

Article

Perceptions from Member-Consumers of a University Community for Sustainable and Healthy Eating: Evidence from Greece

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Abstract: Healthy eating is a vital component of a sustainable daily life, especially after the COVID-19 pandemic. In this study, we investigated the perceptions and attitudes of the members of a Greek university community, especially the young members, on: (i) health itself, (ii) healthy eating, and (iii) healthy eating campaigns today. The research was conducted electronically in the last three months of 2023 via a questionnaire survey and 1046 member-consumers participated. Statistical analysis, including descriptive and cluster analysis to group respondents into homogenous segments, was performed by employing a one-way ANOVA. The highlights of the results indicate that consumers perceive physical and mental health and energy efficiency as health preconditions, while they perceive a balanced and sustainable diet as the main parameter of healthy eating. They are influenced mostly by doctors and health providers and use information mostly based on common sense and their upbringing for their healthy eating choices. The cluster analysis revealed two distinctive groups of consumers categorized by this study as the “approachables” (54.5%), affected by today’s sustainable knowledge and concepts on healthy eating, and the “conservatives” (45.5%), who are reluctant to accept these as such.

Keywords: healthy eating; healthy eating advertisement; healthy eating campaigns; approachable consumers; conservative consumers



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1. Introduction

Social marketing campaigns for better health have successfully reduced smoking prevalence, drinking and driving, and improved several other public health outcomes, including healthy eating [1]. Food product manufacturers frequently employ health and nutrition-related claims as a marketing strategy to inform consumers about important, yet unknown, health benefits [2]. Concerningly, given that products bearing claims are not always healthier or more sustainable than those without, claims are also commonly used to skew opinions about how sustainable or healthful food and beverages are [3]. The majority of studies on eating behaviors and habits have concentrated on consumption and selection behaviors, with the latter receiving the most attention. Changes in eating habits are frequently made in tandem with increases in physical activity to promote healthy lifestyles and weight control [4]. A healthy diet and improving the health and well-being of consumers have been the main goals of numerous social marketing diet-related campaigns [5–9]. These campaigns are supported by the food industry, the government, and nongovernmental organizations; the data indicate that consumers appear to understand and be receptive to the information provided.

This research investigates the member-consumers of a Greek academic community’s understanding of healthy eating perceptions and campaigns. It will inform us and provide

us with information primarily about the young with high educational levels, their perceptions of the term “healthy eating”, and whom they trust for healthy eating campaigns. The advertising sector is required to develop and deliver improved healthy eating messages to encourage better food choices and as a result, improve the nutritional status of the community. The paper continues with a literature review and sections on methodology, results, and discussion following.

Literature Review

The World Health Organization defines health as a condition of total physical, mental, and social well-being, rather than just the absence of disease or weakness [10]. Scientific research has confirmed a strong and consistent connection between individuals’ mental and physical well-being [11]. Attaining a state of well-being is a paramount objective for individuals in their quest for a fulfilling existence [12]. An investigation into the impact of food can enhance our comprehension of how eating behavior patterns are formed. The COVID-19 pandemic had an impact on various aspects, such as the economy, public health, and lifestyle, including food consumption [13]. Health outcomes are greatly influenced by individual behaviors such as diet quality, physical activity, alcohol consumption, and sleep. These behaviors, in turn, are influenced by socioeconomic factors [14]. During the COVID pandemic, food-related behavior was significantly impacted [15]. This has resulted in limited access to daily shopping and has influenced people’s choices for a healthy balanced diet. Consequently, there has been an increased reliance on highly processed, ready-to-eat cereals and junk foods, which are rich in salt, sugar, and fats [16]. These dietary habits can contribute to an elevated susceptibility to chronic diseases such as obesity, heart disease, stroke, type 2 diabetes, certain cancers, and chronic kidney disease [13].

