

DEVELOPMENT OF FOOTBALLER'S CORE AND SHOULDER STRENGTH THROUGH BULGARIAN BAG TRAINING

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Abstract

The goal of the current study was to determine how bulgarian bag training improved football players' core and shoulder strength abilities. Twenty (20) male football players, aged between 20 to 25 years, were chosen at random from Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. The chosen participants were randomly assigned to one of two equal groups: The Control Group (CG; N=10) and the Bulgarian Bag Training Group (BBTG; N=10). A six-week bulgarian bag training regimen has been designed to test the impact of the offered training regimen on football players' core and shoulder strength. Before and after the six-week bulgarian bag training programme, the strength of the core and shoulders were assessed using the "plank test and push-up test." By examining and comparing the pre-test and post-test score using the paired sample 't' test and ANCOVA among the football players of BBTG and CG, it has been discovered that there have been significant positive increases in core strength and shoulder strength. According to the findings of this study, football players' core and shoulder strength improved after six weeks of bulgarian bag training regimen. The control group did not experience any appreciable improvements in their shoulder and core strength, perhaps as a result of the fact that they were not involved in any additional training programmes outside their regular activities.

Keywords: Bulgarian bag training, Core Strength, Shoulder Strength, Football Players

Introduction

Training is a methodical procedure of consistent, escalating exercise or labor that involves learning and acclimatization [1]. Sports are a type of human activity that involve administration, organization, and regulations that have been in place for a long time and define the goal and set boundaries for human behavior. Sports also involve competition or challenges with a clear result that is mostly based on physical prowess [2]. Training for sports is known for its constant control and regulation. The fact that various means and methods, load dynamics, training tasks, etc. are planned to achieve short- or long-term goals while taking into account the relationships between various training elements, the cyclical nature of

performance developments, and the long-term goal of sports training adequately reflects the systematic nature of the training process [3].

The crescent-shaped Bulgarian bag, often referred to as the Bulgarian training bag, is an exercise tool used for strength training, plyometric weight training, cardiovascular fitness, and general physical fitness. The sand-filled bags, which are constructed of leather or canvas and range in weight from 11 pounds (5.0 kg) to 50 pounds (23 kg), have flexible handles that enable training of the upper and lower bodies as well as the development of grip strength [4]. The Bulgarian bag exercise promotes balance and coordination as well as total shoulder and joint mobility. It also strengthens and boosts the muscular endurance of one grasp, wrists, arms, shoulders, back, legs, rotational muscles, and core muscles [5].

Football is a high-level performance sport requiring both anaerobic and aerobic strength as well as physical attributes including "agility, balance, speed, strength, and power." It is one of those uncommon games that call on agility, strength, power, endurance, and speed in addition to talent. Football players are those who participate in the sport [6].

The term "core strength" refers to the body's capacity to support the spine through intra-abdominal pressure and contractile forces while also actively regulating spine stability through the coordinated contraction of the trunk muscles [7]. The power of the shoulder muscles to overcome or operate against resistance is known as shoulder strength [8].

Methods and Materials

Although it uses a quasi-experimental research methodology, this study remains in the quantitative research category. The intervention group was evaluated by giving them exercise in the form of bulgarian bag training to improve the capacity of the core strength and shoulder strength among football players, based on data analysis utilising quantitative analysis. The inter-department football players from Manonmaniam Sundaranar University in Tirunelveli, Tamil Nadu, India, who made up the study's samples were all male soccer players with ages ranging between 20 to 25 years. The chosen participants were randomly split into two equal groups: The Control Group (CG) (N=10) and the Bulgarian Bag Training Group (BBTG) (N=10). Six weeks bulgarian bag training programme has been formulated to see the effectiveness of given training programme on core strength and shoulder strength of football players.

Bulgarian Bag Training Protocol

The investigator of this study developed a special six-week bulgarian bag training routine, which the BBTG followed. Training sessions were held three days a week on alternate days, lasting 40 to 50 minutes each time. The subjects are instructed to perform a general, full-body warm-up for 10 to 15 minutes prior to the session in order to lubricate their joints, increase their body temperature and pulse rate, and prepare their muscles for use. One set of each exercise required 8–12 repetitions of each movement. Between sets, there was a rest period of about 60 to 90 seconds. Exercises were carried out in a group setting under the supervision of

an investigator with assistance from his coach and supervisor. The protocol was primarily composed of training for the Bulgarian bag halos, weighted rotation swings, lateral arm throws, swing to squats, get-up & sit-up, press up, clean and press, power snatch. Before the training programme the trainer demonstrated each activity using verbal and visual instructions to facilitate the correct position and movement.

Statistical Analysis

Significant positive changes occur in core strength and shoulder strength has been found by analysing and comparing the pre-test and post-test score through paired sample 't' test and to find out the difference exists between both groups were analysed through one way ANCOVA at the level of significance at 0.05. The collected data were statistically analysing with use of SPSS 17.1 trail version.

