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THE IMPACT OF HEALTH VALUE ON FOOD CHOICE IN RESTAURANT CUSTOMERS: A COMPARISON IN TERMS OF BODY-MASS INDEX (BMI)*

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ABSTRACT

The best method to maintain a healthy life is healthy food choice. As for the healthy food choice itself, it is related to placing value on health. The aim of the study is to determine the impact of health value on healthy food choice in restaurant customers. The data were gathered through a questionnaire, which was developed based on the literature review. The questionnaire was conducted on 01.05-31.07.2018 on restaurant customers between the ages of 20-69, who lived in Kayseri, and dined out at least once a year. Quota sampling was employed in the implementation of the survey on the basis of towns and age groups. A total of 1286 surveys were analysed via factor, regression and variance analysis, as well as single sample t-test. Health value had a positive impact on healthy food choice among the underweight participants (β: 0,339), the participants with normal weight (β: 0,143), the overweight participants (β:-0,684), and the participants with the 1st degree of obesity (β: 0,152) while it had a negative impact on healthy food choice among the participants with the 2nd degree of obesity (β: 0,162). As for the participants with the 3rd degree of obesity, health value was found out to have no impact on healthy food choice.

Keywords: *Health Value, Healthy Food Choice, Kayseri.*

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1. INTRODUCTION

Being healthy has always been a popular and significant issue for humanity. Hence, consuming healthy food at restaurants has become a significant factor for both consumers and catering businesses (Choi and Zhao, 2010). Considering the increase in obesity and food consumption outside homes (Bowman and Vinyard, 2004), restaurants have been making a great effort to encourage people to consume healthy food (Glanz et al., 2007; Jun et al., 2016). Unfortunately, not many people care about what they consume until after they notice that not all food is beneficial for their health (Choi and Zhao, 2010). However, it is also a fact that some customers have more positive attitudes towards restaurants that offer healthy menus even if they cannot choose them (Jun et al., 2016). While choosing healthy food, consumers are more worried about the calories or fat content in the food rather than other food items or ingredients in it (Chen et al., 2006; Jun et al., 2016).

Another concept that would support healthy food choice is health value. The concept of health value refers to the value that individuals place on their health, and the follow-up behaviours regarding their health (Smith and Wallston, 1992).

Health value channels people's behaviours such as healthy food choice (Jun et al., 2014). Determining how much importance individuals place on their health and the worries they have considering their health shape their behaviours constitutes the underlying element in measuring health value. Based on this, measuring health value is associated 1st and foremost with food consumption and other areas (sports, etc.), and hence, examined concordantly.

In a community, there are plenty of elements that provide the emergence of health consciousness and an increase in healthy eating. The increase in air, water and noise pollution along with climate change and the destruction of the ozone layer have led to many health problems (Ture and Ganesh, 2012). The increase in the rates of obesity, cancer and cardiovascular diseases has in turn raised social concerns in terms of healthy eating (Tudoran et al., 2009).

Health value has developed into a significant factor in food purchases, and consumers have become more aware of the issues such as nourishment, health and the quality of food (Chen, 2009). In line with these developments, topics like health value and health consciousness have been increasingly taken into consideration by the society, the media, the government, researchers, etc., and they have started to take necessary steps regarding them.

Jun et al. (2014) researched the impact of health value on healthy food choice at restaurants based on the roles of the attitudes towards the healthiness and the taste of healthy food. They examined restaurant customers' intentions of healthy menu choices (i.e. low-calorie or low-fat food items) employing the Value-Attitude-Behaviour model (VAB). They concluded that taste related attitudes towards healthy menu items have a more significant impact on behavioural intentions such as opting for positive phrases for these menu items, recommending and promoting them.

Health value is positively correlated with health related attitudes, and hence it has a positive impact on attitudes towards healthy products (Tudoran et al., 2009). It is discovered that whereas consumer interests towards health is significantly correlated with positive attitudes towards fruit, vegetables and fish (Zandstra et al., 2001), they manifested negative attitudes towards high-fat food (Zandstra et al., 2001; Tudoran et al., 2009). Cornell (2006) emphasised that these days some tourists have minded out whether they could have health benefits from their travel experiences (Kim and Eves, 2012). The literature review indicates that health value might have an impact on healthy food choice.

