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Effect of yogic and aerobic exercises on general wellbeing of badminton players

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Abstract

The purpose of the study was to determine the effect of yogic and aerobic exercises on general wellbeing of Badminton players. To achieve the purpose of the study, Forty five intercollegiate Badminton players of Government degree colleges affiliated to Vijayanagara Sri Kirshnadevaraya University, Bellary State were selected as subjects randomly. Their age ranged from 18 to 24 years. The subjects were randomly assigned to three equal groups of 15 intercollegiate Badminton players. The study was confined to General Wellbeing. The General Wellbeing Scale developed by Santosh K. Verma and Amita Verma (1989) was used to assess the wellbeing of subjects. To find out the variance in the selected variable due to the application of independent variable, Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) was applied and the level of significance was set at the 0.05 and 0.01 levels. The result indicated that experimental groups (Aerobic and Yogic exercises groups) were significantly improved the Wellbeing when compared with the control group. It was also indicated that yoga group had significantly improved the wellbeing greater than aerobic exercises group. The study suggested that the results would provide a scientific base and guidance to the coaches and physical educationists to design the training programme for sportsperson especially for Badminton players.

Keywords: Aerobic, Yogic, Intercollegiate, Badminton

Introduction

Physical Education aims to keep people 'healthy'. The Physical Education programme provides students with accurate and significant knowledge related to their individual needs and interest. There is also concern for fitness, health services and healthy physical and emotional environment. Twenty first century has witness a sign growth in science and technology. Due to scientific technological discovery, the movements of the human being have been restricted and increased anxiety and tension and facing feel prey of stress and mental diseases. Hence, it is the task of everybody concerned to see that our future citizens are strong and have an ultimate character. So it is important to give importance to any physical activities such as aerobic and yogic exercises.

Aerobic exercise is a non-specific activity that improves physical capacities. It is simple to carry out and includes jogging in place, knee ups, short kick, running, marching and so on. (Gody *et al.* 2006)^[3]. Yoga helps students in developing fitness. Academic pressure is another main cause. Parents and teachers are neglecting the physical objectives of their children. Many scientists, doctors, psycholinguists etc., all over the world are extensively studying the beneficial aspects of yoga which encourages us to attain positive health through yoga.

Wellbeing is a concept that encompasses a well-rounded, balanced and comprehensive experience of life. It includes health in social, physical, mental, emotional, career and spiritual domains. Wellbeing a positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well. Better living conditions are fundamental to wellbeing.

Well-being is a way of life. Especially in terms of life ideally inclined to health and wellness; unifying body, mind, and soul; individually full of purposeful attitude and aim to live life more fully; and a functional life in all social, personal, and environmental aspects. Students with psychological wellbeing possess good mental health and maintain good relationship with other individuals. They are productive in nature and maintain positive attitude towards their life. The recent study reveals that 60% of the school and college going children suffers obese.

Physical exercise, particularly continuous aerobic exercises such as running, cycling and swimming, has many cognitive benefits and effects on the brain include increases in neurotransmitter levels, improved oxygen and nutrient delivery. The effects of exercise on memory have important implications for improving children's academic performance, maintaining mental abilities among children. Ahadi *et al.* (2013) [4] determined the effect of 8-weeks aerobic and yoga training on anxiety and quality of life in individuals and the results shows that yoga group controlled anxiety level and improve the quality of life. Ray *et al.* (2001) [8] determined the effect of yogic exercises on physical and mental health of young fellowship course trainees. The result shows that there was improvement in psychological parameters like reduction in anxiety and depression and a better wellbeing and mental function after yogic practices. Badminton players need to be fits in that the time the ball remain in play, average length of rallies and distance traveled by players during the game are all significantly higher in badminton. In other words, the endurance level of badminton players should be very high. Also it is worthwhile remembering that badminton is significantly faster than most of the games, so the player needs to be in peak fitness to run, stretch, dive, bend, jump and reach the birdie with lightning quick reflexes and body balance. Badminton is a fast-paced sport that involves a lot of aerobic activity such as running on the court, stretching to reach the shuttle and jumping in the air to hit the shuttlecock with your racket. Being such a strenuous activity the health benefits that accrue from playing badminton are also tremendous. Almost every muscle of the body get exercised by playing the game, it is excellent for maintaining healthy body weight and keeps the body well-toned. College Education is a very important stage of growth and development of an individual personality. Considering the fact that exercises may play an important role in the health of body and soul, strongly favored for youths and as a strategy, it can be used to develop their wellbeing, therefore the research on effect of varied exercises on wellbeing is a priority, so perhaps it would help to promote their mental health and wellbeing of athletes.

Statement of the Problem

The purpose of the study was to find out the effect of yogic and aerobic exercises on General Wellbeing of intercollegiate level Badminton players.

Objective of the Study

The objective of this study was to determine the effect of yogic and aerobic exercises on General Wellbeing of intercollegiate level Badminton players.

Statement of Hypothesis

It was hypothesized that 12 weeks of yogic and aerobic exercises training will have significant improvement on Wellbeing of the subjects.

