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Effect of physical fitness on mental health of adolescents

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Abstract

Physical fitness is primarily determined by physical activity habits and its operational performance governed by many conditioned factors. The mental status of adolescence groups is equally important as high mental health status functioning has greatest impact on health perception. A regular physical activity during adolescence is associated with better self-esteem and a decrease in mental health in adolescents. Teens should be encouraged to practice and master increasingly complex and demanding life skills. The present investigation partially supports the results of these studies that at high physical fitness level promotes high skill, decision power and enhance the energy level towards career in new generation group.

Keywords: Physical fitness, mental health, adolescent groups

Introduction

The term fitness conveys different meanings to different groups depending on their own requirements. Fitness comprises of a number of factors including strength, flexibility, motor fitness and aerobic fitness. Although all elements of fitness are of importance probably the most important (and the one that most people regard as 'being fit') is aerobic or cardiovascular fitness. This is really a measure of the bodies ability to process oxygen and do work to live an active life without undue fatigue and lack of it is directly associated with progression of heart disease. It must be stressed though that strength and flexibility are both essential components and should not be neglected.

Concept of Fitness

Physical fitness is the ability to function effectively in physical work, training, and other activities and still have enough energy left over to handle any emergencies, which may arise.

The components of physical fitness are as follows:

- **Cardiorespiratory endurance:** The efficiency with which the body delivers oxygen and nutrients needed for muscular activity and transports waste products from the cells.
- **Muscular strength:** The greatest amount of force a muscle or muscle group can exert in a single effort.
- **Muscular endurance:** The ability of a muscle or muscle group to perform repeated movements with a sub-maximal force for extended periods of time.
- **Flexibility:** The ability to move the joints (for example, elbow, knee) or any group of joints through an entire, normal range of motion.
- **Body composition:** The amount of body fat a soldier has in comparison to his total body mass.

Improving the first three components of fitness listed above will have a positive impact on body composition and will result in less fat. Excessive body fat detracts from the other fitness components, reduces performance, detracts from appearance, and negatively affects one's health.

Physical fitness is not a measure of athletic ability or physical beauty. Rather, it is defined by a list of components that measure one's overall ability to perform normal physical activity. These include:

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- Balance
- Flexibility
- Cardio-respiratory and muscular stamina
- Strength
- Exercise - above-normal physical activity - is the most common method of improving fitness levels.

Achieving Physical Fitness

Reaching and maintaining optimal performance levels for your unique body through regular exercise is the key to physical fitness. You should consult your physician before beginning any exercise program.

The most effective exercise programs include sustained rigorous activity for 30 minutes at least three times per week. Choose from a list of activities walking, running, biking, tennis, swimming, calisthenics, dancing, and many others. For more structured exercise, you may join a health club.

Also, try supplementing your regular exercise with other opportunities for physical activity, like climbing stairs instead of taking the elevator, or walking instead of taking the bus.

Benefits of Physical Fitness

Exercise does far more than get you in shape. It improves your life. On the physiological side, exercise can:

- Strengthen your heart; as your heart becomes stronger, it becomes more efficient.
- Regulate cholesterol; proper cholesterol levels improve your arteries.
- Reduce blood pressure; high blood pressure is associated with cardiovascular disease and stroke.
- Increase metabolism; exercise can help control body weight.
- Improve lung capacity; exercise can help expand your lungs and improve your body's ability to use the extra oxygen.
- Increase your life expectancy; naturally, as the above improvements take place, you will become healthier.

Many people begin exercising because they feel bad. Similarly, many people continue exercising because they feel good. On the psychological side, exercise can:

- Relieve emotional stress and anxieties; exercise can help reduce the biochemical released in the body during normal times of stress.
- Relieve depression; exercise causes the body to produce endorphins, chemicals that cause a relaxed, peaceful state of mind.
- Increase energy; regular exercise can make you feel more energetic and alert.
- Increase self-esteem; the improved physical and psychological state can make people feel good about themselves, how they look and feel, and what they have accomplished through exercise.

Fitness is a general term and has been defined in many ways as can be seen from the following three definitions:

1. Fitness is the ability to perform muscular work satisfactorily. W.H.O. (1994) ^[12]
2. The ability to carry out our daily tasks without undue fatigue. Davis, *et al.* (1994) ^[6]
3. Physical fitness is the capacity to meet successfully the present and potential physical challenges of life (Lamb, 1984) ^[8].

As you can see, the term fitness and its definitions are dependent upon how you look at it. Therefore, to add clarity to this situation it is better to define fitness as,

The ability to meet physical demands placed upon us, either generally in the terms of everyday life or the specific demands of a sport or physical activity (Rusby, 2001) ^[11]

Testing a person's fitness may be done for a number of reasons, such as:

1. To assess the persons initial fitness level before beginning an exercise program and allow the exercise intensity and duration to be set at the correct level.
2. To evaluate the progress of their training after a period of time and predict future performance

Factors Affecting Physical Fitness

Anatomical factor

In order to be fit, the individual must possess all the body parts essential to the performance of the task and appropriate body size and shape for the task.

Genetic imperfections in organs and tissues are responsible for weakness in structure and function. These limit an individual's capacity for strength, endurance and skill.

Physiological factors

In order to be fit, the physiological system of the human organism must function effectively to sustain the particular activity that the individual is performing. Since different activity make different demands on the organism relating to neurological, respiratory, circulatory, and metabolic and temperature, physiological fitness is specific to each activity.

Psychological Factors

Psychological factors like perception, emotional stability, motivation and intelligence are of vital importance in determining one's fitness level.

Anxiety can become a barrier to performance by contributing tension, elevated heart rate and blood pressure and endocrine disturbances that add to the stress of the task and therefore affect one's fitness level.

