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Evaluation of Products in Menus in Terms of Nutritional Facts: Eskişehir Sample

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Abstract

The menus are essential elements for food and beverage businesses to carry out their activities. Nowadays, knowing the nutritional facts of the products in the menus can play a significant role for customers in terms of health. The aim of this research is to examine the nutritional facts of the products in the menus of the food and beverage enterprises operating in Eskisehir, Turkey and evaluate them in terms of nutritional facts. Within the scope of this research, eight products, including two starters, one salad, three main courses and two desserts in the menus of total 19 restaurants in Eskisehir, were determined. The nutritional fact calculations are based on an approximate serving of single portion. In order to contribute to other disciplines, 21 items were calculated by a computer program (BeBiS). The nutritional facts of the products are evaluated in terms of human health and nutritional values. The findings of the study suggest that the products in the menus of the food and beverage businesses are found adequate in terms of daily energy and nutrient intake. However, not all businesses include nutritional facts on their menus. When the general evaluation is made, it is determined that the carbohydrate content is high.

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INTRODUCTION

Essential nutrients are the ones that cannot be synthesized by the body itself in sufficient amounts and that must be ingested through eating. Carbohydrates, proteins, fats, vitamins, minerals, and water are the essential nutrients that are required for proper bodily functions (Zare et al. 2017, 19). Nutrients vary in terms of their nutritional values. While the nutrients are categorized under four main groups as meat products and the like, milk products and the like, vegetables and fruits, and cereals and the like in terms of their nutritional values, the oils and sugar derived from these are considered as the fifth group (Şenol 2011, 20-21). These nutrient groups play a significant role in creating a menu. Although menu is used for various meanings in gastronomy, it means listing of food products in compatible groups in terms of their characteristics. Menus represent the purpose and the mission of the restaurant, and they are also sales and marketing tools, and the fundamentals of price control (Küçükaslan and Baysal, 2009). In addition, they also play a significant role in determining the needs of the restaurants, and how these needs should be met. Everything starts with menu planning, especially in catering systems. Randomness should be avoided, and various factors should be considered in menu planning (Ceyhun-Sezgin and Durlu-Özkaya 2014, 125). Currently, selective menus, which offer two or more options for each meal, are widely used by the restaurants.

When preparing a menu, the amounts of food groups that should be consumed daily should be considered. People have been becoming more conscious every day in terms of balanced diet and showing more interest in healthy products that are suitable for their lifestyles (Andersson and Bryngelsson, 2007, 31; Kearney, 2010, 2793; Gil et al. 2014, 364S). Nutritional needs of a person vary by his/her age, gender, physical activities, and other special conditions. In the healthy diet, it is important to consume milk group, meat and products group, bread and cereal group, and vegetables and fruit groups in the amounts required for different age and sex and to determine the portion amounts while making recommendations. While determining the portion amounts, the food groups are evaluated by taking into consideration the nutrients that are given priority. Calcium, protein, vitamin B2, energy and fat requirements for milk and dairy products; protein, iron, zinc, vitamin B12, energy, fat, cholesterol for meat and meat products; energy, protein, carbohydrate, fiber, thiamine requirements for the bread and cereal group; for vegetables and fruits, energy, carbohydrate, folic acid, vitamin A, vitamin C and the need for fiber are evaluated (Besler et al., 2015, 83- 84). Thus, people make their restaurant selections considering these factors (Ganem 1990; Nielsen Siega-Riz and Popkin 2002, 112; Gregerson et al. 2011, 9; Bedard et al. 2015, 7). Studies show that the consumers want to limit or completely eliminate their energy, fat, and sodium intakes in order to prevent or reduce their health problems (Mathios 2000, 674; Burton et al. 2006, 1674; Downs, Loewenstein, and Wisdom 2009, 162; Pulos and Leng 2010, 1038; Ahn et al. 2015, 670). It is also seen that the products on menus of various restaurants are not sufficiently analyzed in terms of their nutritional values. Therefore, the aim of the research is to examine the nutritional values of the products in the menus of the food and beverage enterprises operating in the province of Eskisehir and to evaluate them in terms of nutritional values.

