



MOTOR ACTIVITY AND NOURISHMENT

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ABSTRACT

The aim of the present investigation is to study matters, connected with the motor activity and nourishment with students. The investigation has been carried out with 180 male students and 309 female students from Trakia University – Stara Zagora. Theoretic formulation of the problem has been developed. Inquiry has been carried out. In this investigation, the following methods have been applied: Theoretic analysis, Alternative analysis, Inquiry method and Comparative analysis of relative shares. The results got have been analyzed, drawing the following conclusions: male students are doing more and longer motor activity outside the higher school than the female students; every seventh of almost ten investigated persons of both genders notes he is taking meal three or more times a day, and every eighth that he has enough means available to take his meals as per his preferences; the bigger part of the investigated persons express their wish of getting theoretic knowledge, connected with the motor activity and nourishment. The present development has theoretic and applied character as regards the motor activity and nourishment in context of regulation and maintaining of body mass at the norm, with the young people, educated in the higher school.

Key words: students, investigation, trainings

INTRODUCTION

Theoretic base of problem

Motor activity. The systematic use of physical loading, conformed to the sex, age and state of health, is one of the obligatory factors of healthy way of life and maintaining of body mass at the norm. Movement is necessary for the development and existence of any organism. The constant stream of impulses by the working muscles is one of the main factors for metabolism.

Multiple investigations carried out in higher schools show that trainings with physical exercises and sport have not still become the realized necessity for the young people. The real including of independent trainings with physical exercises among students is insufficient.

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Physical activity as a notion includes multiple forms of motor activity, realized through the participation of big skeletal-muscle groups and characterizes with significant energy waste, exceeding the basic daily one.

Non-specific motor activity is the motor activity people realize with the purpose of entertainment, relaxing and pleasant leisure.

Fitness is a motor programme, planned in advance of realizing of specific physical activity, including purposeful motor exercises, aiming a selective perfection of the qualities – strength, tenacity, speed, dexterity, as well as stimulation of cardio-vascular system and decreasing of body mass.

In Bulgaria, the wrong opinion that fitness is a programme of exercises leading to perfection of muscle strength only, has been widely spread.

Fitness has two different aspects:

- *Cardio-respiratory fitness;*
- *Muscle fitness.*

Physical activity is realized in several *varieties*:

- *Aerobic trainings* – multiple physical exercises of average and moderate intensity, which stimulate mainly the aerobic processes in organism and cardio-respiratory activity (running, swimming, cycling);
- *Anaerobic trainings* – physical exercises of high intensity, stimulating the anaerobic processes and development of the qualities strength and speed (sprint, force exercises);
- *Daily motor activity* – physical activity of low or average intensity, connected with daily habits – walking, instead of getting on a bus, climbing stairs, instead of taking a lift;
- *Motor activity aiming entertainment and hobby practicing* – leading to an increased energy-waste, charging with positive energy and positive effect the cardio-respiratory activity – dancing, walking among nature, tennis, basketball, aerobics;
- *Practicing a certain sport* – motor activity, manifested in practicing an organized sport activity, connected with achievement of sport results;
- *Specific trainings*, including motor activity, intended for decreasing the over the norm body mass.

According to the World Health Organization (1), at prevention of health problems “each adult has to realize average on intensity physical activity, minimum 30 minutes each day of the week”.

Motor activity provokes training of cardiovascular system and locomotory system. Motor activity prevents from muscle dystrophy; decreasing of muscle mass, strength, speed and tenacity; disturbance in phosphorus-calcium exchange in the bone tissue; from generalized disturbances in nervous-psychic and motor working capacity; in regulatory mechanisms; in the central nervous system, endocrine system and etc.

Hypokinesia is a term of a meaning opposite to the motor activity. It characterizes the decreased motor activity, limiting of motor functions, number, frequency and amplitude of movements and it is used in the sense of a sedentary way of life.

- ✓ Hypokinesia is directly or indirectly connected to the appearance of the following health problems – myocardial infarct/attack,

insult, hypertonia, diabetes type 2, obesity, some tumor locations, chronic conditions of stress and anxiety, osteoporosis and arthritis (2).

