



ORIGINAL RESEARCH PAPER

Education

PHYSICAL ACTIVITY AS A FUNDAMENTAL HEALTH PROMOTION TOOL: IMPLICATIONS FOR HEALTH EDUCATION

KEY WORDS:

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ABSTRACT

In Nigeria, modern living is becoming sedentary. Physical activity is no longer part of the daily life, and the improvement of standards of living has added to the decline in the physiological working capacities of the various systems of the body. Numerous studies have shown that degenerative diseases, including heart diseases are more common in more or less sedentary persons. The focus of this paper is therefore on how regular exercise can become the key factor in maintaining a healthy body composition through physical activities, such as walking, vigorous running, and weightlifting, or sports, such as tennis, squash and gymnastic exercises. Physical fitness should be the fundamental rights of all people, age and sex notwithstanding. The paper suggests that the curriculum of medical and health education departments should be redesigned as to make exercise a form of preventive medicine.

INTRODUCTION

The World Health Organization (WHO, 1948) defined health as 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity'. The importance of good health can be best appreciated in a country such as ours where the average life span continues to decline and has fallen to 49 years. The reason for this persistent drop in life expectancy is not just because 'more people are getting sick' but because of changing lifestyles of the people.

In Nigeria, modern living is becoming sedentary. Physical activity is no longer part of daily life; cars have replaced bicycles; buses have replaced walking; lifts (elevators) and escalators have taken the place of stairs; motorized lawn mowers have replaced manual grass cutting; washing machines have replaced manual laundry; telephones, especially with the recent introduction of the global system of mobile (GSM) communication and remote control devices have taken the place of general movements. The result of these modern technological devices is the decline in the physiological working capacities of the various systems of the body, giving credence to the old saying, 'use it or lose it'.

Numerous studies provides the evidence that degenerative diseases, including heart disease in middle age, are more common in more or less sedentary persons (American Dietetic Association, 2003). Prentice (1998), & American College of Sports Medicine (ACSM) (2012) asserted that a sedentary lifestyle is as much a risk factor for diseases as is high blood pressure, obesity, and smoking. Obesity, which is at the centre of most chronic non-communicable diseases, is strongly associated with and, in fact, is a product of sedentary living.

LIFESTYLE CHANGES AND THE IMPLICATIONS FOR HEALTH EDUCATION

A modification in general behaviour that emphasizes changes in lifestyle has been strongly advocated to counter the adverse effects of the multiple factors associated with chronic non-communicable diseases. This entails dietary modifications with emphasis on sensible eating, cessation of cigarette smoking and regular exercise (Payne and Halin, 1998), Brooks, Fabey, White & Baldwin, (2000) & Odunaiya, (2010). In recognition of this fact, the WHO chooses 'physical activity and health' as the theme for the 2002 World Health Day.

Concepts of exercise vary from person to person. They range from irregular, haphazard physical activities to properly-designed ones, such as brisk walking, vigorous running, and weightlifting, or sports such as tennis or squash. Many health clubs and gymnasiums now offer fitness programmes, while several individuals have acquired exercise machines.

Running, walking, swimming, cycling and participation in organized sporting events are readily accessible and inexpensive. For an effective workout, a fitness programme of 25-30 minutes, 3-5 days a week is recommended. For beginners, a slow pace is advocated, with a gradual increase to moderate, and then vigorous intensity, when he/she becomes comfortable at any particular pace. Middle aged persons or those who have any special health consideration should consult a doctor/physician before beginning any fitness programme. Exercise prescriptions are not universal but tailored to individual needs (Briggs and Calloway, 1979), Erniola, (2009) and World Health Organisation (WHO), (2010).

BENEFITS OF EXERCISE

Regular exercises have been shown to improve health, efficiency, physical, appearance and mental capacity (Anugweje, 2003) and Darki, Isma'il, (2009) and Musa, Toriola, Monyeke, & Badamasi, (2012). The heart becomes stronger and functions more effectively as a muscular pump; trained muscles become more efficient, developing higher concentration of the enzymes involved in metabolism. Exercise retards the loss of mineral from bones that accompany the ageing process, thereby preventing osteoporosis and, consequently, pathological fractures. It promotes the release of endorphins, opiate-like substances which improve mental outlook — the 'feel good factor'. Exercise has been shown to increase the levels of high density lipoprotein (HDL) cholesterol and decrease the levels of low density lipoprotein (LDL) cholesterol in the blood. HDL is a protective factor and helps to mobilize cholesterol deposits from other tissues, including arteries. Perhaps one of the greatest benefits of exercise is in the management of overweight and obesity.