Additionally, value placed on health and healthy food choice might both be correlated with physical characteristics like height and weight. The BMI values can even be a good method of measurement. A BMI value below 18.5 kg/ m^2 indicates that the individual is underweight. A BMI value of 18.5 to 24.9 kg/m^2 is considered normal weight while a BMI of 25.0 to 29.9 kg/m^2 is considered overweight, and a BMI of 30.0 to 34.9 kg/m^2 is considered to be the 1st degree of obesity. A BMI of 35.0 to 39.9 kg/m^2 refers to the 2nd degree of obesity while a BMI above 40.0 kg/m^2 indicates the 3rd degree of obesity (NHLBI, 2000). It can be predicted that health value might influence healthy food choice while the impact can differ in accordance with the BMI values of individuals. Hence, it is determined to test the following hypothesis.

H_1: Health value of restaurant customers with different BMI values influences healthy food choice in different levels.

2. THEORETHICAL BACKGOUND AND THE LITERATURE REVIEW

Health value has been initially referred to as the measurement defining the stage that people would like to achieve in life. Health value in consumers tests the correlations among common attitudes towards functional food, attitudes specific to fish products that are rich in functional fibres, and the intention to purchase the product. More importantly, it evaluates the impact of hygiene on these structures and establishes connections (Tudoran et al., 2009). In the literature review, other concepts similar to health value such as "health care" (Fabrega and Roberts, 1972), "health consciousness" (Michaelidou and Hanssan, 2008), and "interest in health" (Olsen, 2003) stand out (Jun et al., 2014).

It is obvious that values that differ in accordance with individuals and societies have taken many forms throughout history, one of which is health value. The concept of health value[1] can be defined as the degree that indicates individuals' health (Tudoran et al., 2009).

Jun et al. (2014) measured whether health value had an impact on taste attitude and intention with the Value-Attitude-Behaviour (VAB) model. The result confirmed the usage of the VAB model and was consistent with the previous studies (Westcombe and Wardle, 1997; Reime et al., 2000; Tudoran et al., 2009). Tudoran et al. (2009) discovered that individuals' attitudes towards functional food act as a mediator between health value (worries about and importance of health) and specific attitudes towards a real functional food.

Lau et al. (1986) developed a 4-item health value scale while Tudoran et al. (2009) improved Lau et al. (1986)'s scale into a 5-item health value scale. Moreover, Wallston et al. (1976), Wallston et al. (1978), and Norman (1995) developed Health Locus of Control Scale (HLC) in order to use it with a measure of individuals' health value. Norman (1995) found out a significant correlation between behaviour-specific efficacy beliefs and the performance of health behaviours for individuals with a high health value. Meanwhile, Kristiansen (1985) and Kristiansen (1986) determined that for an individual to adapt to health behaviour, another reason or motivation (a peaceful world, an exciting life, happiness, etc.) could be more effective than the value he/she placed on health. In the study carried out to verify the validity of the Health and Taste Attitude Scales (HTAS) among different nationalities, Roininen et al. (2001) demonstrated that all health scales and two of the taste subscales were useful to define consumer attitudes in and among countries.

Kim and Eves (2012) developed a 26-item scale in order to determine the factors that affected local food and beverage consumption. Local food consumption was found out to consist of five basic motivational dimensions, which were labelled as cultural experience, interpersonal relationships, excitement, sensory appeal and health concern. Furthermore, Kim et al., (2009) labelled the motivating factors that affected local food and beverage consumption as exciting experience, escape from routine, *health concern*, learning knowledge, authentic

experience, togetherness, prestige, sensory appeal, and physical environment. Sun (2008) confirmed the correlation between *health concern* and healthy eating, both of which constitute food choice motivations. Sparks et al. (2003) discovered that one of the basic motivations of food consumption on holidays was consuming healthy food in a touristic destination (Kim et al., 2009). Formerly, Steptoe et al. (1995) revealed that the most obvious motivation concerning food choice consisted between food choice motivations about health and natural products (r=0.59). Contento et al. (1988) concluded that adolescence food choice motivations entailed hedonistic, social/environmental, personal, peer-supported, and *parent-supported health tendencies* (Roininen et al. 1999). In the study carried out in PAN-EU countries, Lappalainen et al. (1998) revealed several consumer tendencies such as (1) quality/ freshness, (2) price, (3) taste, (4) *trying to consume healthy food*, and (5) whatever my parents wanted me to consume (Roininen et al. 2001).