- ✓ Sedentary way of life leads to involuntary and atrophic processes, which on their turn cause the quicker aging of the live system (3,4).
- ✓ As per the data of the National Statistics Institute, 2005 (5), the decreasing of the physical activity in Bulgaria is manifested stronger among the urban population, than among the country one.
- ✓ More than 80% of the population, over 15 years leads an extremely sedentary way of life (6).
- ✓ Deficit of movement leads to decreasing of the physical qualities such as strength, speed and tenacity (7).
- ✓ Deficit of motor activity is a threat for the young growing organisms and could lead to disturbance of the figure and change in body-keeping (8, 9).

Inquiry among students has shown that the bigger part of them (79,4%) do not practice sport, another one (15,2%) are doing sport in the respective educational institute, and only 5,4% of them are regularly practicing sport. Morning gymnastics is made only by 18,8% of them (10). Investigation with students has shown that 39% of men and 66,1% of women are doing physical exercises and practicing sport only during the physical education and sport classes, and do not have a plan to do that out of the obligatory trainings.

Nourishment. Quality of life of contemporary human being depends on the adequate, expedient recovery of organism, of which the culture of nourishment is being responsible. The correct nourishment is an important precondition for the good health, work capacity and high life activity.

Nourishment regimen is a main component of the healthy way of life. It is useful for each student to be aware of the principles of rational nourishment and to be able to regulate his body mass, keeping it at the norm. It is necessary for nourishment to be rational. Rational is the nourishment ensuring the optimum quantity of energy and nutrient substances to the organism, for the correct growth and development; for normal life activity and health welfare.

With the adequate nourishment, the indices for physical development are optimum, and the immune defense – high (11).

It is necessary to observe certain *principles* of rational nourishment, and namely, the following is to be supplied by the food:

- ✓ optimum quantity of energy from the main nutrient substances – proteins, carbohydrates, fats, containing unique nutrient components;
- ✓ macro and micro-elements;
- ✓ vitamins;
- ✓ ballast substances;
- ✓ additional water drinking in balanced ratio, according to the age, and with human beings in active age – according to the intensity of work.

On the other side, another term of opposite meaning is also existing – *irrational nourishment*, which means under-nourishment, over-nourishment, or unbalanced combination between the separate nutrient substances, leading to various diseases or enhancing the symptoms of the existing ones (especially cardio-vascular or malignant ones).

Irrational nourishment is one of the most significant reasons for the wide spread of the socially important diseases in the country. The number of the diseases, connected to the nourishment increases progressively (12-17).

Lately, in the developed countries, including Bulgaria we observe an increase of the number of people with over-weight and obesity.

Unhealthy nourishment could increase the health risks, connected with the continuous nervous strain and falling into frequent stress situation. Stress could provoke an extreme enhancement of inclination for inappropriate foods, leading on its turn to their consumption, and the result being over weight and obesity (18). Incorrect nourishment is connected with a big part of cancer diseases (19).

Under-nourishment, low energy and protein waste make immune system weak, keeping down the immune functions, developing deficiency diseases (20). Under-nourishment provokes the so called nutrient disorders, known as anorexia-neurosis and bulimia-neurosis. They are multi-

factor diseases, which are hard to be mastered (21; 22).

Nourishment has a significant effect on the whole health state. Both the under-nourishment and excess taking of food are equally harmful.

From the above-said, it is apparent that the rational and expedient nourishment is a pre-condition and necessity for the good health.

Basic nutrient substances – the proteins, fats, carbohydrates, minerals, vitamins, water, cellulose and anti-oxidizers are the substances of vital necessity for maintaining of growth and development of organs and systems, for their normal functioning, for renewal of tissues, for providing of energy to the working muscles, and as a result of all this for maintaining of good health and etc.

In an investigation carried out regarding the availability of harmful habits, in which students have been required to make self-assessment of their motor activity, 7,04% of men and too high percentage of women - 19,72% have indicated that they lead sedentary way of life (23).

Topuzov, I. (24) has experimented modeling of “women’s pool” through a complex kinesitherapy.

Obreshkov, D. & Bozhkova., A., 2009 (25); Obreshkov, D., Bozhkova, A. & Ilieva I., 2010 (26) have investigated the influence of a systemic functional loading by force exercises with weights on the organism of the investigated persons from 16 to 22 years of age. They have proved that the specialized force preparation with weights is a wonderful means for melting of fat tissue and modeling of a beautiful and attractive female’s body.

