

La activación física para combatir la obesidad y el sobrepeso en universitarios

Physical activation to combat obesity and overweight in university students and academic staff

Anuar Jesús Alvarado González
Universidad Autónoma de Zacatecas
anuar_algo@hotmail.com

Edmundo Guerrero Sifuentes
Universidad Autónoma de Zacatecas
edmundoguerrero@hotmail.com

Isabel Llamas Félix
Universidad Autónoma de Zacatecas
isabelllamas@ymail.com

Resumen

El sobrepeso y la obesidad son factores de riesgo para enfermedades crónicas, como diabetes, enfermedades cardiovasculares y cáncer, así como para enfermedades de tipo psicológico, ortopédico y metabólico.

La práctica de actividades físicas, deportivas y recreativas en la población tiene un gran impacto social, ya que se pueden generar hábitos saludables que mejoren la calidad de vida.

Por lo anteriormente expuesto, el presente trabajo tiene como objetivo proponer actividades que motiven a alumnos, trabajadores y docentes a luchar contra el sobrepeso y, en general, a mejorar su calidad de vida mediante el ejercicio físico y una adecuada nutrición.

Palabras clave: activación física, motivación, nutrición, obesidad y sobrepeso.

Abstract

Overweight and obesity are risk factors for chronic diseases, such as diabetes, cardiovascular diseases and cancer, as well as for psychological, orthopedic, and metabolic diseases.

The practice of physical activities, sports and leisure in the population has a great social impact, since healthy habits that will improve the quality of life can be generated..

By the above, the present work aims at proposing activities that motivate students, workers and teachers to combat overweight and, in general, to improve their quality of life through exercise and proper nutrition.

Keywords: physical activation, motivation, nutrition, obesity and overweight.

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Introduction

Mexico is the country with the highest prevalence of obesity in children. At present, about 70% of the adult population has a body mass that may be deemed inappropriate for his health. For this reason, schools, institutions and training universities are required to find an alternative that contributes to the solution of this problem, through programs of physical activation that motivate young people to exercise, seeking an optimal balance between their physical and mental health.

Mexico is located in the first places of obesity worldwide and what is more serious is that this problem has been on the increase, affecting the population in general but at increasingly younger ages, regardless of their socioeconomic status.

Currently, obesity is considered a major non-transmissible epidemic disease in the world. Obese young people lack confidence in their physical abilities, which reflect the activities carried out in their daily lives and its low productivity.

The culture of physical activity has been replaced by activities that do not involve exercising the body, a situation that has been just getting worse.

Promoting the development of physical culture and sport as an alternative to preserve health and prevent diseases, can help young people find a way to develop physical

and mental skills that allow them to develop as persons and, therefore, contribute better to society.

The practice of physical activities, sports and leisure in the population has a huge social impact because they generate healthy habits that improve their quality of life and contribute to their optimal development.

Through the practice of sport, young people can improve their capabilities of coordination and dexterity, and develop a positive attitude about the benefits afforded them to adopt a healthy lifestyle.

The objective of this project is to persuade Physical Activation academic institutions and forming organisms, to worry and occupied by implementing own physical sport activities, and thus counteract the problem of obesity and overweight in our society. This can be possible if you start by giving such activities the importance they actually have, directing them towards the development of academic, social and cultural performance of students, workers and academics.

Similarly, the proposals are intended to complement physical activities here with healthy eating habits that contribute, of course, to reduce overweight and obesity and to increase self-esteem.

Obesity and overweight

Obesity has been defined by the World Health Organization as abnormal or excessive fat accumulation that may be harmful to health.

Overweight and obesity are risk factors for many chronic diseases, among which are diabetes, cardiovascular disease and cancer, as well as posture problems and metabolic.

Mexico is one of the countries with the highest prevalence of obesity in adults, according to the National Health and Nutrition Survey 2012. Currently, approximately 39.5% of men and women are overweight and 31.7% obese, ie, near the 70% of the adult population has a body mass may be considered unsuitable for health.

This condition has placed Mexico in the first places in terms of obesity in the world, according to various estimates by specialists in the field. If we consider what measures the waist circumference to diagnose obesity, then 75.8% of Mexican adults are obese.

The comparative analysis of the National Health Survey 2000 (ENSA 2000) (Olaiz et al., 2003) and ENSANUT (2006) documented an approximate 12% increase in the prevalence of overweight and obesity in adults of both sexes (ie an average of 2% per year) increase.

The prevalence of overweight adolescents (12-19 years), in females it was 23.3%, while in males of 21.2% (Olaiz-Fernández et al., 2006). This prevalence has increased over time, regardless of socioeconomic level, as has been previously documented in national surveys de1988, 1999, 2006 and 2012.