Health issues of restaurant customers caused by food consumption have brought about the issue of healthy food choice. Healthy eating refers to consuming food that is low in bad fats, sodium, bad cholesterol and sugar, but high in fibres, fresh fruit and vegetables (Deshpande et al., 2009).

Health value is reflected on an individual's behaviour as food choice. Food choice, in turn, is determined through many interrelated factors. The four main elements that govern healthy food consumption are personal health, environment, ethics, and spiritual factors (Chen et al., 2006). Demographic and socio-economic variables along with social, cultural and cognitive factors can also be included in these elements. Additionally, hunger and satiation factors, personal taste preferences, as well as the sensory and other physical characteristics of the food constitute an important part in food choice (Tepper et al., 1997).

Ronteltap et al. (2012) specified health as an important motivation in food choice. As for Barta (2008), healthy food was considered a significant motivation along with relaxation, experience and ambiance (Choi and Zhao, 2010). Chen et al. (2006) maintained that the most important element of healthy eating was low fat levels.

Lee (2009) and Nothwehr et al. (2010) asserted that women and seniors preferred healthy food at restaurants and that they preferred restaurants which provided healthy food. While Yüksel and Yücelik (2002) found out that tourists looking for healthy food preferred restaurants that offered healthy and nutritious food, Hallab et al. (2003) concluded that tourists with high health consciousness cared more about the healthy life style characteristics of destinations, as well as "the restaurants that emphasised light meals", and "the restaurants that concentrate on healthy cooking methods with vegetables" (Chang, 2017).

Rappoport et al. (1993), Steptoe et al. (1995), Buttriss (1997), Turrell (1997), Wardle et al. (2004), and Hwang and Cranage (2010) pointed out that women cared more about healthy eating than men, and that they were more enlightened about the issues such as diet and health (Kearney et al., 1998). Furthermore, Pollard et al. (1998) revealed that women were more successful than men in maintaining healthy eating habits. Additionally, Nothwehr et al. (2010) confirmed that women were more interested in healthy choices than men.

In their study, Lappalainen, et al. (1998) discovered that most of the participants from the EU did not need to change their diets since they considered their diets as healthy, and that price could play a distinctive role in food choice. In their study concerning healthy food consumption in 15 EU member states, Kearney and McElhone (1999) identified the factors of time and taste as the most frequently stated obstacles to healthy eating. Furthermore, Croll et al. (2001) discovered that adolescents believed in the importance of having knowledge about healthy eating; however, lack of time, limited supplies of healthy food at school, and a common concern about healthy eating recommendations constituted the aforementioned obstacles.

In their study concerning healthy eating, Keane and Willetts (1996) identified healthy diet as comprising of certain food and nutrition such as fresh fruit and vegetables while Lake et al. (2007) referred to concepts like "a balanced diet" or "appropriate food". Meanwhile, Marshall et al. (1994) found out that Scottish people considered fruit and vegetables beneficial to health.

Kozup et al. (2003), Cranage et al. (2004), Burton and Creyer (2004), Burton et al. (2006), Tangari and Burton, (2008), Burton et al. (2009), and Jones (2010) confirmed the correlation between having knowledge about health and health behaviour considering food choice at restaurants (Jones, 2010). Kearney et al. (2001) demonstrated the consistent relationship between healthy eating attitudes and behaviours. In the meantime, Bogue et al. (2005) identified key variables that explained the change in dietary behaviours as attitudes towards healthy eating habits, perceived impacts of diet on health, and knowledge about nutrition. Hwang and Lorenzen (2008) explained that the more nutritional knowledge an individual was offered, the more beneficial that knowledge became and the more credible the source became. In the study that was carried out to determine tourists' healthy eating habits and the impact of travel on eating habits, Chang (2017) asserted that healthy eating attitudes were multidimensional, and that tourists with healthy eating consciousness should not be considered as a homogenous group.

