International Journal of Current Science Research
www.drbgrpublications.in

Effect of MAXEX Training on Selected Physical Variables among College Male Students

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Abstract

The purpose of the study was to find out the effect of Maxex training on selected Physical Variables among College male Students. To achieve the purpose of this study, 28 Male students were selected from CSI Jeyaraj Annapackiam College, Nallur, Tirunelveli, Tamilnadu and their age ranged from 18 to 22 years. The selected subjects were divided into two groups namely experimental (14) and control group (14) and the experimental group underwent MAXEX training for six weeks, three alternate days in a week. The physical variables, Explosive Power, Muscular Strength and Agility were tested by Standing Broad Jump, Pushups and Shuttle Run and examined with ANCOVA. The level of confidence was fixed at 0.05. It was concluded that there was a significant Improvement on both variables.

Keywords: Maxex Training, Explosive Power, Muscular Strength, Agility

Introduction

Maxex training is a new method that combines work with exercises to generate maximum explosive power. This training method should be done carefully, with a wide variety and gradual. **Dr. Johansyah LMPd is Seeding Commission KONI, the period 2007-2011.**

This method combine's maximum force with plyometrics and can be done at the end of a maximum strength phase. This combination of power and strength can be beneficial for all sports which rely on powers however must also be done carefully.

The athlete completes a heavy load activity followed by a quick or explosive move increasing the rate of the fast twitch muscle fibers.

Some exercises

- Drop jumps
- Jumping squats
- Drop push-ups
- Medicine ball throws

The concept of Maxex training relies on science-specifically, manipulating two physiological concepts to produce speed and explosiveness and thereby improve athletic performance. The first part of the Maxex routine is performed against a heavy (85 to 95 percent of 1RM) Load, with stimulates high recruitment of fast-twitch muscle fibers. The follow-up explosive or quickness movements increase the firing rate of the fast- twitch muscle fibers, thus preparing the athlete for the quick, explosive actions required for all speed and power sports during the competitive phase.

Maxex training is suggested for the prime movers only. Because this training method can be quite stressful mentally and physically, only athletes with a good background in strength training should use it. The duration of Maxex training should be approximately three to six weeks, depending on the athlete's background. Maxex training should follow a maximum strength phase in which eccentric-concentric contraction has been used. One or two training sessions per week with a least 48hours of rest between bouts are suggested.

Maxex training applies to the upper body as well as the lower body. Strong arms and shoulders are essential in various sports, including basketball, baseball, ice hockey, football, lacrosse, the martial arts, boxing, wrestling, kayaking, and squash, and European handball, water polo, wrestling, and throwing events in track and field. Without exhausting all options, exercises that can be applied in these sports for Maxex training include drop jumps, jump squats, drop push-ups, short sprints, hurdle jumps, and medicine ball throws (Bompa, 2003).

Purpose of the Study

The purpose of the study was to find out the effect of Maxex Training on Selected Physical Variables among College Male Students.

Methodology

To achieve the purpose of this study, 28 Male students were selected and their age ranged from 18 to 22 years, the study was confined to CSI Jeyaraj Annapackiam College, Nallur, Tamilnadu. Standing Broad Jump Test (Explosive Power), Muscular Strength (Pushups) and Shuttle Run Test (Agility) was used to collect the data. The collected data from the subjects were statistically examined with ANCOVA to find out the effect of Maxex training on selected Physical Variables among College male Students. The level of confidence was fixed at 0.05. It was concluded that there was a significant Improvement.

Analysis of Data

The influence of independent variables on each criterion variables were analyzed and presented below table I, II and III.

Table – I Analysis of Covariance of the Data on Explosive Power of Pre, Post and Adjusted Post Tests Scores of Maxex Training and Control Group (In Centimetres)

Test	EG	CG	SOV	SS	Df	MS	F-ratio
Pre-test							
Mean	138.57	140.21	B.M	200.50	1	200.50	1.07
SD(±)	12.61	13.24	W.G	4871.88	26	187.38	
Post-test							
Mean	184.15	152.14	B.M	5062.31	1	5062.31	12.38*
SD(±)	28.14	18.26	W.G	10631.66	26	408.91	
Adjusted post-test							
Mean	186.32	150.12	B.S	4523.42	1	4523.42	11.47*
			W.S	9859.35	25	394.37	

**significant at 0.05 level of confidence. The table values required for significance at 0.05 level of confidence for 1 & 26 and 1&25 are 4.23 and 4.22 respectively.*

CG –Control Group
EG –Maxex training group
SOV – Sum of variance
SS - Sum of Squares
df – degrees of freedom
MS - Mean Square
B.M –Between means
W.G – Within groups
B.S – Between sets
W.S – Within sets

The table I show that the pre-test mean value on explosive power of Maxex training group and control group are 138.57 and 140.21 respectively. The obtained 'F' ratio 1.07 for pre-test scores was less than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on explosive power. The post-test mean values on explosive power of Maxex training group and control group are 184.15 and 152.14 respectively. The obtained 'F' ratio 12.38 for post-test scores was greater than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on explosive power. The adjusted post-test means of Maxex training group and control group are 186.32 and 150.12 respectively. The obtained 'F' ratio of 11.47 for adjusted post-test means was greater than the table value of 4.22 for df1 and 25 required for significance at 0.05 level of confidence on explosive power.

