

Nutritional value of student's diet during the university stage in faculty of food products technology from Timisoara

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Abstract

The goals of our study was to analyze the results from a nutritional questionnaire special design for students from Faculty of Food Products Technology of University of Agriculture Sciences and Veterinary Medicine of Banat in Timisoara, Romania. The questioned students were in the second year of study, which lives in campus or their home, boys and girls, having between 20 and 25 years old. A total of 68 students – 20 boys and 48 girls – had answer at the same questions and participate as volunteers. Applied questionnaire was designed for observations of three aspects such as: body shape perceptions and health consequences; eating and food habits; and physical activity and students' perception. Results from questioner were presented as percent values and some of the obtained data were presented graphically. From their answers easily we observed that boys' goal is body shape and girls' goal is to be thin, without any correlation with health and balance diet. Students replace fruits, vegetables and cooked meals with fast food products and worst then this they prefer to have snacks, sweets, nuts, and sugar added drinks. No correspondence was observed between optimal energy level and macro- and micronutrients in students' diet and habits. Boys, generally, are better hydrated then girls, even if girls are more careful with their figure. Also, physical activity is present more in boys' lifestyle then in girls' habits – even during their student stage more girls then boys become overweight. Our results demonstrate that eating and food habits in students' life are associated with unhealthy lifestyle, with medical consequences in time – such as obesity and diabetes. Also, we observed that students are very responsive to nutritional guidelines for a better lifestyle and good health status. We think that in schools and universities nutritionist have to present and promote health diets with the benefits and consequences of their food and eating habits, to obtain good educational results and good-health teenagers.

Keywords: Student's diet, food and eating habits, nutritional value

1. Introduction

Because it is obviously that the students from our university are theoretically preoccupied by their body "shape" we thought that we could become and help them beginning with a nutritional questioner for them. Their lifestyle demonstrates that their desire – especially

for girls – is to be thinner and skinny, but not eating well and healthy.

Eating and food habits demonstrate that students take more calories then they need, but less macronutrients and micronutrients and are more interesting in figure then health (Arroyo Izaga et al., 2006; Brown, 2008; Insel et al., 2004; Pope, 2000).

Nutritional researchers all over the world observed that students' eating habits are not healthy and very different between students that live at home with their parents or family, or live in a student campus (Papadaki et al., 2007). Students that have their own family or live with their parents eat at list one cooked meal a day and their food habits and eating habits are healthier compared to students form campus. Their food choices assure a higher percent of essential nutrients and a more adequate percent of calories – that is very good. Also, they eat fruits, vegetables, cooked food, and they diversify their diets. But, the students that live in a student campus changed a lot their food and eating habits, decreasing the consumption of cooked food, fresh fruits, vegetables, whole-grain cereals and increasing the consumption of sugar added beverages, sugars, alcohol, refined food products and fast food intake – that is very bad. This problem is found all over the world and more and more nutritionists try to inform the students from colleges and universities about the negative health consequences (Ruka et al., 2005; Daigle Leblanc and Villalon, 2008; Moore et al., 2008).

Usually, students know well enough general nutritional information, what they should eat and what they should avoid to eat. But, even so, they eat sweets products and sugar added beverages for assuring the right energy level (kcal). From their answers we can easy observe that boys are more interesting about their “body shape”, and girls are more interesting to be “thin”. Also, boys are more interesting about nutritional information of foods correlated to their goals compared to girls. Same data were found even from others nutritional researchers from other countries (Brunt and Rhee, 2008; Satalic et al., 2007).

Latest nutritional studies referred to students' eating and food habits, try to bring for students enough arguments to change their life and eating habits for a good health and more dynamic life.

2. Materials and method

In the present study we wanted to test the nutritional knowledge's, food habits and eating habits for the students from the second year of study, at the Faculty of Food Products Technology, after half of semester of nutrition courses. We thought that students from the first year of university have to accommodate with the student life and the questionnaire results would not be relevant.

For good and relevant results of present questioner, the dean of faculty and students were informed in advance about the questioner and students had the possibility to refuse to answer at the questioner' questions without any consequences.

Most of the questioned students were very young, without their own family, which wanted to be full-time students and employees in the same time. From this reason students eat in hurry fast-food products, snacks, a lot of coffee and sugar added beverages and sweets. The students were represented by boys and girls, a total of 68 students. Also, we ask the students to answer in the same class-hour at the questions from the questioner because we did not wanted students to talk to each other and give unreal answers. The age range for questioned students was between 20 and 25 years old (fig. 1). Thus, from 68 students – 44 were 20 years old, which represent 64.7%. Also, from 20 questioned boys – 11 were 20 years old (55%), and from 48 girls – 33 were 20 years old (55%), and from 48 girls – 33 were 20 years old (68.75%).

