Restaurants' customers' attitudes toward menu sustainability and sustainable food

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Abstract
A sustainable menu is a menu that considers ecological, environmental, and ethical aspects, seasonally, locally sourced, and organically grown ingredients, and ultimately promotes the continuous well-being of ourselves and our planet. Therefore, the goal of this study is to find out how customers feel about sustainable hotel menus. Also, consumers' attitudes toward green products are affected by their tendency to value environmental benefits or environmental performance. A sample of 421 green-star hotel guests in Hurghada responded to a questionnaire SPSS version 26 was used to analyze the data. According to the findings of this study, hotel customers' awareness of menu sustainability influences their decision to choose healthy and environmentally friendly menu options. Additionally, it concludes that there are differences among the sample responses of the study regarding the attitudes of hotel customers toward menu sustainability concerning gender, age, and educational level.

Keywords: Menu sustainable, organic food, sustainable restaurant, green star hotel, local food.

Introduction
The hospitality industry faced many challenges, as this industry has displayed almost constant growth since the 1950s. characterized by globalization, which increases the number of competitors, as well as the fact that it must meet consumer expectations that are constantly evolving concerning the quality of service and respond to the increasing environmental and social awareness of customers (Saad & Raslan, 2017). Due to increased environmental attention, many hotels and restaurants are becoming more sustainable as they embark on a wide range of measures designed to reduce their impact on the environment (Sloan et al., 2009). Previous research has shown that customers are more knowledgeable, experienced, and aware of the impact of food type on their health status as well as the nutrition pattern on the environment. They want more healthy and nutritional food that is low in fat and calories. Consumers are also more likely to seek out hospitality services that have adopted sustainable practices and are interested in the sources and production processes of the food they are eating.
The Sustainable Development Commission (SDC) defined food sustainability as food that is safe, healthy, and tasty for customers and can meet the needs of people with less money. Gives farmers, processors, and retailers a way to make a living, and their employees have a safe and clean workplace. Respects biophysical and environmental limits in its production and processing, while using less energy and making the environment better. It also meets the highest standards for animal health and welfare, so it can be used to make food that everyone can afford. By relying on the locals, it helps rural economies and the diversity of rural culture suppliers that decrease the distance between food grown and consumed (Sloan et al., 2013).

Because of its nature, sustainable food is considered more expensive than other kinds of food. Restaurant operators who are looking to offer clients sustainable food items may be forced to increase their menu prices. There is proof from previous research that restaurant customers are willing to pay an extra charge or price for sustainable food choices. The concept of a sustainable menu can be defined as a way of constructing a menu that ultimately promotes the continuous well-being of ourselves and our planet while considering ecological, environmental, and ethical aspects (Ezzat & Ashry, 2017): seasonally sourced, locally sourced, and organically grown ingredients. food at its peak supply, bread, and bakery items fresh daily by local bakeries, and changed menus monthly to serve the freshest possible produce at its peak, cut down sugar, salt, and fat, eliminate genetically modified ingredients (GM), reduce the amount of meat per plate, increase the portions of vegetarian options, and provide more vegetables, fruit, and whole grains while reducing the number of animal products and minimizing the use of processed poultry and meat products in their menu.

Increasing nutritional awareness among customers and their awareness of the importance of eating healthy, organic, and sustainable food forced the hotel sector to implement sustainability applications in their menus based on the customer's desires (Mancini et al., 2017). Typically, studies on customer behavior toward sustainable food addressed only one factor as an influential factor. This factor may be the tourist's experience with food, tourist motivators to consume local food, tourist perceptions of local cuisine experiences, or tourist satisfaction. Thus, no study focused on the majority of these combined factors(Chang et al., 2011).

In this study, we explore the relationship between customers' attitudes toward menu sustainability at restaurants. Consumers' motivations for switching to sustainable menus are the major focus of the study. The broad research objectives of the study are:

1. To identify the motivating factors that influence the purchase of a sustainable menu.
2. To evaluate the subjective norms of sustainable food consumers.
3. To investigate the relationship between environmental concern and attitudes toward a sustainable diet.

