

Effect of functional fitness training on college girls

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■ ABSTRACT

Aim was to evaluate the effectiveness of functional fitness training exercise on the physical fitness of college girls. Forty college girls were selected randomly and voluntarily of 16-21 range of age. These 40 girls were divided in two groups each of 20. One group was intervention another was control. The intervention group trained for 12 weeks, five days in a week on 13 functional exercises which were related to the strength, agility, flexibility, endurance and fat conducted like circuit training. Intensity of exercise increased on the base of girl's ability. Shuttle run, Sit and reach test, 600 yard run and walk, Modified pull-ups, Standing broad jump, BMI and WHR tests were selected and conducted before and after the training for collection of data. Obtained data were treated by statistical methods for critical results. On the basis of these results the conclusions were drawn. There was statistically significant effect of functional fitness training on all physical fitness components of college girls on increased muscles strength of leg and shoulder, cardio-vascular endurance, flexibility, agility and reduced in fat.

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Functional training is any type of exercise that has a direct relationship to the activities you perform in your daily life. It has its origins in rehabilitation. Functional training involves mainly weight bearing activities targeted at core muscles of the abdomen and lower back. Functional training attempts to adapt or develop exercises which allow individuals to perform the activities of daily life more easily and without injuries.

The functional fitness training movements are ones which you use in your everyday life specific movement. Everyday life movements like:

- Pushing a bike. Kick to start scooter.
 - Pushing luggage on the loft.
 - Lifting the luggage of your shoulder.
 - Lifting a heavy things can off the floor.
 - Carrying heavy water bucket or bags.
- Functional fitness training has become a popular buzzword in the fitness industry :
- Because functional fitness training is freedom of

movement training.

- Functional fitness training is movement training with resistance.
- The functional fitness training movement can be a celerated speed movement or a decelerated slow movement which require stabilization or balance.
- The movements involved are mostly unsupported movements which involve the core muscles to be activated.

Scholar observed the life style of her college girls of 16-21 age. And being a physical director of college, scholar decided to conduct the study on these girls for testing their physical abilities. This age is a transition phase through which girl becomes an adult. It is characterized by rapid growth and development; physiologically, psychologically and socially. These girls were not habitual of daily exercises or any physical fitness exercises. But scholar has knowing the life style or routine hose chores of these girls. Also scholar had the knowledge of importance of functional training and easy

to conduct these exercises. First she conducted one orientation lecture for these girls and told them the importance of functional fitness training.

What is functional fitness training ? :

Functional fitness exercises train your muscles to work together and prepare them for daily tasks by simulating common movements you might do at home, at work or in sports. While using various muscles in the upper and lower body at the same time, functional fitness exercises also emphasize core stability. For example, a squat to bicep curl is a functional exercise because it trains the muscles used when you pick up an object from the floor or a table. By training your muscles to work, the way they do in everyday tasks, you prepare your body to perform well in a variety of common situations. Functional fitness exercises can be done at home.

What are the benefits of functional fitness training ? :

Functional exercises tend to be multijoint, multimuscule exercises. Instead of only moving the elbows, for example, a functional exercise might involve the elbows, shoulders, spine, hips, knees and ankles. This type of training, properly applied, can make everyday activities easier, reduce your risk of injury and improve your quality of life.

Therefore, it was decided to conduct a study with the core purpose to test the existing physical abilities in these girls and to observe the effect of 12 weeks functional fitness training on the physical fitness of these girls.

■ METHODOLOGY

For this study, total 40 college girls were selected randomly and voluntarily of 16-21 range of age from Warora Agriculture College of Chandrapur district. These 40 girls were divided in two groups each of 20. One group was experimental another was of control.

Collection of data :

The health related tests were selected. Test components are as below :

- Standing broad jump= to measure the strength of legs.
- Agility test- shuttle run marked on floor 10 yard apart.
- Agility test: sit and reach test in centimeters.
- WHR (waist-hip ratio) Waist circumference/Hip circumference.

$$\text{Body mass index (BMI)} = \frac{\text{Body weight (kg)}}{\text{Height in metres}^2}$$

Cardio-vascular endurance test – 600 yard run and walk.