Additionally, Ronteltap et al. (2012) revealed that healthy food was not understandable and transparent for everyone; similarly, it was not interpreted in the same way. Krahn et al. (2011) stated that all of the participants considered healthy eating significant. Moreover, Jun et al. (2014) found out that customers' behaviours during healthy menu choices were affected by intentional (behavioural intention) and reactive (behavioural weakness) decision making processes. Incidentally, Chen et al. (2006) specified the essential element in choosing healthy food as low-fat levels. Additionally, Choi and Zhao (2010) determined that the factors that affected consumers while choosing a restaurant differed in accordance with consumers' health problems, annual income, eating out budget, and weight anxiety.

Auchincloss et al. (2014) discovered that the food served at full service restaurant chains had high levels of calories, saturated fats and sodium. Besides, Sun (2008) confirmed the correlation between health anxiety and healthy eating attitudes. In the study carried out to determine children's healthy eating habits, Seaman et al. (1997) found out that most children thought about what they consumed to a certain extent, but girls had more anxiety about it than boys. Fila and Smith (2006) defined the important barriers to healthy eating as the availability and taste of fast food. Furthermore, Glanz et al. (2007) revealed that profit margins were important barriers to offering healthy food choices at restaurants.

3. THE METHOD OF THE STUDY

The study was descriptive, and the data were collected with a questionnaire based on the literature review. The questionnaire contained two scales as well as demographic questions. Participants' health value was measured via the 5-item scale developed based on the previous study of Jun et al. (2014). As for determining healthy food choice of the participants, Kim et al. (2013)'s 5-item scale was employed. Response categories of all items were subjected to 5 point Likert type (from 1=I definitely disagree to 5= I definitely agree).

The population of the study consisted of restaurant customers between the ages of 20-69 while the sampling framework was comprised of individuals between the ages of 20-69, who lived in Kocasinan, Melikgazi and Talas districts of Kayseri, and dined out at least once a year. Quota sampling was employed in the implementation of the questionnaire taking towns and age groups into consideration.

As the scales did not have any parameters that represented the whole population in Turkey, the intended sample size was measured based on the decision that the standard deviation (SD) of the 5-point Likert scale should be 1, and the population mean should deviate approximately e: 0.10 at a 5 % significance level. Since the population of the ages between 20 and 69 in the three districts of Kayseri is more than 10.000, the formula of infinite population sample size ($n=\sigma^2*Z^2\alpha/H^2)^2$ was employed to calculate the mean. The analysis yielded a sample size of 384 for each district. Moreover, taking into consideration the possibility of deviation, it was aimed to implement at least 420 questionnaires in each district. Implementation process of the questionnaire was carried out from 01.05.2018 to 31.07.2018 electronically and through interviewers. At the end of this process, a total of 1342 questionnaires were compiled. Following multiple outliers analysis, 56 of the observations were removed from the data set. Hence, a total of 1286 questionnaires were analyzed. Along with descriptive analysis, factor and regression analysis were employed in the analysis of the data. In factor analysis, a factor loading of at least 0.400 and more was approved to establish the factors that explained each item. In order to determine the number of factors, it was agreed to factor in eigenvalues that are higher than 1 (Kalaycı, 2014), and employ Varimax rotation. Communality values were determined to be at least 0.500 and more.

3.1. Reliability

It was discovered that all of the items in the healthy food choice scale had item-total correlations of + 0.250 and more, and hence, no items were deleted from the scale. The item-total correlations of the 5-item healthy food choice scale ranged between 0.704 and 0.833, and the squared multiple correlations values varied between 0.525 and 0.714. The coefficient of internal consistency of the healthy food choice scale was measured to be 0.914.