METHOD

This study was conducted with a mixed method involving quantitative and qualitative research designs. In the research, the total number of 19 restaurants was determined by using purposive sampling method. For the purpose of

the study, 18 first class and one second class restaurants with Tourism Operation Certificate issued by the Ministry of Culture and Tourism operating in Eskisehir, Turkey, were determined by using the combing method[1] and their menus were collected. The first class restaurants are literally the most premium restaurants in Turkey due to the fact that they fulfill the requirements sought by the ministry. Second-class restaurants are also restaurants that meet the minimum requirements sought by the ministry. Then, experts (Table 1) were interviewed, and eight products were determined by them; two starters, one salad, three main meals and two desserts from common meals in these menus were selected. These menu items were: lentil soup, artichokes cooked by olive oil, mixed salad, sac kavurma (sautéed beef), grilled meatballs, grilled chicken, sutlac (milk and rice pudding) and baklava (Hızlı, 2017; Işık, 2017; Şallı, 2017; Yıldız, 2017). During this process, special attention has been paid to ensure that the determined meals can be used in the menus of restaurants in Eskisehir.

Table 1: Information about Researchers and Experts

No.	Role	Title	Expertise	Years of Working/Teaching
1	Researcher and interviewer	Instructor	Cookery, Creative Culinary Practices	14
2	Researcher	Assistant Professor	Turkish Cuisine	22
3	Researcher	Research Assistant	Gastronomy and Culinary Arts	5
4	Expert	Dr. Lecturer	Nutrition and Dietetic	8
5	Expert	Assistant Professor	Turkish Cuisine, Banquet Cuisines	33
6	Expert	Instructor	Cookery, Basic Culinary Practices	14
7	Expert	Instructor	Cookery, Basic Culinary Practices, Pastry, International Cuisines	16

In the study, the steps below were followed in the formation of standard recipes;

- Collected the necessary resources (recipes)
- The optimum environment (food, equipment, preparation-cooking units, etc.) for cooking the food was created.
- First 10 trials were performed.
- The same recipes were then tried on different cooks. According to the quantities in the experiment, the food was produced in the same quality and standard, and 100% yield is obtained from the recipe.

[1] Browsing is a research approach that attempts to identify models as they are in the past or present. In this approach, it is tried to be defined as if it is within its own conditions and without being intervened in an effort to change or influence it. In the screening approach, the investigator must examine the object or individual directly, as well as to interpret the scattered data to be obtained by applying to various records previously held by others and to the resource persons in the field, by integrating them with their observations (Karasar 2014: 77).

- Quality control panel was created from people shown in Table 1.
- At this stage, the dishes were evaluated by the quality control panel until the quality of the dishes was confirmed.
- The approved quality was doubled and re-evaluated.
- At the final stage, the standard recipes prepared were recorded.

Approximately one portion was analyzed of each of the 21 items with the Nutrition Information System (Erhardt, 2010). The Nutritional Information System (BeBiS) is a packaged program that allows the calculation of nutrients in the contents of foods during studies related to nutrition. BeBiS uses the nations' scientific food databases. The data are evaluated by reliable intake levels (Appendix 1) from Turkey's Food and Nutrition Guide. This guide takes into account the reference values from the World Health Organization and the World Agriculture Organization: it is a scientific study based on the results of Turkish Nutrition and Health Research (Besler et al. 2015, 86-88).

RESULTS

The nutritional value and the evaluation of a portion of each product included in the survey are given below.

Lentil soup

The ingredients used in a portion of "lentil soup" are as follows:

- Corn oil 5 g
- Dried onion 12 g
- Wheat flour 5 g
- Tomato paste 5 g
- Meat juice 175 g
- Red lentils 30 g
- Potatoes 10 g
- Salt 2 g
- Red powdered pepper 0.2 g
- Dry mint 0.1 g

Lentil soup is one of the most common soups in Turkish cuisine. It is a commonly consumed soup both in restaurants and houses. It is usually preferred as a hot starter. It is not difficult to cook, and it is practical. One portion of lentil soup contains 154.7 kcal and covers 7% of women's daily energy needs and 6% of men. Meets daily needs as follows: 14% (F)-%12 (M) of protein, 8% (F)-7% (M) of fiber, 114% (F)-89% (M) vitamin A, 11% vitamin E, 13% of phosphorus, 7% (F)-13% (M) of iron, and 25% (F)-18% (M) of omega 6 (Table 2).