The pre-test, post-test and adjusted post-test means values of Maxex training group and control group on explosive power are graphically represented in the figure – I

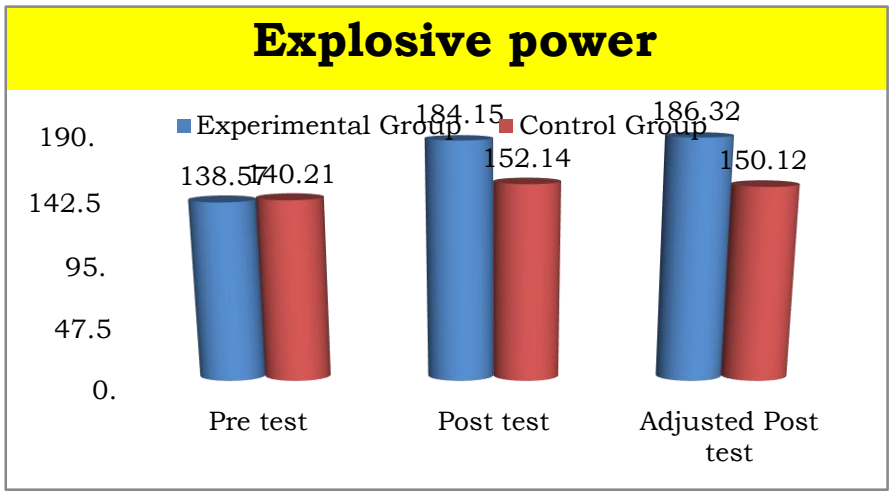

Figure-I: The Pre-Test, Post-Test and Adjusted Post-Test Mean Values of Maxex Training Group and Control Group on Explosive Power

Table – II Analysis of Covariance of the Data on Muscular Strength of Pre, Post and Adjusted Posttests Scores of Maxex Training and control Groups (In Counts)

Test	EG	CG	SOV	SS	Df	MS	F-ratio
Pre-test							
Mean	25.33	25.70	**B.M**	44.55	1	44.55	1.84
SD(±)	3.01	3.22	**W.G**	629.46	26	24.21	
Post-test							
Mean	31.05	26.88	**B.M**	480.70	1	480.70	21.87*
SD(±)	2.91	2.90	**W.G**	571.48	26	21.98	
Adjusted post-test							
Mean	32.53	25.77	**B.S**	700.35	1	700.35	34.18*
			W.S	512.25	25	20.49	

**significant at 0.05 level of confidence. The table values required for significance at 0.05 level of confidence for 1 & 26 and 1 & 25 are 4.23 and 4.22 respectively.*

CG –Control Group **EG** –Maxex training group

SOV – Sum of variance **SS -** Sum of Squares

df – degrees of freedom **MS -** Mean Square

B.M –Between means **W.G** – Within groups

B.S – Between sets **W.S** – Within sets

The table II shows that the pre-test mean value on muscular strength of Maxex training group and control group are 25.33 and 25.70 respectively. The obtained 'F' ratio 1.84 for pre-test scores was less than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on muscular strength. The post-test mean values on muscular strength of Maxex training group and control group are 31.05 and 26.88 respectively. The obtained 'F'

ratio 21.87 for post-test scores was greater than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on muscular strength. The adjusted post-test means of Maxex training group and control group are 32.53 and 25.77 respectively. The obtained 'F' ratio of 34.18 for adjusted post-test means was greater than the table value of 4.22 for df1 and 25 required for significance at 0.05 level of confidence on muscular strength.

