

## INFLUENCE OF SPORTS WEARS WITH COMPRESSED AND WITHOUT COMPRESSION ON AGILITY AND SPEED OF PLAYERS

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### Abstract

The purpose of this study was to determine whether garments with and without Compressed fitting Garments affected performance variables of players. To achieve the purpose of the study 20 collegiate players were selected their aged group between 17 to 25 years. For the collection of data, the researcher analysed the subjects in three consequential days and data were collected, 1<sup>st</sup> day subjects were asked to wore Garments without Compression fitting Garments (CGWOCG), 2<sup>nd</sup> day wore Garments with Compressed fitting Garments (CGWCG) 3<sup>rd</sup> day they wore individual own interest garments (IG) were used. The performance related variables such as speed and agility were selected as dependent variables. The data pertaining to the variables collected were analyzed by using analysis of variance (ANOVA). 0.05 level of confidence was fixed to test the significance. The result of the study showed that the Compressed Garments (CGWCG) had significantly influence on speed and agility better than the Garments without Compression (CGWOCG) and Individualized Garments Group (IG).

**Key Word:** sports wears with and without compression, speed, agility and players

### INTRODUCTION

**Greg McNall. It is a fraction of second that decides the winning** and losing. Athletes who race in contradiction of the clock seek clothing that will make them more Cloths with aerodynamic plays a vital role to save the few precious fractions off their time. Comfort also plays a important factor. Using accurately tailored clothing that fits well allows an athlete to move more naturally. Equally, costume modelled dress used by the sports men which can taper tackier away from the body also benefits an athlete's performance. Compression clothing can improve your performance in the sports and enhance your recovery while in playing field. Compression garments are tight, compressive forms of clothing, often made from elastic and nylon, which are designed to enhance recovery. Not only are these worn by athletes to improve performance and enhance recovery, but they are also worn in abundance by recreational fitness enthusiasts. The current commercial belief, despite any evidence, is that wearing compression garments can enhance athletic performance and improve post-exercise recovery time based on the physiological and psychological influences [1] Athletes wear compression garments while playing and training to boost muscle pump or as a instrument to modify movement for the better performance in the game; the reason behindhand using these clothes is to improve performance in the field of sports and also improve the recovery phase. Fully compressed garments as a recovery tool helped in improving recovery process in line with mental, perceptual, functional and performance variables [2]. In addition, There was a significant developments found in relations of muscular power and neuromuscular performance during a resistance training session[3].

Elite endurance athletes specializing in different endurance sports e.g. biking, sprinters, or cross country skiing costume sleeves, socks, shorts, tights, or with full body suits with compression shirts or long sleeves shirts to enhance their performance and to faster the recovery. Businesses to promote the application of compression clothing and advertise

ergogenic effects, improved recovery and perception. Therefore, sportspersons, trainers and coaches recommended compression clothing as an exterior support to deliver benefits for aerobic performance and retrieval. Competition periods and intense training regimes can lead to exercise-induced muscle damage, which is the cause of the delayed onset of muscle soreness.

## METHODS

The purpose of the study was to find out the influence of garments with and without compression garment on speed and agility variables of players. To attain the drive of this study, twenty players were selected from Annamalai University of Physical Education, India and they were of age group between 17 to 25 years.

## TESTING PROCEDURE

For the collection of data, the researcher analyzed the subjects in three consequential days and data were collected, 1<sup>st</sup> day subjects were asked to wore Garments without Compression Garments (CGWOCG), 2<sup>nd</sup> day wore Garments with Compression Garments (CGWCG) 3<sup>rd</sup> day they wore individual own interest garments (IG) were used. The following performance associated variables such as speed and agility were selected as dependent variables.

## STATISTICAL PROCEDURE

To test the statistical significance ANOVA (Analysis of Variance) was used for identify the significant difference between garments with and without compression garment.