Table 2: Nutritional Value Analysis of a Portion of Lentil Soup and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		Percent requirement coverage (%)			
		Female (age)		Male (age)	
		19-30	31-50	19-30	31-50
Energy (kcal)	154.7	7	7	5	6
Protein (g)	7.2	15	14	12	12
Fiber (g)	2.1	8	8	7	7
Vitamin A (mcg)	799.6	114	114	89	89
Vitamin D (mcg)	0.0	0	0	0	0
Vitamin E (mg)	1.7	11	11	11	11
Thiamine (mg)	0.1	9	9	8	8
Riboflavin (mg)	0.1	10	9	8	8
Niacin (mg)	21	15	15	13	13
Vitamin B6 (mg)	0,.2	15	15	15	15
Vitamin B12 (mcg)	0.0	0	0	0	0
Folate (mcg)	22.1	6	6	6	6
Vitamin C (mg)	4.3	5	5	5	5
Sodium (mg)	286.9	-	-	-	-
Calcium (mg)	27.5	3	3	3	3
Phosphorus (mg)	88.8	13	13	13	13
Iron (mg)	1.3	7	7	13	13
Zinc (mg)	0.9	9	9	8	8
Omega 3 (g)	0.1	9	9	6	6
Omega 6 (g)	3.0	25	25	18	18
Cholesterol (mg)	0.0	-	-	-	-

Artichokes Cooked by Olive Oil

The ingredients used in a portion of "artichokes cooked by olive oil" are as follows:

- Artichoke 70 g
- Dried onion 5 g
- Potatoes 15 g
- Carrot 10 g
- Drinking water 30 g
- Lemon juice 2 g
- Peas 10 g
- Olive oil 5 g
- Salt 1 g
- Dill 1 g

Artichokes cooked by olive oil is a vegetable dish, which is not common in houses (Kılıç, 2018, 109-110); but available in the menus of the majority of the restaurants in Eskisehir. It is usually preferred as a cold starter or appetizer. The cooking is practical, but it is not possible to find the standard taste everywhere and all the time. One portion of artichokes in olive oil is very low in energy with 85 kcal. By contrast, 9.2 g of pulp content meets 37% (F) - 32% (M) of daily requirement. Further, the dish meets daily needs as follows: 40% (F)-31% (M) of vitamin A, 17% of phosphorus and 7% (F)-13% (M) of iron (Table 3).

Table 3: Nutritional Value Analysis of a Portion of Artichokes in Olive Oil and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		**Percent requirement coverage (%)**			
		Female (age)		**Male (age)**	
		19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	85.0	4	4	3	3
Protein (g)	2.9	6	6	5	5
Fiber (g)	9.2	37	37	32	32
Vitamin A (mcg)	283.1	40	40	31	31
Vitamin D (mcg)	0.0	0	0	0	0
Vitamin E (mg)	0.8	5	5	5	5
Thiamine (mg)	0.1	9	9	8	8
Riboflavin (mg)	0.0	0	0	0	0
Niacin (mg)	0.8	6	6	5	5
Vitamin B6 (mg)	0.1	8	8	8	8
Vitamin B12 (mcg)	0.0	0	0	0	0
Folate (mcg)	332	8	8	8	8
Vitamin C (mg)	7.9	9	9	9	9
Sodium (mg)	424.0	-	-	-	-
Calcium (mg)	54.1	5	5	5	5
Phosphorus (mg)	116.7	17	17	17	17
Iron (mg)	1.3	7	7	13	13
Zinc (mg)	0.3	3	3	3	3
Omega 3 (g)	0.1	9	9	6	6
Omega 6 (g)	0.5	4	4	3	3
Cholesterol (mg)	0.0	-	-	-	-

Mixed Salad

The ingredients used in a portion of "mixed salad" are as follows:

- Tomato 120 g
- Dried onion 30 g
- Green pepper 40 g
- Cucumber 100 g
- Parsley 2 g
- Olive oil 15 g
- Lemon juice 20 g
- Salt 3 g

Mixed salad is widely consumed both at homes and in restaurants. The preparation is very simple and practical. One portion of mixed salad meets 10% of women's daily needs and 8% of men's daily needs with an energy value of 203 kcal. The salad meets daily needs as follows: 15% (F)-13% (M) of Fiber, 40% (F)-31% (M) of vitamin A, 27% of vitamin E, 23% of vitamin B6, 21% of folate, 116% of vitamin C, 13% of Phosphorus, 10% (F)-18% (M) of Iron, and 13% (F)-9% (M) of Omega 6 (Table 4).

