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Comparative determination of factors affecting attitude level towards healthy nutrition

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Healthy eating habits are critical to the health and well-being of future generations. Many people worldwide do not receive enough vitamins and minerals due to malnutrition To eliminate these, it is necessary to determine the factors that support people's healthy eating habits. This study was conducted to determine the factors that affect healthy eating habits. There are three external factors to the study: (1) being an expert in food and drink, (2) having received formal education in health, and (3) receiving professional support (dietician support) in nutrition. The level of healthy eating was evaluated based on nutritional knowledge, feelings about nutrition, positive eating habits, and poor eating habits. In this context, an online survey was applied to 425 employees in the health sector (202 people) and the food and beverage sector (223 people). The data obtained were analyzed comparatively. The study results showed that the level of nutritional knowledge was equal in both groups. However, it was concluded that food and beverage sector employees were more sensitive to feelings about nutrition, positive eating, and poor eating habits than healthcare sector employees. While food and beverage sector employees are expected to constantly deal with food, which causes desensitization, it has been observed that they are stable and resistant to healthy eating. It has been concluded that although they have not received any formal health training, the information they have obtained through professional support (dietician) accelerates the process of developing healthy eating behaviors. This result has strengthened the power of the education variable affecting healthy nutrition. In addition, sensitivity to healthy nutrition is catalyzed by the professional profession. Dietician support indirectly reinforces this attitude. Thus, it has contributed to the development of healthy nutrition literature.

Keywords Food & beverage professionals, Nutritional habits, Healthy eating habits, Education

Nutrition is a mandatory action that is among the key factors in sustaining life for all living things. According to the definition of the Turkish Public Health Institution[1], nutrition; is an important behavior that must be followed to stay healthy, improve our health status and get the food and liquids (water etc.) our body needs on time and in the required amount to live a quality life. Today, not being able to eat healthy, along with the lack of a physical exercise routine, are considered two main problems of public health[2]. Eating and drinking habits have changed significantly. There are many reasons for this situation, from global changes to changes in daily life and global negativities[3–8]. Individuals have turned to processed and ultra-processed products with low nutritional values and high energy and calorie values. These products include ultra-processed bread, French fries, ready-made/frozen pizza, packaged salty snacks and biscuits, packaged ready meals, margarine, spreads and sauces, confectionery and pastries, buns and cakes, etc[9]. There have also been significant increases in the rate of eating out of home (mainly fast food)[10].

Changes in eating habits will inevitably have negative effects on public health. More than two billion people worldwide are overweight or obese. 11% of the general world population, consisting of mothers and babies, is malnourished[11]. This negativity has attracted the attention of researchers and many studies have been conducted on healthy eating behavior. Researchers have examined the unhealthy eating behaviors of individuals and societies and tried to reveal the reasons[12–15]. While some authors put forward unconsciousness as the reason[16], others focused on the education factor as a solution[17–19]. However, studies are showing that the profession performed in daily life has an effect on healthy eating behaviour[20–22].

Academic studies show that healthy eating habits are directly proportional to the education received. This study aims to test whether healthy eating habits are a behavioral pattern that can only be acquired through

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education. For this purpose, it compares healthcare professionals who receive health training and food and beverage industry employees. It focuses on whether people's occupations have an impact on their ability to acquire healthy eating habits. In addition, the indirect effect of dietitians who provide professional services on healthy nutrition to people in the process of gaining healthy eating habits is tested. This study challenges the ongoing and cult education phenomenon in the literature by revealing other variables that affect healthy eating habits, which are commonly associated with formal education. Primary data were collected to achieve the objectives of the study. Confirmatory factor analysis was performed. A T-test was used for pairwise comparisons. The empirical results to be obtained will enable the subject addressed in separate studies to be seen practically in a single study. In addition, the study results are important in understanding the driving motivational factors of food and beverage industry employees regarding healthy eating.

Literature review

Adequate and balanced nutrition

There are nutritional styles specific to each society and are affected by the geographical conditions, the society's economy and socio-cultural situations[23–25]. As a result of these situations, the importance of local dishes specific to that region has begun to increase[26]. One of the most basic needs of the individual is nutrition[27]. If it is met in the best way, nutrition appears as a confidence-building factor in the implementation of the person's other needs[28].