## RESULTS AND DISCUSSION

**TABLE – I**

**Presentation of the analysis of variance on the means obtained from garments with and without compression Garments on speed**

Means Values of Players			Source of Variance	Sum of Squares	df	Mean Squares	F
CGWOCG	CGWCG	IG					
10.460	9.83	10.83	Between	10.28	2	5.14	11.53*
			Within	25.42	57	0.44	

*\*Significant at 0.05 level of confidence.*

*(The table values required for significance at 0.05 level of confidence for 2 & 57 and 3.15 respectively).*

Table – I shows that the mean and standard deviation values of Garment without Compression Garments (CGWOCG), Garments with Compression (CGWCG) and Individualize Group (IG) are 10.46, 9.83 and 10.83 respectively. The obtained F-ratio value between Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and individualize Groups (IG) was 11.53. The obtained F-ratio was greater than the table value of 3.15 with df 2 and 57 required for significance at 0.05 level.

Since the value of F-Ratio is greater than the table value, it indicates that there is a significant difference among the means of Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) on speed.

**TABLE – II**  
**SCHEFF’S FOR THE DIFFERENCE BETWEEN THE PAIRED MEANS OF**  
**GARMENTS WITH AND WITHOUT COMPRESSION**  
**GARMENTS ON SPEED**

Adjusted Post Test Means			Mean Difference	Confidence Interval
CGWOCG	CGWCG	IG		
10.46	9.83		0.63*	0.27
10.46		10.83	0.37*	
	9.83	10.83	1.00*	

Table II showed that there was a significant difference between the adjusted post-test means of the Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) on speed. The findings of the study showed that the Garments with Compression Garments (CGWCG) influence the speed more than the Garments without Compression Garments (CGWOCG) and Individualize Group (IG).

**Figure 1:** The mean value of Garments with and without Compression Garments on speed.



**TABLE – III SHOWING THE ANALYSIS OF VARIANCE ON THE MEANS OBTAINED FROM GARMENTS WITH AND WITHOUT COMPRESSION GARMENTS ON AGILITY**

Means Values of Players			Source of Variance	Sum of Square	df	Mean Squares	F
CGWOG	CGWCG	IG					
9.74	9.08	10.35	Between	16.68	2	8.34	12.00*
			Within	39.61	57	0.68	

\*Significant at 0.05 level of confidence.

(The table values required for significance at 0.05 level of confidence for 2 & 57 and 3.15 respectively).

Table – III shows that the mean and standard deviation values of Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) are 9.74, 9.08 and 10.35 respectively. The obtained F-ratio value between Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) was 12.00. The obtained F-ratio is greater than the table value of 3.15 with df 2 and 57 required for significance at 0.05 level.

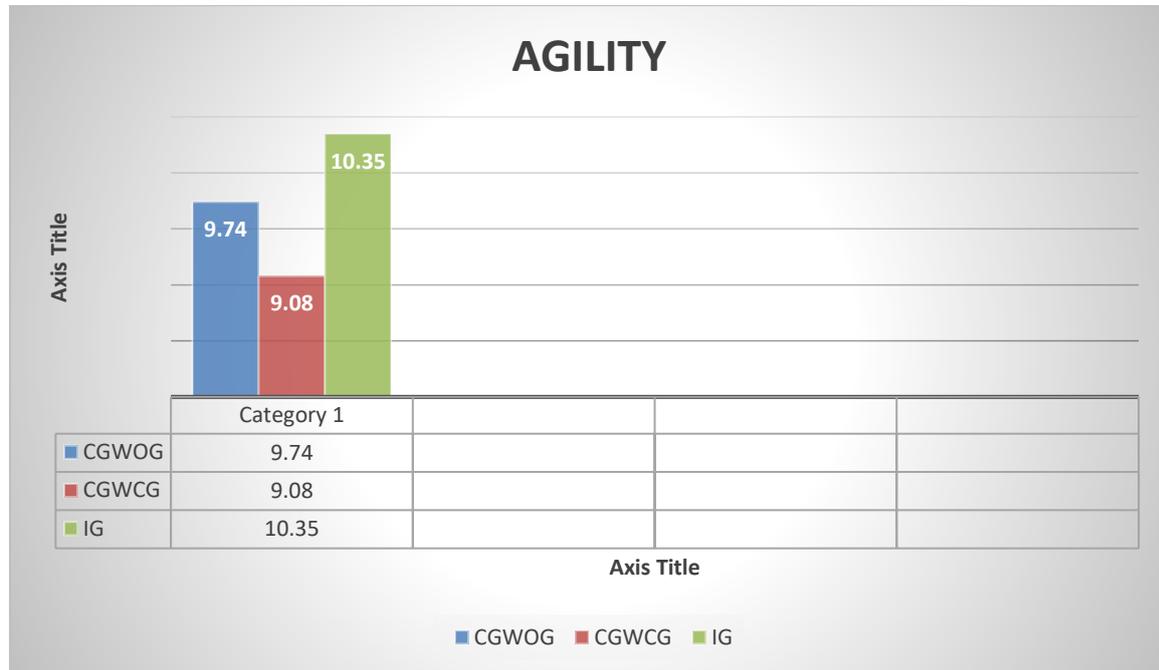
Since the value of F-Ratio is greater than the table value, it indicates that there is a significant difference among the means of Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) on agility.