Analysis of Data

Table-1
Means and Paired Sample 't' Test for the Pre and Post Tests on Core Strength and Shoulder Strength of BBTG and CG

Criterion variables	Test	BBTG	CG
Core Strength (seconds)	Pre test	64.85	64.51
	Post test	79.41	67.93
	't'-test	9.03*	1.72
Shoulder Strength (numbers)	Pre test	30.44	31.11
	Post test	38.27	32.45
	't'-test	10.57*	1.41

*Significant at .05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

The table-1 shows that the pre-test mean value of BBTG and CG on core strength and shoulder strength were 64.85 & 64.51 and 30.44 & 31.11 respectively. The post test mean value of BBTG and CG on core strength and shoulder strength were 79.41 & 67.93 and 38.27 & 32.45 respectively. The obtained paired sample t-ratio values between the pre and post-test means of BBTG and CG were 9.03 & 1.72 and 10.57 & 1.41 respectively. The required table value for significant difference with df 9 at 0.05 level is 2.26. From the above table the paired sample t-test value of core strength and shoulder strength between pre and post-tests means of BBTG was greater than the table value 2.26 with df 9 at 0.05 level of confidence, it was concluded that the BBTG had significant improvement in the core strength and shoulder strength when compared to CG.

Table-2

Computation of Mean and Analysis of Covariance Core strength and Shoulder strength of BBTG and CG

Adjusted Post Mean	BBTG	CG	Source of Variance	Sum of Squares	Df	Mean Square	F
Core Strength	80.14	68.02	BG	224.25	1	224.25	34.08*
			WG	111.86	17	6.58	
Shoulder Strength	38.71	32.68	BG	203.72	1	203.72	22.51*
			WG	153.85	17	9.05	

* Significant at 0.05 level. Table value for df 1, 17 was 4.45

Table-2 shows that the adjusted post-test means values on core strength and shoulder strength of BBTG and CG are 80.14 & 68.02 and 38.71 & 32.68. The obtained f- ratio of adjusted post-test mean value was 34.08 & 22.51 which was greater than the required table value 4.45 with df 1 and 17 required for significance at 0.05 level of confidence. The results of the study indicated that there was a significant mean difference exist between the adjusted post-test means of BBTG and CG on core strength and shoulder strength.

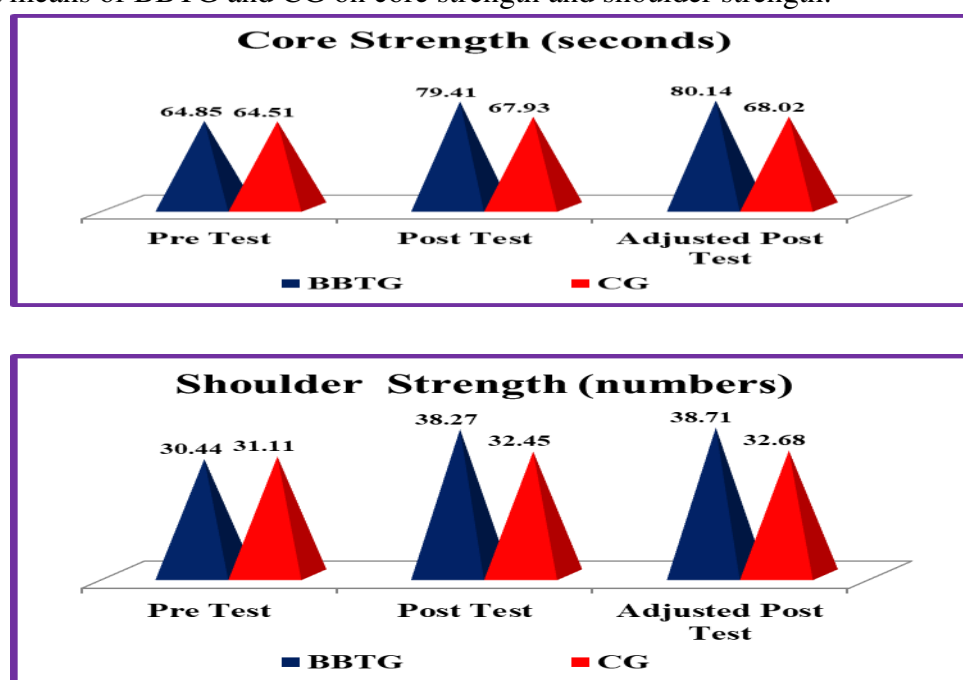


Figure-1 shows that the mean values of pre, post and adjusted post tests on core strength and shoulder strength of BBTG and CG.

Discussion on Findings

The goal of the current study was to discover a statistically significant increase in core and shoulder strength, demonstrating the benefits of bulgarian bag training for football players. The results below are the same as those in my study by El-Deeb (2017), who looked at the impact of Bulgarian bag exercises on specific physical traits and basketball pivot

players' levels of performance. In order for teachers to better comprehend and incorporate these notions for technical consequences of training, these outcomes must be taken into consideration. The impact of Bulgarian bag training on a few physical characteristics among handball players was studied by Vairavasundaram & Palanisamy (2015). According to the study's findings, the Bulgarian bag training group and control group had substantial variances from one another. Comparing the Bulgarian bag training group to the control group, it was clear that they had significantly improved their degree of muscle strength, flexibility, and leg explosive power. The effects of Bulgarian bag training on selected physical physiological variables, including vital capacity, maximum strength, and balance in intercollegiate handball players, were examined by Vairavasundaram & Palanisamy (2015). The study's findings demonstrated that there were notable level differences between the control group and the Bulgarian bag training group. When compared to the control group, the Bulgarian bag training group significantly improved in core and shoulder strength.

Conclusions

Due to the impact of football players' bulgarian bag training practises, there was a significant development in their core and shoulder strength. On core strength and shoulder strength, there were notable variations between BBTG and CG. The control group, however, had not significantly improved on any of the chosen factors.

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