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Effect of Basketball Specific Training on Selected Physical Fitness Variables among the Inter-Collegiate Men Basketball Players of Mangalore University

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Abstract

The purpose of the present study was to find out the effect of Basketball Specific Training on selected physical fitness variables among the intercollegiate men basketball players of Mangalore University. For this purpose, thirty men basketball players in the age group of 18 - 25 years were selected as subjects. The selected subjects were divided into two equal groups, Group-I: Basketball Specific Training Group (BSTG) (n=15) underwent specific training and Group–II: Control Group (CG) (n=15) which did not participate in training but allowed to play basketball regularly. The training programme was five days per week for twelve weeks. Prior to and after the training period, the subjects were tested for speed, explosive power, flexibility and agility. These were assessed by administering 50 Meters Dash, Vertical Jump, Sit and Reach Test and Boom rang Test respectively. The statistical tool used for the present study was 't' test. After applying the 't' test, it was found that there was a significant improvement in the selected physical fitness variables such as speed, explosive power, flexibility and agility of the Basketball Specific Training Group when compared with control group. Based on the results it was concluded that the Basketball Specific Training significantly improved the selected physical variables such as speed, explosive power, flexibility and agility of male Basketball players.

Keywords: Basketball Specific Training, Speed, Explosive Power, Flexibility, Agility.

Introduction

Sport is an important element of physical education and a worldwide phenomenon today. In recent times, the field of sports has become popular, since youth are participating in large numbers with a recreational and professional approach. The outcome of their quantitative participation is the resultant performance and vast improvement in the sports and games standards. The improvement in performance has taken place due to the application of science at various levels such as improvement in facilities, training methods, conditioning, nutrition, psychological intervention strategies and professionalization of sports itself. Day-by-day the increasing number of athletes brings higher level achievements in team sports such as basketball. The demands on fitness level have brought to those of the parameters, such as muscular strength, endurance, flexibility, speed and agility along with body composition. The athletes maintain a high level of physical endurance for long time, which is great importance in sports. Sports Specific Training can help to improve strength, flexibility and stamina whereby the players can improve their performance in specific sports. Sport-skill coaches (baseball coaches, basketball coaches) are specialists in developing the specific skill sets needed for that game. A supervised training program improved skill based athletic performance such as agility, coordination, speed, explosive power, dynamic balance (Dean, 1998). Basketball is a sport that requires a combination of speed, strength, power, stamina and agility. Basketball specific training was comprised of resistance, aerobic, plyometric trainings, basketball specific drill practices and playing the game. This training is executed by adapting principles of high intensity with low volume and low intensity with high volume for resistance and aerobic training modules alone. As for as plyometric training was concerned, it is treated as progressive in nature.

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Objective of the Study

The objective of the study was to determine the effect of Basketball Specific Training on selected physical fitness variables of intercollegiate men Basketball players.

Hypothesis of the Study

It is hypothesized that there would be a significant difference in the selected Physical Fitness variables of the experimental group by practising basketball specific exercises.

Methodology

To achieve the purpose of this study, 30 Inter

collegiate male basketball players were selected from Mangalore University, Mangalore, Karnataka, India. They were divided into two equal groups namely Group-I SBTG (Specific Basketball Training Group) and Group-II CG (Control Groups), After assigning to subjects in groups, 't'- test was conducted to assess the selected physical fitness variables such as Speed in secs. (50 Meter Dash), Explosive Power in inches (Vertical Jump), Flexibility in inches (Sit and Reach Test) and Agility in secs (Boomrang Test) and this was considered as a pre-test. After the pre-test, the Group-I (SBTG) underwent specific basketball training program for training for 12 weeks, and Group-II (CG) did not engage in any training given by the scholar. After the 12 weeks, post-test was conducted for both groups, and scores were recorded accordingly. The collected data was evaluated using 't' test analysis. The proposed hypothesis was tested at 0.05 level of confidence. The Statistical Software for Social Science (SPSS) was used.

Analysis of Data

The data collected prior to and after the experimental periods on the selected physical fitness variables such as speed, explosive strength, flexibility and agility of Basketball Specific Training Group (BSTG) and Control Group (CG) were analyzed.

Table I. Table showing 't' test analysis between pre test and post test scores for the selected physical fitness variables such as speed, explosive strength, flexibility and agility for Basketball Specific Training Group (BSTG) and Control Group (CG) (N=15 Each group).