**TABLE – IV  
SCHEFF'S FOR THE DIFFERENCE BETWEEN THE PAIRED MEANS OF GARMENTS WITH AND WITHOUT COMPRESSION GARMENTS ON AGILITY**

Adjusted Post Test Means			Mean Difference	Confidence Interval
CGWOG	CGWCG	IG		
9.74	9.08		0.66*	0.65
9.74		10.35	0.61	
	9.08	10.35	1.27*	

The Table IV showed that there was a significant difference between the adjusted post-test means of the Garment without Compression Garments (CGWOCG), Garments with Compression Garments (CGWCG) and Individualize Group (IG) on agility. The findings of the study showed the Garments with Compression Garments (CGWCG) influence the agility more than the Garment without Compression Garments (CGWOCG) and Individualize Group (IG).

**Figure 2:** The mean value of Garments with and without Compression Garments on Agility.



**DISCUSSION**

The primary finding was Garments with Compression Garments were better able to maintain speed and agility during the performance when wearing Garments with Compression Garments. However, the influence of comfortable compression Garments levels found in commercial garments does not appear to augment the highest maximal speed and agility. This specifies there might be a more subtle ergonomic interplay between the garment and natural biological mechanisms. Such a finding also suggests that the popular use of these garments may extend beyond simply the fashion aspects. Compression Garments has been shown to be advantageous in the muscle propelling action of the cardiovascular system and helps in elimination of lactate from muscles during exercise [4]. And also weight lifters are found to be benefited in wearing tightly bound wraps around various joints of the body (e.g., knees) to increase the production of force . Every individual has his own optimized relationship for force generation when trying to create enough of an impulse to maximize the performance[5]. Frequently the individual attempts to generate great force over a short time. Small changes in the duration of time may allow higher forces to be attained, but if the increased time of force application interferes with the intersegment transfer of forces through the kinetic chain. examined the impact a lower leg compression garment basically, a more compressive tight full stockings which are wore above the ankle and goes a slight underneath the knee had on a athletes running mechanics and running economy[6]. Lower leg compression garments have gained popularity in the professional field of long distance running[7]. In his research identifies that compression garments may improve joint awareness, local blood flow, waste product removal, improve running economy, reduce swelling, reduce muscle oscillations, and decrease post-exercise muscle soreness whilst appearing to have no negative impact on performance[8].

## CONCLUSION

It was concluded that there was significant difference between the Garment without Compression Garments, Garments with Compression Garments and Control Groups on speed. Further it was concluded that the Garments with compression garments better than the Garments without Compression Garments and control Group.

It was concluded that there was significant difference between the Garment without Compression Garments, Garments with Compression Garments and Control Groups on agility. Further it was concluded that the Garments with compression garments better than the Garments without Compression Garments and control Group. And it was concluded that there was no significant difference between Garment without Compression Garment and control group.

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