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..... Pretest was conducted and at the end of the training, post test was conducted.

Training programme :

Experimental group was having functional training programme of 5 days in a week in morning from 6.30 am-7.40 am (70 min) under the supervision of scholar and assistants. Warm-up exercises should be practiced for five to 10 minutes at the beginning of an exercise session.

Total duration of training for one hour minutes means total 60 minutes the training schedule was as below :

| No. | Exercises | Intensity No./time | Resting time | Sets | Total time |
|-----|--|--------------------|--------------|------|------------|
| 1. | Warming up | | | | 5 min |
| 2. | Wall pushups | 2 | 1 | 2 | 5 min |
| 3. | Kneeling squat jumps | 2 | 1 | 2 | 5 min |
| 4. | Dips simple | 10-15 times | 1 | 2 | 5 min |
| 5. | Pull-ups on bar | 8-10 times | 1 | 2 | 5 min |
| 6. | Stair climbing with both leg jump | 2 | 1 | 2 | 5 min |
| 7. | Stair climbing with holding bricks in both hands | 2 | 1 | 2 | 5 min |
| 8. | Stair down running | 2 times | 1 | 2 | 5 min |
| 9. | Sit ups with knee bending | 15 times | 1 | 2 | 5 min |
| 10. | Sand jogging | | | | 4 min |
| 11. | Rope skipping 100 | 2min | 1 | 2 | 5 min |
| 12. | Side passing trunk twist | 10 times each side | | | 4 min |
| 13. | Over head ball passing | 10 times | | | 2 min |
| 14. | Trunk and hips up and down | 10 times | 1 | 2 | |
| 15. | Relaxation for 5 minutes | | | | 5 min |
| 16. | Total duration of exercise | | | | 60 min |

Source of data: By actual conducted tests

Table 1 : Mean comparisons in pre & post-test of physical and physiological components

| Components | Pre test mean | Post test mean | Mean difference |
|-------------------|---------------------|---------------------|-----------------|
| Leg strength | 4 ^{ft.5} “ | 5 ^{ft.2} ” | 0.7 |
| Agility | 23 sec. | 18 sec. | 5 |
| Shoulder strength | 6 | 12 | 6 |
| Flexibility | -2 | +3 | +1 |
| Endurance | 9 min 30 sec. | 8 min 10 second | 1.2 |
| BMI | 22-25 | 18-20 | 4.05 |
| WHR | 1.2 | 0.9 | 0.3 |

Source of data: By actual conducted tests.

■ OBSERVATIONS AND DISCUSSION

Due to 12 weeks functional fitness training, girls improved in their leg strength from 4^{ft.5} “to 5^{ft.2}” difference found 0.7. Strength means ability of maximum muscular force or tension was used in the creation of movement. Agility meaning ability to change body position direction rapidly and accurately, in pre-test it was 23 seconds and in post-test 18 sec. difference was found 5. It means time decreased by means of 5 seconds. In shoulder strength pre-test performance mean score was 6 pull up and pre-test score was 12 numbers of pull-ups it showed tremendous upgrading in arm and shoulder strength. Girls were found more flexible after training because their pre-test means score -2 on the other hand post-test score was +3centimeters mean difference was found +1 means, it increased by 3 centimeters. Flexibility means range of motion around a joint as determined by the elasticity of the muscles.

From Table 1 indicated that before start of specific functional fitness training subjects WHR 1.2 and BMI 22-25 means of score showing in average range. And after having 12 weeks functional fitness training, the post-test means of score was found improved in good range that is BMI 18.20 and WHR1.2. In cardio-vascular endurance pre-test score means 9 min 30 sec showing high in average but after having functional fitness training their endurance increased more that is 8 min 10 second time decreased by 1.2 seconds. It is

the ability of heart and lungs to take in and to transport adequate oxygen to working muscles to perform over long time. This means functional fitness training showing remarkable positive effect on physiological fitness.

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