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THE EATING HABITS OF MEN AND WOMEN IN ADOLESCENCE

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Abstract: The period of adolescence is characterized by rapid physical, biological and social changes, which is reflected in a specific daily rhythm of work, behavior and diet. Diet of adolescents is characterized by eating large amounts of fast food. Social changes of population that have occurred in recent years affect the behavior of adolescents and their eating habits. The aim of the research in this paper was to determine the attitude of high school students from several towns in the Republic of Srpska (Bosnia and Herzegovina) toward eating and consumption of fast food as food products that are commonly found in their menu.

In this paper, a survey is conducted among high school students of both sexes aged between 15 and 18. The survey included 12 questions that can be classified into two groups: knowledge of fast food and eating habits.

Half of the interviewees (49.73%) believe that there is no particular reason for choosing fast food, while one-third (33.78%) choose this kind of food products because of their taste. 51.60% is careful about the amount of fast food that they eat. Over half of the interviewees (58.09%) do not have a reason to give up consuming fast food, and 31, 58% do it so because they think that this diet is harmful to health.

For breakfast 19,11% of the interviewees eat croissants and buns, sandwiches or candies that they buy on their way to school. During and after meals 33.62% of the interviewees usually drink water, and 21.53% drink refreshing fizzy drinks or fruit juices (21.02% of responses). The amount of fizzy drinks that the interviewees drink during the day goes from one glass (30,09%) to 2-3 glasses (24.7%). The interviewed students mostly like eating meat and vegetables (37.82%), fruit (23.06%), but they do not like eating vegetarian dishes (31.04%), strongly flavored dishes (18.07%) and meatless dishes (17.24%).

Keywords: Fast food, adolescents, eating behavior.

Introduction

The transition from childhood to adulthood is a period that people often speak and write about, this period is known as adolescence. It is a period of life in the age group of 12 to 18, and it is defined as: “the transition between childhood to adulthood and it is significant for the rapid changes that affect all areas: physical, biological and social” (Lingren, 1999). The central event of adolescence - puberty (lat. Pubertas - sexual maturation) is the age when a sexually immature individual – a child transforms into a person capable of reproduction of the species (WHO, 1986 Grujic, 2000 Grujic and Miletic, 2006).

Adolescents have characteristic behavior patterns, which are unique and distinctive and differ qualitatively from other developmental phases in life. Late night going out for fun, affects the daily rhythm of work and rest, resulting in a specific diet of high school students (Mihajlovic et al, 2000). These authors found out that 67% of the interviewees have breakfast, 90% of all of the interviewees have lunch, and 84% of boys and 61% girls have dinner. More boys (55%) than girls (32%) take snack. As for the consumption of certain types of food, girls in Belgrade take more fruit, fresh vegetables and milk than boys. The two-thirds of the interviewees eat sweets once or more than once a day. 35% of high school students never eat rye bread or wholemeal. Having in mind that this is a time of intense growth and development, that needs for energy are increased they should pay attention to eat properly. The choice of dishes and meals are based on the habits of families. Adolescents are not given much information about

the importance of proper nutrition by experts, while on the other hand they tend to choose restrictive diets (Mihajlovic et al, 2000).

It was found that boys in Pancevo eat sweets (chocolates and candies) (13.90%) more than girls. The study showed that the consumption of sweets among adolescents in Pancevo is reasonable. Boys in Pancevo had never eaten wholemeal bread (which is 11.34% more than girls) and girls from Pancevo more than 12.93% drink milk more often than boys. As many as 10.20% of girls responded that they eat breakfast every day, and 19.52% of boys from Pancevo responded that they have breakfast once a week. The consumption of Coca-Cola, juices containing sugar, then cakes and pastries is significant, there are no significant differences in relation to gender (Mihajlovic et al, 2000; Brkic et al, 2000; Deanović et al, 2000).

Fast food like burgers, hot dogs, sausages, French fries is presented every day in the diet of school-children and it is consumed equally by both genders (Brkic et al, 2000; Deanović et al, 2000).

