



PROBLEMS RELATED TO SPORTS AND NUTRITION OF STUDENTS FROM MEDICAL COLLEGE – PLOVDIV DURING ONLINE TRAINING

Y. Topuzova¹, M. Bonev²

¹Medical University, Medical College, Plovdiv, Bulgaria

²Medical University, Department of Physiology, Section of Sports, Plovdiv, Bulgaria

ABSTRACT

Goal: Modern technologies and digitalization require that higher education adopt online teaching methods. Current conditions, exacerbated by the ongoing COVID-19 pandemic, required most colleges and universities to transition to online teaching, which has its pros and cons. The effects of online learning on sports and nutrition are the subject of this paper – it is the writer's goal to review and discuss the above topics as they relate to students from Medical College – Plovdiv.

Methods: The study is conducted via a survey of Medical College students at random. Students represent a sample of both sexes, as well as a variety of majors, different levels of completed course work and different age groups. After completing the survey, statistical methods are used to extrapolate the data and sum up the main problems related to online education.

Results: Online learning leads to a number of issues. The obtained results show the main negative factors observed to be: inactivity, lack of motivation and lack of acceptable conditions for physical education. Surveyed students also display higher propensity toward eating more often, eating larger quantities of food, as well as eating less healthy. All of the above could lead to increased body weight.

Conclusions: Online education may be an acceptable alternative to many other topics, but as it relates to sports and nutrition it is very challenging to successfully replace the in-person method with online learning. This may lead to deteriorating health in students and the early onset of disease. Students may experience high blood pressure, diabetes, cardio-vascular disease and others. Therefore, it is very important to research the above topic and proper action to be taken to address and remedy the above-mentioned issues.

Key words: health, disease, sports, nutrition, online education

INTRODUCTION

Food is a source of proteins, carbohydrates, fats, vitamins and mineral salts, vital for the human body. They supply energy, micro- and macronutrients needed for metabolism and participate in all biological processes and in building the body's immune system (8-11). The proper selection of quantity and composition of food can affect the body's functions in one direction or another.

There are many studies focused on food products and biologically active components in them, having the ability to positively affect the health of

the human body. The concept of functional and dietary foods that have a positive effect on human health is of interest to professionals in various fields. Trends observed in the nutrition of the Bulgarian population, including students, are hyperenergy, hyperlipidity and high salt consumption.

In the modern world, sport is essential in people's lives. Its application in different directions and with different purposes, such as educational, cognitive, healing, social-integrative, etc. has grown tremendously. Decreased physical activity is one of the essential health and social factors for

increasing immobility in humans and for the emergence of a number of diseases (7). Filkova and col. (5) physical activity is a major factor in health and wellbeing.

Digitalization and modern technologies are increasingly requiring online teaching in higher education. The current situation related to the global pandemic situation has massively introduced this way of training. Along with its positive features, it also has its problems. They are especially pronounced in the direction of sports and nutrition of people in general and of pupils and students in particular.

There are many factors that affect the health, nutrition and physical activity of students: hereditary predisposition to diseases associated with weight gain, endocrine and metabolic factors, systemic nutrition, excessive consumption of carbohydrates, saturated fats, the wrong ratio of essential nutrients, the presence of a number of harmful eating habits, various social factors such as family income, education and employment of parents, living conditions; various emotional - psychological factors, etc (1).

The underestimation of the threats arising from eating and physical activity habits also contributes to the unhealthy behavior of students (4). Sport is often underestimated as a means of overcoming stress, the negative impact of the environment, dealing with difficulties in social integration and more. Sport is the subject of research in many scientific disciplines: medicine, pedagogy, psychology, sociology and others.

The promotion of a daily healthy lifestyle and the choice to achieve wellbeing through healthy behavior are leading elements on which the fight against the consequences of a sedentary lifestyle depends [2,3,6]. Of great importance and with a significant contribution to the health and physical condition and wellbeing of students are well-

selected in quantity and quality foods and the frequency and duration of physical activity.

The purpose of the study is to establish and analyze data related to nutrition and physical activity and interests of students.

MATERIALS AND METHODS

The study included 100 students from the Medical College at the Medical University - Plovdiv, who conducted an anonymous survey containing questions to clarify the possible reasons for the increase in the amount of food and changes in its quality, changes in the motivation for sports and physical activity of students during online training. Of exceptional importance are their own motivation and their ability to maintain a normal body weight and practice sports. Statistical processing of the completed surveys has been made and the obtained results describe the main problems in their online training.