As for the health value scale, the items "I am not interested in the positive or negative results of what I consume on my health" and "Being healthy is not an important issue for me" were deleted from the scale since squared multiple correlations of these items were measured to be 0.161 and 0.260 respectively. Item-total correlations of the remaining three items ranged between 0.567 and 0.677, and squared multiple correlations values varied between 0.326 and 0.449. The coefficient of internal consistency of the health value scale was found out to be 0.781. Since the Cronbach Alpha coefficients of two scales were greater than 0,700, the data gathered via two scales might be accepted that they had the acceptable and good reliability respectively (Sekaran and Bougie, 2013).

3.2. Validity

To measure the construct validity of the scales, exploratory factor analysis was carried out. Healthy food choice scale explained 74.711 % of the total variance in a single dimension (KMO: %87.7; Bartlett's test of sphericity: χ^2:4482.932; s.d.:10; p<0.0001). The 3-item health value scale explained 69.831 % of the total variance in a single dimension (KMO: %68.8; Bartlett's test of sphericity: χ^2: 1126.654; s.d.:3; p<0.0001).

Subsequently, confirmatory factor analysis was applied on the health value and healthy food choice scales. The total 1286 surveys were randomly divided into two groups. The first one consisted of 628 surveys while there were 658 surveys in the second group. On both groups, confirmatory factor analysis was conducted separately to provide evidences for validity.

The data in the first group was derived from 628 questionnaires. Standardized values ranged between 0.69 and 0.90, and all t-values (between 17.37 and 28.72) were higher that the theoretical value of 1.96 at the significance level of α: 0.05. Furthermore, t-values of error terms (the lowest being 7.98) were found out to be higher than the critical value of 1.96. As for the data derived from 658 surveys in the second group, standardized values varied between 0.61

and 0.87. The lowest t-value was determined to be 15.54, and all the other t-values were found to be higher than the theoretical value of 1.96 at the significance level of α: 0.05. t-values of error terms (the lowest being 7.29) were found to be higher than the critical value of 1.96 (Aksu et al., 2017).

Following the analysis of goodness-of-fit carried out on the first and second groups, it was discovered that the values of "χ^2/s.d." of both groups were less than 5. RMSEA values were approximately 0.07 while SRMR values were less than 0.03. Other goodness-of-fit analysis indicated that both groups had attained acceptable fit (Aksu et al., 2017).

For both groups, the values of average variance extracted (AVE) were higher than 0.50 and clustered close to each other. Similarly, the coefficients of composite reliability were close. In the first group, the correlation coefficient between the health value scale and healthy food choice scale was 0.180, and had significance at a level of $p<0.001$. Correlation coefficient in the second group was calculated to be 0.144, and had significance at a level of $p<0.001$. The correlation coefficients calculated for both groups were low, but indicated a significant correlation.

For discriminant validity, the AVE value is required to be higher than correlation coefficients, and the results of the analysis of the both scales indicate that discriminant validity is achieved for both groups (Group 1: AVE values: 0.56-0.69, r: 0.180, r^2: 0.0324; Group 2: AVE values: 0.56-0.68, r: 0.144, r^2: 0.0207).

Table 1. Results of Confirmatory Factor Analysis

	1st Group; n: 628			2nd Group; n: 658		
	Standardized value	Error margins	t-value	Standard values	Error margins	t-value
HEATH VALUE	**AVE:0.56; CR:0.79**			**AVE:0.56; CR:0.79**		
1.Being health is indispensable for me.	0.69	0.52	17.37	0.61	0.63	15.54
2. I constantly think about my physical condition.	0.82	0.33	20.65	0.83	0.31	21.14
3. Healthy food interests me.	0.72	0.48	18.18	0.78	0.40	19.79
HEALTHY FOOD CHOICE The restaurants I frequent;	**AVE:0.69; CR:0.92**			**AVE:0.68; CR:0.91**		
1.have high nutritious food.	0.75	0.44	21.58	0.74	0.46	21.48
2.offer light and healthy food choices.	0.84	0.29	25.67	0.86	0.26	27.06
3. use fresh and organic ingredients.	0.90	0.18	28.72	0.87	0.24	27.72
4.employ healthy cooking methods (steaming, grilling, baking, boiling, etc.)	0.87	0.24	27.16	0.86	0.26	26.88
5.offer food that helps me control my weight or lose weight.	0.79	0.37	33.45	0.77	0.40	22.95
1st Group (n:628) Goodness-of-Fit	χ^2:72.52; d.f.:19; χ^2/d.f: 3.82< 5; RMSEA: 0.067; CFI: 0.99: GFI: 0.97; AGFI: 0.95; IFI: 0.99; RFI: 0.97; NFI: 0.98; NNFI: 0.98; RMR: 0.036; SRMR: 0.025; Model CAIC < Saturated CAIC: 199.04<267.93					
2nd Group (n:658) Goodness-of-Fit	χ^2:80.46; d.f.:19; χ^2/d.f: 4.23< 5; RMSEA: 0.07; CFI: 0.98: GFI: 0.97; AGFI: 0.94; IFI: 0.98; RFI: 0.97; NFI: 0.98; NNFI: 0.97; RMR: 0.043; SRMR: 0.029; Model CAIC < Saturated CAIC: 207.77<269.61					