Milk as one of the essential ingredients is needed for all people, especially children and young people. 70% of pupils interviewed in the in the survey conducted by Brkic et al. (2000) said that milk is presented in their daily diet, while 10% of students said they never drink milk. 40% of students never eat rye bread. Most schoolchildren have breakfast and lunch every day. Smaller number of students has dinner, and only half said that have snack. Having in mind the importance of personal satisfaction when a man has a beautiful and healthy figure it is not surprising that a significant number of students think that they should put their weight down, and that they should rationalize food consumption (Brkic et al, 2000). 30.5% of women and 28.5 men said that they consume fruit the most, and 25.8% of women and 23% men eat vegetables the most (Kamenko-Marc et al., 2014).

One of the parameters of proper diet is having of all main meals a day. A relatively large number of high school students 83.3% eat breakfast every day, 12.2% take this meal irregularly, and only 2% never have breakfast (Kljakić, 2000). This is significant, because it is known that the morning meal, breakfast, contributes to the success in work activities, and ensures better learning. The evening meal is much less frequent. Only 77.9% of high school students have dinner every day. Here, the difference among the genders can be seen: almost one third of girls (31.3%) ignore dinner, and 6.6% do not have dinner at all. The survey results showed that 46.8% of girls and 14.8% of boys think that they have too many kilograms (10.5% of those girls are on diet). The percentage of girls who do not eat dinner is significantly higher in the group of those who are overweight than in the group that believes that it has adequate body weight (35.1%, 8.0%, respectable) (Kljakić, 2000). 53.5% of women and 65% of men said they have 3-5 meals a day (Kamenko-Marc et al., 2014). Surveys conducted in Australia showed that young men and women have different attitudes toward food they consume daily (Kiefner-Burmeister et al., 2014; Jiang et al., 2014).

Besides the regular consumption of meals, ingredients and variety of food are significant for the proper development of children and the prevention of diseases. Properly selected nutrients should ensure an optimal intake of all nutrients, protein, fat, carbohydrates, vitamins, minerals, and adequate energy intake.

Materials and Methods

Research (survey) in this paper was conducted in 2014 on a sample of 1,000 teenagers from Banja Luka, Gradiska, Srbac, Teslic and Celinac. During the research the questionnaire is used, it consisted of several sections related to: the general information about the interviewees, information on the type of food they consume and data about where and how they eat fast food.

530 females and 470 males were interviewed. The age of the interviewees was between 15 and 19, the average age of females was 17,16, while the average age of males was 16,97.

Tabela 1. Demographics data of the interviewees

Parameters	
The number of men	470
The number of women	530
Total number of the interviewees	1000
Age of interviewees	15-19
The average age of men	16,97
The average age of women	17,16
Number of family members	
five	35,0%
four	45,%
three	14,8%
two	5,0%

Knowledge of fast food

As it can be seen from the chart (Chart 1), adolescents think of fast food as food that is mainly purchased in restaurants *McDonald's* (33.44%), pizza and other pasta dishes (27.77%), so as food sold on

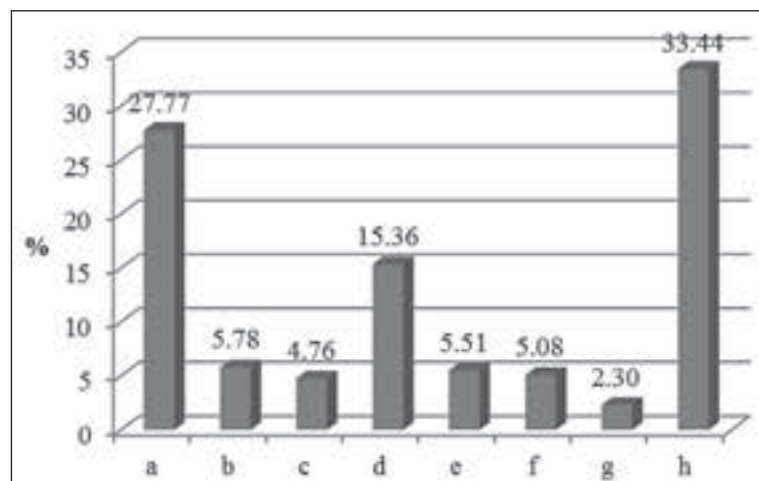


Chart 1. Responses to the question “What is “ fast food “ for you?”

a- Pizza and other pasta dishes; b- A frozen pasta dishes; c- Dishes with lots of mayonnaise and sauce; d- All meals that are sold on the street; e-Meat pie and other types of pie; f- All ready meals in a restaurant or supermarket; g- Popcorn; h- *McDonald's* food and similar food;

Results and discussion

The survey included 1,000 interviewees, 530 females and 470 males. The age of the interviewees was between 15 and 19, the average age of females was 17,16 and the age of males was 16,97 (Table 1).