Nutrition; It is the intake of nutrients necessary for sustaining life, maintaining health and growth[29]. For an individual to be healthy, energy and nutrients must be consumed in a well-balanced manner[30]. It has been shown that when any of these nutrients are not taken or taken insufficiently, health deteriorates and growth and development slow down or stop[31]. It is the intake and use of the necessary nutrients in the body in the appropriate amount and in the most economical way, without losing or deteriorating their nutritional value, to carry out body functions and maintain growth and development in the best way, thanks to healthy nourishment[32]. An individual's nutritional needs vary depending on age, gender, genetic structure, physical activity status and existing diseases. The amount of nutrients and the amount of energy increase compared to normal during adolescence[33].

An individual should be fed adequately and balanced to live a physically and psychologically healthy life in every period of life[34,35]. The basic conditions of healthy nutrition are listed as consuming sufficient amounts of food[36], being diverse, having a balanced diet[37], having high subjective quality[38], being physically active[39] and having high hygiene conditions[40]. With adequate and healthy nutrition, which is seen as the basis of a healthy life, it is aimed for people to be healthy throughout their lives, to improve their health and to live a quality life. By improving the individual's environmental conditions, it is possible to prevent nutritional problems that disrupt the standard of living and diseases that can be caused by unhealthy nutrition, such as cardiovascular diseases, hypertension, diabetes, iron-iodine-protein deficiencies, rickets, dental caries and ultimately obesity. In addition, by making it easier to access and consume healthy foods, nutrition education should be given to the whole society and awareness should be raised[41].

Gaining adequate and balanced nutritional habits ensures that individuals in the geriatric age group are healthy. Therefore, society should be made aware by giving seminars and training on adequate and balanced nutrition[42]. Demirci[43] stated that the benefits of healthy nutrition for the human body are the subject of many scientific studies. Well-balanced nutrition nutrition appears as an important condition that enables individuals to maintain their health, increases body resistance against diseases, improves physical and psychological health, gives energy and increases their success. It is one of the most important conditions for a healthy and successful life. If a person has a balanced and adequate diet, they will have an active life and a healthy appearance. All body structures such as vision, skin structure, muscle strength and hair are active and healthy. Their height is proportional to their body weight and they always have a vigorous and sporty appearance. At the same time, they are individuals who have developed mentally and psychologically[44].

For adequate and balanced nutrition; Milk and dairy products, proteins such as meat, eggs and legumes, vegetables and fruits, and grain group products should be consumed in sufficient quantities at every meal. Food diversity should be ensured during nutrition and the same products should not be consumed for a long time. When starting the day, you should have breakfast and not skip meals. Salt and sugar production should not be taken more than necessary. Among grain products, care should be taken to consume whole grain products. Water consumption should be at least 2.5 L per day[45]. An individual's lifestyle is an important factor in the emergence of problems such as chronic kidney diseases, heart diseases and respiratory diseases[46,47]. Many chronic diseases will be prevented with a balanced and healthy diet, however, nutrition-related lifestyle variables that increase risk factors should be learned and implemented by the general population. It is possible to protect and sustain the health of the individual with a correct eating habit[48–52].

While healthy nutrition has many benefits for people, unbalanced nutrition also has its harms. These will be detailed in the next section.

Disadvantages of inadequate and unbalanced nutrition

Tayar and Korkmaz[53] stated that it is necessary to have an adequate and balanced diet because if the individual is malnourished, it will cause problems in growth and development and the body's inability to perform its functions properly. Inadequate and unbalanced nutrition can cause problems in the growth, development and routine functions of the individual. Since their bodies are less resistant to microbes, these people become more susceptible to illnesses and disease processes last longer than normal. Any food consumed in inadequate amounts can cause deterioration in body health. However, unhealthy nutrition can also negatively affect people's mental functions such as their desire to work, planning and generating new ideas. If malnutrition is severe, it can lead to more serious health problems[54].

With globalization, individuals' intense working hours lead to changes in their food preferences and eating habits. Fast food has become preferred due to the need to eat quickly to save time. Obesity disease seems to be widespread in the world due to irregular and unhealthy nutrition. Obesity; It is the presence of more fat in the body than it should be. Risk factors for obesity; are age, gender, environmental factors, economic status, education level, lack of physical activity, nutritional habits, and genetic and psychological factors. Individuals generally continue the eating habits they acquired during childhood and adolescence into old age. The prevalence of obesity has been increasing since childhood. Those who are obese during childhood and adolescence have a higher risk of becoming obese in adulthood compared to those who are thin during this period[55].