The concept of healthy eating is widely recognized as a fundamental approach for individuals to attain and sustain good health, even though the specifics of what constitutes healthy eating are multifaceted [17]. The Dietary Guidelines for Americans 2020–2025 recommend a healthy eating plan that prioritizes fruits, vegetables, whole grains, and fat-free or low-fat dairy products. It also suggests including a diverse range of protein sources such as seafood, lean meats, poultry, eggs, legumes, soy products, nuts, and seeds [18]. This diet is characterized by its low content of added sugars, sodium, saturated fats, trans fats, and cholesterol, while also ensuring that it aligns with your daily calorie requirements. Adopting the Mediterranean diet as a consistent eating habit is the optimal choice for maintaining good health [19]. Nevertheless, studies have demonstrated that adolescents living in Westernized nations tend to consume substantial quantities of energy-dense, nutrient-deficient foods and beverages, as well as foods that are high in saturated fat and sugar while having low intake of fruits and vegetables [20]. College students consume nutritionally deficient foods and exhibit limited compliance with the Mediterranean diet [21,22]. Therefore, it is imperative to increase awareness and establish intervention programs that encourage a healthy lifestyle among this demographic [22]. These programs should take into account factors related to food literacy and address behavioral concerns that influence their food choices [23]. Conversely, adults adopt a distinct perspective on this matter, expressing a desire to consume more nutritious foods and acknowledging the correlation between dietary intake and well-being [24,25]. Multiple studies indicate that individuals possess certain beliefs regarding the concept of healthy eating and the importance of avoiding contaminants and toxins. Consequently, they tend to prioritize natural and/or organic food options [26]. However, the concept of maintaining a nutritious diet has frequently been characterized as challenging and arduous to accomplish.

The pandemic has not had a significant impact on nutritional quality and sensory appeal, which are two of the main factors influencing food choices [27]. Over the years, experts have prioritized the promotion of medical guidelines regarding nutrient intake and proper consumption. They have also provided recommendations for a balanced diet that does not prohibit the consumption of specific food products. According to the analyzed data, it appears to be more feasible to promote the exploration of healthier food

choices among consumers, such as fresh fruits, vegetables, and whole foods [27]. Positive predictors and significant determinants of healthy eating attitudes are motives that indicate healthier perceptions, such as weight control, maintaining a healthy diet, and choosing organic food [28]. For the past two decades, health literacy has been a significant concern for health care planners and specialists, including dietitians, in health care systems. Health literacy refers to the ability of individuals to acquire, comprehend, and utilize basic health information and services in order to make informed health decisions [29]. Health literacy is linked to nutritional behaviors such as evaluating portion sizes, comprehending food labels, and selecting nutritional sources, all of which impact the quality of one's diet. Moreover, the factors of self-efficacy and health literacy were found to be predictors of the utilization of food labels, which in turn had a positive impact on the overall quality of one's diet [30]. The implementation of nutrition labeling enhances consumers' capacity to comprehend nutritional data and deters the selection of unhealthy products [31]. Factors related to family and household dynamics were found to significantly impact healthy dietary behaviors [32]. The utilization of social media platforms for promoting healthy eating can have an impact on the dietary habits of individuals within one's social network [33]. The perception of website credibility is significantly influenced by the expertise of the source and the accuracy of the message [34]. Additional sources of nutrition and health information include governmental and non-governmental institutions such as hospitals, as well as newspapers, dietitians, and the social environment [35,36]. The extent to which an individual depends on each source is heavily influenced by their age and level of education. Typically, data sourced from government and noncommercial websites are considered to be more reliable and authoritative [37].

Consumer skepticism has historically been directed towards advertising, reflecting a predisposition to doubt the credibility of the information conveyed through advertisements [38]. There are multiple mechanisms through which information can exert an impact on consumer decisions regarding food. Consumers are also indirectly influenced by advertising and various media campaigns, as well as local or national food policies [39]. In order to encourage people to adopt healthy eating habits, public health authorities globally have implemented diverse initiatives. These initiatives share a common goal of promoting the consumption of nutritious foods by providing information that emphasizes the nutritional value of foods and their effects on health and body weight [40]. A significant portion of the population in industrialized countries does not adhere to dietary guidelines [41,42]. These statistics indicate that the majority of public health initiatives focused on disseminating information to enhance the quality of diet have achieved only limited success. Therefore, it is necessary to adopt new approaches to develop effective strategies for promoting healthy eating habits.

Food companies have implemented various tactics to enhance their public perception by cultivating a healthier brand image. One approach has involved procuring new brands in order to position themselves as nutritious alternatives to current food options [43]. Enhancing the nutritional value of products has emerged as a crucial domain of advancement in the food and beverage sector. The nutritional quality of a product has a curved relationship with the profit of the firm, and this relationship is positively influenced by package innovation and advertising [44]. Public health campaigns promoting food consumption and daily diet have been implemented through national programs, utilizing public dietary recommendations [45]. The appropriateness of interventions relies on their alignment with individuals' daily priorities, constraints, and the prevailing cultural values of their social environment [46,47]. Variations in people's interpretation of health can lead to notable variations in behavior; thus, nutrition education could be enhanced by designing customized intervention campaigns that effectively address the health-related motivations of specific subgroups [48–50].