According to the number of family members was the most represented group with four members of the family (45.2%), followed by five members (35.0%). Representation of families with three members was 14.8%, and with two members of 5% (Table 1).

the street (15.36%). Other responses were far less frequent, they vary from 2.30% (popcorn) to 5.78% (frozen pasta dishes). Danford et al. (2010) think of fast food as food that is eaten for breakfast, hamburgers, chicken products, pizza, salads, sandwiches and side dishes, so everything that can be quickly prepared .

To the question “Where can you buy fast food?” the majority of the interviewees (39.58%) answered that fast food can be bought at fast food kiosks. 26.37% of the interviewees answer to this question associate to the shops and supermarkets, while 13.93% of the interviewees believe that fast food can be bought in school cafeterias, 10.39% think it can be bought in pie-shops and 9.73% in kebab shops (Chart 2). Places for selling fast food are conditioned by various factors, but

in most cases in the Republic of Srpska the owners mostly choose the cheapest variants or the objects that meet minimal requirements. These are objects where food is only sold, and consumers consume it on the street or take it to school or some other places where it can be consumed as soon as possible. This applies to all fast food objects regardless of the type of the product that is being sold. Fast food objects are usually placed in those places where large number of potential consumers are gathered. They are close to schools, colleges, markets, bus stations. Temporary facilities that offer fast food can be seen at fairs and at various celebrations where a lot of people are gathered and where it is not possible to serve restaurant food to all visitors. (Lombard, 2005 Thomadsen, 2007; Baltić et al. 2012).

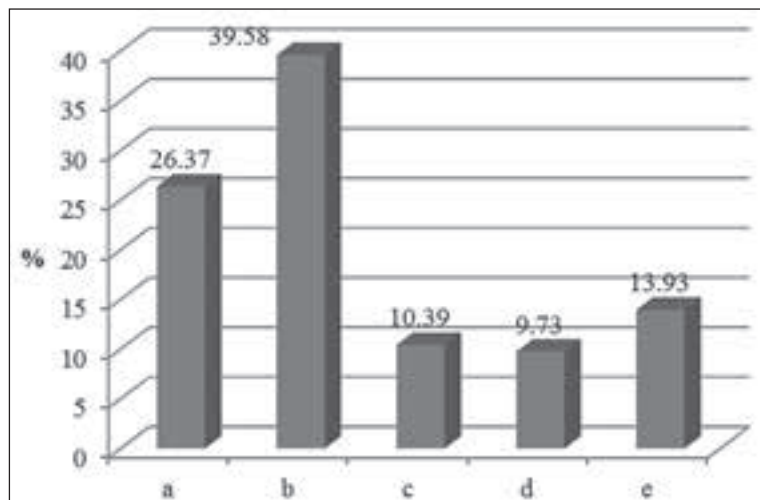


Chart 2. Answer the question “Where can you buy fast food?”

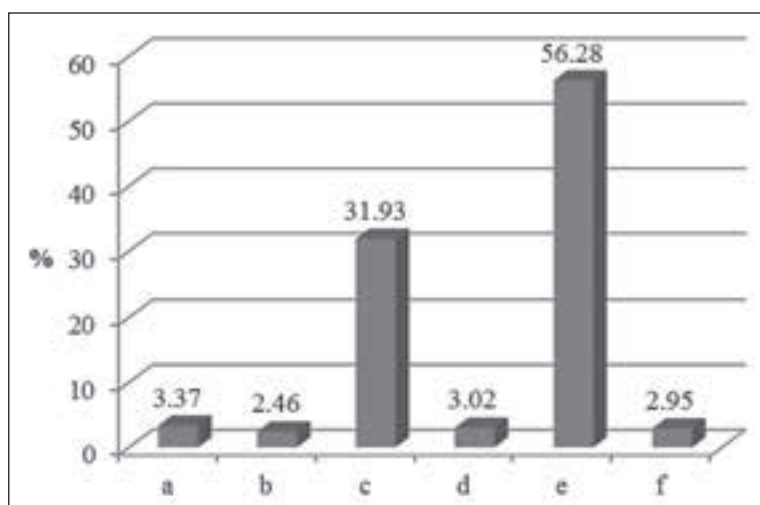


Chart 3. Responses to the statement “In fast food there are not enough ...”