Unbalanced and unhealthy eating habits pave the way for many diseases such as cardiovascular diseases, diabetes and hypertension, as well as obesity. To be protected from such diseases and to live a healthy life, attention should be paid to nutrition and health should be maintained from childhood[56]. Maguire and Monsivais[57] children, pregnant women, people with difficult working conditions and unemployed adults are the groups most affected by malnutrition.

Some situations also hurt a balanced diet. Some of these are as follows[58];

- Lack of adequate education on nutrition.
- Insufficient use of health institutions.
- Having a physical environment with poor conditions.
- Ignorance about food hygiene and food safety.
- Unconscious nutrition.
- The relationship between the production and consumption of food.
- Imbalances.
- Lack of sufficient food due to reasons such as famine, war, and natural disaster.
- Financial inadequacies in Purchasing.
- Inability to break away from traditions.
- Rapid population growth.

Factors affecting nutritional habits

Health behavior; is all the behaviors related to the protection and development of the individual's health[59]. The role of health professionals in achieving healthy lifestyle behaviours is very important. For this reason, the training healthcare professionals receive on this subject and their ability to apply it is of great importance. The healthcare worker must first apply the training he receives to his own life and set an example for society[60,61]. Nutritional habits are an issue that is emphasized all over the world because they affect the individual physically and psychologically. Situations such as the number of meals, the content and quantity of meals, purchasing food, preparing and cooking meals, as well as whether the person eats fast or slow, the time it takes to chew the food, psychological state, whether the food is hot or cold, are important during nutrition. However, education, income, customs and traditions, climate, environment and living space affect eating habits. For such reasons, it is very difficult to change a person's eating habits[62].

Hacıhasanoğlu et al.[63] stated that the individual acquires his/her eating habits in the family environment, and then he takes his final form with the influence of the training received and the environment. Nutrition does not mean that an individual unconsciously eats the foods he wants or eats to satisfy his hunger. According to the definition of the World Health Organization (WHO), nutrition; refers to individuals being in a state of complete physical, mental and social well-being. Individuals need to have an adequate and balanced diet to increase their living standards and to consciously consume the foods the body needs in appropriate amounts and at the right time for a healthy life[54]. Behaviors that affect an individual's healthy nutrition; Factors such as gender, age, economic status, marital status and education level come to the fore. Increasing nutrition awareness is one of the primary requirements for societies to achieve the targeted quality of life. For this purpose, societies should act by placing healthy nutrition at the centre of their lifestyle[64]. Many factors affect individuals' food preferences and eating habits. These factors are divided into two groups: (a) individual and (b) external factors (environmental). When studies focusing on individuals' food and beverage choices are reviewed, it is possible to list external factors as follows: information, social environment and physical environment[65], food environment[66], global epidemics and pandemics[67], social, economic and cultural influences[68], media[69], parental lifestyle[70] etc. Individual factors can be listed as follows; Stress[71], personal-state and food-internal factors[65], personal values, beliefs and habits[72], physiological and individual characteristics[56] etc. (see Table 1). All these factors directly or indirectly affect the nutritional level.

In order to help individuals gain balanced eating habits, it is important to determine the factors that cause unbalanced eating. The subject discussed in this paper will help determine these factors. It is anticipated that empirical findings will shed light on the literature.

Methodology

This study aims to comparatively analyze the healthy eating habits of health and food and beverage sector employees. In this context, a survey was conducted with health and food and beverage sector employees in Gaziantep Province. The "Attitude Scale Towards Healthy Nutrition (ASHN)", which was tested for validity and reliability by Tekkurşun Demir and Cicioğlu[43] and consists of four dimensions and 21 5-point Likert-type items, was delivered online to potential participants. Participants were included in the study using a random sampling method. Of the 446 returned surveys, 21 were eliminated because they affected the reliability coefficient and normal distribution. Analyzes were made on the remaining 425 survey data. While 202 of the participants are healthcare sector employees (HSE), 223 are food and beverage sector employees (FBSE). The necessary ethics committee permission for the application part of the research was received from Hasan Kalyoncu University

External factors	Individual factors
Social, economic and political system	Physiological needs and characteristics
Food availability, production and distribution system	Body structure
Family structure	Personal values, beliefs and habits
Family culture & parental lifestyle	Food preferences
Peers	Personal concepts
Social and cultural values	Health
Media	Personal experiences
Foods to eat quickly	Stress
Nutrition awareness	Personal-state factors
Nutrition awareness personal experiences	Food-internal factor

Table 1. Factors affecting nutrition.

