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A study of Pilates exercise training on Subcutaneous and Visceral Fat of Engineering College Men students

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Abstract

Introduction: The performance of the players depends on the body composition and fitness of the muscles. During the peak performance the players are failing due to lack of core muscles strength.Pilates helps in healthy weight, strengthenthe core abdominal muscles and also improve posture and back problems. Pilates are all about training people to use their core specifically the muscles of the stomach and hip related floor. Consist of a series of precise movements and workouts that train the human body to move more powerfully. This relieves pairs from the poor posture. The aim of the study was to analyse the effect of selected pilates exercise on body composition of male students.

Methods: The subjects for this study were randomly selected from the male students of engineering college with the age group ranged from 18 to 21 years. The minimum criteria for the subjects should be inter college men players of any game. The data collected for the variables Weight, BMI, Visceral fat, Subcutaneous whole body fat, Subcutaneous trunk fat, whole body muscle and trunk muscle were analysed pre and post pilates exercise training.

Results and Discussion: There is significant decrease in the body composition of the subjects after pilates training. The results indicate that the pilates exercises will effect on our core muscles especially and decrease in our body composition. Hence weight will be reduced by reducing the bad fat and strengthening the muscles.

Keywords: Pilates, Subcutaneous fat, Visceral fat, Skeletal muscle, BMI.

Introduction: The performance of the players depends on the body composition and fitness of the muscles. During the peak performance the players are failing due to many reasons, the important of those are lack of core muscles strength and injury.Pilates helps in healthy weight, strengthenthe core abdominal muscles and also improve posture and back problems.

The popularity of pilates is increasing worldwide. Pilates is used not only for fitness programs but also for rehabilitation programs. Joseph Pilates was self educated in anatomy, bodybuilding, boxing, wrestling, yoga, gymnastics and material arts. His method of training is called contrology, would activate brain cells to stimulate the mind and affect the body. The "mind over matter" concept is the central element of the Pilates method. The goal is to fuse the mind and body so that without thinking, the body uses the greatest mechanical advantage to achieve optimal balance, strength, and health. The principles of Joseph pilates method of exercise is Centering, Concentration, Control, Breath, Precision and Fluidity.

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Core stabilization has become a staple in most rehabilitation, fitness, and performance enhancement programs. Professional athletes of all kinds have discovered that adding Pilates to their training can improve performance, reduce injury, speed recovery, and help their hardworking bodies stay balanced and healthy. Pilates are all about training people to use their core specifically the muscles of the stomach and hip related floor. Consist of a series of precise movements and workouts that train the human body to move more powerfully. This relieves pairs from the poor posture. The aim of the study was to analyse the effect of selected pilates exercise on body composition of male students.

Methods: This study was involving the experimentation of pilates exercises on the body composition. The subjects for this study were randomly selected from the male students of engineering college with the age group ranged from 18 to 21 years. All the subjects signed a statement of informed consent. The minimum criteria for the subjects should be inter college men players of any game. The subjects were undergone pilates exercise training for four weeks with days a week. The duration for one session is one and half an hour. Scanner was used to measure the Weight, Visceral fat, Subcutaneous whole body fat and whole body muscle. The data collected for these variables were analysed pre and post pilates exercise training. Therefore Mean, Standard deviation and T-test was applied to understand the significant difference at 0.05 level.

Results & Discussion: The data collected prior to and after the pilates exercise training were analysed to know the difference in the body composition of the subjects.

Table-I : Showing the Mean, SD, dof, t value and p value between the pre and post test in relation to their weight.

S.no	Subjects	N	Mean	S.D	Dof	't' ratio	P value
1.	Pre-test	12	62.73	5.1275	22	2.4555	0.0224
2.	Post-test	12	57.75	4.8029			

From the Table-I it is clear that there was significant differences between the pre and post test of the pilates exercise in relation to their weight as the obtained t-ratio (2.4555) which is greater than the table P value (0.0224). The mean values indicated in figure I clearly established that the weight of the pre test (62.73) was higher when compared to the post test (57.75) of the study.

Figure : I

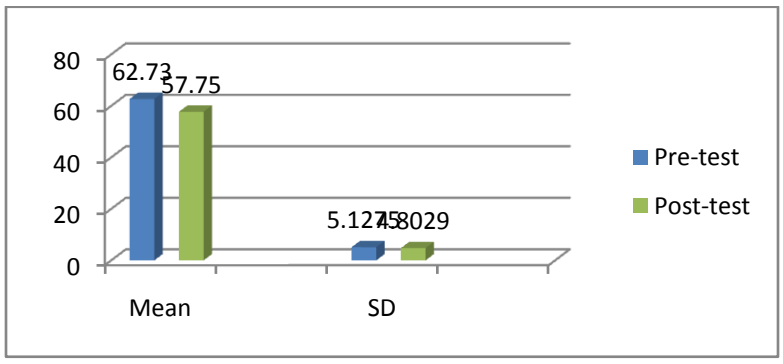

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Table-II : Showing the Mean, SD, dof, t value and p value between the pre and post test in relation to their Visceral Fat.

