research Scholar, FGAPEY,  
Ramakrishna Mission  
Vivekananda Educational and  
Research Institute, Coimbatore,  
Tamil Nadu, India

**Dr. PJ Sebastian**

Professor and Guide, FGAPEY,  
Ramakrishna Mission  
Vivekananda Educational and  
Research Institute, Coimbatore,  
Tamil Nadu, India

## Effect of small area games and yogic practices on selected stress and aggression of intercollegiate male volleyball players

**S Rajasuthakar and Dr. PJ Sebastian**

### Abstract

The purpose of this study was to find out the effect of small area games and yogic practices on selected stress and aggression of intercollegiate male volleyball players. To achieve the purpose of the study, 72 intercollegiate male volleyball players from Vivekananda college, Agasteeswaram, Kanyakumari, Tamil Nadu, Annai Velankanni College Kanyakumari and Sivanthi Aditanar College, Nagercoil, Tamil Nadu were selected as subjects their age ranged from (17 to 21 years as per the college records). They were divided into 3 equal groups in which each group consisted of 24 subjects (n=24). Group – I and Group – II were the experimental groups such as small area games and yogic practices – SAGYP and small area games Group yogic practices – SAGYP and Group – III served as control group (CG). Group I and II underwent training for a period of 12 weeks. The following are the criterion variables: Small area games yogic practices and control group. They were tested using standard test methods and instruments before and after training. The collected data were analysed using paired sample 't' test and ANCOVA. Whenever, the 'F' ratio for adjusted post – test was found to be significant, scheffe's post hoc test was applied. The level of confidence was fixed at 0.05 level. The findings of the study showed that there were significant improvements in the variables namely small area games, yogic practices and control group time between pre test and post-test of the 2 experimental groups. Better improvement was found in small area games with yogic practices group. There was no significant difference in any of the selected variables between pre test and post-test of the control group.

**Keywords:** Small area games, yogic practices, stress and aggression

### Introduction

Volleyball is a world wide popular games and ranks third as a recreational team sport. It is one of the few popular games that originated from the United States. The ball is usually played with the hands or arms, but players can legally strike or push (Short contact) the ball with any part of the body. Spiking the ball is easy to hit and has a fair advantage that the other team will not be able to hit back.

On February 9, 1885, in Holyoke, Massachusetts (USA), William G. Morgan, a YMCA physical education director, created a new game called Mintonette as a pastime to be played preferably indoors and any number of players.

Yoga is the physical, mental and spiritual practices or disciplines which originated in ancient India with a view to attain a state of permanent peace.

Stress is a stimulus resulting in arousal or a response characterized by fear or nervousness to a specific situation.

Aggression refers to a range of behaviours that can result in both physical and psychological harm to oneself, other or objects in the environment.

### Materials and Methods

To achieve the purpose of this study, 72 intercollegiate male volleyball players from Vivekananda College, Agasteeswaram, Kanyakumari, Annai Velankanni College, Kanyakumari and Sivanthi Aditanar College, Nagercoil, Tamil Nadu were selected as subjects at random (17 to 21 years as per the college records). They were divided into 3 equal groups of 24 each (n = 24). Group – I and Group – II were the experimental groups such as small area

**Correspondence**

**S Rajasuthakar**

Research Scholar, FGAPEY,  
Ramakrishna Mission  
Vivekananda Educational and  
Research Institute, Coimbatore,  
Tamil Nadu, India

games group with yogic practices – SAGYP and Group – III served as control group (CG) Group I and II underwent training for a period of 12 weeks. Eight small area games that lead up to Basketball were twenty one, twenty one (version), sponge Bob basketball, Shoot out, mass basketball knock out, knock out (Veriation) and basketball chicken fights. The small area games that lead up to Volleyball following are the game Four – way volleyball (poison), four way volleyball 2, hit and switch, head and hands, clean house, box ball, bind, man volleyball and small area games that lead up to Tennis were Alleys tennis, aerobic tennis, crazy 8s tennis, short – court mini tennis, toss & catch tennis.

Yogic practices are asana and pranayana and meditation. The selected yogic practices were given as experimental treatment and the duration of time for each asana and the order of doing are given below. They yogic practices are Padmasana, Vajrasana, Yogamudra, Pachimottanasana, Matsyasana, Shalabasana, Bhujangasana, Vibareethakarani Mudra, Pawanmuktasana, Dhanurasana, Sarvangasana, Halasana, Pathahasthasana, Trikonasana and Shavasana.

The word psychology refers to the study of human behaviour.

Sports psychology denotes an area of psychology that deals with the behaviour of athletes and teams engaged in competitive sports. Sports psychology is that branch of psychology which is intimately connected with human behaviour on the play field, both under practice and competitive situations, with a view to bring about qualitative improvement in performance and maintain the same even during the stresses of competition.