In this study, we evaluate and analyze Greek consumers' responses about their perceptions on healthy eating and the effect that healthy eating advertisements and campaigns have on them. To elaborate this research, based on the literature of different sources

of health perceptions and ‘healthy eating’ messages, seven factors assessing consumers’ opinions were examined:

- Attitudes towards health;
- Definition of healthy eating;
- Influences of healthy eating;
- Sources of information about healthy eating;
- Objectives of advertisers;
- Proper organizations for developing and running healthy eating campaigns;
- Responsible organizations for regulating healthy eating campaigns.

2. Materials and Methods

2.1. Data Collection and Characterization

This survey was based on a structured questionnaire. The research was focused on the attitudes of the human resources (students, professors, and staff) of the University of Ioannina, Greece, which consists of seven schools and fifteen departments with more than 30,000 active students and more than 5000 professors and staff. Ioannina is a city in Greece that is located in the northwest of the country, opposite Italy, with 112,486 inhabitants (Figure 1) [51]. The research was conducted through the online platform Google Forms and distributed to the members of the university’s community through their academic emails. GDPR approval was granted by the responsible bureau of the University according to Greek regulation, and the answers were anonymous, as well as the included emails. A total of 1046 member-consumers of the University responded to the survey, constituting 3.5% of the total survey population of 35,000 members.



Figure 1. A map of Greece with the Ioannina regional unit marked.

The questionnaire was composed of seven parts, in addition to the sociodemographic part, which was derived from previous related studies [49,50] but revised, aiming to serve the objectives of this study (Table S1). Initially, participants completed five questions about their sociodemographic characteristics, specifically gender, age, level of education, civil state, and job situation. In the first and second part, consumers’ perceptions about health and healthy eating, respectively, were examined (a total of 12 questions). The third and fourth parts consisted of questions regarding the influences of information sources, as well as the sources that consumers use to keep informed about healthy eating (a total of 13 questions). The fifth part consisted of questions to investigate the consumers’ views relatively with the objectives of the advertisers promoting healthy food (a total of

4 questions). Finally, part six and seven included questions about consumers' opinions on which organizations are responsible for developing and running healthy eating campaigns and who should be responsible for regulating those campaigns (a total of 9 questions).

2.2. Data Analysis

All the included multi-item questions were measured with a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The mean values for each item of the questions were extracted for the results' expression. Cluster analysis was performed to group respondents into homogeneous segments of consuming perceptions. Cluster analysis is a tool that uses variable combinations to sort observations into two or more clusters [52]. It identifies a system for categorizing observations into groups, with objects within each group sharing similar characteristics. Many authors have used this technique for segmentation in the field of consumer food science [53–55]. The clusters were validated using a one-way ANOVA, which stands for analysis of variance and is a statistical test used to compare the means of multiple groups [56]. All statistical analyses were carried out using IBM SPSS Statistics for Windows, Version 25.0. IBM Corp. (Armonk, NY, USA). All of the participants' answers were evaluated.

3. Results

Table 1 presents the demographics of the participants. This survey included majorities of females (72.8%), a finding similar to that of other researchers in nearby Italy [57,58], of young participants 18–25 years old (74.0%), single participants (82.8%), and students of the university (71.4%) as expected based on the target group of the research.

Table 1. Sociodemographic characterization of the sample.

Groups	N	(%)
Male	284	27.2
Female	762	72.8
18–25	774	74.0
26–35	91	8.7
36–45	64	6.1
46–55	86	8.2
56+	31	3.0
Single	866	82.8
Married	156	14.9
Other	24	2.3
Employee	254	24.3
Unemployed	34	3.3
Student	747	71.4
Retired	11	1.1
None/Primary school	5	0.5
Secondary school	2	0.2
High school	221	21.1
University	818	78.2

Consumers' responses towards their health and healthy eating attitudes and perceptions are illustrated in Table 2.

Table 2. Consumers’ attitudes on health and healthy eating attitudes and perceptions.

