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STRENGTH TRAINING IN MOTOR FITNESS

ABSTRACT

The term 'training' is widely used in sports. Physical education focuses physical exercise. In sports word "Training is generally understood to be a synonym of doing physical exercise for the improvement of performance. Sports training play an important role in physical education. Sports training is a organized process through which planned performance, ability and performance readiness. So sports training improves ability are tested energy, power and directs for accepting challenges. Motor fitness may be defined as a readiness or preparedness for performance with special regard for big muscle activity without undue fatigue. It concerns of capacity to move the body efficiently with force over a reasonable length of time. The effects of strength training includes 1. children and young people can enjoy the competition and still be learning skills. 2. Some children at this age are showing special talent at and interest in a particular sport and can benefit from individual coaching. 3. Training at this stage can involve trips away with a team and opportunities for team leadership. 4. It is important not to push any young people beyond what they are physically ready for and to find out about what is appropriate in relation to their age and the sport they are playing.

Keywords: Training, motor fitness, physical education and sports, motor fitness components and strength training.

Introduction:

Strength training sometimes called weight training or resistance training, according to the American sports medicine institute (ASIMI), strength training is a specialized method of conditioning designed to increase muscle strength, muscle endurance and muscle power. Strengthening one's muscles through strength training offers many benefits and makes it easier to do one's muscles. Strength training offers many benefits and makes it easier to do one's daily routine. One can find that carrying your briefcase, doing laundry and hauling groceries becomes easier when one's arm and chest muscles are toned.

Muscular strength: Muscular strength refers to the maximum contraction power of the muscles.

Muscular endurance

Muscular endurance is the ability of muscles to perform or work. Two manifestations of muscular endurance are recognized. Isometric whereby a maximum static muscular contraction is held and isotonic, whereby the muscles continue to raise and lower

sub maximal load, as in weight training performing push ups. In the isometric form, the muscles maintain a fixed length in the isotonic form, they alternately shorten and lengthen.

Circulatory respiratory endurance: Circulatory respiratory endurance is characterized by moderate constriction of large muscle groups for relatively long period of time, during which maximal adjustments of the circulatory respiratory system to the activity are necessary

Muscular power: Muscular power is the ability to release maximum muscular force in an explosive manner, that is in the shortest possible time. Example; Standing broad jump.

Agility: Speed in changing body positions or in changing direction. Examples; thrusts; dodging run.

Speed: Rapidity with which a movement or successive movements of the same may be performed. Example; Flexing forearm; 50-yard dash.

Flexibility: Range of movement in a joint or sequence of joints. Examples; Knee extension movement, touching finger to floor without bending knees.

Important of the study: Motor fitness and skills are very much important in the total physical fitness and game improvement.

Review of literature:

Carbi et.al.(1987) found a positive correlation between kick performance and iso-kinetic strength and opined that strength training could be effective in increasing the performance of soccer players. *Edward and McFarland (2007)* revealed that for improving the maximum strength, strength training is important and over load principles is the key method. Strength training with overload principles has been considered as the most effective method for strength development.

Updyko and Johnson (2009) reveals that agility involves coordinating quickly and accurately the muscle of the body in a particular activity. The rapid change in movement patterns by the whole body or by some of the parts have been measured by such test items as dodge run, obstacle race, zig-zag run, shuttle run, side step and squat thrust. Agility is more effective when it combines with high level of strength, endurance and speed, while to a certain extent; it depends on one's heritage.

Marian (2012) conducted a study were college male (n=64) demonstrated muscular strength and endurance in arm flexion, forearm extension, thigh extension and leg extension. ANCOVA was used to compare treatment effect of 2 training programme and the relationship between strength and endurance was determined through correlation. Results were somewhat conclusive for 1 test of endurance, were almost significant for another and insignificant for two of the test.

Frank (2016) studied an effect of heavy resistance weight training of the pattern of muscular development as indicated by strength, girth, and endurance measures of the right elbow flexors, were studied using as subjects 34 grades 7 students. It was found that heavy resistance exercises did produce significant increases in size, strength and endurance of the right elbow flexor.

Research methodology:

Motor fitness components

Table : 1

Strength, endurance, power, agility, speed and flexibility as a variables and their test measurement

Sr. No.	Motor fitness components	Measurements
I.	1. Strength Maximum strength Explosive strength Strength endurance	Pull ups

II.	Endurance Basic endurance General endurance Specific endurance Circulatory respiratory endurance	Sit ups (Bent knees)
III.	3. Power Maximum power	Vertical Jump
IV.	4. Agility active agility passive agility	Obstacle race
V.	5. Speed movement speed acceleration ability locomotors ability	Shuttle run
V	6. Flexibility Active flexibility Passive flexibility Extent flexibility Dynamic flexibility	Modified sit and reach test

Results and discussion:

Status of motor fitness of players.

The statistical assessment motor fitness components of players i.e, strength endurance, power, agility, speed, circulatory respiratory endurance and flexibility of players for were low to medium.

Strength training programme for promotion of motor fitness.

The effect of 8 weeks strength training programme for promotion of motor fitness after different stages reveals that mean, t values of pre test, post test of controlled and experimental group shows positive and significant improvement at respective level of probability.

Conclusions:

The strength training programme which constitutes effective exercises have proved fruitful. The motor fitness components of the players i.e. strength, endurance, muscular respiratory endurance, power, speed, flexibility also have shown positive and significant improvement after the effect of strength training programme.

Recommendations

- The effect of strength training programme may be helpful for the promotion of physical fitness in all sports events. Similarly, more innovative strength training programme may be developed for various other sports.
- Professionals of physical education should consider the need for improvisation of different strength training programmes.

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