Obesity is now considered the largest in the world non-communicable disease epidemic; Unfortunately, this problem strikes especially children. (Trinidad Quizan Plata, 2008)

In early 2011, the then president of Mexico, Felipe Calderon, became official that our country ranked first in childhood and adult obesity and first in childhood diabetes and announced a national program to combat them.

Young people who are obese often have a lack of confidence in their physical abilities: are considered less competitive, coordination, motor skills and strength, however, are not considered less healthy, less strong or less active, just unproductive.

A sedentary lifestyle among young Mexicans favor the course of the disease. The culture of physical activity has been replaced by actions that do not involve the activation of the body, which with the passage of time aggravates the problem (Health, 2012).

According to the National Institute of Public Health, obesity is a chronic, complex and multifactorial disease that can be prevented. One of the main causes of obesity in children and young Mexicans decreased time spent on physical activity; They spend much of their time at a computer, watching television or playing video games.

Lack of physical activity causes an imbalance between energy intake and energy expenditure, ie the calories in the food we consume is greater than those that burn to perform physical activity. (Health, 2012)

There is no organization to promote physical activity, so that inactivity has permeated in all population groups, from infancy to the elderly.

So that in Mexico, the obesity epidemic is a major problem in all age groups and experience a speed increase has not been registered in any other country. On the other hand, at international level there is sufficient to establish the contribution of this disease to chronic disease evidence and its potential burden care systems to health.

For the aforementioned reasons, schools, universities and training institutions have an obligation to find an alternative that contributes to the solution of this problem. Thus, the need to create programs that encourage young people to be physically active for optimal balance between physical and mental health arises. This would allow a better development in their learning and vocational training, laying the foundation for promoting the culture of physical and mental health care in society.

Motivation

In general, what really drives us to do things is the motivation. This may change depending on the stage where we are physically, socially and cognitively, which in turn influences the way we see the world, our preferences, and so on.

Understand the implications of physical activity on the physical, emotional, social and cognitive development until it has become a forefront issue; this because, despite the benefits of practice are widely known, there are many young people and adults living in a sedentary lifestyle (Corbin, 2002), which results in flaws in the implementation of this practice, as it is closely related to the level of motivation they feel those to whom it is addressed.

Awakening the motivation to exercise is the key to doing on a regular basis, thus enjoying the benefits it brings to health.

In recent times, physical activity has been widely developed in various aspects, influenced by multiple factors.

The rapid development of various disciplines, major advances in the social sciences, such as psychology and pedagogy, the need to exploit more efficiently the time and combating a sedentary lifestyle, constantly remind us that physical activity is one of the key conditions in the formation and harmonious development of human beings, who must act in accordance with the values of their intellectual education, moral, labor, aesthetic and hygienic.

Therefore, we can say that if individual and group interests of people are known to choose to exercise or not, can establish the reasons for adopting certain attitudes toward physical activity.

Nutrition

Exercise is not the only element required to enjoy good health, but also a healthy diet, ie eating habits to proper nutrition and a balance between caloric intake and energy expenditure. Not having a proper diet can directly affect physical performance of individuals and harm your health.

A balanced diet allows the body to receive a variety of foods, adequately supply nutrients in appropriate quantities and, most importantly, get enough to achieve and maintain a healthy body mass index health energy.

A healthy diet is essential to achieve the benefits they can afford a healthy lifestyle, to facilitate physically active have a body to perform daily activities.

If a variety of highly nutritious food rations consumed in proportion to our caloric expenditure will be much easier to carry a healthy lifestyle, reducing stress levels, counteract the acquisition of multiple diseases, and so on.

Clearly good nutrition and physical activity are an excellent formula, and how important it is to energetically swallowed everything, like energy costs causing physical activity. However, there is often a marked imbalance between what we eat and what we

spend, that is, we often eat more calories than we expend through physical activity or exercise, because you do not have the habit of exercising regularly, increasing the risk of contracting diseases such as overweight and obesity. The latter are seen as an excess of fat above the normal range for the person body, according to their age, sex and constitution.

It is easy to detect if you are overweight or obese by calculating the body mass index (BMI), which is to divide your weight in kilograms and dividing the result by height in meters squared.

$$\text{IMC} = \text{peso (Kg)} / \text{altura (m}^2\text{)}$$

This we can easily determine whether our body mass is healthy for our body, if the result of this calculation lies in the range 18-25, normal weight; if it exceeds this range it is considered overweight or obese depending on the elevation of that factor.

Our BMI tells us whether or not we have a healthy weight. If our case is the latter, then we look for ways to balance calorie intake and burning. As already mentioned, it is advisable to include in our lifestyle the binomial physical activity and good nutrition. With this you can achieve optimal health.

Good nutrition means eating healthy, giving the body what it needs to take into account the variety of foods from the different food groups.