Health and Healthy Eating Perceptions of the Consumers *					
Consumers’ attitudes towards “health”	Not at all important	Less important	Moderately important	Quite important	Very important
Keeping the body in good condition (fitness)	1	1.9	9.1	41.6	46.5
Having the energy to do the things I want to do	0.6	1.3	5.4	33.9	58.7
Having no physical health problems	0.5	0.9	3.7	22.0	72.9
Looking good	3.3	10.4	30.4	35.5	20.5
Protecting my body against harmful influences	1.8	3.3	14.4	36.6	43.8
Emotional well-being, feeling good mentally	1.2	0.9	6.0	24.0	67.9
Consumers’ definition of “healthy eating”	Not at all important	Less important	Moderately important	Quite important	Very important
Eating vegetables and fresh fruit	0.7	3.4	18.6	48.6	28.7
Balanced diet/eating food from all five food groups	0.8	1.0	3.1	20.3	75.0
Eating to stay healthy	0.9	3.0	11.5	36.4	48.3
Not eating junk food	2.8	9.8	26.6	32.5	28.3
Eating vitamins	1.7	3.5	14.6	35.5	44.6
Eating protein	2.3	5.8	15.8	36.6	39.5
Consumers’ influences of healthy eating	Not at all important	Less important	Moderately important	Quite important	Very important
Food manufacturers	14.6 *	20.5	30.0	23.5	11.4
Supermarkets	17.9	25.0	28.3	21.6	7.2
Fast-food restaurants	33.7	26.4	20.7	13.5	5.7
Food packaging	19.4	22.8	27.8	21.4	8.4
Government	46.4	24.0	16.8	7.5	5.4
Family and friends	7.7	10.7	26.4	34.3	20.8
Doctor or health care provider	3.6	6.7	17.6	32.5	39.6
Consumers’ sources of information about “healthy eating”	Not at all important	Less important	Moderately important	Quite important	Very important
Books, magazines, and newspapers	22.0	24.9	26.9	19.0	7.3
Internet	6.0	7.8	22.2	34.1	29.8
Commonsense/upbringing	3.0	4.2	17.3	39.7	35.9
School/university	4.1	6.4	15.0	33.3	41.2
Professionals (doctors, dietitians)	13.8	14.9	26.4	29.1	15.9
Do not use any sources	71.5	12.0	11.4	3.0	2.2

* Values represent %.

The results of the Table 2 show that:

On consumers’ perception of “health definition”:

For most of the participants, it is quite or very important (more than 90%) to have no physical health problems (94.9%), have emotional wellbeing and feel good mentally (91.9%) and have the energy to do their activities (92.6%). In contrast, looking good was the least prioritized (56%), and keeping the body in good condition was moderately important at 88.1%.

On consumers’ definition of “healthy eating”:

For most of the participants, it is quite or very important to follow a balanced diet that involves foods from all the five groups (95.3%), with decreasing importance to eating for

staying healthy (84.7%), eating foods with vitamins (80.1%), proteins (76.1%), vegetables and fresh fruits (77.3%), and not eating junk food (60.8%).

On consumers' influences on "healthy eating":

The consumers of this study reported that they are influenced by more than 50% by their doctor or health care provider (72.1%) and family and friends (55.17%), while they reported being less than 50% influenced in decreasing order by food manufacturers (35.1%), food packaging (29.8%), supermarkets (28.8%), fast-food restaurants (19.2%), and the government (12.9%).

On consumers' sources of information about "healthy eating":

For the participants in this study, they assess as quite or very important sources commonsense/upbringing (75.6%), school/university (74.5%) and the internet (63.9%), and to less extent professionals (45%), and books and magazines (26.3%). Only 5.2% reported that they do not use any sources for their information.

Table 3 presents the consumers' responses towards their attitudes on advertisers' objectives, on who should be responsible for developing and running healthy eating campaigns, and on who should be responsible for regulating those campaigns.

Table 3. Consumers' attitudes and perceptions on healthy eating campaigns.

Perceptions of the Consumers on Healthy Eating Campaigns *					
Towards advertisers' objectives on health foods	Not at all Important	Less important	Moderately important	Quite important	Very important
Aim is to inform	17.5 *	23.2	35.2	19.2	4.9
Essential information	19.7	29.8	31.9	13.3	5.3
Concerned with making money	2.3	2.1	5.4	22.3	67.9
Consumers' best interest	6.0	10.1	25.8	31.8	26.2
Organizations for developing and running healthy eating campaigns	Not at all important	Less important	Moderately important	Quite important	Very important
Non-governmental health organizations	10.7	13.6	31.4	28.8	15.6
Government	16.1	14.5	24.1	24.3	21.0
Food manufacturers	6.7	9.0	26.8	33.6	24.0
Supermarkets	13.8	20.4	30.6	23.0	12.2
Fast-food retailers	41.4	22.6	20.1	8.4	7.6
Responsible bodies for regulating healthy eating campaigns	Not at all important	Less important	Moderately important	Quite important	Very important
Government	10.1	10.1	21.0	27.3	31.4
Independent bodies	6.5	9.0	28.5	31.7	24.3
Medical professionals	1.9	1.8	7.5	29.1	59.8
Health organizations	1.6	1.3	6.6	24.7	65.8

* Values represent %.

