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The Relationship Between Religious Perceptions and Nutrition; The Case of Istanbul Center

Din Algısının Beslenme ile İlişkisi: İstanbul Merkez Örneği

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ABSTRACT

Aim: The aim of this study is to Investigating the relationship of Abrahamic Religions on perceptions, nutrition and The Healthy Eating Index (HEI) in Istanbul. The importance of this study is not only the lack of sufficient studies in the literature but also being the unique and the first study on this topic in Turkey. In addition, it is important in terms of revealing the effects of the nutritional effects of religious differences on national health policies globally and reducing the social burden by decreasing the unhealthy nutritional status that may occur in this way.

Material and Methods: The data were collected by a survey containing 24 questions on the demographic characteristics, their religious perceptions, the effects of their religious perception on nutrition and their HEI. For the participants who did not speak Turkish, questionnaire was also conducted in English. The Healthy Eating Index was used to assess healthy eating status of the 330 participants.

Results: The distribution of 330; 33% Christians, 33.6% Jews, and 33.3% Muslims and 65.5% of the participants are women and 34.5% are men. 81,4% of Christians were consuming the most "forbidden foods". Jews by 47.4% agreed the most with the idea "they have the stricter diet rules". Christians by 65.4% agreed the most "everyone can consume any food". Muslims, by 87.2%, fasting the most. Christians by 41.2% believed "fasting does affect the health". The HEI distribution showed a significant difference ($p<0.05$), the highest quality rate was among Muslims as 59.2%. It was observed that there was a significant difference ($p <0.05$) between the groups with Body Mass Index (BMI), and obesity was the highest in Christians (55.9%). Muslims have the highest rate to ensure that the origin of the food brands are the same of the belief of individuals by 95.5%.

Conclusion: In this study, the ones who had the highest HEI scores and religious rules affected their eating habits the most are the Muslims; members of Islam. This result may also be related to the awareness of the participants on healthy nutrition, their attitudes towards applying the rules of the religion they belong to, and similar factors. More comprehensive studies are needed on the effect of religions on individuals' eating habits.

Key Words: Religion, Healthy eating index, Fasting, BMI, Religious perception

ÖZ

Amaç: Bu çalışmanın amacı, İstanbul'da üç semavi dinin, din algılarının beslenme ve Sağlıklı Yeme İndeksi (SYİ) arasındaki ilişkiyi araştırmaktır. Literatürde bu konu hakkında yeterli sayıda çalışmanın bulunmaması ve aynı zamanda Türkiye'de bu konuda yapılan ilk çalışma olması nedeniyle önemlidir. Buna ilaveten, dini farklılıkların beslenme etkilerinin küresel anlamda ulusal sağlık politikaları üzerindeki etkilerini ortaya koymak ve bu yolla oluşabilecek sağlıksız beslenme durumunu azaltabilmesi yoluyla toplumsal yükü azaltmak açısından da önemlidir.

Gereç ve Yöntemler: Veriler, katılımcıların demografik özellikleri, din algıları, din algılarının beslenme ve SYİ üzerindeki etkilerini içeren 24 sorudan oluşan bir anket ile toplanmıştır. Türkçe bilmeyen katılımcılar için anket İngilizce olarak da oluşturulmuştur. Çalışmaya katılan 330 katılımcının sağlıklı yeme indeksini değerlendirmek için SYİ kullanılmıştır.

Bulgular: Çalışmaya katılan 330 bireyin %33'ü Hıristiyan, %33.6'sı Musevi ve %33.3'ü Müslüman'dır. Katılımcıların %65.5'i kadın ve %34.5'i erkektir. "Yasak olan yiyecekleri" en fazla (%81.4) tüketen bireylerin Hırıstiyan dinine mensup bireyler olduğu görülmüştür. Musevilerin %47.4 oranıyla en çok "Kendi dinleri dışındaki dinlerin diyet kurallarını daha katı ve sağlıksız'' bulan bireyler olduğu görülmüştür. Çalışmaya katılanlar arasında en fazla %65.4 oranıyla Hıristiyanlar "Herkesin istediği yiyecekleri tüketebileceği" ni düşünmektedirler. Katılımcılar arasında %87.2 ile en çok Müslümanların oruç tuttuğu belirlenmiştir. Hıristiyanlar en fazla %41.2 ile "oruç tutmanın sağlık üzerinde herhangi bir etkisi olmadığını" düşünmektedir. İstatistiksel olarak SYİ dağılımı anlamlı bir fark göstermektedir ($p<0.05$). Müslümanlar, SYİ oranı %59.2 ile en yüksek olarak saptanmıştır. Vücut Kütle İndeksi (VKİ) açısından gruplar arasında anlamlı bir fark ($p<0.05$) olduğu, obezitenin Hıristiyanlarda en yüksek (%55.9) olduğu görülmüştür. Yiyecek alışverişinde marka menşeilerinin inançlarıyla aynı olmasına en çok dikkat eden %95.0 oranı ile Müslümanlarken, en az dikkat edenler; %4.5 oranı ile Hristiyanlardır.