4. FINDINGS AND DISCUSSION

Of 1286 participants, 51.7 % were male. 69.3 % of the participants were married. 26 % of the participants were university graduates while 10.4 % had master's degree and 14.9 % had PhD. The average monthly income of the participants was 3.390 TL.

Following confirmatory factor analysis, a model test was conducted in order to determine whether health value of the participants in both groups had any impact on healthy food choice (Table 2), which revealed that health value had an impact on healthy food choice despite the low rate of explanation. The lowest practically significant rate, 4 % (Ferguson, 2009), was slightly approached in the first group.

Table 2. Model Test Results Concerning the Impact of Health Value on Healthy Food Choice

Group	N	Correlation	Coefficient (β)	t-value	p value	R^2	Results
1	628	SD → SYS	0.20	4.22	0.046	0.038	Supported
2	658	SD → SYS	0.16	3.44	0.045	0.024	Supported
HV: Health Value; HFC: Healthy Food Choice							

Another variable that might have an impact on individuals' food choice is Body-Mass Index (BMI). It is a parameter that shows whether an individual's weight is normal in relation to his /her height. It is measured by dividing the weight by the square root of height (kg/m²), and WHO's reference values are taken into consideration in evaluating the result (Acıbadem, 2019). In this context, out of 1285 participants that provided information about height and weight, 47 were underweight, and 534 were normal weight while 548 were overweight. Of the overweight participants, 144 were in the 1st degree of obesity, 9 were in the 2nd , and 3 were in the 3rd degree of obesity.

Table 3. Findings considering the height, weight and BMI of the participants

Height (cm)	F	%	Weight (kg)	F	%	BMI	F	%
Between 140-150	9	0.7	Between 40-50	69	5.4	Less than 18.5; Underweight	47	3.7
Between 151-160	173	13.5	Between 51-60	196	15.2	18.5-24.9; Normal weight	534	41.5
Between 161-170	446	34.7	Between 61-70	271	21.1	25.0-29.9; Overweight	548	42.6
Between 171-180	464	36.1	Between 71-80	331	25.7	30.0-34.9; 1st degree of obesity	144	11.2
Between 181-190	176	13.7	Between 81-90	244	19.0	35.0-39.9; 2nd degree of obesity	9	0.7
Between 191-200	18	1.4	Between 91-100	111	8.6	40.0+; 3rd degree of obesity	3	0.2
Missing data	-	-	101 and more	63	4.9	Missing Data	1	0.1
Total	1286	100	Missing Data	1	0.1	**Total**	1286	100
			Total	1286	100			

Regression analysis was carried out on the data in order to determine whether health value of the participants had an impact on healthy food choice in accordance with their BMI values. The findings based on the few numbers of participants with the 2nd and 3rd degree of obesity (9 and 3 respectively) should be cautiously evaluated. Despite this drawback, Table 4 summarizes the analysis.