The results of the Table 3 show consumers' perceptions and attitudes:

On "healthy food" campaigns:

Most of the participants' opinions (answering quite and very important) about the advertisers' objectives are that they are primarily concerned with making money (90.2%), to a much lesser extent serving the consumers' best interests (58%), and only to inform the consumers (24.1%) or to provide essential information as required (18.6%).

On organizations running "healthy eating" campaigns:

Participants believe moderately or low (answering quite and very important) that food manufacturers first (57.6%), the government second (48.3%), and non-governmental orga-

nizations third (44.4%) are suitable for running healthy eating campaigns. Supermarkets (35.2%) and fast-food retailers are low in their perception.

On organizations regulating “healthy eating” campaigns

Participants believe by far (answering quite and very important) that health organizations first (90.5%) and medical professionals second (88.9%) are the proper bodies for regulating healthy eating campaigns. Their opinion is moderate to low on the government (58.7%) and independent bodies (56%) undertaking this role.

For a better understanding of the behavior of the examined sample, a cluster analysis was carried out with the help of the statistical program Jam Ovi ver. 2.3.21.0, using the participants’ responses to questions 5, 6, and 7 of the questionnaire (consumers’ sources of information about healthy eating, consumers’ perceptions about the objectives of advertisers and organizations, and the last question on developing and running healthy eating campaigns) which examine the perceptions of those who took part in the survey. Cluster analysis was used to create consumer segments with common features. Based on the results, two statistically meaningful clusters of consumers were formed using the three variables from the questions. Table 4 depicts the distribution of the two clusters. The first cluster includes 570 participants (54.50%), while the second cluster consists of 476 consumers (45.50%).

Table 4. Cluster distributions.

Cluster	N	% of Total
1	570	54.50%
2	476	45.50%
Total	1046	100.00%

The analysis results in two groups of participants, as shown in Figure 2, with a statistically significant difference in the answers they gave to the questions about their behavior (attitudes) about healthy eating (Table 5 gives the results of the one-way ANOVA).

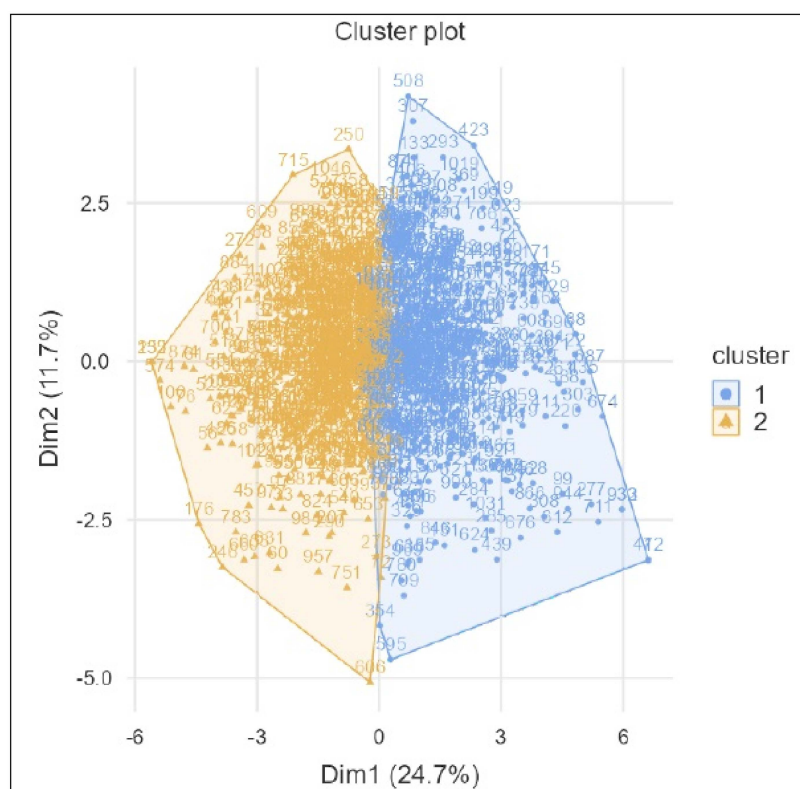


Figure 2. CPCA clustering based on participants’ responses.

Table 5. One-way ANOVA (Welch’s).