Sonuç: Bu çalışmada en yüksek SYİ puanlarının ve dini kuralların yeme alışkanlıklarını en çok etkilediği bireylerin; İslamiyet dininin mensubu olan Müslümanlar olduğu görülmüştür. Bu sonuç, çalışmaya katılan bireylerin sağlıklı beslenme konusundaki farkındalıkları, mensubu oldukları dine ait kuralları uygulamaları konusundaki tutumları vb. faktörlerle de ilgili olabilir.

Anahtar Sözcükler: Din, Sağlıklı yeme indeksi, Oruç, BKİ, Din algısı

INTRODUCTION

Dietary habits, cultural differences and methods of acquiring foods differ on an individual basis (1). Eating attitudes may be defined as a tendency that forms all knowledge, feelings, views and behaviors of a person related to food consumption. Eating behavior is seen as a complex phenomenon formed by central and environmental factors regulating motor, cognitive, social, and emotional developments (2,3). This situation is affected by the perceptions of the person, past experiences with foods and dietary status which also cover physiological, demographic, economic, social, geographical and cultural factors (4). Beginning from the birth, how a person eats, which foods they consume and which places they prefer for food consumption are shaped with the process of socializing, and which foods they should consume where and with whom are socially constructed (5).

This study also encounter religion in the nutrition and food cultures of individuals as an important factor. In many cultures, there is a close and comprehensive relationship between ideological and cosmological beliefs (6).

The effect of religion on social life and individual life takes place via symbolic meanings. The attitude individuals develop towards the foods that are mandated or prohibited in their religion. Religion attributes sanctity to foods by coding them in a cultural way, and with the help of these meanings given on foods, it creates its own belief system through shaping the culinary cultures of individuals. It also makes the food preferences of individuals a part of their belief systems (7). For example, Muslims and Jews avoiding pork and Hindus avoiding beef may be considered in this context (8). Kashrut is a set of laws that determine the Jewish food regime (9) The term Kosher food includes "clean" and suitable for eating, forbidden foods (ruminants, poultry; chicken, turkey, duck and goose, shellfish), cutting, preparing and consuming rules (such as not consuming milk and meat together) and kosher rules specific to special days (10,11). In Islam, consumption of pigs and hunting birds, the meat of animals killed without blood, alcohol and stimulants are prohibited (12,13). Banned foods in Christianity vary according to sectarian differences (13,14).

Eating and drinking activities may be considered as an indicator with critical significance in materialization of the distinction among different religions as much as in the case of construction of religious identity. Food preferences may vary based on the cultural and religious norms of the society where people live (1).

To sum up, nutrition expresses a symbolic meaning for individuals by becoming an indicator of carrying out the rituals of the religion they believe in, and it turns into an expression of religious identity as an area where religious differences are uncovered. Moreover, with its interventions on social relationships and daily life, religion also has a determinant effect in the production, trade and consumption processes of food items. In the light of this information, the purpose of this study was to investigate the relationship between religious perceptions and nutrition and the HEI of three Abrahamic Religions in Istanbul.

METHODS and MATERIALS

This is a cross-sectional study that investigates correlations (Pearson Chi-Squared). Within the scope of the objective of the study, data were obtained from Muslim, Jewish and Christian individuals living in Istanbul in Turkey on a voluntary basis by using the method of purposive (convenience) sampling. A purposeful sampling method is used when a given situation is more in each space (15). According to the calculation of sample population, it was determined that the participation of 385 people would be sufficient. However, it was considered that the number of the participant groups was equal or close to each other.