Scientific Research and Publication Ethics Board on 20.06.2023. The data collection process was meticulously executed in full compliance with pertinent guidelines and regulations.

Academic ethical principles were observed in all methodologies used in this study. In addition, relevant guidelines and guidelines from pioneering studies were followed and implemented throughout the entire methodology. During the data collection phase of the study, no identity information was requested from any participant that would identify. This was only done to ensure the protection of their personal data. Individuals aged 18 and over participated in the study. Informed consent was obtained from participants at the beginning of the online survey form. Potential participants, who were informed about the research in writing, were faced with the option of "I have read and understood. I agree or disagree to participate in this survey with my consent." For participants who consented, the survey questions became visible and the answering process began. For potential participants who did not consent, the online answering process was terminated with the warning "Thank you for your time. Your survey process has ended." Even if participants started the survey, they had the chance to go back and leave the survey at any stage. Even if they completed the survey and submitted their answers, they had the authority to go back and correct them or delete them completely diagnose or expose them.

Data collection was carried out between 26.06.2023 and 16.07.2023. After this date, the system is closed to accepting surveys. S17, S18, S19, S20 and S21, among the negative items in the ASHN, were reverse-coded before analysis. After the items were subjected to validity and reliability analysis, skewness and kurtosis values were checked. After proving the normal distribution (homogeneity) of the data, structural accuracy for the factor structures was tested. At this stage, discriminant (AVE) and convergent (CR) validity were tested. In the last stage, parametric mean comparisons (t-test and F-test) were made for the two groups of samples considered and the analysis process was terminated.

Demographic profile of participants

The data regarding the participants in the research sample were separated through frequency analysis and presented in Table 2. Participants were allowed to choose more than one option in the question "source of nutrition information". In this context, it was determined that HSE made 317 markings and FBSE made 410 markings. The relevant questions were separated according to their frequencies and percentages through multiple-answer analysis based on the total number of markings. The results showed that participants in both sample groups made more than one mark (115 healthcare sector employees and 187 food and beverage sector employees).

When the demographic data of the participants is examined, it is seen that the total number of participants is close to each other. It is seen that the proportion of women is high in HSEs and the proportion of men is high in FBSEs. While participants with undergraduate and graduate education constitute more than half of the total participants in HSEs, participants with primary and high school education constitute half of the total participants in FBSEs. It is seen that the education level of HSEs is higher than that of FBSEs. The lack of formal education required to work in the health sector is seen as the main reason for this situation. Certificates received from non-formal education institutions may be sufficient to work in FBS. While the monthly income level in HSEs is concentrated in the range of 18,001–23,000 TL, in FBSEs the concentration is in the range of 11,500 – 18,000 TL. The rate of HSEs receiving healthy nutrition education (46.5%) is higher than FBSEs (25.6%). FBSEs were more likely to receive dietitian support in the last year (34.1%), to have followed a diet program before or to be currently following it (41.3%), and to have gone to the internal medicine outpatient clinic for weight problems in the last year (18.8%). Their rates are higher than those of HSEs. While almost all HSEs (93.1%) sometimes or always pay attention to their daily diet, this rate is 74.9% for HSEs. Social media is among the sources where participants get nutrition information. It is important for both groups. While health personnel and family are the priority for FBSEs, newspapers, magazines, TV programs and health personnel are other important sources of information for FBSEs.

Validity, reliability and comparison analysis

The scale used within the scope of the study was primarily subjected to reliability analysis. During the analysis, it was determined that items coded I1 and I15 negatively affected the reliability level. Therefore, both items were removed from the analysis. The reliability level of the remaining 19 items was obtained as $\alpha = 0.779$. This value