	F	Df1	Df2	p
E2i	7.44	1	940	0.007
E2ii	16.20	1	939	<0.001
E2iii	6.96	1	939	0.008
E2iv	8.37	1	976	0.004
E2v	18.31	1	940	<0.001
E2vi	16.81	1	883	<0.001
E3i	29.16	1	925	<0.001
E3ii	19.81	1	798	<0.001
E3iii	22.69	1	874	<0.001
E3iv	14.26	1	950	<0.001
E3v	33.99	1	876	<0.001
E3vi	20.78	1	923	<0.001
E4i	42.21	1	983	<0.001
E4ii	72.22	1	995	<0.001
E4iii	37.47	1	1037	<0.001
E4iv	45.27	1	996	<0.001
E4v	44.22	1	1035	<0.001
E4vi	59.10	1	922	<0.001
E4vii	38.09	1	869	<0.001
E8i	68.08	1	909	<0.001
E8ii	56.94	1	900	<0.001
E8iii	52.13	1	739	<0.001
E8iv	43.29	1	747	<0.001

Table 6 presents the average values of the variables that showed significant variation and are the most important attitudes of participants regarding their perceptions of health and healthy eating. Small, but significant differences are observed between the two clusters, defining the characteristics of the consumers classified in these two groups.

Table 6. Results of the cluster analysis—Characteristics of each cluster.

	Cluster 1 “Approachable” Mean Value	Cluster 2 “Conservatives” Mean Value
For me, health is mainly about		
Keeping the body in good condition (fitness)	4.37	4.23
Having the energy to do the things I want to do	4.57	4.39
Having no physical health problems	4.71	4.60
Looking good	3.68	3.49
Protecting my body against harmful influences	4.28	4.04
Emotional well-being, feeling good mentally	4.65	4.46
Definition of “healthy eating”		
Eating vegetables and fresh fruit	4.14	3.86
Balanced diet/eating food from all five food groups	4.76	4.58
Eating to stay healthy	4.40	4.14
Not eating junk food	3.85	3.60
Eating vitamins	4.33	3.99
Eating protein	4.18	3.90
Influences on healthy eating		
Food manufacturers	3.19	2.70
Supermarkets	3.03	2.42
Fast-food restaurants	2.52	2.07
Food packaging	2.99	2.49

Table 6. Cont.

	Cluster 1 “Approachable” Mean Value	Cluster 2 “Conservatives” Mean Value
Government	2.23	1.75
Family and friends	3.75	3.20
Doctor or health care provider	4.17	3.75
Who should be responsible for regulating healthy eating campaigns		
Government	3.89	3.24
Independent bodies	3.82	3.29
Medical professionals	4.61	4.22
Health organizations	4.67	4.33

All variables are on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

The groups were named based on the answers they gave to the questions about their behavior as follows: (a) approachable and (b) conservative, in order to further distinguish them. The name of the groups is artificial and results from the overall behavior of the people belonging to each group.

For the determination of health, based on the mean values for each item of the variables, we observe that the two groups focus with equal weight on the questions posed, and therefore cannot be characterized differently. Specifically, for “keeping the body in good condition”, Cluster 1 exhibited $M = 4.37$, while Cluster 2 scored $M = 4.23$; for “having the energy to do the things I want to do”, $M = 4.57$ for Cluster 1, and $M = 4.39$ for Cluster 2; for “having no physical health problems”, $M = 4.71$ for Cluster 1, and $M = 4.60$ for Cluster 2, “protecting my body against harmful influences” $M = 4.28$ for Cluster 1 and $M = 4.04$ for Cluster 2; and for “emotional well-being, feeling good mentally”, $M = 4.65$ for Cluster 1, and $M = 4.46$ for Cluster 2. The least important component for both groups, similarly to the statistical results shown above in Table 2, is “looking good”, presenting mean values of 3.68 for Cluster 1 and 3.49 for Cluster 2.

For the definition of healthy eating, Cluster 1 consumers emphasize both the concept of a complete health diet regarding mean values for “balanced diet/eating food from all five food groups” and “eating to stay healthy” of 4.76 and 4.40, respectively, as well as the individual actions to achieve it, such as the consumption of “vegetables and fresh fruit” ($M = 4.14$), “eating vitamins” ($M = 4.33$), and “eating proteins” ($M = 4.18$). Therefore, this cluster group can be characterized as “approachables” in regard to modern healthy eating concepts. On the contrary, Cluster 2 consumers, are characterized as “conservatives” or “old-fashioned” since they are focused mainly on the global dimension of healthy eating emphasizing all five food groups for a balanced diet and maintaining health; in this group, $M = 4.58$ for a balanced diet, and $M = 4.14$ for eating to stay healthy. However, the consumption of “vegetables and fresh fruit” ($M = 3.86$), vitamins ($M = 3.99$), and proteins ($M = 3.90$) seems not to be priority for them. Furthermore, avoiding fast food is secondary to both groups of consumers, with values for Cluster 1 of $M = 3.85$ and Cluster 2 of $M = 3.60$.