Participants; Non-random (nonrandom sampling) sampling method, which is sampled, with purposeful (guided) sampling. In the purposeful sampling method, the researcher determines the units to be included in the sample with her own judgment in accordance with the purpose of the researcher based on her previous knowledge, experience and observations.

The sample of the study consisted of a total of 330 individuals who agreed to participate including Muslims (n=110), Christians (n=109) and Jewish (n=111).

The selected participants were at the age of 18 years or older, were residing in Istanbul. The neighborhoods and religious places where the Muslim, Christian and Jewish populations living in Istanbul are abundant were selected. After explaining the purpose of the study, the participants were given a questionnaire to respond to the participants who agreed to participate in the study. Inclusion criteria of this study were to be Muslim, Christian and Jewish, to be 18 years or older, to live in Istanbul and to be fed normally and the exclusion criteria of this study were to be inability to eat, communication disability.

The data were collected by applying a questionnaire consisting of 24 questions on the demographic characteristics of the participants, religious perceptions, effects of religious perceptions on nutrition and the HEI. For the participants whose did not speak Turkish, the questionnaire was also prepared in English.

Index of HEI-2010 was developed by the United States Department of Agriculture (USDA) and it investigates the relationships between nutrition and health, dietary costs and diet quality (16). It was created for the first time in 1995 by using the 24-hour food consumption records in the 1989-1990 individual food consumption data, and in 1998 it was reorganized using the data from 1994-1996. In addition, Healthy Eating Index 2005 and Healthy Eating Index 2010 based on the recommendations of the nutritional guide updated in 2005 and 2010 were updated. Healthy Eating Index; It consists of ten components, including cereals, vegetables, fruits, milk and meat intake, and the percentages of energy from total fat and saturated fat, intake of sodium and cholesterol in mg, and the diversity of individuals' diets. Each component is scored between 0 and 10 points and the values in between are calculated by ratio-proportion. As a result, the scores from each component are added together to form the HEI score. After 2000, the HEI has been adapted in line with the changes in the dietary guidelines. In 2005, HEI was updated in line with the nutrition guide recommendations and its name was changed to HEI-2005. There are 12 components in this updated HEI. These components are; total fruit (fruit and juices total), whole fruit (edible parts of unbroken fruit), total vegetables, dark green and yellow vegetables and dried legumes, total grain, whole grain, milk, meat and soybeans, vegetable oils, total energy It consists of the amount of saturated fat, the amount of sodium in g per 1000 kcal, and the ratio of energy from fat, alcohol and added sugar in total energy. It is evaluated between 0-100 points. The maximum score for each component of the index is 10 and the minimum score is 0 (zero). The maximum total score is 100. If the Healthy Eating Index score is over 80, diet, quality "; Diet between 51-80 is classified as normal and diet below 51 is classified as inadequate. The high total score indicates that the recommended amounts and rates are taken with the diet at a sufficient rate, and the lower the total score indicates that the recommended amounts or rates are not received with the diet.

The height and weight of the participants were measured with a standardized weighing scale (Fakir Hercules weight scale; precision up to 100 grams) and height measuring instrument (tape measure). Measurements of people; standing upright, legs slightly spread, and weight

evenly distributed across the legs without squeezing the muscles of the hips were made in a standing position. BMI values of the participants; It was classified according to the World Health Organization's BMI classification. If BMI< 18.5, it was underweight, if BMI between 18.5 and 24.9, it was normal weight, if BMI between 25.0 and 29.9, it was overweight and if BMI>30.0, it was obese.

Dietary Quality Index (DQI) and HEI are two indices developed to measure total dietary quality. While the total score effect of the components of the HEI varies, the total score effect of the components of the DQI is the same.

Healthy Eating Index is on the other hand, examines the multidimensional and different aspects of nutritional habits, determines the overall nutritional quality and plays an important role in the prevention of nutrition-related diseases (2,3). In addition, HEI provides a variety of nutrients and aims to determine whether the diet complies with nutritional guidelines (3).

Statistical Analysis of Data

For data analysis SPSS 21.0 program was used. For normality tests of data was used Kolmogorov-Smirnov, kurtosis and skewness values and data were not normally distributed ($p<0.05$); To compare the rate of more than two independent groups, analyzes were performed with multi-groups chi-squared, which is a nonparametric test measurement. Pearson correlation analysis was used to evaluate intergroups relationships. Confidence interval was accepted as 95% and p value <0.05 in all statistical tests. Qualitative variables are shown as counts and rates in the tables.