RESULTS

The opportunity for students to study from home brings with it a number of problems. The obtained results show that the main negative areas are: immobility, lack of conditions and motivation for sports, predisposition to more frequent eating, intake of more and lower quality food, weight gain.

Students from different specialties, in different range of years, take part in the survey. The distribution by years is presented in **Table 1**. It can be seen that the majority of students (55%) are under the age of 21. This shows that they entered the College immediately after graduating from high school. Due to the dynamic political, economic and social changes affecting the market economy of the country and the desire of people to retrain or practice a certain profession, it can be seen that students aged 21 to 30 and 30 to 40 have a high percentage of presence, respectively 26 and 14%.

Table 1. Age Group of Surveyed Students

Age	Under 21	From 21 to 30	From 30 to 40	Over 40
Female	44 %	25 %	5 %	4 %
Male	11 %	8 %	2 %	1 %
Total	55 %	26 %	14 %	5 %

Analyzing the height of the students participating in the survey, it was summarized that the average

height for girls and boys is as follows: 167 cm for girls and 174.5 cm - for boys.

To the question "Did you gain weight during online training?" 56% of respondents answered "Yes", 31% - "No" - ie. No change and 13%

reflect a decrease in body weight, which may be due to worries; good diet or other factors that helped reduce it. The results are presented in

Figure 1:

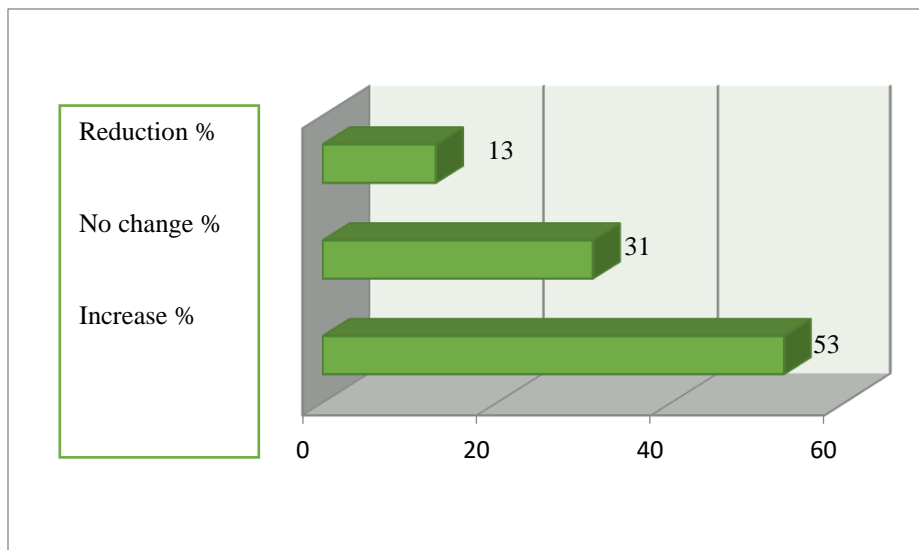


Figure 1. Change in Weight in Surveyed Students

The percentage of overweight students is high, which in turn shows that during online training the predisposition to gain weight is high. This is of concern, given that overweight and obesity in general are a serious problem worldwide, even before the introduction of this type of training.

To the question: "Has the quantity and quality of the food you eat during the day changed?" Again the percentage of respondents is Yes, it increased - 47%. In 25.5 percent of the respondents, the answer is negative, and 27.5% cannot decide (**Figure 2**):