The influences on healthy eating results also noted some differences between the two clusters. Cluster 1 individuals, characterized as “approachables”, are clearly more influenced by health professionals ($M = 4.17$), with the family environment ($M = 3.75$), food manufacturers ($M = 3.19$), and supermarkets ($M = 3.03$) following on a second level. It is also evident that fast-food restaurants ($M = 2.52$) and the government ($M = 2.23$) do not cater to this group of consumers. Also noteworthy is the low confidence shown by these consumers in food packaging ($M = 2.99$). Contrarily, Cluster 2 individuals are more strict or even “absolute” consumers influenced by no one for their choices; this is seen as an old-fashioned perspective, hence their characterization as “conservatives”. They are moderately influenced by doctors and nutritionists ($M = 3.75$) and their family environment ($M = 3.20$), while showing the least trust in food producers ($M = 2.70$), supermarkets ($M = 2.42$), food packaging ($M = 2.49$), and fast-food restaurants ($M = 2.07$). The government’s information

campaigns appear to be disregarded according to their responses to the lower selection of the questionnaire scale ($M = 1.75$).

Both cluster groups agree in the field of “Who should be responsible for regulating healthy eating campaigns”; both “approachable” and “conservative” consumers attribute as more important the actions of medical professionals ($M_1 = 4.61$, $M_2 = 4.22$) and health organizations ($M_1 = 4.67$, $M_2 = 4.33$) than those of the government ($M_1 = 3.89$, $M_2 = 3.24$) and independent bodies ($M_1 = 3.82$, $M_2 = 3.29$). However, there is also in this area a greater tendency from Cluster 2 for responses towards the lower rung of the scale.

4. Discussion

Healthy eating is one of the main factors that directly contributes to achieving a healthier lifestyle. Mediterranean consumers, including Greek citizens, have a positive association between perception, motivations for health behavior, and adherence to a healthy diet [59]. A similar pattern was identified by us studying the food choice motives, based on the ten main parameters, of Greek students aged 18–25 years old [60]. The results indicated that young consumers have returned to their pre-COVID-19 food choice preferences, including health, even though health is not at the top of their priorities for food.

Based on the seven factors identified as part of the study’s specific goal presented above at the introduction, the findings of the results for each factor are as follows:

Attitudes towards health:

The combination of mental and physical health, including required energy supply, is an integrated concept of the consumers’ perception of health. These findings are in line with the results of Leite’s research [61], according to which, health perception can be an important factor to predict psychological well-being, aligned with a holistic approach to the terms of health. Furthermore, our findings showed that the least emphasis is given by the participants to physical appearance and fitness, which proves that they have a deeper knowledge about health and that they are not confined to superficial traits.

Definition of healthy eating habits:

Consumers defined the balanced diet containing fruits, vegetables, grains, protein foods, and dairy products as by far the most important parameter of healthy eating. Our findings coincide with the consumers’ perception in Coumans’s study published recently [62].

Influences of healthy eating:

Participants of the study are influenced primarily by doctors/health providers or family and friends. These results agree with the statistically positive linear effect between health provider influence and eating behavior and between health literacy and health perception [63], and a significant correlation was found between family role performance and healthy eating perceptions [64,65]. The characteristics of the food production, such as food manufacturers, packaging, supermarkets, restaurants, and, least, the government, have less influence in our study as a source of information on healthy eating by the consumers.

Source of information about healthy eating:

Participants use commonsense/upbringing, schools/universities, and, to a lesser extent, the internet as the main sources of information for healthy eating knowledge. The importance of online information sources such as the internet, social media, etc., to consumers’ information-seeking for health nutrition has been highlighted by other researchers systematically throughout the years [66–68]. In a recent study, Feher et al. examined the correlation between online and offline information-seeking actions regarding healthy nutrition [69]. The findings indicate that both online and offline sources of information play a significant role in influencing individuals’ acceptance of healthy foods. However, when it comes to rejecting healthy nutrition or having mixed feelings about it, the primary sources of information are not as clear-cut. There is a tendency to believe that these attitudes may stem from childhood or have a familial origin. These findings corroborate our results regarding the subject matter, as there is a direct correlation between upbringing and childhood experiences as well as family background.

Objectives of advertisers:

Participants believe by far that it is the profit for the interested party implementing the advertising campaigns.

Proper organizations for developing and running healthy eating campaigns:

Participants in this study believe that food manufacturers, the government, and non-governmental health organizations should run such campaigns.