a- Fats; b- Salt; c- Proteins; d- Sugar; e- Vitamin; f- Spices

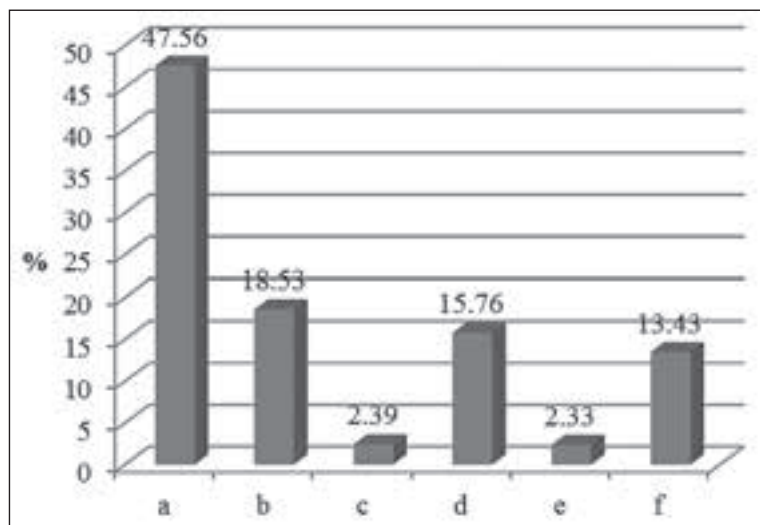


Chart 4. Answers to the question “Which ingredients of fast food are harmful to the body?”

a- Fats; i- Salt; i- Proteins; d- Sugar; e Vitamins; f- Spices

a- In each store and supermarket; b- In the kiosks of ready meals;
c- In pie shops; d- In kebab shops; e- In school cafeteria

Several questions in the survey were related to the nutritional value and quality (sensory characteristics, safety) of fast food. The interviewees had to finish the following statement “In fast food there are not enough ...” we can conclude from the comments that were given that students believe that there are not enough vitamins in fast food (56.28% of responses) and protein (31.93% of responses) while only small number of the interviewees think that fast food lacks fat, salt, sugar and spices (3.37%, 2.46%, 3.02%, 2.95%, respectively) (Chart 3).

Students think that the most harmful ingredients of fast food are fat (47.56%), salt (18.53%), sugar (15.75% of responses) and spices (13.43% of responses). Only 2.39% of the interviewees believe that proteins are harmful, and 2.33% think the same of vitamins (Chart 4).

The interviewees showed good knowledge and they are well informed that fast food does not contain enough vitamins and protein as the most valuable food ingredients, and that it contains ingredients harmful to the body in large quantities (fat, salt and refined sugar). Data from the literature suggest that fast food is rich in energy (fat, carbohydrates) and that content of salt is often higher than optimal. When we talk about fat we have in mind saturated fatty acids and trans fatty acids (Stender et al, 2007, Mozaffarian et al, 2006, Rangan et al, 2009, Webster et al, 2009, Boskovic et al, 2015).

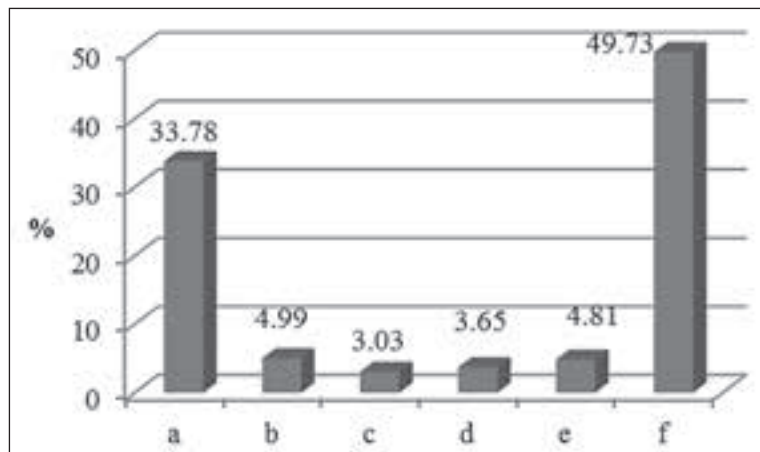


Chart 5. The answer to the question “Why do you choose fast food?”