Table 4: Nutritional Value Analysis of a Portion of Mixed Salad and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		**Percent requirement coverage (%)**			
		Female (age)		**Male (age)**	
		19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	203.0	9	10	7	8
Protein (g)	2.8	6	6	5	5
Fiber (g)	3.8	15	15	13	13
Vitamin A (mcg)	281.1	40	40	31	31
Vitamin D (mcg)	0.0	0	0	0	0
Vitamin E (mg)	4.0	27	27	27	27
Thiamine (mg)	0.1	9	9	8	8
Riboflavin (mg)	0.1	10	9	8	8
Niacin (mg)	1.1	8	8	7	7
Vitamin B6 (mg)	0.3	23	23	23	23
Vitamin B12 (mcg)	0.0	0	0	0	0
Folate (mcg)	82.0	21	21	21	21
Vitamin C (mg)	104.4	116	116	116	116
Sodium (mg)	1185.8	-	-	-	-
Calcium (mg)	60.1	6	6	6	6
Phosphorus (mg)	88.4	13	13	13	13
Iron (mg)	1.8	10	10	18	18
Zinc (mg)	0.5	5	5	5	5
Omega 3 (g)	0.2	18	18	13	13
Omega 6 (g)	1.6	13	13	9	9
Cholesterol (mg)	0.0	-	-	-	-

Sac Kavurma (Sautéed Beef)

The ingredients used in a portion of "sac kavurma (Sautéed Beef)" are as follows:

- Beef meat 150 g
- Sunflower oil 10 g
- Butter 10 g
- Dried onion 40 g
- Green pepper 10 g
- Tomato 50 g
- Salt 2 g
- Black pepper 0.1 g
- Thyme 0.1 g
- Cumin 0.1 g

Sac Kavurma (Sautéed Beef) is a favorite dish in both houses and restaurants. It is consumed as a main dish. Cooking requires experience and time. A portion of Sac Kavurma (Sautéed Beef) meets 22% of women's daily energy needs and 18% of men's daily energy needs with an energy value of 463.8 kcal. It meets daily needs as follows: 59% (F)-49% (M) of protein, 18% (F)-14% (M) vitamin A, 51% of vitamin E, 18% (F)-17% (M) of thiamine, 27% (F)-23% (M) of riboflavin, 52% (F)-46% (M) of niacin, 250% vitamin B12, 47% of phosphorus, 22% (F)-39% (M) of iron, 74% (F)-67% (M) of zinc and 57% (F)-40% (M) of omega 6 (Table 5).

Table 5: Nutritional Value Analysis of a Portion of Sac Kavurma (Sautéed Beef) and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		**Percent requirement coverage (%)**			
		Female (age)		**Male**	
		19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	463.8	21	22	16	18
Protein (g)	29.5	63	59	51	49
Fiber (g)	1.6	6	6	6	6
Vitamin A (mcg)	126.6	18	18	14	14
Vitamin D (mcg)	0.1	1	1	1	1
Vitamin E (mg)	7.7	51	51	51	51
Thiamine (mg)	0.2	18	18	17	17
Riboflavin (mg)	0.3	30	27	23	23
Niacin (mg)	7.3	52	52	46	46
Vitamin B6 (mg)	0.4	31	31	31	31
Vitamin B12 (mcg)	6.0	250	250	250	250
Folate (mcg)	20.2	5	5	5	5
Vitamin C (mg)	21.7	24	24	24	24
Sodium (mg)	1244.1	-	-	-	-
Calcium (mg)	38.9	4	4	4	4
Phosphorus (mg)	330.3	47	47	47	47
Iron (mg)	3.9	22	22	39	39
Zinc (mg)	7.4	74	74	67	67
Omega 3 (g)	0.4	36	36	25	25
Omega 6 (g)	6.8	57	57	40	40
Cholesterol (mg)	114.0	-	-	-	-