Health value had a positive impact on healthy food choice among underweight, normal weight, and overweight participants. In underweight participants in particular, a unit increase in health value provided a 0.339 unit increase in healthy food choice, which hints that underweight participant were more careful in healthy eating. On the other hand, a unit increase in health value provided only a 0.172 unit increase in overweight participants, which makes the assessment that the care for healthy food choice decreased in overweight participants viable. However, among participants with the 1st degree of obesity, health value did not have a discernable impact on healthy food choice. Nevertheless, among participants with the 2nd degree of obesity a unit increase in health value indicated a 0.684 unite decrease in healthy food choice. Thus, it is obvious that they adopted a negligent attitude towards food choice. As for the participants with the 3rd degree of obesity, health value was found out not to have an impact on healthy food choice.

Table 4. Impact of health value on healthy food choice in accordance with BMI

Dependent Variable	**Coefficients**	**Underweight**	**Normal**	**Overweight**	**1st degree of obesity**	**2nd degree of obesity**	**3rd degree of obesity**
Healthy Food Choice	n	47	534	548	144	9	3
	The average of Healthy Food Choice*	3.4553	3.0281	2.9949	3.0625	3.4000	2.2000
	Standard deviation	1.25850	1.09498	1.16812	1.10345	1.06771	1.05830
	Standardized β	0.339	0.143	0.172	0.152	-0.684	0.982
	t-value	2.417	3.823	4.070	1.832	-2.480	5.196
	p-value	0.020	0.001	p<0.001	0.069	0.042	0.121
	F value	5.841	11.043	16.562	3.355	6.152	27.000
	F(p)	0.020	0.001	p<0.001	0.069	0.042	0.121
	R^2	0.115	0.020	0.029	0.023	0.468	0.964
Independent Variable: Health value *Response Categories :1: I definitely disagree.....5: I definitely agree							

5. RESULTS AND DISCUSSION

Nourishment has always been the topic of many researches. Researchers have examined issues such as adequate and balanced nutrition, malnutrition, and healthy eating, along with natural and organic food, local food, healthy food choice, eating out, taste attitude, and GMOs. Compared to the past, nowadays the challenging issues contain seeds that have lost their original structures, the increase in GMOs, pesticide and chemical usage during and after farming, the disappearance of naturality, and the increase in food-related diseases and death. These striking topics stir up quite a lot of discussion and research. Thus, this study aims to reveal the correlation between health value and healthy food choice of restaurant customers. The participants consist of 1286 individuals between the ages of 20-69, who lived in Kocasinan, Melikgazi and Talas, Kayseri, and dined out at least once a year. As health value and healthy food choice constituted the research topic, the need to inquire about the physical characteristics of the participants (height and weight) arose. The evaluation of the responses revealed that the average height of the participants varied between 171-180 and the average weight of the participants ranged from 71 to 80. These results also represent the physical characteristics of people living in Kayseri. Additionally, a comparison of height and weight was carried out to obtain more distinctive information about the physical characteristics of the participants. The number of male participants between 140 cm and 170 cm was 143 while there were 484 female participants in the same range. Moreover, male participants between 171 cm and 198 cm consisted of 522 individuals while there were 134 female participants in this range. A similar situation occurred in weight-gender comparison. Namely, the number of male participants between the kilograms of 40 to 70 was 115 while there were 420 female participants in the same range. Additionally, male participants between 71 kg and 100 and more kg consisted of 550 individuals while there were 197 female participants in the same range. These findings draw a parallelism between height and weight in terms of gender. In other words, while most of the female participants were both short and underweight while male participants present an opposite condition.

Certain questions were added to the survey to obtain, analyse and assess more data considering participants' health value and healthy food choice. To begin with, to the question "How many times a year do you eat out at a restaurant?" a surprising 33.2 % of the participants answered 21 and more. To clarify the situation, the answers to this question were crosschecked with cross tabulation of gender. The number of male participants that answered 21 and more was 189 while female participants amounted to 238. On the contrary, of all the participants that answered "once a year" 34 were male while 23 were female. These observations lead to the assessment that female participants, who were not willing to cook, worked or did not have enough time to cook, etc., preferred eating out in the evenings more than male participants.