a- Because of its taste; b- Because of its look; c- Good health effects; d- Because of its energy; e- Because of its popularity; f- There is no particular reason

To the question “Why do you choose fast food?” almost half of the interviewees (49.73%) responded that “there is no special reason”, and over one-third (33.78% of responses) choose fast food because of its “taste”. Other reasons that influence food choices (appearance, health, energy, popularity) the interviewees considered less important (3.03% to 4.99% of responses) (Chart 5). This may be the result of habits to consume a particular food taste or hedonistic approach to the choice of meals. When choosing a meal a consumer makes choice based on the level of satisfaction that this meal provides. However, almost half of the interviewees (49.73%) have no particular reason for choosing fast food.

This may be either due to the fact that the answer to this question is not related to any of the alternatives, or may be due to the fact that several related reasons (availability, price, curiosity, etc.) influence the selection.

About 51.60% of the polled students said that they are careful about the amount of fast food they consume, while 48.40% are not (Chart 6). This frequency of response may be understandable if we take into account the age category of the participants in the survey (adolescents), different habits, family situation, information, health care, financial status, etc. (Jankovic et al, 2000).

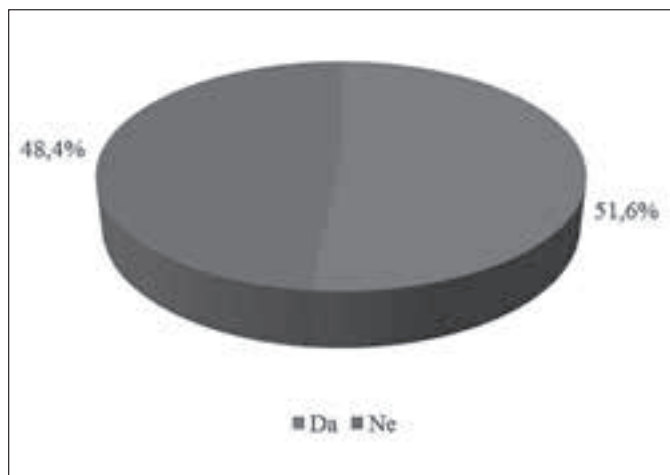


Chart 6. Answers to the question “Do you take care of the amount of fast food that you eat?”

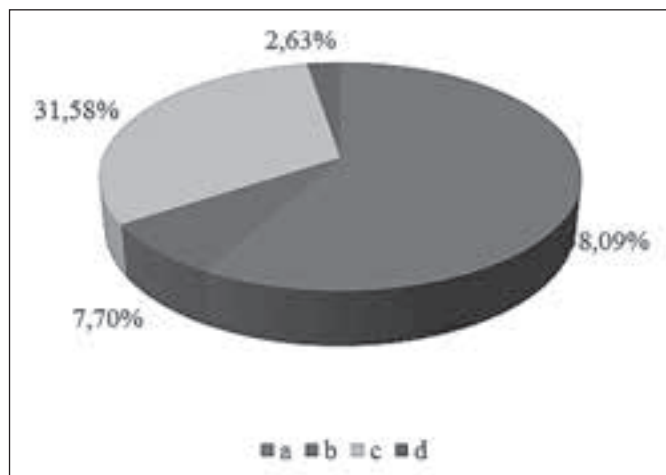


Chart 7. Answers to the question “Are there any reasons why you do not want to eat or eat a limited amount of fast food?”

a- No; b- Parents ban; c- Bad for health; d- Because of the disease they suffer from

58.09% of the interviewees do not have a particular reason why they do not want to eat or why they eat a limited amount of fast food, and 31.58% of them do not eat fast food because they think that this kind of food is harmful to their health. Among those who do not want to eat or eat a limited amount of fast food, 7.70% of the interviewees do that because their parents ban them to eat it, and 2.63% because of illness they have (Chart 7).