Grilled Meatballs

The ingredients used in a portion of "grilled meatballs" are as follows:

- Minced beef 120 g
- Onion 20 g
- Salt 5 g
- Black pepper 1 g
- Cumin 0.5 g
- Thyme 0,5 g
- Red powdered pepper 1 g

Grilled meatballs are a favorite dish in picnics and restaurants. It is consumed as main dish. Cooking requires experience and time. A portion of the grilled meat meets 12% (F) - 10% (M) of the daily needs of women and men with an energy value of 257.5 kcal. with a protein content of 24.2 g, which corresponds to 48% (F) - 40% (M) of the daily requirement. It meets daily needs as follows: 27% (F)-23% (M) of riboflavin, 57% (F)-50% (M) of niacin, 200% of vitamin B12, 32% of phosphorus, 19% (F)-35% (M) of iron and 46% (F)-42% (M) of zinc (Table 6).

Table 6: Nutritional Value Analysis of a Portion of Grilled Meatballs and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		**Percent requirement coverage (%)**			
		Female (age)		**Male (age)**	
		19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	257.5	12	12	9	10
Protein (g)	24.2	51	48	42	40
Fiber (g)	0.9	4	4	3	3
Vitamin A (mcg)	83.3	12	12	9	9
Vitamin D (mcg)	0.0	0	0	0	0
Vitamin E (mg)	0.5	3	3	3	3
Thiamine (mg)	0.3	27	27	25	25
Riboflavin (mg)	0.3	30	27	23	23
Niacin (mg)	8.0	57	57	50	50
Vitamin B6 (mg)	0.2	15	15	15	15
Vitamin B12 (mcg)	4.8	200	200	200	200
Folate (mcg)	5.8	1	1	1	1
Vitamin C (mg)	1.6	2	2	2	2
Sodium (mg)	2017.4	-	-	-	-
Calcium (mg)	46.2	5	5	5	5
Phosphorus (mg)	226.3	32	32	32	32
Iron (mg)	3.5	19	19	35	35
Zinc (mg)	4.6	46	46	42	42
Omega 3 (g)	0.3	27	27	19	19
Omega 6 (g)	0.4	3	3	2	2
Cholesterol (mg)	69.6	-	-	-	-

Grilled Chicken

The ingredients used in a portion of "grilled chicken" are as follows:

- Chicken 180 g
- Olive oil 10 g
- Salt 2 g
- White pepper 0.2 g
- Cumin 0.1 g

Grilled chicken is a food that is common in both houses and restaurants. It is preferred as a main dish. Cooking is practical and easy. It contains 475.5 kcal energy and meets 23% of the daily needs of women and 18% of men. With a protein content of 50.7 g, it also meets 101% (F) - 85% (M) of daily requirement. It meets daily needs as follows:

43% vitamin E, 45% (F)-38% (M) of riboflavin, 89% (F)-78% (M) of niacin, 46% vitamin B6, 53% of phosphorus, 20% (F)-36% (M) of iron, 31% (F)- 28% (M) of zinc, and 88% (F)-62% (M) of omega 6 (Table 7).

Table 7: Nutritional Value Analysis of a Portion of Grilled Chicken and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		**Percent requirement coverage (%)**			
		Female (age)		**Male (age)**	
		19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	475.5	22	23	17	18
Protein (g)	50.7	108	101	87	85
Fiber (g)	0.0	0	0	0	0
Vitamin A (mcg)	61.7	9	9	7	7
Vitamin D (mcg)	0.0	0	0	0	0
Vitamin E (mg)	6.4	43	43	43	43
Thiamine (mg)	0.2	18	18	17	17
Riboflavin (mg)	0.5	50	45	38	38
Niacin (mg)	12.5	89	89	78	78
Vitamin B6 (mg)	0.6	46	46	46	46
Vitamin B12 (mcg)	0.0	0	0	0	0
Folate (mcg)	27.0	7	7	7	7
Vitamin C (mg)	00	0	0	0	0
Sodium (mg)	187.3	-	-	-	-
Calcium (mg)	33.1	3	3	3	3
Phosphorus (mg)	372.3	53	53	53	53
Iron (mg)	3.6	20	20	36	36
Zinc (mg)	3.1	31	31	28	28
Omega 3 (g)	0.4	36	36	25	25
Omega 6 (g)	10.6	88	88	62	62
Cholesterol (mg)	153.0	-	-	-	-