S.no	Subjects	N	Mean	S.D	Dof	't' ratio	P value
1.	Pre-test	12	8.75	1.1580	22	2.4626	0.0221
2.	Post-test	12	7.89	0.35			

Table-II indicates that there was significant differences between the pre and post test of the pilates exercise in relation to their Visceral Fat. The obtained t-ratio (2.4626) which is greater than the P value (0.0221), which is significant at 0.05 level of significance. The mean values indicated in figure II clearly establish that the Visceral Fat of the pre test (8.75) was higher when compared to the post test (7.89) of the study.

Figure : II

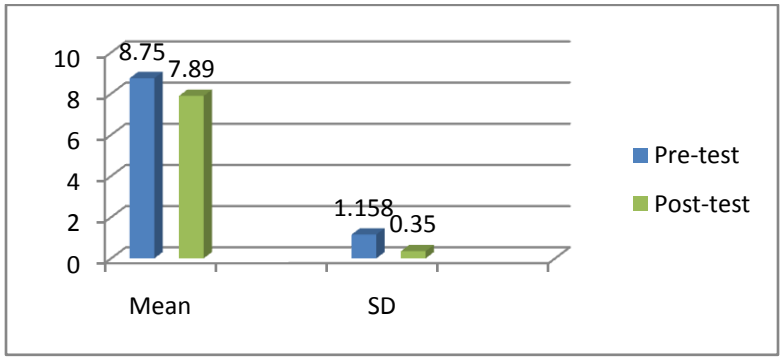

Table-III : Showing the Mean, SD, dof, t value and p value between the pre and post test in relation to their Subcutaneous whole body fat.

S.no	Subjects	N	Mean	S.D	Dof	't' ratio	P value
1.	Pre-test	12	31.6	1.6755	22	4.2975	0.0003
2.	Post-test	12	28.72	1.6069			

From the Table-III it is clear that there was significant differences between the pre and post test of the pilates exercise in relation to their Subcutaneous whole body fat as the obtained t-ratio (4.2975) which is greater than the table P value (0.0003). The mean values indicated in figure III clearly established that the Subcutaneous whole body fat of the pre test (31.6) was higher when compared to the post test (28.72) of the study.

Figure : III

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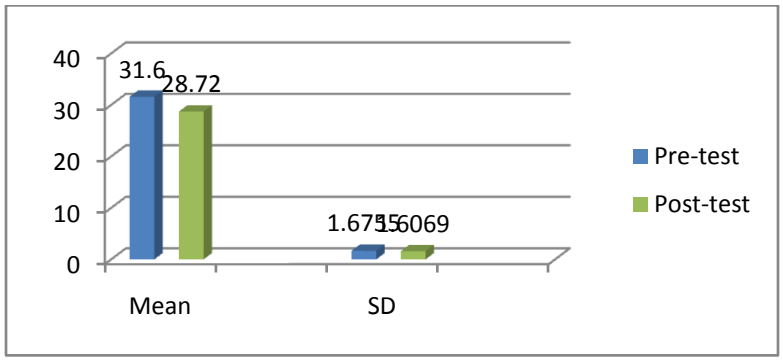
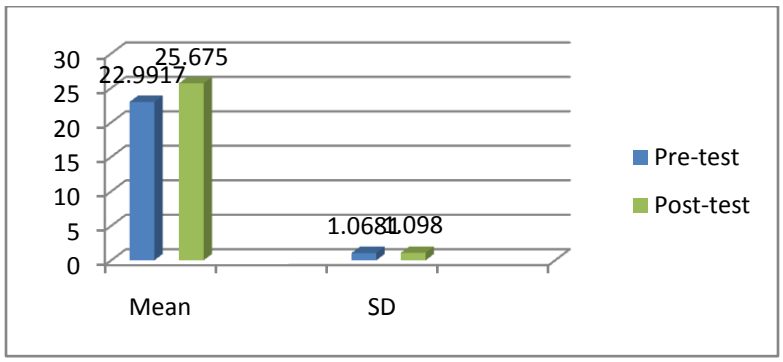


Table-IV : Showing the Mean, SD, dof, t value and p value between the pre and post test in relation to their Whole body muscle.

S.no	Subjects	N	Mean	S.D	Dof	't' ratio	P value
1.	Pre-test	12	22.9917	1.0681	22	6.0681	0.0001
2.	Post-test	12	25.675	1.0980			

Table-IV indicates that there was significant differences between the pre and post test of the pilates exercise in relation to their Whole body muscle. The obtained t-ratio (6.0681) which is greater than the P value (0.0001), which is significant at 0.05 level of significance. The mean values indicated in figure II clearly establish that the weight of the pre test (22.9917) was lower when compared to the post test (25.675) of the study.

Figure : IV



Strengthening our core is one of the best things we can do for our overall fitness. A strong core—which includes your abs, obliques, and lower back muscles, helps keep our body balanced and stable, lets we maintain proper posture and exercise form, keeps our spine stable and safe, and overall, helps us move in a more controlled and efficient way. There are tons of ways to work our core by adding pilates exercise.

Conclusion: There is significant decrease in the body composition of the subjects after pilates training. The results indicate that the pilates exercises will effect on our core muscles especially and decrease in our body composition. Hence weight will be reduced by reducing the Visceral fat, Subcutaneous fat and strengthening the muscles.

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