Eating habits

Eating habits of people significantly influence the choice of foods, frequency and timing of daily consumption. Eating habits are acquired in childhood. From the responses to the question: “What kind of food do you consume the most frequently,” it is evident that the interviewees for breakfast eat meal that is bought not prepared at home. Only 6.86% of the interviewees for breakfast have a sandwich that is prepared at home.

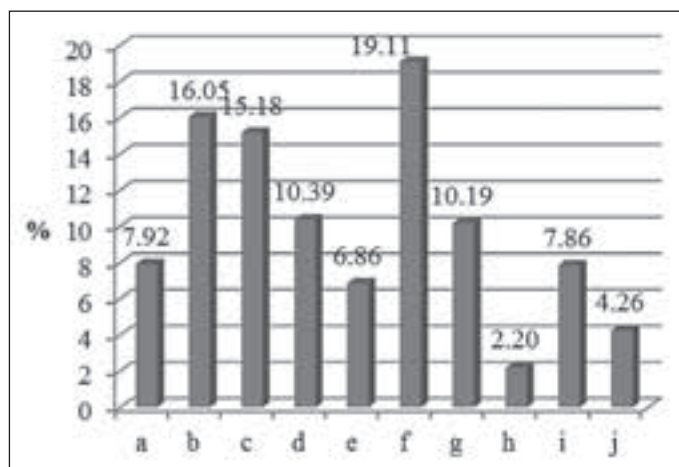


Chart 8. Answers to the question “What do you usually eat for breakfast?”

a- The meal from the school cafeteria; b- A dish that you buy at the kiosk in the school yard; c- sandwich that you buy at the supermarket; d- sandwich that you buy at the kiosk; e- a sandwich which you bring from home; f- Rolls and the like pastry; . Sweets that you buy in the store; h- sweets that you bring from home; i- warm pie; j-kebab

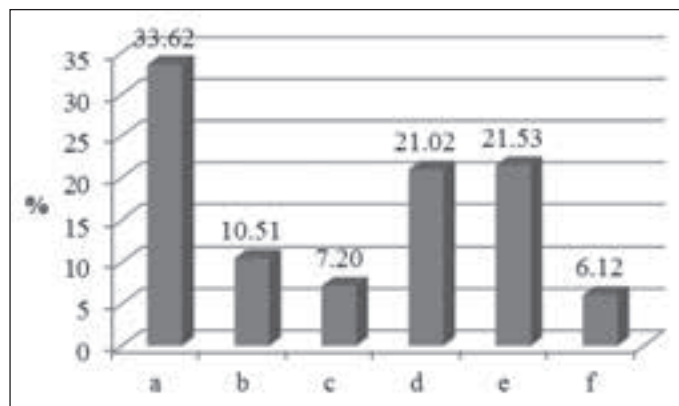


Chart 9. Answers to the question “What do you drink during and after meals?”

a- Tap water; b- Bottled non-carbonated water; c- Bottled carbonated water; d- Fruit juices; e- Refreshing drinks; f- Nothing

To the question “What do you usually eat for breakfast?” the interviewees answered that the most common breakfast consists of rolls and similar pastry (19.11%), they eat food bought at a kiosk, in school or a sandwich bought in a supermarket (Chart 8).

During and after the meal the interviewees most often drink tap water (33.62%), while 21,02% and 21,53% drink fruit juices or fizzy drinks (Chart 9). This kind of drinks usually contains about 10% of sugar, which may significantly affect the daily energy intake, especially if these drinks are used in large amounts. 10.51% of the interviewees drink bottled non-carbonated water, while 7,20% of the interviewees drink bottled carbonated water. 6.12% of the interviewees do not drink anything during and after the meal.

To the question what amount of fizzy drinks they drink during the day, 30.9% of the interviewees answered that they drink one glass, 24.7% drink two to three glasses, and 21.4% of them do not drink carbonated beverages at all (Chart 10.). The interviewees most often (30.9%) consume one glass of this kind of drinks (2 dl), which means that in this way they consume two grams of simple sugars. There are, however, participants in the survey who drink more than five cups of these drinks a day and thus consume more than five grams of sugar.