RESULTS

The views of the participants on characteristics of participants, among the participants, 33% were Christians, 33.6% were Jewish, and 33.3% were Muslims, while 65.5% of the participants were women, and 34.5% were men. 45.6% of the men had risky waist circumference values (>102 cm), while 41.2% of the women had risky values (>88 cm) (Table 1).

The views of the participants on nutrition-related rules based on their religions were examined, and it was found that those with the highest agreement rate with the statement "I find nutrition-related religious rules meaningless" consisted of Christians by 51.7%, while the group with the least frequent agreement rate was Jewish by 15.2%. For the statement "I can consume foods that are prohibited by my religion if I have to," the highest agreement rate was among Christians by 81.4%, while the lowest rate was found among Muslims by 7.5%. Regarding the statement "I find the nutrition-related rules of religions other than mine stricter and unhealthier," the highest agreement rate was among the Jewish participants by 47.4%, while the lowest rate was among the Muslim participants by 6.2%. Christians were the participants who had the highest rate of agreeing with the statement "Everyone can consume any food they want" Christians by 65.4%, while the lowest agreement rate was among the Jewish participants as 13.6% (Table 2).

The views of the participants on fasting status based on religions, among the participants, Muslims had the highest rate of participation in fasting by 87.2%, while Christians had the lowest rate by 75.2% (Table 3).

The views of the participants on the effects of fasting on health, among the participants who thought fasting helps losing weight, Muslims had the highest rate as 9.1%, Christians had the second highest rate as 4.5%, and Jewish had the lowest rate as 1.8% (Table 4).

The views of the participants on distribution of the HEI values based on religions, there was a statistically

Table 1. Characteristics of participants

Variables	**n (%)**
Religion	n (%)
Christianity	109 (33.0)
Judaism	111 (33.6)
Islam	110 (33.3)
Total	330 (100.0)
Gender	n (%)
Female	216 (65.5)
Male	114 (34.5)
Total	330 (100.0)
Waist Circumference (cm) (Male)	n (%)
Normal <102	62 (54.4)
Risky >102	52 (45.6)
Total	114 (100.0)
Waist Circumference (cm) (Female)	n (%)
Normal < 88	127 (58.8)
Risky > 88	89 (41.2)
Total	216 (100.0)

(Pearson Chi-Squared Value) significant difference among the participants ($p<0.05$) in terms of the distribution of their HEI values based on their religion, while the religious group with the highest-quality index value was Muslims by 59.2%, and Christians had the lowest quality of diet by 62.3% (Table 5).

The views of the participants on comparison of body mass index (BMI) based on religions, there was a statistically (Pearson Chi-Squared Value) significant difference among the participants ($p<0.05$) in terms of their BMI values based on their religion, whereas the highest rate of obesity was among Christians as 55.9%, and the lowest rate of obesity was among Muslims as 20.9% (Table 6).

The effects of the religious perceptions of the participants on their food preferences were investigated, and the group that paid the most attention to 'whether or not the origins of the brands while shopping for food are the same as their belief' were Muslims by 95.5%, while those that paid the least attention to this issue were Christians

Table 2. Views on nutrition-related rules based on religions

Views	Christian Group	Jewish Group	Muslim Group	Total
	n (%)	n (%)	n (%)	n* (%)
God gave us these principles so that we could eat better and become healthier.	40 (23.5)	70 (41.1)	60 (35.4)	170 (100)
I find religious rules related to nutrition meaningless.	75 (51.7)	22 (15.2)	48 (33.1)	145 (100.0)
I find religious rules related to nutrition very meaningful.	55 (26.0)	69 (32.5)	88 (41.5)	212 (100.0)
I find the nutrition-related rules of my religion to be healthier than those of others.	72 (31.2)	80 (34.8)	78 (34.0)	230 (100.0)
I find the nutrition-related rules of other religion to be healthier than those of my religion.	5 (38.6)	4 (30.7)	4 (30.7)	13 (100.0)
I find the nutrition-related rules of religions other than mine stricter and unhealthier.	90 (46.4)	92 (47.4)	12 (6.2)	194 (100.0)
I can consume foods that are prohibited by my religion if I have to.	22 (81.4)	3 (11.1)	2 (7.5)	27 (100.0)
I do not consume prohibited foods even if I have to.	65 (29.8)	82 (37.4)	72 (32.8)	219 (100.0)
Everyone can consume any food they want.	87 (65.4)	18 (13.6)	28 (21.0)	133 (100.0)