Peeva, P. & Dyakova, G., 2012 (27) have carried out 12-week experiment, including trainings with aerobic recovering programmes, 5 times weekly, of durability 45 minutes and intensity of loading 80-85% of the maximum pulse frequency, establishing a decreasing of some of risk factors, leading to problems of cardio-vascular system.

Motor activity is an integral part of the programmes for reduction of body weight, because through it: energy waste increases; negative energy balance is established; loss of body weight is for the account of the fat tissue;

muscle mass is preserved; metabolism processes are speeded up; health state is improved; risk factors, connected with obesity decrease, self-confidence and psychic tonus are improved; depressions and stress decrease.

The aim of the present survey is to investigate the matters, connected with the motor activity and nourishment with students.

For realization of the aim, it is necessary to fulfill the following **tasks**:

1. To develop a theoretic formulation of the problem.
2. To carry out an Inquiry.
3. To process and analyze the data received.

Subject of the investigation are the motor activity and nourishment with students.

Object of the investigation are the students from Trakia University – Stara Zagora.

METHODS

Investigation has been conducted with 180 male students and 309 female students from Trakia University – Stara Zagora (Faculty of Economics, Agrarian Faculty and Veterinary-Medicine Faculty).

The following methods have been applied in this investigation:

- *Alternative analysis.* The relative share of the certain reply towards the total number of the inquired persons has been calculated.
- *Inquiry method.* For investigation of engagement of students in out-of-classes trainings with motor activity and sport, type and frequency of trainings, an Inquiry has been carried out with three questions.
- *Theoretic analysis* and
- *Comparison analysis* of relative shares.

Survey has been conducted of the motor activity and nourishment of students through an Inquiry containing 9 questions. Information has been received of the trainings with motor activities; of the number of the daily food takings; of the necessity of motor activity, of the qualitative and quantitative characteristics of the food consumed.

ANALYSYS OF THE RESULTS

The average age of persons investigated is 19,7 years.

Important is the matter, connected with conducting of organized or independent trainings with physical

exercises and sport out-of-physical culture classes in the High school. On one side, the fact is that 61% of men and 33,9% of women are doing physical exercises and sport additionally, and on the other side, it is alarming that more than one third of men and two thirds of women are not doing this at all.

In this investigation, the results show that men are doing more physical exercises and sport out-of-the obligatory classes in the training programme. With men, the highest is the percentage of those, doing exercises additionally more than three times (36,1%), while the highest relative share is for women doing motor activity additionally only once weekly (40%).

Interesting is the durability of the additional trainings with physical exercises and sport. The highest is the relative share of investigated persons, doing sport additionally with men of durability more than 60 min (31,8%) and with women of durability 30 min (35,1%). The investigation has shown that men are doing sport both more frequently than women, and with bigger durability of trainings.

From the investigation of the number of the daily food takings, it has been established that students taking food once a day are 2,8%, female students - 3,9%, and those taking food twice a day are - men 22%, women - 37,2%. The results got with persons, indicated three food takings are close (men – 40,7%, women - 42,4%). High is the percentage of the investigated persons, taking food more than three times (men – 34,5%, women - 26,5%).

With men 75,3%, and with women 79,8% indicate they have enough means available to take food as per their preference.

Replies got indicate that 82,8% of men and 92,9% of women would like to enrich their knowledge for shaping and keeping of body mass at the norm.

High is the percentage of the investigated individuals wishing to enrich their knowledge for the necessity of motor activity (men – 74,4%, women - 89%).

To the question regarding the knowledge they possess for the qualitative and quantitative characteristics of the food, they consume, almost half of male students (48%) and 57,1% of female students define their knowledge as insufficient.

Close is the relative share of students (men – 19,9% and women – 16,9%), who declare they

have no knowledge at all. From the replies to this question, it is apparent that with a big part of the investigated individuals (men – 67,9% and women – 73,4) there is deficit in the knowledge for the qualitative and quantitative characteristics of the food, they consume.

CONCLUSIONS

1. Male students are doing motor activity out-of-school more and of bigger durability than the female students.
2. Every seventh out of approximately ten investigated persons from both genders indicates he is taking food three and more times daily, and every eighth indicates he has enough means to take food according to his preferences.
3. The bigger part of the investigated individuals express wish to get theoretic knowledge, connected with the motor activity and nourishment.

This development has theoretic and applied character as regards the motor activity and nourishment, in the context of regulation and maintaining of body mass at the norm, with the young people, educated in the higher school.

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