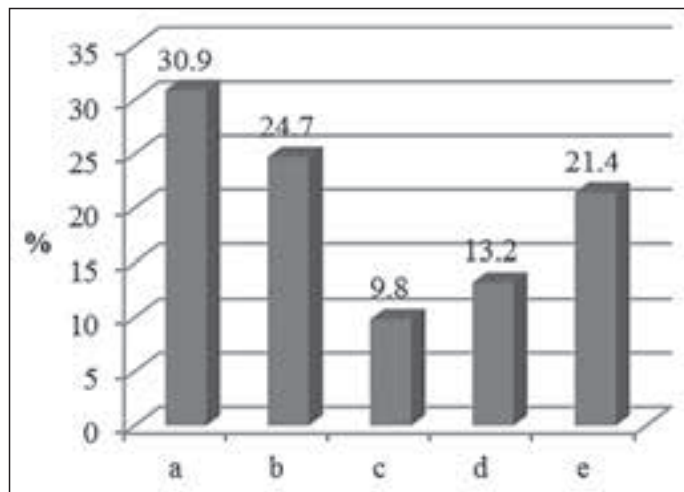


Chart 10. Answers to the question “How many fizzy drinks do you drink a day?”

a- One glass (2 dl); b- 2-3 glasses; c- 3-5 glasses; d- More than 5 glasses; e- I do not drink carbonated drinks

The least desirable dishes among the interviewees are (31,03% of responses) vegetarian dishes, then strongly flavored dishes (18.97% of responses) and meatless dishes (17.24% of responses). There is, however, the “resistance” to food rich in fat and energy (11.78%), meals with mayonnaise, sauces and gravy (12.28%) and savory dishes (8.69%) (Chart 12). This could be taken as the expected response for examined geographical area.

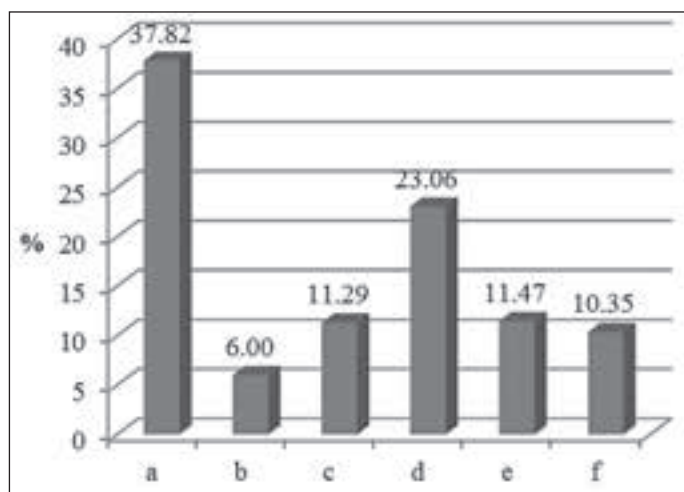


Chart 11. Answers to the question “What kind of food do you like to eat?”

a- Meat and vegetables; b- Only vegetable dishes; c- Dishes made of flour; d- Fruit; e- Only meat; f- Fast food

Traditional cuisine is presented in high school students’ diet and it’s a part of the eating habits which is seen in the fact that 37.82% of interviewees prefer meat dishes with vegetables, that is, home-made dishes (Chart 11). This can be explained by the fact that students mostly come from four-member (45.2%) or five-member families (35.0%). As the number of family members is growing the need for food preparation at home is increasing too, because it is more rational and cheaper. Participants in the survey prefer using fruit in their diet (23.06%), which is very important from a nutritive aspect. The area of Banja Luka and other municipalities in which the survey was carried out do not lack fruit, especially seasonal fruit of which some species (apple, pear, quince), under optimal conditions (cooling) can be stored until the next season.

Fast food like burgers, hot dogs, sausages and fries are daily presented in the diet of school children. According to gender, there is a statistically significant difference compared to the consumption of hamburgers, considering that boys eat them more often than girls (Brkic et al, 2000; Dejanovic et al, 2000). The survey, conducted by Kljakić (2000) showed that 83.8% of high school students eat fruit in a satisfactory amount, or at least once a day, while the percentage of those who do not eat it is negligible (0.3%). Fresh vegetables is less frequently found in the menu of our students. Only slightly more than half of the interviewees, 59.5% eat fresh vegetables every day, and 4.3% of students never eat vegetables. Bad habits are present when it comes to cooked vegetables too (40.8% of the interviewees consume it every day, and 11.2% never eat it). It is recommended that these foods are taken every day in an amount which satisfies 18% of daily energy intake.