The total 1286 surveys were randomly divided into two groups. On data derived from these groups, confirmatory factor analysis and model tests were conducted. These analyses revealed that in both groups health value had a positive impact on healthy food choice. In his study, Jun et al. (2014) discovered the positive impact of perceived health value on customer attitudes concerning healthy food choice at restaurants, confirming the findings of a previous study by Hearty et al. (2007). Thus, it is possible to state that the findings in this study are in tune with the findings in the literature review.

The impact of health value on healthy food choice was analysed in accordance with the respective BMI of the participants. Health value was discovered to have a positive impact on healthy food choice among the underweight, normal weight, and overweight participants. Out of these three groups, the underweight participants were more focused on healthy eating. Nevertheless, the increase in weight indicated a decrease in the focus on healthy food choice, and among the participants with the 1st and 3rd degree of obesity health value had no impact on

healthy food choice. As for the participants with the 2nd degree of obesity, health value negatively affected healthy food choice.

The study also specified that the underweight participants and the participants with normal weight cared about their health, and hence healthy eating. However, the underweight participants had high levels of weight anxiety, which resulted in exaggerated healthy eating. Furthermore, it was revealed that the overweight participants were aware of the excess weight and believed in healthy eating to lose weight. Nevertheless, surprisingly, among the participants with the 2nd degree of obesity health value had a negative impact on healthy food choice. As well as being surprising, this finding also contributes to the literature review, the reason being based on the characteristics of the research group. Namely, the diet of the participants contained pastry excessively, and they had insufficient health value or health consciousness. Moreover, there was a lack of restaurants that offered healthy menu choices, and the participants placed more importance on taste rather than healthy eating. However, as they were despaired of losing weight, the participants with the 2nd degree of obesity reacted negatively to the notion of health value and gave in to the concept described in the proverb, "Let's throw caution to the wind".

On the whole, offering healthy food does not merely entail offering vegetarian or diet food in the menu. It also demands a menu to consist completely of healthy, fresh, unprocessed, additive-free and natural ingredients, as well as hygienic production processes. Concordantly, authorities need to look for answers to the questions like "What is healthy food?", "How can we create healthy menus?", and "What does a healthy business entail?".

Nowadays, consumers look for healthy and tasty food. Thus, food authorities need to take action to break down the prejudices against the idea that healthy food is tasteless. In order to achieve this aim, they can create healthy and tasty menu alternatives, promote them, and carry out educational and informative efforts.

Conclusively, although this study was carried out on restaurant customers in Kayseri to determine healthy food choice and health value of Kayseri residents, the findings encompass all consumers and even the whole country. Namely, every step taken to achieve healthy food production will create a domino effect, and hence positively affect producers, farmers, shop keepers, food businesses, consumers, etc. It can also contribute to the economy of the country, decreasing food-related diseases, and the emergence of a healthy community.

However, the study has limitations such as the pastry-based dietary habits of Kayseri residents, lack of health value awareness, few numbers of restaurants that offer healthy menus, and giving more attention to taste rather than healthy eating. The study, which delved into the correlation between health value and healthy food choice, was carried out on restaurant customers between the ages of 20-69, who lived in Kocasinan, Melikgazi and Talas districts of Kayseri, and dined out at least once a year. Future studies could conduct the same study in different cities, regions or districts of the country or they could examine health consciousness as opposed to health value. Another alternative could be examining health consciousness in accordance with taste attitude.

Lack of adequate number of participants with the 2nd and 3rd degree of obesity constitutes another limitation of the study, despite the total number of 1286 participants. Therefore, this situation demands caution in terms of making comparisons. Additionally, future studies could focus on obtaining more data to provide the conditions of Central Limit Theorem and normal distribution.

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NOTES

[1] Colloquially, "Health is not valued till sickness comes" is frequently used in our country to mean that “People understand the significance of health only after they suffer from an illness and get better” (TDK, 2018).

[2] σ: The Value of Standard Deviation (when the parameter value is unknown, “S”, which is derived from the sample, can be used) Z: The theoretical value that corresponds to a definite significance level-for α:0.05, Z is 1.96; H: Standard error value (it refers to the decision of how much a mean from a sample can deviate from the parameter value). ($n = 1.96^2 * 1^2 / 0.10^2 = 3.84 * 1 / 0.01 = 384$)