Physical Fitness Variables	Tests	Control Group			Experimental Group		
		Mean	SD	't' Value	Mean	SD	't' Value
Speed (In Secs)	Pre Test	5.530	0.259	0.70^{NS}	5.440	0.183	3.63*
	Post Test	5.610	0.358		5.040	0.385	
Exp Strength (In Inches)	Pre Test	22.533	2.642	0.41^{NS}	23.200	1.473	2.77*
	Post Test	22.933	2.685		25.133	2.263	
Flexibility (In Inches)	Pre Test	5.666	1.502	0.16^{NS}	5.778	0.990	2.73*
	Post Test	5.753	1.447		6.933	1.302	
Agility (In Secs)	Pre Test	12.348	0.726	0.53^{NS}	12.269	0.515	3.30*
	Post Test	12.508	0.922		11.282	1.034	

^{NS}Not Significant: * Significant at 0.05 level [Table Value = 2.04]

The above table shows that the obtained 't' values 0.70 (Speed), 0.41 (Explosive Strength); 0.16 (Flexibility) and 0.53 (Agility) for Control group are less than the table value 2.04. It is not significant even at 0.05 level of confidence. Hence it is concluded that the changes made from pre-test to post test were not statistically significant in the control group. Table-1 further shows that that the obtained 't' values 3.63

(Speed), 2.77 (Explosive Strength); 2.73 (Flexibility) and 3.30 (Agility) for basketball specific training group (BSTG) are greater than the table value 2.04, hence. It is significant at 0.05 level of confidence. Hence it is concluded that the basketball specific training group significantly improved the selected physical fitness components of men Basketball players. This is due to BSTG group subjects participating in specific basketball exercises programmes.