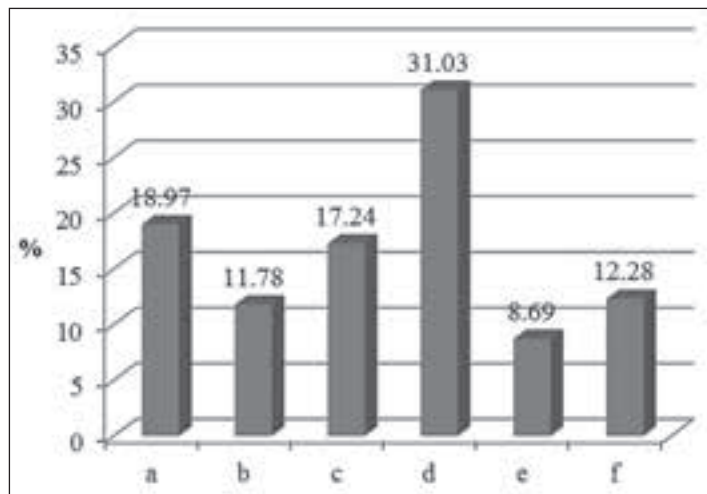


Chart 12. Answers to the question “What kind of food do not like to eat?”

a- Spicy dishes; b- Dishes rich in fat and energy; c- Meatless dishes; d- Vegetarian dishes; e- Savory dishes; f- Dishes with mayonnaise, sauces and gravy

Similar data were given by Mihajlovic et al (2000) examining the eating habits of children in Belgrade. Late going out to bars, discos and cinemas for fun or surfing the Internet delay going to bed until midnight at 60% of high school boys and girls in Belgrade. This daily rhythm has effects on eating habits. 67% of the interviewees have breakfast every day, 90% of them have lunch and 84% of boys and 61% girls have dinner. Snack takes more boys, 55% of them compared to 32% of girls (Mihajlovic et al, 2000).

Conclusion

1. In the survey about the consumption of fast food, 1,000 high school students were involved, 53% were girls and 47% were boys, aged 15 to 19, the average age of the girls was 17,16 and the average age of the boys was 16,97. The interviewees mostly came from four-(45.20%) and five family members (35.00%).
2. The majority of the interviewees (35.44%) associate fast-food with Mc Donald’s and similar dishes, pizzas and other pasta dishes (27.75% of responses), and then all the dishes that are bought on the street (15.36% of responses). According to participants in the survey, fast food can be bought in kiosks of fast food (39.58% of responses), or in the shops and supermarkets (26.37% of responses).
3. The interviewees believe that fast food does not have enough protein (56.28% of responses) and vitamins (31.93% of responses), and as the most harmful ingredients they see fat (47.56% of responses), salt (18.53% of responses) sugars (15.76% of responses) and spices (13.43% of responses).
4. Half of the interviewees (49.73%) believe that there is no particular reason why they consume fast food, while one-third of them(33.78%) do it for the taste of this kind of food products. Approximately the same number (51.60%) are careful about the amount of fast food they consume as well as (48.40%) of them are not careful about the amount of fast food they eat. Over half of the interviewees (58.09%) do not have a reason to give up fast food, and 31, 58% do so because they think that this diet is harmful to health. 61.36% of the interviewees do not read the declaration on the label of fast food.
5. For breakfast 19,11% of the interviewees eat rolls and similar pastry, sandwiches or candies that they buy on their way to school. During and after meals 33.62% of the interviewees usually drink water, and 21.53% drink refreshing fizzy drinks or fruit juices (21.02% of responses). The amount of fizzy drinks that the interviewees drink during the day goes from one glass (30,09%) to 2-3 glasses (24.7%). More than one-fifth of the students (21,4%) do not drink fizzy drinks at all. The interviewed students mostly like eating meat and vegetables (37.82%), fruit (23.06%), but they do not like eating vegetarian dishes (31.04%), strongly flavored dishes (18.07%) and meatless dishes (17.24%).

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