Health sector			Food and beverage sector		
Gender	**n**	**%**	**Gender**	**n**	**%**
Male	75	37.1	Male	161	72.2
Female	127	62.9	Female	62	27.8
Marital status	n	%	Marital status	n	%
Married	133	65.8	Married	147	65.9
Single	69	34.2	Single	76	29.1
Educational background	n	%	Educational background	n	%
Primary education	2	1	Primary education	63	28.2
High school	20	9.9	High School	51	22.9
Associate degree	31	15.3	Associate degree	37	16.6
Licence	121	59.9	Undergraduate	43	19.3
Postgraduate	28	13.9	Postgraduate	29	13
Age	n	%	Age	n	%
18–25	39	19.3	25 years and under	32	14.4
26–30	40	19.8	26–30	36	16.1
31–35	37	18.3	31–35	51	22.9
36–40	35	17.3	36–40	42	18.8
41 and over	51	25.2	41 and over	62	27.8
Monthly income	n	%	Monthly income	n	%
Minimum wage or less	11	5.4	Minimum wage or less	38	17
11.500–18.000 TL	45	22.3	11,500–18,000 TL	67	30.1
18.001-23.000 TL	103	51	18,001-23,000 TL	25	11.2
23.000–28.000 TL	12	5.9	23,000–28,000 TL	29	13
28.001-33.000 TL	4	2	28,001-33,000 TL	23	10.3
33.001 TL and above	27	13.4	33,001 TL and above	41	18.4
Job	n	%	Job	n	%
Technician	32	15.8	Support staff	44	19.7
Doctor/Physician	29	14.4	Service personnel	49	22
Midwife	31	15.3	Kitchen staff	37	16.6
Nurse	63	31.2	Bar Staff	24	10.8
Support staff	28	13.9	Sous chef	27	12.1
Health officer/Civil servant	19	9.4	Executive chef	42	18.8
Professional experience	N	%	Professional experience	n	%
0–5 years	69	34.2	0–5 years	41	18.4
6–10 years	37	18.3	6–10 years	47	21.1
11–15 years	34	16.8	11–15 years	36	16.1
16–20 years	36	17.8	16–20 years	56	25.1
21 years and above	26	12.9	21 years and above	43	19.3
Managerial duty	n	%	Managerial duty	n	%
Yes	23	11.4	Yes	72	32.3
No	177	87.6	No	151	67.7
Healthy nutrition education	n	%	Healthy nutrition education	n	%
Received	94	46.5	Received	57	25.6
Not received	108	53.5	Not received	166	74.4
Dietitian support in the last year	n	%	Dietitian support in the last year	n	%
Received	28	13.9	Received	76	34.1
Not received	174	86.1	Not received	147	65.9
I had/Still have a diet progra	**n**	%	I had/Still have a diet program	n	%
Yes	69	34.2	Yes	92	41.3
No	133	65.8	No	131	58.7
Visit to the internal medicine polyclinic regarding weight problems in the last year	n	%	Visit to the internal medicine polyclinic regarding weight problems in the last year	n	%
Examined	20	9.9	Examined	42	18.8
Not examined	182	90.1	Not examined	181	81.2
Source of information on nutrition	n	%	Source of information on nutrition	n	%
Family	74	17.7	Family	38	9.3
Continued					

Health sector			Food and beverage sector		
Gender	**n**	**%**	**Gender**	**n**	**%**
School	66	15.8	School	64	15.6
Social media	111	26.6	Social media	149	36.3
Health personnel	117	28.1	Health personnel	73	17.8
Newspapers, Magazines, TV programs	49	11.8	Newspapers, Magazines, TV programs	86	21
Paying attention to nutrition in daily life	n	%	Paying attention to nutrition in daily life		
Always	62	30.7	Always		
Sometimes	126	62.4	Sometimes		
None	14	6.9	None		

Table 2. Demographic profile of participants.

shows that the data obtained has a good level of reliability[64]. Before proceeding with advanced analysis in the study, it was tested through the normality test whether the items for which the scale was created were distributed homogeneously or not, to decide on the type of analysis. After checking the skewness and kurtosis values, it was seen that all values were between − 1.5 and + 1.5. Thus, it was decided that the data obtained was normally distributed[73,74] and parametric tests were preferred in data analysis.

The structural validity of the scale used in data collection was tested with confirmatory factor analysis (CFA). 4 dimensions of the scale were analyzed through AMOS24. For the Nutritional Knowledge (NK) dimension tested, $\alpha = 0.891$; $\alpha = 0.708$ for Emotion Towards Nutrition (EN); It was obtained as $\alpha = 0.742$ for Positive Nutrition Habits (PSNH) and $\alpha = 0.726$ for Poor Nutrition Habits (PONH). In structural validations, the average variance extracted (AVE) is a measure of the ratio of the amount of variance captured by a construct to the amount of variance due to measurement error. The model-based reliability coefficient used to assess the reliability of a scale score in confirmatory structural studies is Composite reliability (CR). This coefficient is based on the assumption of unidimensional measurement scales and independent measurement errors[75]. $AVE \geq 0.50$ for all sizes; It was observed that the assumption of $AVE < CR \geq 0.70$ was met. Thus, it was decided that all factor structures provided combination and discriminant validity[76]. All factor loadings exceeded the 0.60 threshold. Fit indices for the resulting confirmatory model were $GFI \geq 0.90$; $CFI \geq 0.90$; $RMSEA \leq 0.08$; CMIN/DF was obtained as ≤ 0.05. These coefficients proved that the dimensions in the factor analysis model were structurally confirmed (see Table 3).