The collected data from the 3 groups prior to and after the 12 weeks training programme on selected criterion variables were statistically analysed using paired samples ‘t’ test. In order to compare the effect of treatment on the selected physiological variables among the 3 groups, analysed of covariance was used. When ever, the ‘F’ ratio for adjusted post – test was found to be significant and to determine which of the three paired means significantly different, the Scheffe’ s post hoc test was applied. The level of confidance was fixed at 0.05 levels.

**Results**

**Table 1:** Analysis of covariance for the pre-test post-test and adjusted post-test means on stress of small area games yogic practices and control groups

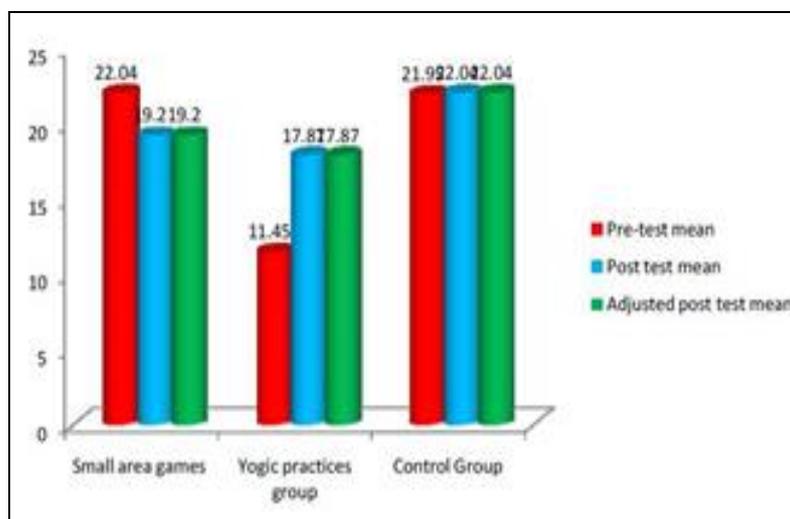
|                           | SAG   | VG    | CG    | Source of Variance | Sum of Squares | df | Mean Squares | F-ratio |
|---------------------------|-------|-------|-------|--------------------|----------------|----|--------------|---------|
| Pre Test Means            | 22.04 | 11.45 | 21.95 | BG                 | 4.77           | 2  | 2.389        | 047     |
|                           |       |       |       | WG                 | 343.87         | 69 | 4.98         |         |
| Post- Test Means          | 19.20 | 17.87 | 22.04 | BG                 | 217.33         | 2  | 108.66       | 24.22*  |
|                           |       |       |       | WG                 | 309.54         | 69 | 4.48         |         |
| Adjusted Post- Test Means | 19.20 | 17.87 | 22.04 | BG                 | 185.73         | 2  | 92.36        | 73.26*  |
|                           |       |       |       | WG                 | 86.07          | 68 | 1.26         |         |

SAG - Small area games group CG - Control Group  
 YG - Yogic practices group df- Degrees of Freedom  
 BG - Between Group Means WG - Within Group Means \* - Significant  
 (Table Value for 0.05 Level for df 2 & 57=3.16)  
 (Table Value for 0.05 Level for df 2 & 56=3.17)

**Table 2:** Scheffe's test for the difference between paired means on stress

| Group I (N-24) | Group II (N-24) | Group III (N-24) | Mean Difference | CI value |
|----------------|-----------------|------------------|-----------------|----------|
| 19.20          | 17.87           | -                | 1.33            | 1.80     |
| 19.20          | -               | 22.04            | 2.84*           |          |
| -              | 17.87           | 22.04            | 4.17*           |          |

\*Significant 0.05 level of confidence



**Fig 1:** Adjusted post-test mean values of small area games yogic practices and control group on stress

**Table 3:** Analysis of covariance for the pre test post-test and adjusted post-test means on competition stateanxiety of small area games yogic practices and control group