* the participants answer multiple questions in this table

Table 3. Fasting status based on religions

	Christian Group	Jewish Group	Muslim Group
Fasting Status	n (%)	n (%)	n (%)
Yes	82 (75.2)	94 (84.6)	96 (87.2)
No	27 (24.8)	17 (15.4)	14 (12.8)
Total	109 (100)	111 (100)	110 (1009)

Table 4. Views on the effects of fasting on health

Views	Christian Group	Jewish Group	Muslim Group
	n (%)	n (%)	n (%)
Yes, I lose weight.	5 (4.5)	2 (1.8)	10 (9.1)
Yes, it also gives my peace in the spiritual sense.	38 (34.8)	75 (67.5)	85 (77.3)
Yes, it allows the digestive system of the body to rest.	9 (8.5)	4 (3.6)	10 (9.1)
Yes, I find it unhealthy to stay hungry for a certain time.	12 (11.0)	8 (7.2)	1 (0.9)
No, I do not believe it has any effect on health.	45 (41.2)	22 (19.9)	4 (3.6)
Total	109 (100.0)	111 (100.0)	110 (100.0)

by 4.5%. Muslims had the highest rate of agreement with the statement that 'their religion affected their eating' by 44.7%, while Christians had the lowest rate by 8.2% (Table 7).

DISCUSSION

This study was carried out with 330 participants consist of 110 Muslim, 109 Christian and 111 Jewish individuals who are living in Istanbul. 65.5% of the participants were female, and 34.5% were male. In this study, the waist circumference values of the male were found to be higher and more frequently risky in comparison to those in the female. Obirikorang et al showed that male had higher rates broader-than-normal waist circumference values (17). Conducted a study in Japan and found the waist circumference values of male to be riskier than those in female (18). This may be explained by that fattening in male is usually based on the android apple body type, meaning around the abdomen, while female usually have a gynoid pear body type, which indicates fat accumulation on the hips and buttocks.

In this study, when the views of the participants on nutrition-related rules based on religions were examined, the religion whose members found the 'religious rules about eating meaningless' the most was Christianity, while the Jewish participants had the highest rate to 'find the rules of other religion on nutrition stricter and unhealthier'. The eating-related rules of Judaism known as Kashrut, which are stricter in comparison to other religions' rules, may explain these results. The highest rate of agreement with the statements 'I can consume foods prohibited by my religion if I have to' and 'everyone can eat anything they want' was among the Christian participants. The reason for this may be nutritional differences according to religions. (Judaism: meat and dairy products, pork products not allowed. Islam: pork products, alcohol, carnivores are not allowed. On the contrary, no specific ban on any kinds of food in Christianity.)

The Muslim participants in this study had the highest rate of participation in fasting practices in comparison to the other two groups. This may be attributed to the higher significance attached to fasting in Islam due to 30 days of fasting during Ramadan and celebrations under Eid ul-Fitr, in comparison to 7 days of fasting in Judaism and differing fasting durations in Christianity based on sects. (13).

In the comparison in this study of the distribution of the HEI values of the participants based on these values, the index values with the highest quality were found among Muslims. This finding may be explained by that, in Islam, the things that are forbidden for consumption have high calorie contents (pork products, carnivorous birds, alcohol, carnivorous animals such as feline species and wolves, all reptile meats and products, all insects).

In the comparison of the participants' BMI values based on their religions, the highest BMI values were found among Christians. This result may have been caused by that the Christian participations in this study had higher

Table 5. Distribution of the HEI values based on religions

	Inadequate	Needs Improvement	Quality	Total
Religions	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Christian	68 (62.3)	9 (8.4)	32 (29.3)	109 (100.0)
Jewish	49 (44.1)	20 (18.1)	42 (37.8)	111 (100.0)
Muslim	32 (29.0)	13 (11.8)	65 (59.2)	110 (100.0)

Note: Pearson Chi-Squared Value = 12.172 and p value = 0.016, **HEI:** Healthy Eating Index

Table 6. Comparison of body mass index based on religions

Religion	Underweight	Normal	Overweight	Obese	Total
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Christian	6 (5.7)	32 (29.3)	10 (9.1)	61 (55.9)	109 (100.0)
Jewish	10 (9.1)	44 (39.6)	15 (13.5)	42 (37.8)	111 (100.0)
Muslim	5 (4.5)	65 (59.2)	17 (15.4)	23 (20.9)	110 (100.0)

Note: Pearson Chi-Squared Value = 13.791 and p value = 0.032

food intake levels due to lack of restrictions imposed by Christianity on specific food types in comparison to other religions, or that these participants could have unhealthy eating habits.