The factorial averages of both groups in the sample were compared via t-test. According to the arithmetic statistics obtained, it was seen that the NK level was above the average in both groups and there was no statistically significant difference between them ($t = 0.689$; $p > 0.05$). A significant difference was detected between the participants' EN levels depending on the sector they work in. The result obtained showed that the EN level of FBSEs ($\bar{x}$=3.26) was farther from indecision than that of HSEs ($\bar{x}$=2.98) ($t = 0.038$; $p > 0.05$). FBSEs are relatively more conscious about PSNH ($\bar{x}$=3.81) than HSEs ($\bar{x}$=3.53). However, the PONH level of FBSEs ($\bar{x}$=1.62) is lower than that of HSEs ($\bar{x}$=2.19). The findings regarding the effects of external factors of the study on nutritional habits are summarized in Fig. 1.

Conclusion

This study determines the factors affecting healthy nutrition. For this purpose, data obtained from healthcare sector employees and food and beverage sector employees were compared. The results showed that the healthy nutrition levels of both groups were almost equal. We expected that the constant cooking of food and beverage industry workers would desensitize them to nutrition. However, food and beverage industry workers were resistant to maintaining a healthy diet. There is no significant difference between the knowledge levels of both groups. However, food and beverage industry employees were more optimistic about emotions towards nutrition, positive nutrition habits and poor nutrition habits. In addition, the healthy nutrition level of healthcare workers who received professional support was not affected. Dietitian support was an important factor for food and beverage industry employees. This proved that dietitian support is important in gaining healthy eating habits in individuals who have not received formal education.

Discussion

In this study, two groups with formal and informal knowledge about nutrition were compared. In addition, demographic questions were diversified to make in-depth interpretations of the results obtained. The analyses performed in the study primarily showed that the scale used was validated. The demographic results are fully consistent with the two groups selected for the sample. Namely, in Turkey, as in the international arena, it is mandatory to receive formal education to work in the health sector. Except for support personnel (security, cleaning, etc.), people who complete a certain formal education curriculum and graduate from the program are employed in health-related business lines (doctor, nurse, technician, civil servant, etc.) in the health sector. Although formal education is available in the food and beverage industry, this is not mandatory for employment in the sector. People who have no formal education but have experience can be employed in this sector[77]. Studies confirm this information. In his study to determine the nutrition knowledge levels of chefs, Çekal[78] concluded that more than half of the participating cooks had primary and secondary school education, while the majority of them did not receive formal vocational training. When the collected data are examined, it is seen that the

Factors and items	Factor loadings	AVE	CR	Normality test		Sample		t-test		α
				Skewness	Kurtosis	HSE	FBSE			
						x̄	x̄	*p*	t	
Nutritional knowledge (NK)						3.97	3.91	.258	.689	
I2	.89	.711	.770	-1.043	1.392	3.87	3.91			.891
I3	.93			-1.276	1.461	3.94	3.78			
I4	.86			-1.191	1.403	3.91	3.85			
I5	.67			-1.626	1.121	4.17	4.09			
Emotion towards nutrition (EN)						2.98	3.26	.038*	2.789	
I6	.71	.620	.825	-.421	-.795	3.36	3.67			.708
I7	.82			-.077	-1.226	3.08	3.51			
I8	.74			.439	-.888	2.53	3.07			
I9	.76			-.514	-.681	3.31	3.44			
I10	.81			.985	-.134	2.16	1.88			
I11	.87			-.660	-.583	3.42	3.97			
Positive nutrition habits (PSNH)						3.53	3.81	.049*	1.008	
I12	.71	.607	.757	-.526	-.610	3.54	4.16			.742
I13	.86			-.477	-.690	3.70	3.40			
I14	.82			-.154	-.924	3.21	3.91			
I16	.78			-.658	-.343	3.69	3.76			
Poor nutrition habits (PONH)						2.19	1.62	.032*	3.485	
I17	.88	.637	.799	.348	-.772	2.61	2.08			.726
I18	.75			.821	-.018	2.22	1.53			
I19	.71			1.231	-.983	1.93	1.76			
I20	.84			.558	-.656	2.33	1.48			
I21	.80			1.146	.841	1.87	1.24			
CFA fit indices	CMIN = 282.710		GFI = .927		RMSEA = .048					
	DF = 146		AGFI = .897							
	CMIN/DF = 1.936		CFI = .903							