These effects of exercise collectively determine physical fitness. Generally, the trained individual can perform many physical activities of daily life better than the sedentary, unconditional individual. He is also able to withstand illnesses and accidents better due to the enhancement of immunity and cardiac reserve. Revealing some of his survival strategies during his long imprisonment, Nelson Mandela (1994) wrote, 'on Mondays to Tuesdays, I would run on the spot in my cell in the morning for up to 45 minutes. I would also perform 100 fingertip push-ups, 200 sit-ups, 50 deep knee-bends and various other callisthenics'.

BENEFITS OF FITNESS

A programme of regular aerobic exercise improves the efficiency of one's cardiovascular and respiratory systems. This cardio-respiratory fitness enables one to deal with the routine and extraordinary demands of the daily life more easily. -Cardio-respiratory fitness is the foundation of body fitness. This fitness increases one's capacity to sustain a given

level of energy for a prolonged period. Thus, the body can work longer and at greater levels of intensity. In addition, improved cardio-respiratory (aerobic) fitness has a variety of benefits that can improve nearly all parts of the human life.

Aerobic fitness can help gain the following physical benefits:

- Reduce the proportion of low density lipoproteins ('bad cholesterol') and increase the proportion of high density lipoproteins ('good cholesterol') in the blood;
- Increase the capillary network of the body;
- Reduce the risk of heart disease;
- Prevent hypertension; and
- Improve blood lipid and lipoprotein profiles.

SLEEP AND OVERALL FITNESS

Sleep is an important adjunct to a well-planned exercise programme. It is so vital to health that people who are unable to sleep sufficiently (those with insomnia) or who are deprived of sleep experience deterioration in every aspect of their health. Fortunately, exercise is frequently associated with improvement in sleeping Bergstrom and Huctman, (1998) and Partavi, (2013).

The value of sleep is apparent in a variety of positive changes in the body. Dream is thought to play an important supportive role in emotional health. Problem-solving scenarios that occur during dreams seem to afford some carryover values in actual coping experience. A variety of changes in physiological functioning, particularly a deceleration of the cardiovascular system, occur while we sleep. The feeling of being well rested is an expression of the mental and physiological rejuvenation one feels after a good sleep.

The amount of sleep need varies among people. In fact, for any person, sleep needs vary according to activity level and overall state of health. As we age, the need for sleep appears to decrease from the 6-8 hours young adults require. For everyone however, periods of relaxation, daydreaming and even an occasional afternoon nap promote electrical activity patterns that help regenerate the mind and body,

DANGER SIGNS TO WATCH OUT FOR DURING EXERCISE

The human body is an amazing piece of equipment which functions well regardless of whether or not one is conscious of its processes. It also derives clear signals when something goes wrong. One should monitor oneself for any sign that may seem abnormal during or after exercise. 'Listen to your body' is a good rule for self-awareness. The 'changing for the better' programme contains some lists of common warning signs to look out for. However, such occurrences are extremely unusual. Fear of developing these difficulties should not deter one from starting a fitness programme. These risks are minimal and the benefits far outweigh the risks.

'CHANGING FOR THE BETTER' ACTIVITIES TO PROMOTE SOUND SLEEP

Can we work at being better sleepers? The answer is 'Yes'. Many activities, when done at the appropriate time, will aid you in our quest for sound sleep.

Activities for the day

- *Schedule*: maintain a consistent schedule of daily activities. A disrupted day makes sleeping difficult.
- *Physical activity*: Regular vigorous activity promotes sleep; exercise near bedtime, however, can make you too energized to sleep soundly.
- *Eating*: A large meal taken late in the evening interferes with sleeping; avoid heavy late night snacks as well.
- *Alcohol use*: A single drink in the evening may be relaxing, but too many drinks during the day can make sleeping difficult.
- *Central nervous system (CNS) stimulants*: coffee, tea, soft drinks with caffeine, and some medications can disrupt

normal sleeping patterns.