The pre-test, post-test and adjusted post-test means values of Maxex training group and control group on muscular strength are graphically represented in the figure – II

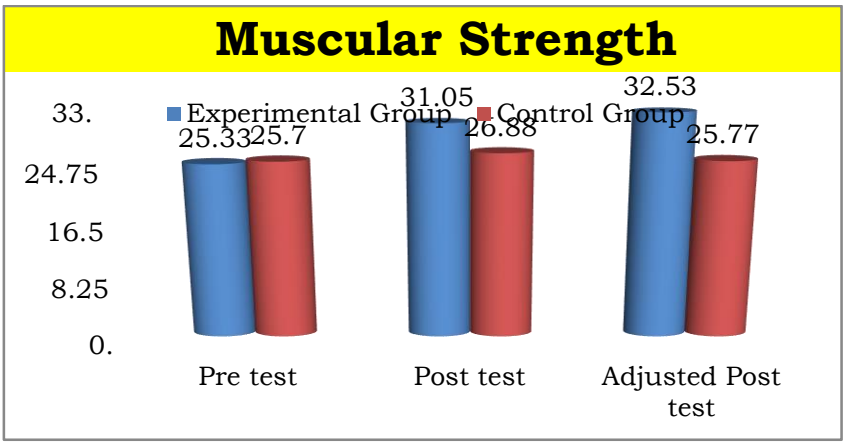

Figure-II: The Pre-Test, Post-Test and Adjusted Post-Test Mean Values Of Maxex Training Group And Control Group on Muscular Strength

Table – III Analysis of Covariance of The Data On Agility Of Pre, Post And Adjusted Post Tests Scores of Maxex Training And Control Group(In Seconds)

Test	EG	CG	SOV	SS	Df	MS	F-ratio
Pre-test							
Mean	12.28	12.32	**B.M**	0.56	1	0.56	0.91
SD(±)	0.03	0.03	**W.G**	16.12	26	0.62	
Post-test							
Mean	11.94	12.44	**B.M**	2.06	1	2.06	**34.28***

SD(±)	0.07	0.21	**W.G**	1.56	26	0.06	
Adjusted post-test							
Mean	11.96	12.47	**B.S**	1.99	1	1.99	**33.11***
			W.S	1.50	25	0.06	

**significant at 0.05 level of confidence. The table values required for significance at 0.05 level of confidence for 1 & 26 and 1&25 are 4.23 and 4.22 respectively.*

CG –Control Group **EG** –Maxex training group

SOV – Sum of variance **SS** - Sum of Squares

df – degrees of freedom **MS** - Mean Square

B.M –Between means **W.G** – Within groups

B.S – Between sets **W.S** – Within sets

The table III shows that the pre-test mean value on agility of Maxex training group and control group are 12.28 and 12.32 respectively. The obtained 'F' ratio 0.91 for pre-test scores was less than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on agility. The post-test mean values on agility of Maxex training group and control group are 11.94 and 12.44 respectively. The obtained 'F' ratio 34.28 for post-test scores was greater than the table value 4.23 for df1 and 26 required for significance at 0.05 level of confidence on agility. The adjusted post-test means of Maxex training group and control group are 11.96 and 12.47 respectively. The obtained 'F' ratio of 33.11 for adjusted post-test means was greater than the table value of 4.22 for df1 and 25 required for significance at 0.05 level of confidence on agility.

The pre-test, post-test and adjusted post-test means values of Maxex training group and control group on agility are graphically represented in the figure – III

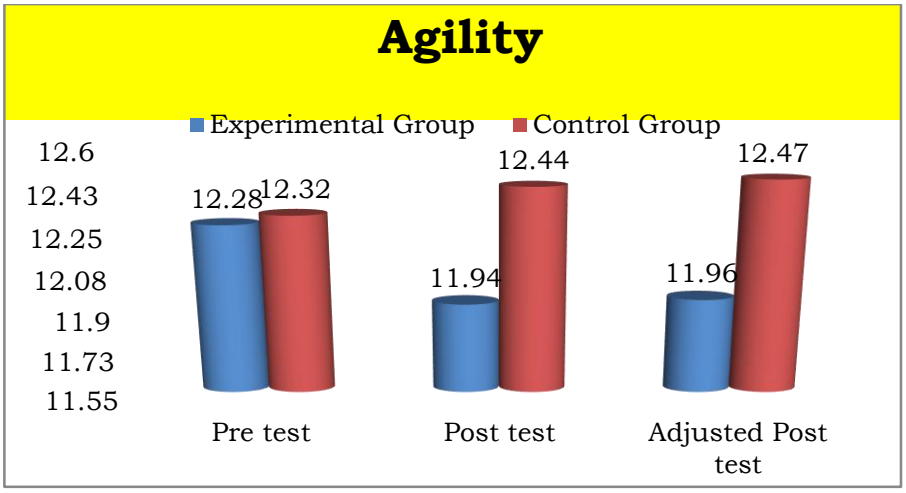

Figure-III: The Pre-Test, Post-Test And Adjusted Post-Test Mean Values of Maxex Training Group And Control Group On Agility

Results

1. A significant improvement on selected physical variables such as explosive power, Muscular strength and agility due to the effect of Maxex training among college male students.
2. There may be a significant difference on selected variables between the experimental and control groups.

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