Sutlac (Milk and Rice Pudding)

The ingredients used in a portion of "Sutlac (Milk and Rice Pudding)" are as follows:

- Rice 20 g
- Milk 160 g
- Sugar 30 g
- Cream 14 g

Sutlac is a widely consumed dairy dessert in Turkish cuisine. Preparation requires experience and time. A portion of Sutlac meets 14% of women's daily needs and 11% of men's daily needs with an energy content of 289.6 kcal. It meets daily needs as follows: 15% (F)-12% (M) of protein, 27% (F)-23% (M) of riboflavin, 20% of calcium and 27% of phosphorus (Table 8).

Table 8: Nutritional Value Analysis of a Portion of Sutlac (Rice Pudding) and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		Percent requirement coverage (%)			
		Female (age)		Male (age)	
		19-30	31-50	19-30	31-50
Energy (kcal)	289.6	13	14	10	11
Protein (g)	7.3	16	15	13	12
Fiber (g)	0.3	1	1	1	1
Vitamin A (mcg)	53.6	8	8	6	6
Vitamin D (mcg)	0.1	1	1	1	1
Vitamin E (mg)	0.1	1	1	1	1
Thiamine (mg)	0.1	9	9	8	8
Riboflavin (mg)	0.3	30	27	23	23
Niacin (mg)	0.4	3	3	3	3
Vitamin B6 (mg)	0.1	8	8	8	8
Vitamin B12 (mcg)	0.2	8	8	8	8
Folate (mcg)	15.2	4	4	4	4
Vitamin C (mg)	1.7	2	2	2	2
Sodium (mg)	85.4	-	-	-	-
Calcium (mg)	204.7	20	20	20	20
Phosphorus (mg)	192.4	27	27	27	27
Iron (mg)	0.3	2	2	3	3
Zinc (mg)	0.8	8	8	7	7
Omega 3 (g)	0.1	9	9	6	6
Omega 6 (g)	0.1	1	1	1	1
Cholesterol (mg)	15.8	-	-	-	-

Baklava

The ingredients used in a portion of "baklava" are as follows:

- Egg 5 g
- Drinking water 20 g
- Sugar 25 g
- Pistachio 5 g
- Wheat flour 20 g
- Corn starch 5 g
- Butter 3 g

Baklava is an internationally known dessert in Turkish cuisine. The preparation requires considerable expertise and time. Therefore, it is usually made and preferred by food and beverage businesses. A serving of baklava meets 12% of women's daily needs and 9% of men with an energy amount of 244.7 kcal. It meets daily needs as follows: 9% (F)-8% (M) of thiamine, 8% of vitamin B6 and 7% of phosphorus (Table 9).

Table 9: Nutritional Value Analysis of a Portion of Baklava and Percent of Requirement Coverage

Nutritional Values (About 1 serving)		Percent requirement coverage (%)			
		Female (age)		Male (age)	
		19-30	31-50	19-30	31-50
Energy (kcal)	244.7	11	12	9	9
Protein (g)	3.5	7	7	6	6
Fiber (g)	1.4	6	6	5	5
Vitamin A (mcg)	34.9	5	5	4	4
Vitamin D (mcg)	0.2	2	2	2	2
Vitamin E (mg)	0.5	3	3	3	3
Thiamine (mg)	0.1	9	9	8	8
Riboflavin (mg)	0.0	0	0	0	0
Niacin (mg)	0.2	1	1	1	1
Vitamin B6 (mg)	0.1	8	8	8	8
Vitamin B12 (mcg)	0.1	4	4	4	4
Folate (mcg)	7.6	2	2	2	2
Vitamin C (mg)	0.4	0	0	0	0
Sodium (mg)	4.9	-	-	-	-
Calcium (mg)	14.1	1	1	1	1
Phosphorus (mg)	52.3	7	7	7	7
Iron (mg)	0.9	5	5	9	9
Zinc (mg)	0.4	4	4	4	4
Omega 3 (g)	0.1	9	9	6	6
Omega 6 (g)	0.6	5	5	4	4
Cholesterol (mg)	26.3	-	-	-	-

CONCLUSION

Within the scope of the research, eight products, including two starters, one salad, three main course and two desserts in the menus of 18 first class and one second class restaurant in Eskisehir, were determined.