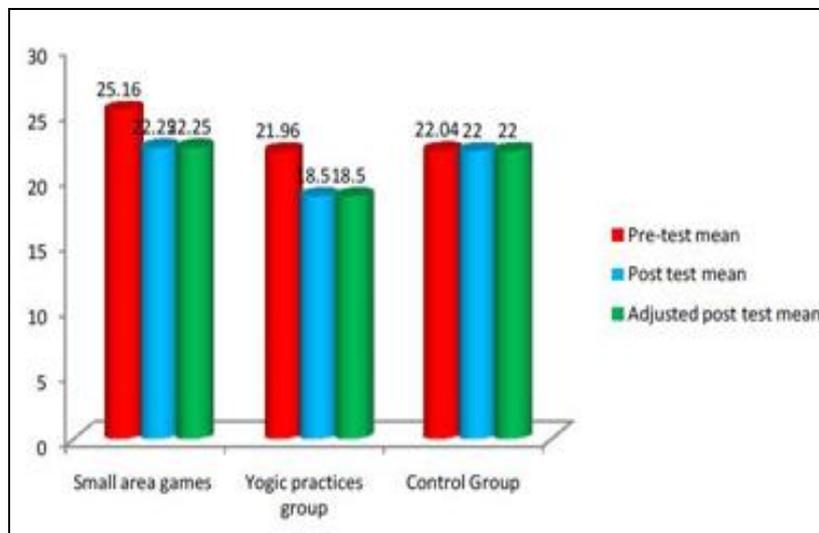
|                           | SAG   | YG    | CG    | Source of Variance | Sum of Squares | df | Mean Squares | F- ratio |
|---------------------------|-------|-------|-------|--------------------|----------------|----|--------------|----------|
| Pre-Test Means            | 25.16 | 21.96 | 22.04 | BG                 | 160.52         | 2  | 80.26        | 2.64     |
|                           |       |       |       | WG                 | 865.52         | 69 | 12.54        |          |
| Post- Test Means          | 22.25 | 18.5  | 22    | BG                 | 211            | 2  | 105.5        | 9.25*    |
|                           |       |       |       | WG                 | 786.5          | 69 | 11.39        |          |
| Adjusted Post: Test Means | 22.25 | 18.5  | 22    | BG                 | 150.17         | 2  | 75.08        | 50.86•   |
|                           |       |       |       | WG                 | 100.37         | 68 | 1.47         |          |

SAG - Small area games group CG - Control Group  
 YG - Yogic practices group df- Degrees of Freedom  
 BG - Between Group Means WO - Within Group Means \* - Significant  
 (Table Value for 0.05 Level for df 2 & 57 = 3.16)  
 (Table Value for 0.05 Level for df 2 & 56 = 3.17)

**Table 4:** Scheffe's test for the difference between paired means on competition stateanxiety

| Group I (N=24) | Group II (N=24) | Group III (N=24) | Meau Difference | CI value |
|----------------|-----------------|------------------|-----------------|----------|
| 22.15          | 18.5            | -                | 3.75*           | 2.86     |
| 22.25          | -               | 22               | 0.25•           |          |
| -              | 18.5            | 22               | 33*             |          |

\*Significant at 0.05 level of confidence.



**Fig 2:** Adjusted post-test mean values of small area games yogic practices and control group on competition stateanxiety

**Table 5:** Analysis of covariance for the pre test post-test and adjusted post-test means on aggression of small area games yogic practices and control group

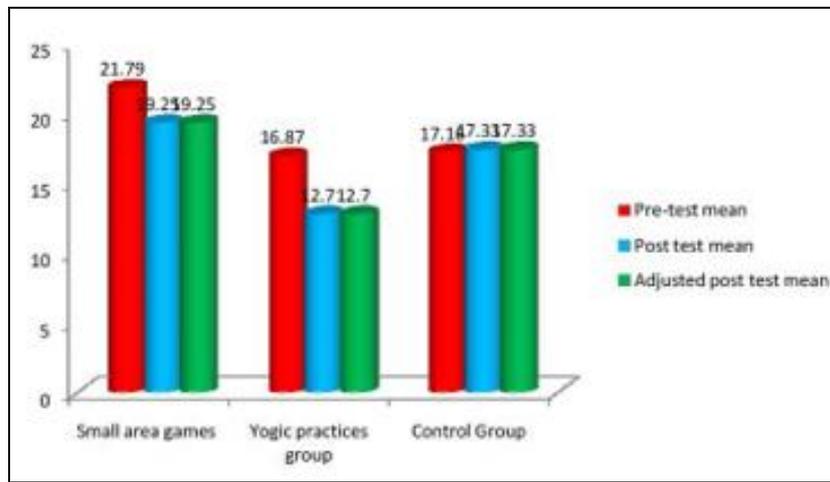
|                          | SAG   | YG    | CG    | Source of Variance | Sum of Squares | df | Mean Squares | F-ratio |
|--------------------------|-------|-------|-------|--------------------|----------------|----|--------------|---------|
| Pre-Test Means           | 21.79 | 16.87 | 17.16 | BG                 | 965.19         | 2  | 182.59       | 1.50    |
|                          |       |       |       | WG                 | 251.91         | 69 | 3.65         |         |
| Post- Test Means         | 19.25 | 12.70 | 17.33 | BG                 | 542.86         | 2  | 271.43       | 76.52*  |
|                          |       |       |       | WG                 | 244.79         | 69 | 3.54         |         |
| Adjusted Post-Test Means | 19.25 | 12.70 | 17.33 | BG                 | 233.52         | 2  | 116.76       | 73.92*  |
|                          |       |       |       | NG                 | 107.39         | 68 | 1.57         |         |