This study also investigated the effects of the participants' religious perceptions on their food preferences and found that Muslims constituted the group that had the highest rate of agreement with the statements 'I pay

Table 7. Religious perceptions of food preferences according to religions

Views	Christian Group			Jewish Group			Muslim Group		
	Yes	No	S[a]	Yes	No	S[a]	Yes	No	S[a]
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Paying attention to whether or not the foods that are consumed are prepared in compliance with religious beliefs	27 (24.7)	69 (63.3)	13 (12.0)	47 (42.4)	14 (12.6)	50 (45.0)	55 (50.0)	33 (30.0)	27 (20.0)
Status of consuming food prepared by a member of a religion other than yours (defined as a divine religion)	90 (82.7)	15 (13.7)	4 (3.6)	75 (67.6)	10 (9.0)	26 (23.4)	92 (83.8)	8 (7.2)	10 (9.0)
Status of eating with a member of a religion other than yours (defined as a divine religion)	104 (95.5)	2 (1.8)	3 (2.7)	103 (92.8)	3 (2.7)	5 (4.5)	105 (95.5)	2 (1.8)	3 (2.7)
Status of consuming food prepared by a member of a religion other than yours that is not considered a divine religion	91 (83.6)	15 (13.7)	3 (2.7)	94 (84.7)	12 (10.8)	5 (4.5)	85 (77.4)	20 (18.1)	5 (4.5)
Status of eating with a member of a religion other than yours that is not considered a divine religion	101 (92.8)	4 (3.6)	4 (3.6)	100 (90.0)	7 (6.3)	4 (3.7)	102 (92.8)	4 (3.6)	4 (3.6)
Paying attention to whether or not the origins of the brands while shopping for food are the same as your belief	5 (4.5)	95 (87.3)	9 (8.2)	108 (92.3)	2 (1.8)	1 (0.9)	105 (95.5)	3 (2.7)	2 (1.8)
Status of consuming all food considered to be healthy without regard to your religion	103 (94.6)	2 (1.8)	4 (3.6)	104 (93.7)	2 (1.8)	5 (4.5)	101 (91.9)	7 (6.3)	2 (1.8)
Your thoughts about the effects of your religion on your nutrition	9 (8.2)	96 (88.2)	4 (3.6)	22 (19.8)	76 (68.5)	13 (11.7)	60 (44.7)	40 (36.3)	10 (9.0)

[a]S: sometimes

attention to whether or not the origins of the brands while shopping are the same as my religion' and 'I believe my religion has an effect on my eating behaviors.' This may have been caused by that the participants were more sensitive in terms of consumption of foods prohibited by Islam and the place where the study is conducted is Istanbul, where the Muslim population is comparatively high, to which explains the results of the research.

Religious beliefs and belief-related effects of different religions may shape the dietary styles of individuals in social life by affecting their approaches to foods and eating habits. Religious perceptions and religious obligations like fasting may affect the body mass indices of individuals by intervening with their eating styles. Additionally, religious perceptions may have a determinant effect on the production, trade and consumption processes of food items.

Limitations of this study;

Because of the originality of the study and inadequate number of studies on this subject in the literature, our results could not be discussed in a wider way. The place where the study was carried out is a place where the Muslim population is majority compared to other religions. It is believed that revealing the effects of different religions in countries on nutrition and the food industry will contribute to planning food industry and healthcare policies by considering religious minorities.

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Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee (Non-Invasive Clinical Studies Ethics Board at the Faculty of Medicine at Marmara University with the decision date of 03.18.2019 and protocol number of 99) and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. After the ethics board approval, the data were conducted in the period of March-May 2019.

Conflict of Interest

The authors declare that they have no conflict of interest.