Need for physical activity project

The General Law on Physical Culture and Sports published in the Official Journal of the Federation on February 24, 2003, establishes as one of its main purposes to promote the development of physical culture and sport to preserve health and prevent disease (DOF, 2003). Therein lies the importance of physical culture in all levels of education in our country, because thanks to it young people can find a way to develop physical and mental skills to become better people.

The practice of physical, sports and recreational activities in the population has a great social impact, since they can generate healthy habits that improve the quality of life of each individual and, in turn, contribute to their full development.

In accordance with the provisions linking the guiding principles of the National Development Plan 2007-2012, it is said to be within the level of higher education should be incorporated into the curriculum practicing a sport or physical activity, (CONADE , 2008-2012) thus achieving one of its main objectives is to promote physical activity and sport in the education system of our country.

Distinguishing the difference between physical activity and exercise, provides that the concept of physical activity is any movement produced by our skeletal muscles generating energy expenditure (Health, 2012), ie by simply brushing your teeth or walking and climb stairs and gets the body moving. For its part, the exercise is a physical activity category where it requires planning, focus and repetitive structure whose purpose is fitness maintenance.

It is extremely important to include sport and physical activity in the daily lives of young people, because through these can best take care of their physical and mental development and, of course, improve their quality of life.

There is evidence that physical inactivity is a cause of global mortality (Health, 2012). Physical inactivity causes about 25% of the diseases that cause cancer, 27% of those that cause diabetes and 30% of those that give rise to ischemic heart disease.

Another important point to consider is to promote physical education in college, that is, encourage sport and physical activity through recreation. The aim is to motivate students and teachers to practice sport regularly, even outside school, on their own, until it became part of their culture.

The teacher

The program is included faculty. The teachers also bears help counteract the problems associated with obesity and overweight; comprehensive training is intended to give students is undoubtedly a great challenge, which is required to involve all members of the university.

Are the academic institutions that have the responsibility to society to form competent professionals with skills in all areas. And a fundamental way to achieve this is

worrying to include sports physical activity to counter obesity and overweight; such activities promote academic, social and cultural performance of students.

The teacher must show consistency between what he says and does, that is, lead by example, to transmit to their students their experiences and knowledge about the practice of sports or physical activity. Meanwhile, young people can be encouraged if they develop a positive and reflective attitude about the benefits of exercise.

Approach to the problem

In our society, youth in general carried away by practicing habits harmful to health; eg smoking, drinking alcohol, taking drugs and so on. If this social problem is added physical inactivity or sedentary lifestyle, health risk increases significantly.

The origin of the problem mentioned is multifactorial: lack of interest in physical activity, lack of education, poor nutritional education, excessive time spent using the new technology, use of means of passive transport, etcetera. These problems in turn are increasing and, unfortunately, raise the chance of getting various diseases.

Again, the importance of including sports activities in academic institutions to counter this problem and contribute to the formation of healthy individuals is reiterated.

Due to the lack of interest shown by the students voluntarily participate in the practice of sports, it suggests teach subjects or workshops related to sports area for them linking physical activity to their health and are interested in improving their academic performance , social and cultural.

Overall objective of the program of physical activation

The overall objective of physical activation program is to contribute to the integral formation of university for students to develop their skills, become more productive and achieve balance your physical and mental health by inducing the exercise and performing physical activity.

Specific objectives of the program of physical activation:

- Promoting university students in the practice of voluntary physical activity.
- To publicize the importance of making physical activity to promote health.
- Contributing to the reduction of risk factors for chronic noncommunicable diseases (obesity, overweight, diabetes, depression, etc.).
- Strengthen and develop the physical abilities of students of the university, to promote improvements in their lifestyle.
- Persuading students, workers and teachers to adopt habits that encourage the practice of physical exercise in cultural way.
- Encourage students, workers and teachers a healthy way of life to achieve optimal development of their physical and mental health.
- Search for timely progress in the formation of the students of the university.

Content structure of the proposed program of physical activation

This program will be focused mainly on the development of performance and physical condition, improved nutritional habits of students, workers and academics, as well as the search for a better quality of life for these actors, always seeking the integration of physical activity themselves so that they can develop their physical abilities individually.

Physical abilities

Are those skills necessary for the proper functioning and development of the human body, which are divided into:

Conditional physical skills: those determined primarily by an energetic process (Guimaraes, 2002):

1. Resistance
2. Force
3. Speed
4. Flexibility

Coordinative physical capacities: those that are determined primarily by the nervous system programmed in moving and control of it (Guimaraes, 2002):

1. Balance
2. Agility
3. Coordination
4. Scroll
5. Integration

PROGRAM CONTENT PHYSICAL ACTIVATION

Importance of physical activity induction

Today, Mexico has high rates of inactivity, which means a risk factor for getting a host of cardiovascular diseases character, so it is important to include physical activity in our daily lives (Health, 2012). Those who exercise regularly have a balanced health indicators and, consequently, a better quality of life than those who do not practice.