Methodology

The subjects (n=45) were randomly assigned to three equal groups of 15 intercollegiate Badminton players. The groups were assigned as Experimental Groups I, II and control group. Pre test (initial) scores were conducted for all the subjects on General Wellbeing collected by administering. The General Wellbeing Scale developed by. Group-I participated in yogic exercises and experimental Group-II participated in aerobic exercises done for a period of 12 weeks. The post test (final) scores were conducted on the above said criterion variable after experimental period. The differences between initial and final mean scores on selected variables were considered as the effect of experimental treatments. Analysis of Variance and Analysis of Covariance (ANCOVA) was used to determine the significance of the means for each variable. Post hoc analysis was made using LSD test when obtained F value was significant. In all cases 0.05 level and 0.01 levels was fixed to test the hypothesis.

Results and Discussion

Analysis of the treatment effects, namely Yogic Exercises Training Group (YETG) Aerobic Exercises Training Group (AETG) and Control Group (CG) on selected criterion variables were presented in the following tables

Table 1: Analysis of Covariance on General Wellbeing among YETG, AETG, and CG.

Mean	CG	YETG	AETG	Sources of Variance	Sum of Squares	df	Mean Squares	Obtained F value
Pre Test	10.866	11.800	11.400	Between	6.578	2	3.289	1.981 (P=0.151)
				Within	69.733	42	1.660	
Post Test	11.333	16.133	14.866	Between	185.644	2	92.822	48.249** (0.000)
				Within	80.800	42	1.924	
Adjusted Post Test	11.375	16.399	14.870	Between	184.087	2	92.043	46.684** (0.000)
				Within	77.516	41	1.891	

^{NS}Not Significant; (df) 2; *Significant at 0.05 F 42 is 3.23. **Significant at 0.01 F 42 is 5.18

Since significant F ratio was obtained, the results were further subjected to post hoc analysis using LSD test and results presented in Table-2.

Table 2: LSD Confidence Interval (CI) Test scores on General Wellbeing

CG	Groups		Mean Difference	Required C.I.
	YETG	AETG		
11.227	16.230		5.003*	0.989
	16.230	14.876	1.353*	
11.227		14.876	3.649*	

The results of this study proved that General Wellbeing of the badminton players was significantly improved due to 12 weeks of yogic and aerobic training as the obtained F value of 46.684 on adjusted means was greater than the required table F value of 5.18 at 0.01 level. The post hoc analysis proved that “there was significant difference between YETG & CG; and AETG & CG.” The treatment groups were also proved

statistically by improving general wellbeing among badminton players and the comparison between the treatment groups proved by mean scores that YETG was better than AETG in improving wellbeing of badminton players. Hence the stated hypothesis was accepted for the said criterion variable that is General Wellbeing.

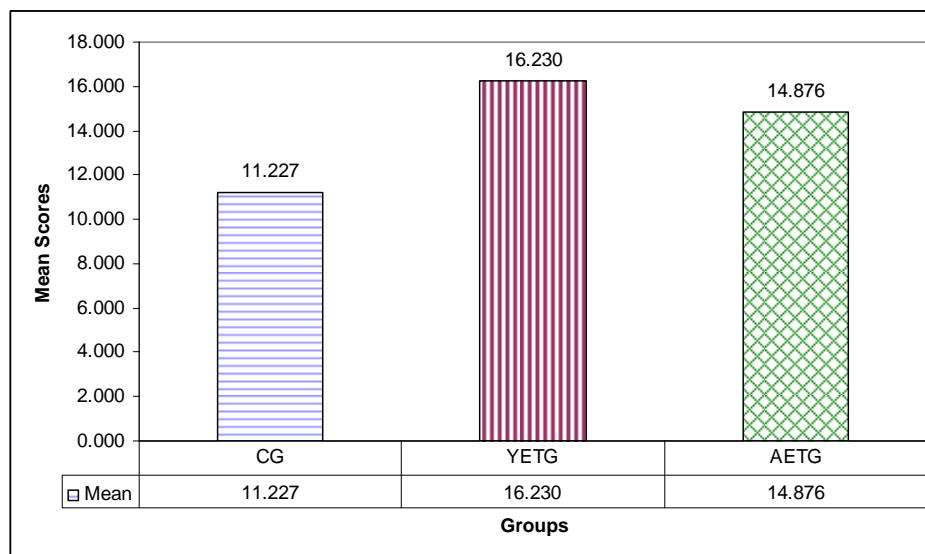


Fig 1: Bar diagram shows comparison of adjusted mean scores of Wellbeing among groups

Conclusion

It was concluded that varied yogic and aerobic exercises groups significantly improved general wellbeing of badminton players. The results suggested that physical exercises such as yogic and aerobic exercises as an appropriate, easy and affordable approach for increasing general wellbeing and mental health among the sports person. The similar results proved by previous studies conducted by Ahadei *et al.* (2013) [4] and Ray *et al.* (2001) [8]. The present study would provide a scientific base and guidance to the coaches, sports trainers and physical educationists to design the training programme for athletes. Research has demonstrated that well-being promoted through regular exercises, which occurs for at least twenty minutes a day, three or more times a week (Yiannakis *et al.*, 2001; [8]. Regularly exercising health club members was found to be more psychologically well than irregular exercisers. Similar improved psychological well-being has been found with swimming, yoga and fencing rugby.

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