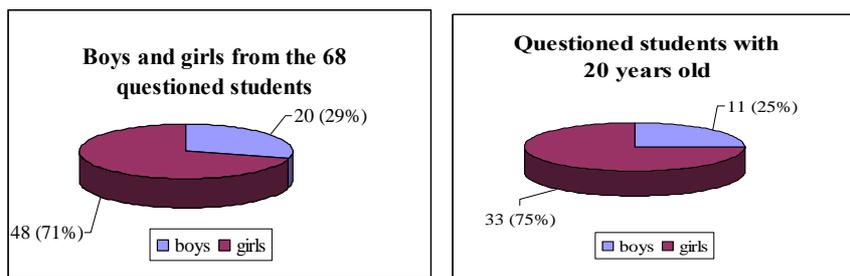


Fig. 1. Characteristics of students' participants of nutritional questionnaire from Timisoara, Romania

The nutritional questioner had short answers, and most of the answers were "Yes" or "No" – students had to mark their answer. The results were statistically performed for total number of students and for boys and girls.

The questioner had questions regarding their body mass index, their age, gender; diet, food and beverages habits – and the conclusions of this study were very close with what we expected. Results and discussions are presented in the next section, graphically, for a better understanding.

3. Results and Discussions

We choose to present alternatively the results of this study, first for boys and secondary for girls. This decision was made because eating and food habits are very different between boys and girls, but presented concomitantly is very good for comparative observations. Response rate for questionnaire was of 100% both for boys and girls (68 students).

Body shape perceptions and health consequences. At our question about boys' body shape perception, 65% from boys declared that are pleased and only 35% of boys do not like their body shape. Also, 26% from boys are preoccupied by their body shape, 30% do not care about their body and 44% from boys would like to have more care about their body shape. It is very good that we can observe that even if not all boys have nice body shape they seem to be preoccupied by their look.

Compared the results we can easy observe that most of participated girls (52%) are not

pleased with their perception of body shape, and 79.16% from questioned girls care about their figure. Also, 18.7% would like to care but they don't, and only 2.14% do not care about their body shape.

Most of the questioned boys (60%) know that they do not have a balance diet and only 40% believe that have balanced diet. About the same percent is found in girls' answers, being a little more careful because 68.75% don't have a balanced diet and 31.25% have a balanced diet. But, 95% of boys and 100% for girls would like to have a balance diet. Less of half from questioned boys and girls have a balanced diet, and the others would like to change their life-style and to achieve a healthier diet that demonstrates a good perception of relation between body shape and health consequences.

Eating and food habits. Three quarter for boys (75%) has minim three meals a day, and about 55% of them eat one hot cooked meal daily. In girls statistic we found a worst situation because only 54.16% of them eat at least three meals a day, and 60.42% eat one hot cooked meal daily. In the morning 65% from boys and 56.25% from girls have the breakfast and only 35% from boys and 43.75% girls are not used to eat in the morning.

Also, 25% from boys eat vegetables and fruits daily, 55% eat twice or third times in a week, and 20% from boys do not like and eat vegetables or fruits (fig. 2a). Girls seem to understand better the importance of vegetables and fruit in diet, because 35.42% eat every day vegetables and fruits, 52.08% eat twice or three times a week, and 12.6% do not eat any vegetables or fruits (fig. 2b).

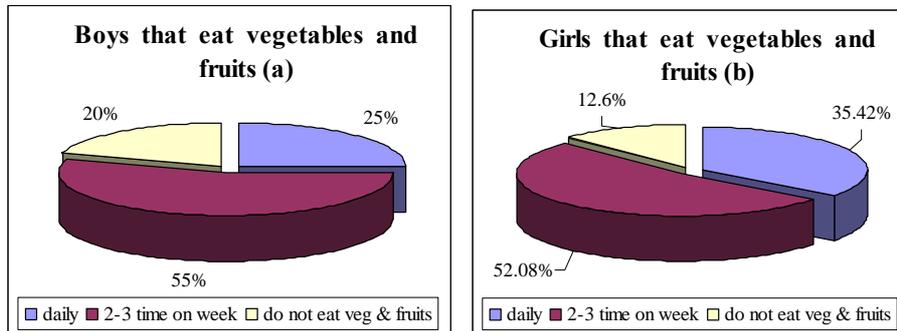


Fig. 2. Vegetable and fruit choices for diet of questioner participated students (a – for boys; b – for girls)

Approximately 70% from boys and 64.58% girls use to eat snacks, seeds or various nuts. And 40% from boys and 25% girls eat 50g-100g sweets everyday, 25% boys and 45.83% girls eat 25g-40g sweets (especially cocoa chocolate), and 35% boys and 29.1% girls from questioned students do not have this bad-habit.

But participated students to our research are careful with hydratation because about 85% from questioned boys and 70.83% girls ingest between 1L and 2L liquids daily, 15% boys and 18.75% girls ingest more then 2L liquids. Also, only 10.42% girls ingest less then 1L liquids daily that is very

unhealthy habit, and in time cause renal and circulation problems.

Physical activity and students' perception. Almost a quarter of questioned boys (20%) do exercise every day, 25% of them do exercise twice or three time a week, 35% of boys exercise one time a week and 20% of boys do not exercise at all (fig. 3a). Girls are not so careful with physical activity and only 4.16% exercise every day, 25% girls do exercise twice or three time a week, 45.83% have physical activity once a week and a quarter of them (25.01%) do not have any physical activity (fig. 3b).