Responsible organizations for regulating healthy eating campaigns:

Participants believe that health organizations and health professionals are the proper bodies for regulating such campaigns and not the government or other independent bodies. These results agree with the findings of Jones et al. [50] in 2009 with Australian consumers who perceive healthy eating information to be the domain of the health industry. They also perceived that there are ambiguities and shifts in conventional trends, such as with food companies, which may be seen to develop credibility over time as healthy eating advertisers, a finding which is proved by our results 15 years later. The literature since then has focused on the efficiencies of health campaigns regarding the source of initiation [1].

“Approachable” vs. “conservatives”: the two cluster groups identified in this study:

The results of the cluster analysis provided two cluster focus groups with some similarities, but differences on health and healthy eating based on the mean values for each item of the variables. The first cluster group is defined as “approachable” because they are approachable to today’s healthy eating perceptions of the synchronous consumers. Contrarily, the second cluster group is defined as “conservatives” since they are old-fashioned with low prestige and belief in modern healthy eating consumers’ attitudes.

Both cluster groups exhibited similar attitudes to the definition of health, with the highest importance placed on the good condition of the body, with no physical and mental health problems, and adequate energy for pleasant life. This is expected since the definition of health has not changed throughout the last few years.

However, the attitudes of the two cluster groups concerning healthy eating differ in many ways. Approachables recognize, in addition to the importance of the balanced diet, the importance of vegetables, fresh fruits, vitamins, proteins, and eating to stay healthy as well. Contrarily, conservatives, even though they recognize the balanced diet as such, do not pay much attention to the other parameters.

Approachables are influenced by external providers, such as health professionals/ doctors, family, and food manufacturers on healthy eating. However, conservatives are less influenced by all these providers, showing low confidence and trust in these major sources of information. This is an old-fashioned approach from when food and health sciences had not yet made significant progress in the field, ensuring the accuracy of the provided data. It is remarkable that both groups, but especially the conservatives, consider the government, as a source of information about a healthier diet, insignificant.

Both groups, approachables and conservatives, equally agree that medical professionals and health organizations should be responsible for regulating healthy eating campaigns. However, even though approachables also trust independent bodies and the government for the same job, conservatives do not trust these bodies, which is also an old-fashioned opinion on the efficiency of these bodies.

5. Conclusions

This research aimed to explore consumers’ perception from a university community on health and healthy eating in the context of the concept and of the sources that influence their formation. Most of the participants were young consumers, mainly college students.

The answers given by the participants in the study, presented above, indicate that their interest, influence, and sources of information on their health and healthy eating are on a holistic, rather than superficial, one-sided level approach. They are well informed on the subject, so they have a critical opinion for each item. The consumers who participated in the study consider healthy eating campaigns to be mainly a source of income for the advertisers, with medical professionals and health organizations as the most appropriate

bodies for regulating such campaigns. The study indicates that fast-food restaurants and the government do not cater to consumers, having failed to realise the goal of their campaigns; additionally, it seems that the food industry's main objective to communicate with consumers through its products is not achieved effectively.

The statistical treatment applied to the data obtained through the questionnaire showed that the consumers who participated are divided into two distinctive cluster groups. The first consists of consumers who pay attention to details, as can be assumed by the whole range of their responses, defined therefore as “approachable”. Their choices are strongly influenced by qualified health professionals, and they want campaigns about healthy eating to be controlled and regulated by them. Family and friends, as another source, can influence their food choices as well. On the other hand, in the second group are consumers that have more stable and strict opinions, defined therefore as “conservatives”. For them, a healthy diet is achieved by a balanced diet only. They may be influenced by doctors and their environment, but any other source leaves them indifferent. In an equal way of thinking, both groups prefer experts, rather than the government or independent bodies, to regulate healthy eating campaigns.

The results of this study can contribute to the feedback of information to the responsible bodies, expanding from food manufacturers to government and health providers, on the effectiveness of their actions to inform the public about a healthier diet. Providing information is a simple process, but creating trust between transmitter and receiver and the assimilation of this information are more complicated processes that needs time to be achieved. Young adults with university education seem to care about their health and nutrition, but the abundance of information provided creates a confusing environment at all levels. Therefore, coordinated actions to be carried out should be authoritative, valid, and clear in order to achieve their purpose.

This study has limitations, mainly due to the sample of the participating consumers being within a university college and mostly female; however, this is also the case for many other related studies. Furthermore, the restriction to the Greek consumers only is a limitation and the next study should be expanded to other countries as well in order to assess the global validity of these findings.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su16052213/s1>, Table S1: Questionnaire on consumers' perceptions on healthy eating and healthy eating advertisements in Greece today.

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Informed Consent Statement: Not applicable based on the GDPR European Union law, adapted by Greek law 4624/2019 for this case.

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