Physical activity brings a number of benefits such as weight control, strengthen bones and muscles, reducing the risk of cardiovascular disease, hypertension, cancer, depression, poor posture and so on.

Types of physical activity

There are different types of physical activity, depending on the intensity with which they perform (light, moderate and vigorous).

1. light physical activity is to perform a series of movements with minimal effort, heart beating a little faster than normal.
2. moderate physical activity is to make movements that require considerable effort, generating a feeling of tiredness during execution.
3. vigorous physical activity is one that produces faster breathing than normal and the feeling of fatigue persists even when the activity is completed.

Making recommendations for physical activity

The World Health Organization (WHO) recommends at least 30 minutes of physical activity per day for at least three or four times a week. The activity should be according to age and level of intensity appropriate to the physical condition you have.

Heart rate measuring

It is critical to know control the intensity of exercise should be done, so it is essential to know the maximum level of intensity under which it must perform the workouts. The index of heart rate can tell follows:

Men 220 – Age = IFCM

Women 226 - Age = IFMC

Before performing any physical exercise should be done prior heating body intended to prepare the muscles for the effort.

Heating was divided into three phases:

1. Initial phase: starts naturally joints.
- Phase 2. Central: dynamic movements such as jogging, jumping and doing push-ups are made.
3. Final phase: relaxation period where flexibility of the muscles in order to avoid injury is made, slow and leisurely manner.

Themes

First stage

Axis 1: Aerobic activities

1. Hiking / Jogging
2. Light Racing
3. Jumping rope

Axis 2: Activities of flexibility

1. Stress-Relaxation-Extension
 - static flexibility exercises
 - flexibility exercises assets

Axis 3: Coordination activities

1. Games (rhythm / coordination)
2. Dynamics (speed, balance, agility, coordination)

Axis 4: Activities of muscular strength and endurance

1. cable and pulley exercises in a gym
2. Exercises working with body weight: push-ups, sit-ups, squats and jumps.
3. Strength training with garters

Second stage

Axis 1: body relaxation techniques

- Breathing
- Muscle Relaxation

Axis 2: Sports Injuries

- Prevention
- Treatment

Axis 3: moderate-vigorous physical activity

Priority 4: Recreational Activities

- Games
- Dance
- Free Movements

Third Stage

Axis 1: Sport and health

1. Physical and mental dexterity

Axis 2: Induction pre-sports: physical prowess

- Basketball
- Handball
- Football
- Volleyball

Axis 3: Sports Competition

- Basketball
- Handball
- Football
- Volleyball

a) Conclusions

In implementing this pilot project, results were achieved in students and teachers, so that their motivation was noted for performing sports-related activities outside school hours, which was a step forward in meeting the objective of this program . Also, another satisfactory result was reached with the implementation of the program of physical activation was to develop the conditional physical abilities and coordinative university, as there was a noticeable difference in their performance in sports activities, that is, according to the results of initial diagnosis of your fitness participants at the end of the first stage showed a significant improvement in their physical performance.

This program has also served to identify sports talents in college disciplined, to the various representative teams of our university, highlighting quickly channeled nationwide. Therefore, it can be seen that the physical activation program also gives rise to a hotbed of high performance athletes. Furthermore, the implementation of the program of physical activity in students aroused the interest and motivation of teachers, staff and the general public to join these activities, which in turn resulted in sub accession programs that allowed the integration and care population. These sub programs were conducted in summer and winter schools where citizens were persuaded to fight obesity through physical activity.

All these dynamics and interaction among students favored its social coexistence; all participants externaron their ideas and perceptions about obesity and physical activity. They provided feedback to each other to exchange experiences, benefiting the program, participants and gave continuity to these projects.

Bibliography

Corbin, C. B. (2002). Physical education as an agent of change. *Quest* 54, 182-95.

Fernández, E. M. (2010). Manual de aprendizaje kinestésico infantil y juvenil . México: Kinestek.

Fuentes, J. A. (2011). Actividad Física + Salud . España: JMLosada.

Guimaraes, T. (2002). Capacidades Físicas. En T. Guimaraes, Entrenamiento Deportivo Capacidades Físicas. San José, Costa Rica: Universidad Estatal a Distancia.

Salud, O. M. (10 de Noviembre de 2012). Organización Mundial de la Salud. Obtenido de la Organización Mundial de la Salud: http://www.who.int/dietphysicalactivity/factsheet_young_people/es/

Salud, S. d. (2012). Encuesta Nacional de Salud y Nutrición. 2012. SS.

Trinidad Quizan Plata, G. A. (2008). Obesidad infantil: el poder de la alimentación y la actividad física. Universidad de Sonora, 11-14.