Table 3. Reliability and construct validity (CFA) analysis. *$p \leq 0.05$

high level of education of HSEs and the fact that FBSEs are predominantly at high school and below the level of education supports this claim, which is similar to the literature.

The level of knowledge about nutrition in both groups is close to each other. When the emotional dimension towards nutrition is considered, it can be stated that HSEs are relatively more conscious. The answers given by both groups to the dimension consisting of expressions regarding satisfaction with the consumption of chocolate, fast food, delicatessen products, fried foods and sherbet desserts are at the level of indecision. However, HSEs are relatively dissatisfied with consuming such foods. The fact that FBSEs are on the production side and constantly produce the products in question may cause the harms of such products to be ignored after a while and there will be no harm in consuming them. The desensitization of individuals to some stimuli they are exposed to in daily life[79] and the fact that the movements they constantly repeat are accepted/normalized after a certain rate of repetition, even if they are unethical[80], form the basis for explaining the obtained result.

Regarding negative eating habits, both groups are far from indecisive and have a positive average. However, FBSEs are in a more moderate position on this issue. The same situation is seen with unhealthy eating habits. Participating groups are free from unhealthy eating habits. FBSEs have a clearer distance stance than HSEs. When detailed analysis is made for both cases, it is seen that the rate of FBSEs paying attention to nutrition in daily life is higher than that of HSEs. However, the number of participating FBSEs who received support from a dietitian in the last year or who are currently on a diet program and who visited the internal medicine outpatient clinic due to weight problems in the last year is higher than the number of HSEs. This clearly shows that professional support has a significant impact on the acquisition of healthy eating habits and the continuation of the established order[81,82]. It is known that individuals are encouraged to eat healthy by three types of motivation sources. These include; early information leading to the routine formation of healthier eating habits, provision of practical sessions to increase knowledge and support and referral to services from health professionals[83]. Thus, it can be clearly established that FBSEs who receive support from health professionals are more sensitive about healthy nutrition.

In our study, we concluded that our sample group that received health education was conscious about healthy nutrition and that the education they received encouraged this. Considering the samples of studies conducted on a similar subject, it is seen that receiving nutrition education is important in acquiring healthy nutrition behaviour. Özenoğlu et al.[19], in their study conducted with undergraduate students of medical faculty, nutrition dietetics, midwifery and nursing departments, concluded that the department in which they are educated affects