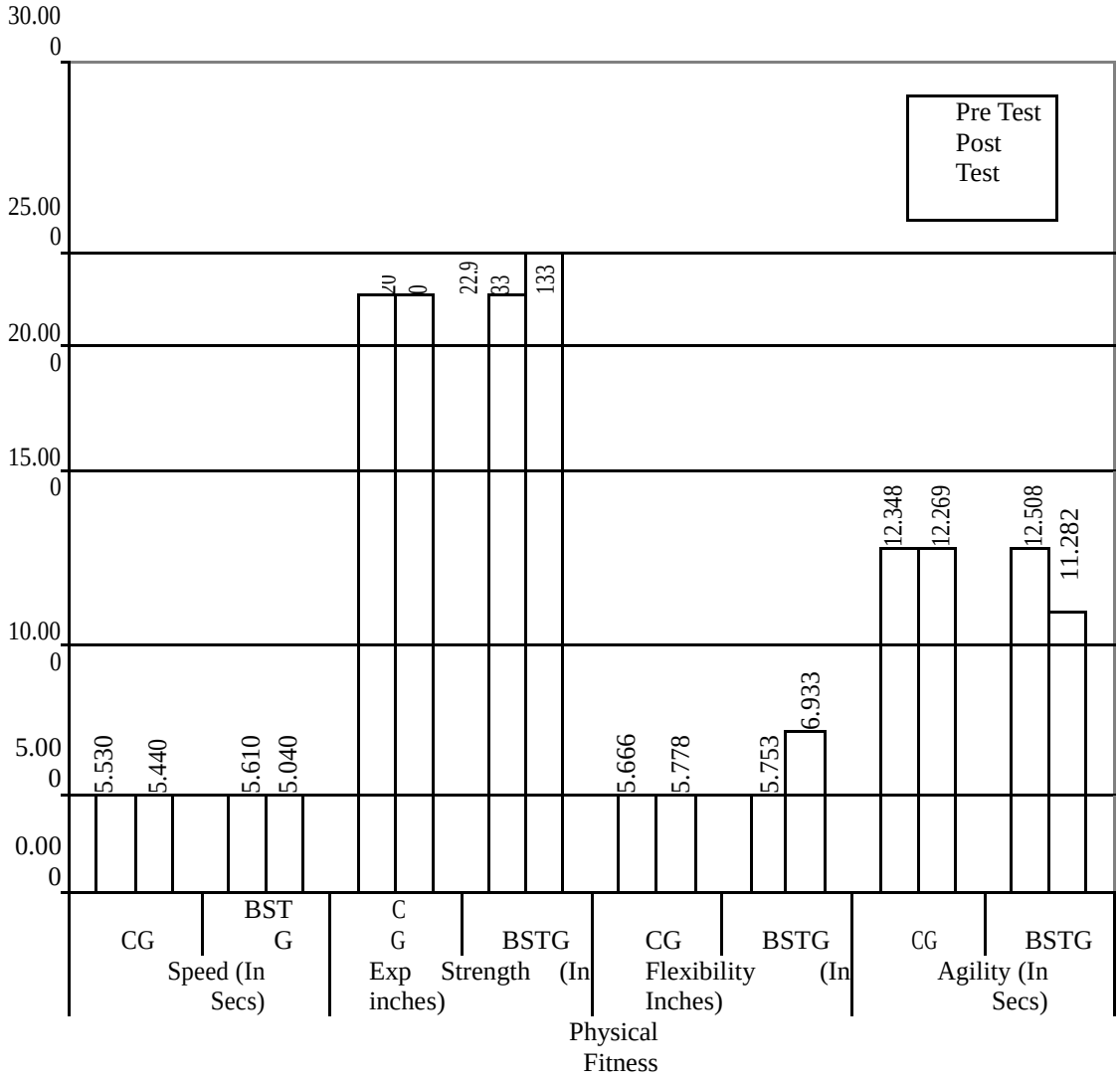

Figure I. Comparison of pre and post test mean scores of physical fitness variables for Experimental and Control groups

Discussion on Findings

The present study found out the effect of Basketball Specific Training programme on selected physical fitness variables of Mangalore University Basketball men players after administration of tests for collection of data with appropriate statistical analysis. The researcher made an attempt to discuss the findings based on the obtained results. The researcher examined the effect of basketball specific exercises on selected physical fitness variables of basketball players. The result shows that the 12 week specific exercises improved speed, explosive power, flexibility and agility of basketball players. This may be due to the subjects participating in a specific basketball exercises programme which comprised of dynamic warm up, flexibility exercises, strength, agility, speed, and endurance drills specifically targeting the requirements of competitive basketball players. Similar results were by Parimalam (2013) and Sandeep Sharma (2015), suthakar (2016) who as found that specific exercise programmes improved the physical fitness variables of Basketball Players.

Conclusion

This study confirmed that the basketball specific training group significantly improved the selected physical fitness components of men basketball players.

References

1. Acarbay, S., Kayatekin, M., Ozgonul, H., Selamoglu, S., &Sermin, I. (1996). A Comparison

of Physiological-Physical Profile in the First Division Basketball Team Player with Sedentaries. Hacettepe University 4th International Sport Sciences Congress, Abstract Book, 356-360.
2. Bale, P., & Scholes, S. (1986). Lateral dominance and basketball performance. Journal of Human Movement Studies, 12, 145-151.
3. Coleman, E., Kreuzer, P., Friedrich, D. W., & Juvenal, J. P. (1972). Aerobic And Anaerobic Responses Of Male College Freshmen During A Season Of Basketball
4. Csanády, M., Forster, T., &Högye, M. (1986).Comparative Echocardiographic Study of Junior and Senior Basketball Players. International journal of sports medicine, 7(3), 128-132.
5. Dr.S.Suthakar k.m.Ashok kumar, R.Ashok kumar "An Effective Approach through Strength, Endurance and Skill Training Program Combinations on Flexibility and Dribbling of Male Basketball Players"., International Journal of Innovative Research and development (2016).
6. Dr.S.Suthakar k.m.Ashok kumar, R.Ashok kumar "An Effective Approach through Strength, Endurance and Skill Training Program Combinations on Muscular Strength and Endurance and Explosive Power of Male Basketball Players"., International Journal of Innovative Research and development (2016).
7. Dr.S.Suthakar., and A. Pushparajan. "Effects of Silambam and Karate with Yogic Training on Agility and Arm Explosive Power of Collegiate Male Students." International Journal of Innovative Research and Development (2014).
8. S. Parimalam and A. Pushparajan, "Effect of specific basketball training program on physical fitness and skill performance variables of inter collegiate women basketball players "., International Journal of Advanced Life Sciences., (2013).
9. Vamvakoudis E, Vrabas IS, Galazoulas C, Stefanidis P, Metaxas TI, Mandroukas K. Effects of basketball training on maximal oxygen uptake, muscle strength, and joint mobility in young basketball players. J Strength Cond Res. 2007 Aug;21(3):930-6.