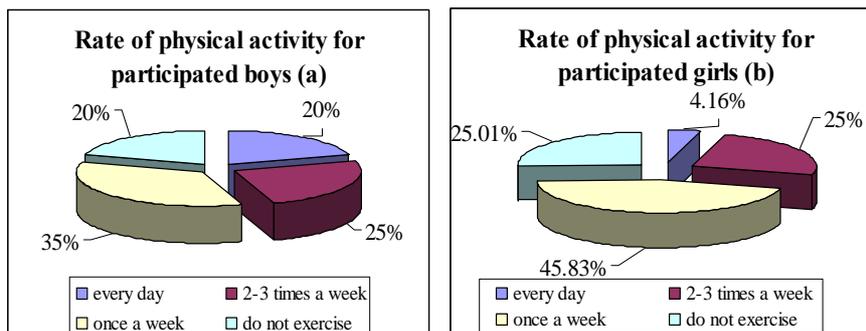


Fig. 3. Exercise habits for questioned students from our faculty (a – boys; b – girls)

These data demonstrate that students during the university stage does not have a balanced diet, ingest food products with high and very high energy level but with very low nutrient content. Also, students do not have breakfast and hot cooked meal every day; do not eat enough fruits and vegetables. Their health status take the

second place in their top and for the first place is body shape. Students do not eat food products with micronutrients and dietary fibers and because of their intellectual and physical effort; sometimes they get ill very easy (Laskshin and Kozhevnikova, 2008).

Bad habits to eat snacks and sweets instead healthy food make them more impatient and tired, and as we can see in the last years, the incidence of diabetes and obesity increased very much in Romanian and not only (Arroyo Izaga, 2006). During the university study an important percent of girls become fatter and some of them become obese with psychological and medical problems.

4. Conclusions

First conclusion, very easy to observe, is that student boys are more interesting about their "body shape", and student girls are more interesting to be "thin" – but this goal does anything to do with their health status.

Most of questioned students would like to have a balance diet, are interesting to change their lifestyle and wants to do more physical activity to achieve a healthier organism. Also, we can observe that boys are more careful with their diet then girls in some answers, but girls eat more vegetables and fruits than boys. Boys ingest more fluids then girls, and also they exercise more then girls.

Analyzed the results of this study we think that nutritionists have to present to the students the benefits of a healthy diet and the consequences of their eating habits. Thus, they should encourage the promotion of a healthier diet and lifestyle to obtain good educational results and good health body.

As a general conclusion of this work, we suggest that nutritional researchers have to extend their studies in nutrition field and create new applied strategies (diet programs) for teenagers. Also, they should have administrative and financial support for implementation of their nutritional programs especially in campus eating places.

References

1. Arroyo Izaga M., Rocandio Pablo A.M., Ansotegui Alday L., Pascual Apalauza E.,

Salces Beti I., Rebato Ochoa E. (2006) Diet quality, overweight and obesity in university students, *Nutr. Hosp.*, Nov-Dec, 21(6), 673-679

2. Brown A. (2008) *Understanding Nutrition – Principles and Preparation*, Third Edition, Thomson Wadsworth Publ.

3. Brunt A.R., Rhee Y.S. (2008) Obesity and lifestyle in U.S. college students related to living arrangements, *Appetite*, Nov., 51(3), 615-621.

4. Daigle Leblanc D., Villalon L. (2008) Perceived stress and its influence on the eating behaviours of students at the University of Moncton, Moncton Campus, *Can. J. Diet Pract. Res.*, 69(3), 133-140.

5. Insel P., Turner Elaine R., Ross D. (2004) *Nutrition*, Second Edition, American Dietetic Association, Jones and Bartlett Publ, Sadbury, Massachusetts.

6. Laskshin A.M., Kozhevnikova N.G. (2008) Diet s a factor in the formation of health and working capacity of students, *Vopr. Pitan.*, 77(1), 43-45.

7. Moore C.K., Fitch-Hilgenberg M.E., Robertson L.J., Apple L.M. (2008) Change in Eating Habits of College Students and Increased Weighted Discrepancy Score Calculated with the Body-Image Ideals Questionnaire, *Journal of The American Dietetic Association*, 108(9), p. A50-A50.

8. Papadaki A., Hondron G., A Scott J., Kapsokefalou M. (2007) Eating habits of university students living at, or away from home in Greece, *Appetite J.*, Jul. 49(1), 169-176.

9. Pope H.G.Jr., Gruber A.J., Mangweth B., Bureau B., deCol C., Jouvent R., Hudson J.I. (2000) Body image perception among men in three countries, *Am. J. Psychiatry*, 157(8), 1297-1301.

10. Ruka S., Kenji T., Rie A., Chuan-Jun L., Naotaka S. (2005) – Nutritional knowledge, food habits and health attitude of Chinese university students – a cross sectional study, *Nutrition J.*, 4-4.

11. Satalic Z., Baric I.C., Keser I. (2007) Diet quality in Croatian university students: energy, macronutrient and micronutrient intakes according to gender, *Int. J. Food Sci. Nutr.*, Aug., 58(5), 398-410.