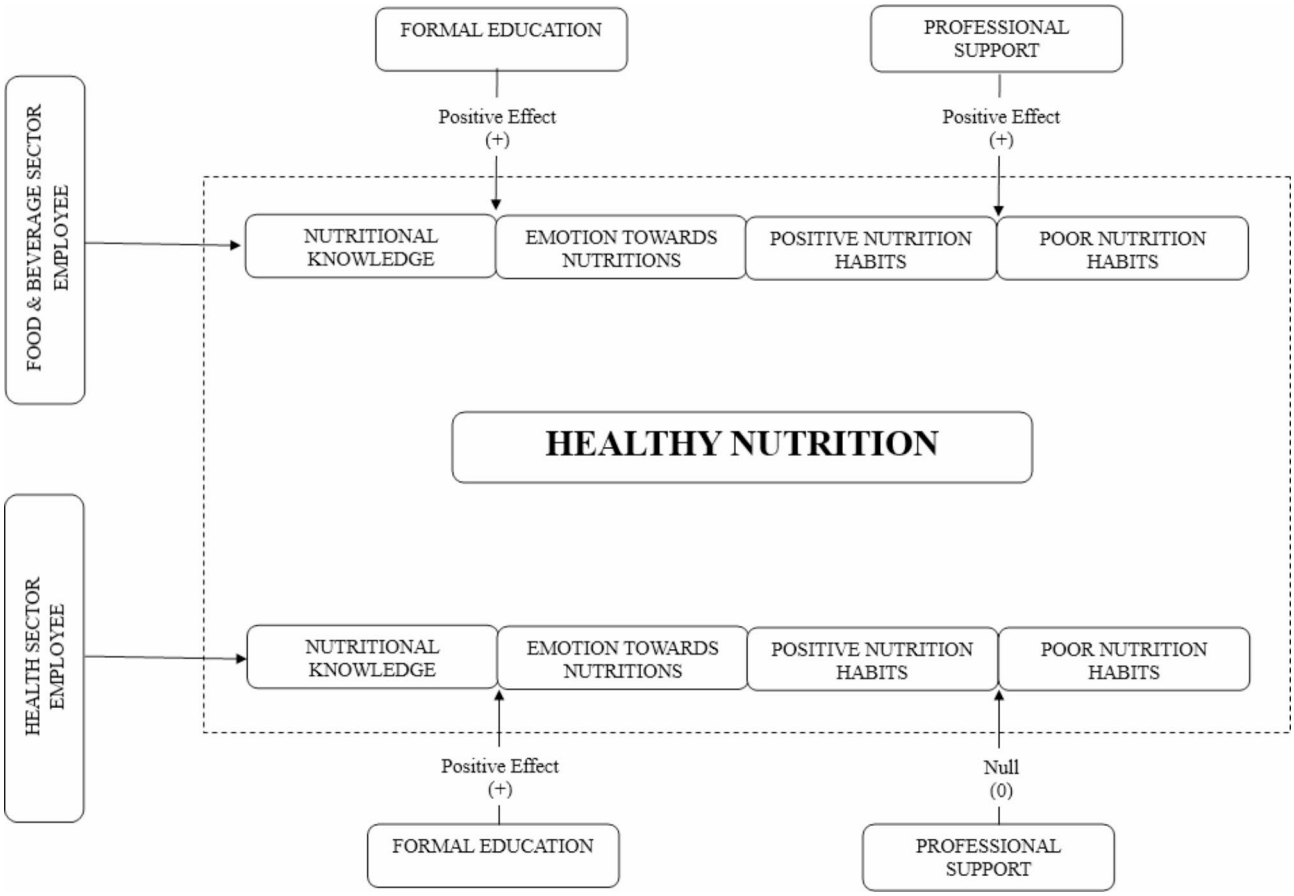

Fig. 1. Summary model of research result.

eating habits. Onurlubaş et al.[84] revealed that individuals who received healthy nutrition education from the formal education curriculum through participation in events such as conferences and panels believed that they ate healthy in daily life. Individuals who received healthy nutrition education stated that they could not eat healthily in daily life. In their study conducted with a group of physical education undergraduate students, Poplawska et al.[85] revealed that senior students ate healthier than first-year students and were selective about food and beverages. Grabia et al.[86] provided healthy nutrition education to young athletes in adolescence through individual and group training. The results of the study revealed that the training provided encouraged healthy eating behaviour in both groups, although at different levels.

When the results obtained in the study are evaluated in general in the light of this information, it can be stated that having received formal health education or working professionally in the food and beverage business catalyzes healthy eating behaviour. In addition, it has been observed that individuals who receive professional support on nutrition, even if they have not received formal health or nutrition education, can develop positive behaviour regarding healthy nutrition.

Limitations and future directions

The most important limitation of this paper is the sample. The study compared only healthcare professionals and food & beverage industry employees. It is important for future studies to include different occupational groups in the sample for the generalizability of the results. Three exogenous factors were used for the purpose of the study. These are (a) being an expert in food and drink, (b) having received formal education in health, and (c) receiving professional support (dietician support) in nutrition. Increasing the number of variables or conducting analyses with different variables will contribute deeply to the healthy nutrition literature. However, this study focused on comparing data obtained from professionals from different occupational groups. The effect of external variables on healthy nutrition was not tested structurally and through regression equations. It is thought that making an evaluation based on the structural model will make the results of future studies interesting. In addition, using socio-demographic parameters such as personality traits, work tempo, and daily working hours in comparison will contribute to filling the existing literature gap.

Data availability

The data collected for the study's analyzes are available online. It can be shared upon request. You can sincerely contact us via the email address below; furkan.baltaci@hku.edu.tr.

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Author contributions
F.B. Main manuscript, Project management, Data collection, data analysis, methodology management, results writing. S.O. Main manuscript, data collection, language editing, writing conclusions.

Declarations

Competing interests
The authors declare no competing interests.

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