SAG - Small area games group CG - Control Group  
 YG - Yogic practices group df- Degrees of Freedom  
 BO - Between Group Means WIG - Within Group Means \* - Significant  
 (Table Value for 0.05 Level for df 2 & 57 at 3.16)  
 (Table Value for 0.05 Level for df 2 & 56 = 3.17)

**Table 6:** Scheffe's test for the difference between paired 3 leans on aggression

| Grasp 1 (N=24) | Group U (N=24) | Group III Mean IN=24) | Difference | CI value |
|----------------|----------------|-----------------------|------------|----------|
| 19.25          | 12.7           | -                     | 6.55•      | 0439     |
| 19.25          | -              | 17.33                 | 1.92'      |          |
| -              | 117            | 17.33                 | 4.63*      |          |

Significant at 0.05 level of confidence



**Fig 3:** Adjusted post-test mean values of small area games yogic practices and control group on aggression

#### 4. Discussion

The results of the paired samples *t* – test reveal that there is a significant difference in the Stress of Small area games Group (Experimental group I) between the post-test and post – test; There is also a significant difference in the Stress of Yogic practices Group (experimental group II) between the post-test and post – test. There is no significant difference in the Stress of Control Group between the post-test and post – test. Recording statistical analysis of covariance, it is observed that there is a significant difference on the Stress between the adjusted post-test means of experimental group I, experimental group II and control group. However the results of the Scheffe’s post hoc test indicates that there is a significant difference between Small area games group and control group on Stress; there is a significant difference between Yogic practices Group and Control group on Stress; there is no significant difference between Small area games group and Yogic practices on Stress among volleyball players. These findings shows that Stress of the intercollegiate male volleyball players was improved in both the experimental groups but it was unable to find better improvement.

The results of the paired samples *t* – test reveal that there is a significant difference in the Aggression of Small area games group (experimental group I) between the post-test and post–test; There is also a significant difference in the Aggression of Yogic practices Group (experimental group II) between the post-test and post–test; There is no significant difference in the Aggression of control group between the post-test and post–test. Regarding statistical analysis of covariance, it is observed that there is a significant difference on the Aggression between the adjusted post-test means of experimental group I, experimental group II and control group. However the results of the scheffe’s post hoc test indicates that there is a significant difference between Ssmall area games group and control group on Aggression there is a significant difference between Yogic practices group and control group on Aggression; there is a significant difference between Small area games group and Yogic practices on Aggression among volleyball players. There findings show that Aggression of the intercollegiate male volleyball players was improved in both the experimental groups but better improvement was found in experimental group I a (Small area games group).

#### 5. Conclusion

It was found that the control group had insignificant

difference than the small area games and Yogic practices group on the selected criterion variables of the intercollegiate male volleyball players. It was concluded that all the selected criterion variables namely Psychological variables: Stress, Competition state Anxiety, Aggression. Of the intercollegiate male volleyball players showed better Improvement in small area game and Yogic practices group. Hence through this study it is suggested that the better training method of improve the physiological variables of the intercollegiate male volleyball players was small area games and yogic practices compaired with the small area games alone.

#### 6. References

1. Saravana Kumar K, Balasubramanian K. Effect of Yogic practices on selected Psychological Variables of Volleyball players, International Journal of Recent Research and Applied Studies, 2014, 12.
2. Saroja. Effect of Yoga Practice, Physical Exercise and Combination of Yoga Practice, Physical Exercise on Selected Motor Ability Components, Physiological variables in College Men, VYAYAM – VIDNYAN, 2011; 44(2).
3. Sharma K, Tyagi G. Effect of specific training programme on physiological and fitness components of Table tennis players, VYAYAM – VIDNYAN Journal, 2011; 44(1):26.
4. Shenbagavalli A, Raj Kumar M. ‘Effect of pranayama on selected physiological variables among Men volleyball players’. Indian journal for research in physical education and sports sciences (IJRPES), 2007.
5. Telles S, Gaur V, Balkrishna A. Effect of a yoga practices session and a yoga theory session on state anxiety, Percept. 2009; 109(3):924-30.
6. Arumugam. Effect of in – season training on skill performance of volleyball players, International Journal of Recent Research and Applied Studies. 2014; 1(2).
7. Buss AH, Perry M. The Aggression Questionnaire. Journal of Personality and social Psychology. 1992; 63:452-459.