- *Worry*: Problems and concerns should be put behind by the time one retires for the night; one should practice leaving one's concerns at the office or in the classroom.
- *Rituals*: A ritualistic 'winding down' over the course of the evening promotes sleep, watching television, listening to music, and reading during the evening are excellent ways to prepare the body for sleep.

Danger signs of exercise

- A delay of more than one hour in your body's return to a fully relaxed, comfortable state after exercise;
- A change in sleep patterns;
- Any, noticeable breathing difficulties or chest pain. Exercise at one's THR should not initiate these problems. Consult a physician;
- Persistent joint or muscle pain: Any lingering joint or muscle pain might signal a problem. Seek the help of an athletic trainer, a physical therapist, or a physician;
- Unusual changes in urine composition or output: A marked colour change in urine could signal possible kidney or bladder difficulties. Drink plenty of water before, during, and after an exercise;
- Anything unusual that one notices after starting a fitness programme, for examples, headaches, nosebleed, fainting, numbness in extremity, and haemorrhoids, should be seen as danger signs.

EXERCISE AND LONGEVITY

Growing old is inevitable in life and is accompanied by a decline in functional capacity due to certain reorganized degenerative changes that accompany ageing. Older adults who participate in aerobic exercise programmes have had this decline in functional capacity greatly slowed down, and some have recorded aerobic capacities equal to sedentary persons 25 years or younger.

The lifespan of man has a strong genetic component. Regular moderate intensity exercise was found to improve the overall quality of life in test subjects in a study conducted at the Cooper Institute for Aerobic Research, Dallas, USA (Walker, 2002), Eler & Acacr, (2018). In another study of the male alumni of Harvard University, USA, vigorous exercise was shown to increase longevity. Subjects who took part in designed vigorous exercise programmes were found to have 25 per cent lower death rate than their sedentary counterparts US Department of Health and Human Services, (1996) and Faghri, Stratton, Momeni, (2015).

In a third study in Stanford University, USA, measurement of an individual lifespan, it was found that apart from age, fitness was a better indicator of potential lifespan than any of the other risk factors checked, such as smoking, heart problems, high blood pressure, diabetes or high cholesterol.

CONCLUSION AND RECOMMENDATIONS

People who exercise regularly often choose activities that fit their lifestyles and individual preferences. These activities have the potential for helping them achieve a state of physical fitness. Physical fitness is achieved when the organic systems of the body are healthy and function efficiently so as to resist disease, to enable the fit person to engage in vigorous tasks and leisure activities and to handle situations of emergency.

Physical fitness allows one to avoid illness, perform routine activities, and respond to emergencies. The health benefits of exercise can be achieved through regular, moderate exercise. The target heart rate refers to the number of times per minute the heart must contract to produce a training effect. Fitness is composed of five components: cardio-respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. Consequently, the following recommendations are made:

1. Public health education should make the public aware of the realities of ageing and of the negative consequence of development degenerative diseases.
2. Physical fitness should be the fundamental rights of both sexes and all ages. The general public and policymakers should be sensitized about the importance of physical fitness to good health.
3. The government can make a lot of difference by making policies that will help tackle the problem and by taking proactive actions that positively affect the society as a whole.
4. School programmes at all levels should promote physical health education, emphasizing the consequence of activities.
5. Fitness programmes for senior citizen groups at risk of developing degenerative diseases should be initiated.
6. The curriculum of medical and health education departments should be redesigned as to make exercise the 'new' preventive medicine.
7. Our hospitals should be directed to conduct physical fitness programmes for the sick under their care and for the healthy within the society.
8. The conversion of public parks and playgrounds to residential or commercial use by the rich in the society should be discouraged and a law should be put in place against it.
9. Non-government organizations (NGOs) should compliment government efforts to initiate the formation of physical activity groups such as 'Runners Clubs' at the primary level. The society should be exercise-oriented; jogging and running should be advocated.

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