Physical fitness is important to human mind because every movement, everybody position and every tension in the muscle tendon and joint helps to contribute to the formation of concepts and ideas. Physical fitness contributes to the working of muscles and enables the mind to make quick and correct while maintaining control the emotions.

Concepts of Mental health

The concept of mental health is relatively recent having originated early in the present century. According to Burnham (1985) ^[4] "A mentally healthy person is one who has a wholesome and balanced personality free from schisms and inconsistencies, emotional and nervous tension, discards and conflicts".

Psychologists have agreed that marital adjustment and emotional maturity of the parents has a profound influence on mental health of adolescents. Adolescents coming from slums are more likely to suffer from the effects of parental neglect and inadequate schooling than pupil coming from an ordered society. On account of lack of care, affection, and security many students are taking to antisocial activities, which ultimately cause poor mental health.

There are several definitions of the term mental health and mental illness. In earlier days, absence of illness was considered as health. However psychiatrists and psychologists have been dissatisfied with this way of looking at health-

physical or mental. It is now recognized by world health organization (WHO) that health is a positive concept. This has been brought out clearly by Preliminary Reports of White House Conference as early as 1930 and Bernard (1970) [2] has discussed it. In the Preliminary Reports of White House (U.S. Government) mental health is defined as the adjustment of individuals to themselves and the world at large with a maximum of effectiveness, satisfaction, cheerfulness and socially considerate behavior and the ability of facing and accepting the realities of life. The highest degree of mental health might therefore be described as that which permits on individuals to realize the greatest success, which his capabilities will permit with a maximum of satisfaction to himself and the social order with a minimum friction and tension. This implies a stage of such well being that the individuals is not conscious of unsatisfactory or objectionable behavior and maintains himself intellectually and emotionally in any environment and under any circumstances (Bernard, 1970) [2].

Teenagers can protect their mental health by eating nutritious meals, getting enough sleep (nine hours each night), and exercising regularly. Teens should be encouraged to practice and master increasingly complex and demanding life skills. Participation in extracurricular activities, such as youth organizations, chess club, school band, drill team etc., reinforces self-discipline and competence. Work or volunteer experiences also widen a teenager's worldview and boost self-worth. An involved teenager is more likely to resist self-destructive acts of addiction, sexuality or aggression. Participating in activities serves two purposes: it engages a teenager in life outside the home (thus preparing a teen for adulthood); and it limits television/video game time (linked to increased aggression and obesity). Exercise reduces the physiological effects of depression and tension; moreover, research suggests that sports participation curbs substance abuse, and that participation in youth organizations exposes teens to positive role models.

Effect of Physical Fitness on Mental Health

Physical fitness is the ability to function effectively in physical work, training, and other activities and still have enough energy left over to handle any emergencies, which may arise. Muscular strength, Muscular endurance, Speed, Flexibility and Body composition are the five components of physical fitness. According to W.H.O. (1994) [12], "Fitness is the ability to perform muscular work satisfactorily". Davis *et al.* (1994) [6] defined it, as "The ability to carry out our daily tasks without undue fatigue is fitness". Lamb (1984) [8] stated, "Physical fitness is the capacity to meet successfully the present and potential physical challenges of life". Physical Fitness is the capability of the heart, blood vessels, lungs and muscles to function at optimal levels. Optimal efficiency means the most favorable health needed for the enthusiastic and pleasurable participation in daily tasks and recreational activities. Functional cardio respiratory and muscular systems enable you to carry out everyday activities efficiently. In other words, people who are physically fit look better, feel better, and possess the good health necessary for a happy and full life. Hence, physical fitness means that the organic systems of the body are healthy and function efficiently, so you are able to engage in vigorous tasks and leisure activities. Effective way to reduce several risks factors associated with cardiovascular diseases, back pain, diabetes, osteoporosis, and obesity. It is also equally important to note that mental status of individual is equally important as high mental health status

functioning has greatest impact on health perception (Cree *et al.*, 1999) [5]. Social non-conformity is the product of strength fitness both in boys and girls. No doubt the weak physique, strength and endurance are unable to rebel against faulty existing social system. Past researches have demonstrated that healthy and exercised body has a positive impact on psychological health (Baughman, 2000) [1].

No doubt, exercise has direct effect on physical health but it did not have a direct effect on mental health. The amount of exercise had an indirect effect by buffering the effect of negative life events on mental health. Fitness whether it is strength or motor has deleterious effects on mental health in boys and girls. Gender difference in the relationship between Physical fitness and mental health has been found in a study conducted by Muraki *et al.* (2001) [10]. They suggest that the relationship between physical fitness and mental health in men differs from that in women. The present investigation partially supports the results of these studies that at high strength fitness level the motor fitness promotes egocentrism in boys where as at low strength level it is a characteristic feature of motor fitness in girls. Girls at low level of speed, coordination, power, agility and balance as strength level develop difficulty in identifying and synthesizing with other people. It induces withdrawal tendency in girls

According to Maninger (1945) [9], the definition of mental health is such a quality by which we, with pleasure and maximum effectively in between the world as well as with the human being, could do the adjustment. Also that is a co-natured, a brilliant intellectual, socially having the balanced behavior and capability of maintaining a pleasant way of life. Hadfield (1950) [7] viewed that "Three complements; the full expression, the harmonization and the capabilities to the aimed direction for goal achievement", is the definition of Mental Health. Banrad (1952) [3] attempted to differentiate the positive health from non-health and negative health. The positive health consists of ways of living that are beyond the frontiers of more social existence implied by negative health, and this category (positive health) applies when there is evidence that the individual fully utilizes a capacity or is working in that direction.

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