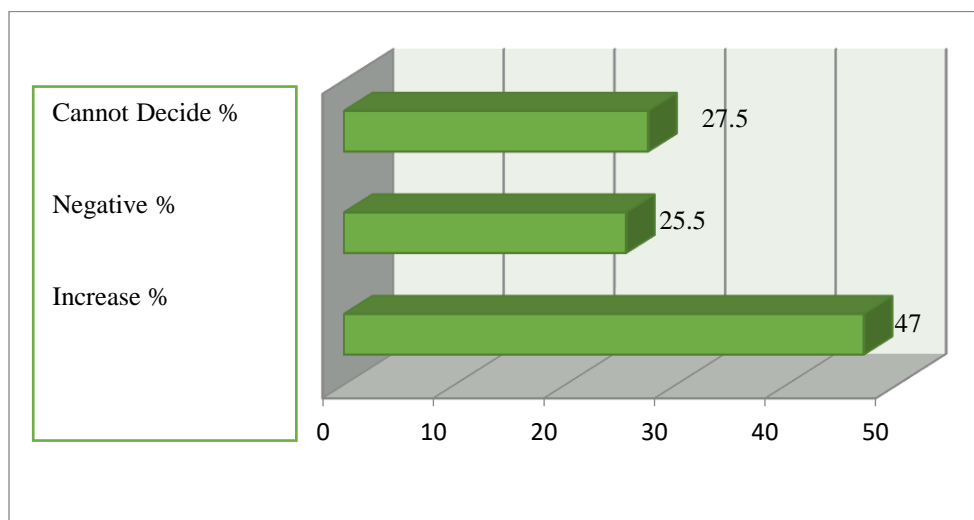


Figure 2. Change in the quantity and intake of food

The increased time spent at home in front of the computer leads to a quantitative and qualitative change in the students' diet. Most of them share

that the amount of food consumed during online training has increased and its quality has deteriorated. These are factors that have a serious

impact on the weight and health of students, which is why it is extremely important to take measures to correct them.

To the question "Do you have time and place to practice any kind of sport?", 41.5% answered that they have neither time nor place, 37.3% - have a place but do not have time, 11.2% - have time but do not have enough space at home and 10% of

respondents do not want to play sports at all. The results are presented in **Figure 3**.

The motivation to play sports in most of the respondents is visible, but they are limited by the time and space they have. The percentage of students who have the necessary time, but do not have the necessary place is not small, and vice versa. The percentage (10%) of those who do not wish to practice any sport is very small.

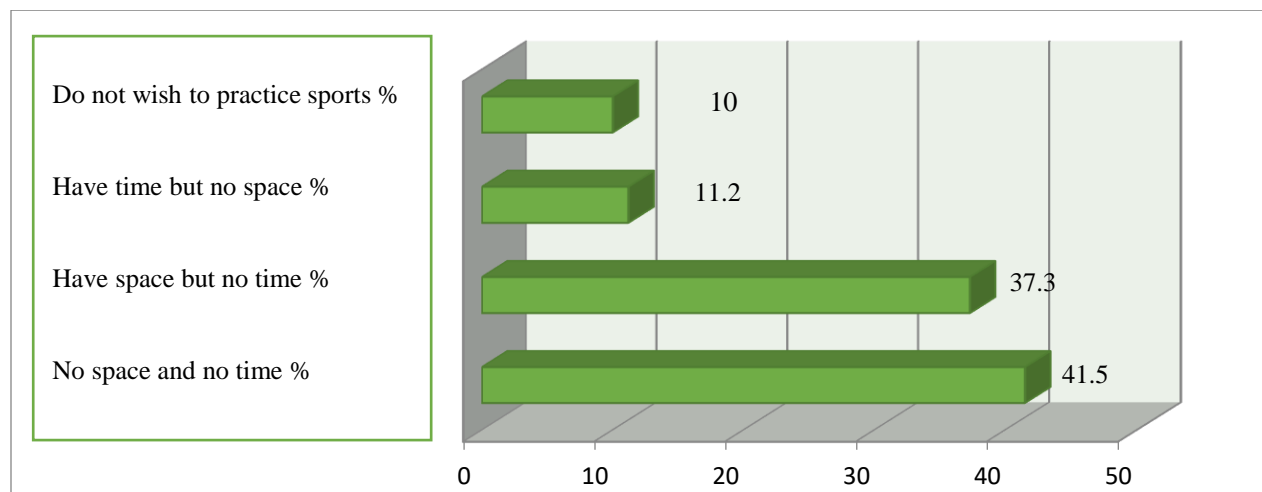


Figure 3. Availability of Time and Space for Practicing Sports

Rational and balanced nutrition, as well as sports are key elements of a healthy lifestyle for every person. Given the complicated pandemic environment and the need for online training in recent months, strengthening control over the quality and quantity of food, as well as devoting some time to sports, are essential for maintaining a normal body weight, healthy body and healthy student mind .

CONCLUSION

Summarizing the questions from the survey, it can be concluded that online learning can cause complications in the health of students and the development of diseases at a later stage: high blood pressure, diabetes, cardiovascular disease and others . Therefore, it is extremely important to study them and take timely measures to correct them.

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