It is found that the meals in the menus of restaurants are adequate and balanced in terms of daily energy and nutrient intake. It is not possible for caterers to remain indifferent to this trend, as healthy eating habits are increasing day by day. It is observed that the food items in the menus of catering enterprises are composed of carbohydrate-weight foods. However, when eating and drinking habits are taken into consideration, it is possible to say that the foods which are fat and cooked in a long time are preferred both on the sector basis and on the customer basis. It can be seen in menu samples of businesses.

When a general evaluation is made, it is understood that lentil soup is rich in vitamin A but lacks vitamin D, vitamin B12 and omega 3. Artichokes cooked by olive oil is rich in fiber and vitamin A, but contents of vitamin D, riboflavin, vitamin B12 and Omega 3 are inadequate. Mixed salad is quite rich in vitamins A and C, but D and B12 vitamins and Omega 3 are inadequate.

Sac Kavurma (Sautéed Beef) is rich in protein, vitamin E, Niacin, vitamin B12, Phosphorus and Omega 6, while vitamin D and Omega 3 are very inadequate. Grilled meatballs are rich in protein, Niacin, vitamin B12 and Zinc, but the contents of vitamin D, Folate, and Omega 3 are inadequate. Grilled chicken is rich in protein, Riboflavin, Niacin, and Phosphorus but the contents of fiber, vitamin D, vitamin B12, vitamin C and Omega 3 are inadequate.

Sutlac is a balanced dessert but does not contain Omega 3. Baklava is not rich in Riboflavin, vitamin C and Omega 3, but other ingredients are balanced. When the general evaluation of the meals offered in the restaurants is made, it is determined that the carbohydrate consumption is high.

With the results of this research, it is recommended for the restaurants to revise and include nutritional charts on their menus. It is important for the enterprises to make the menus suitable for healthy eating tendency in creating competitive advantage. The results of this study will allow restaurants to move towards more standards, and to meet the wishes and expectations of customers who want to eat healthy. Also, it would be useful to make further evaluations with different types of restaurants and in different provinces.

When research results are evaluated, it is important for the sector to improve the kinds of food items that will serve as a sample of healthy nutrition. Businesses should place nutritional charts on their menus and help them revise their menus; more enterprises and more sample evaluations are thought to be important in terms of contributing to the literature.

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Appendix 1: Reliable Intake Levels for Recommended Daily Energy and Nutrients for Turkey (Data source: Besler et al., 2015: 86-88)

Nutrients	**Recommended Intake**			
	Female (age)		**Male (age)**	
	19-30	**31-50**	**19-30**	**31-50**
Energy (kcal)	2065	1917	2850	2623
Protein (g)	50	52	58	60
Fibre (g)	25	21	29	29
Vitamine A (mcg)	700	700	900	900
Vitamine D (mcg)	10	10	10	10
Vitamine E (mg)	15	15	15	15
Thiamine (mg)	1,1	1,1	1,2	1,2
Riboflavin (mg)	1,0	1,1	1,3	1,3
Niacin (mg)	14	14	16	16
Vitamine B6 (mg)	1,3	1,3	1,3	1,3
Vitamine B12 (mcg)	2,4	2,4	2,4	2,4
Folate (mcg)	400	400	400	400
Vitamine C (mg)	90	90	90	90
Sodium (mg)	-	-	-	-
Calcium (mg)	1000	1000	1000	1000
Phosphorus (mg)	700	700	700	700
Iron (mg)	18	18	10	10
Zinc (mg)	10	10	11	11
Omega 3 (g)	1.1	1.1	1.6	1.6
Omega 6 (g)	12	12	17	17
Cholesterol (mg)	-	-	-	-



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