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Author Contributions

The contribution of both authors was equal in designing the study, reviewing the literature, being prepared for the ethics committee, collecting, analyzing and reporting the data.

REFERENCES

1. Aktaş N. Food guides: A visual instrument in nutrition education. Selcuk University The Journal of Institute of Social Sciences. 2011;25:11-16.
2. Soysal Y. Comparison of the effects of exercises and NLP applications on eating attitudes of people facing excess weight and obesity problems (Master Thesis). Celal Bayar University The Institute of Health Sciences, 2006, Manisa, Turkey.
3. Değirmenci T. Obeze persons, self-esteem, health-relted quality of life, eating attitude, anxiety and depression (Doctoral Dessertation). Pamukkale University, Faculty of Medical Sciences, department of Psychiatry, 2006, Denizli, Turkey.
4. Belge M. Culinary culture throughout the history (Tarih boyunca yemek kültürü). Istanbul: İletişim Yayınları, 2013.
5. Sauner-Leroy MH. Yemeğin değişken anlamları ve göç: İstanbul'daki Fransızların yemek alışkanlıkların üzerine bir değerlendirme (Varying meanings of food and migration: An analysis on the dietary habits of the French in Istanbul). In: Avcı A, Erkoç S, Otman E, Eds. Yemekte tarih var: Yemek kültürü ve tarihçiliği (There is history in food, culinary culture and historiography). Istanbul: Tarih Vakfı Yurt Yayınları; 2012. 162-170.
6. Goody J. Cooking, cuisine and class: A study in comparative sociology, Güran MG. (Trans.) 1. Baskı. Istanbul, Pinhan Yayınları; 2013.
7. Beşirli H. Yemek sosyolojisi yiyeceklere ve mutfağa sosyolojik bakış (Food sociology: A sociological approach on foods and cuisine). 1. Baskı, Ankara, Phoenix; 2012.
8. Günebak ÇT, Merdol Kutluay T. Beslenme antropolojisi I. (Anthropology of nutrition I). 1. Baskı. Ankara, Hatiboğlu Yayınları; 2012. Bölüm 8, 93-105.
9. Kurt AO. Kosher and Kosher economy in Judaism (Yahudilik'te koşer ve koşer ekonomisi). C.Ü. İlahiyat Fakültesi Dergisi. 2010;14(2):103-149.
10. Mammadli, B. Eating rules in Judaism (Kaşerut) [Yahudilikte beslenme kuralları (Kaşerut)] (Master Thesis). Uludağ University, The Institute of Social Sciences, 2013, Bursa, Turkey.
11. Gürhan N. Food and religion: A study on the religious symbolic meanings of food. Journal of the Human and Social Sciences Researches. 2017;6(2):1204-1223.
12. Güneş A. Religion and society relations as a sociological phenomenon. Fırat University Journal of Social Science. 2014;24(1):153-164.

13. Koluman A. Food and religion from primitive to celestial. Uludag Univ J Fac Vet Med. 2009;28(1):25-32.
14. Kalafat Y. Türk Halkları arasında yaşayan hayat sonrası ile ilgili inançlar 3. Uluslararası PIAC Toplantısı, Leneken-Belçika (3-8 Eylül 2000); 60. Yılında İlim ve Fikir Adamı Prof. Dr. Kazım Yaşar Kopraman'a Armağan. Ankara, 2000;412-418.
15. Erdoğan S, Nahcivan N, Esin N. Hemşirelikte araştırma: Süreç, uygulama ve kritik. 1. Baskı. İstanbul, Nobel Tıp Yayınları, 2012.
16. United States Department of Agriculture. "The Healthy Eating Index" (Internet). (05.02.2020) available on: https://fns-prod.azureedge.net/sites/default/files/healthy_eating_index/HEI89-90report.pdf.
17. Obirikorang C, Obirikorang Y, Acheampong E, Anto EO, Toboh E, Asamoah EA, Brenya P, et al. Association of wrist circumference and Waist-to-Height ratio with cardiometabolic risk factors among type II diabetics in a ghanaian population. J Diabetes Res. 2018;2018:1838162.
18. Hattori T, Konno S, Munakata M. Gender differences in lifestyle factors associated with metabolic syndrome and preliminary metabolic syndrome in the general population: The Watari study. Intern Med. 2017;56(17):2253-2259.