Literature Review

Sustainability in the hotel industry
According to Blackburn, hotels started restricting their energy use and using it for a variety of purposes in creative ways (Blackburn, 2012). Regarding certain policies and standards about internal and external design as well as waste management, they are now more devoted. Profits, people, and the environment all promote sustainable development (SD) objectives (Khalili & Duecker, 2013). The main objective is to look for ways to manage the hotel in accordance with the "three bottom lines" idea, which stands for profitable operation combined with attention to the people who contribute to the hotel and a spotlight on cautious resource management (Boley & Uysal, 2014). The environmental campaign goes beyond common practices like recycling trash, reusing guest linens, and switching to compact fluorescent bulbs. Along with participating in international award and certification programs, the community strategy also encourages employees to volunteer in the community and to support charitable organizations (Nicholls & Kang, 2012).

Sustainable Restaurant

Green restaurants became popular as consumers became more aware of how their consumption habits affected the environment. Since 1990, the Green Restaurant Association (GRA), a nonprofit group established in the United States, has pushed restaurants to embrace environmental policies and offered practical and affordable solutions for them to do so (Han & Lee, 2016). The sustainable restaurant satisfies indicators like energy efficiency and conservation, water conservation, waste management and composting, the reduction of disposables, chemicals, and pollution, as well as the use of sustainable food, furnishings, and building materials (Lita et al., 2014b). A sustainable restaurant may be a brand-new or restored building that is created, run, and demolished in an environmentally and energy-conscious manner. According to (Lorenzini, 1994). Although the restaurant's service is intangible, its operations are dependent on its physical assets, and these assets are thought to have a negative impact on the environment. Therefore, the environmentally friendly restaurant should emphasize the three Rs (reduce, reuse, and recycle) and the two Es (energy and efficiency) (Khan et al., 2005). A UK-based nonprofit organization called the Sustainable Restaurant Association (SRA) supports "restaurants in becoming more sustainable and guests in making more sustainable choices while dining out" (Sustainable Restaurant Association, 2020). This is done via a star rating system, but it also has a unique program designed just for university catering, whereby eateries can grade their sustainability in 14 critical areas, as shown in Table 1. Restaurants participate in the assessment willingly for being in exchange and are listed in the online sustainable restaurant guide, which enables guests to find sustainable restaurants in their area. As well as audits of waste products and energy, the SRA provides consulting services.

Table 1: Areas covered by SRA sustainability assessment, by category

Sourcing	Environment	Society
Environmentally positive farming Local and seasonal food Sustainable fish Ethical meat and dairy Fairtrade	Water saving Workplace resources Supply chain Waste management Energy efficiency	Community engagement Treating people fairly Healthy eating Responsible marketing

Source: Sustainable Restaurant Association (2020)

Sustainable Food

According to the World Watch Institute (2009), sustainable food is described as follows by the UK government's Sustainable Development Commission: Safe, healthful, and nourishing for consumers in stores, restaurants, hospitals, etc. Provide a stable source of income for farmers, processors, and retailers, whose staff members can operate safely and hygienically either in the UK or abroad. (Sloan et al., 2013) support rural economies and the diversity of rural cultures. One way they do this is by putting a lot of emphasis on locally grown foods that cut down on the distance food travels (Reisch et al., 2017). It is an essential component of our cultural identity and is crucial to the economy. People are aware that the food they eat has a significant impact on their health, but they may not be as conscious of the effects that food production and consumption have on the planet's resources. from the food we grow and eat, which has a big impact on the environment.

Local Supply.

The farm-to-table movement has had and will continue to affect the restaurant industry. Utilize this trend to advantage by purchasing food and ingredients from local farmers'

markets or vendors who do so. This will not only reduce pollution and transportation expenses, but it will also assist neighborhood farmers. Additionally, since there is a shorter distance from the farm to your kitchen to the customer's fork, local food is proven to be fresher (Legrand et al., 2016a).

Seasonality
Restaurant menus should emphasize seasonal ingredients, and chefs should draw inspiration from the changing of the seasons and the consequent influx of fresh produce. Seasonal contributions not only limit the importation of food that is not in season, or "food miles," but they also increase the richness of plant and animal species in the local and regional areas, frequently leading to the rediscovery of regional cooking customs (Sloan et al., 2013).

In-House Production (homemade)
Make several goods on-site if you want to set the restaurant apart from the other eateries in the area and increase the variety of your menu. Homemade jam, pickles, or make salad dressings from scratch with fresh ingredients. The menu will start with a fresh, handcrafted flavor from in-house production, and it will also be sustainable (Garnett, 2013).

Local Garden
In addition to being able to satisfy a range of farmer needs without negatively impacting or, in many cases, even depleting the resource base, gardens have the potential to meet several economic, social, ecological, and institutional conditions that support their sustainability(Méndez et al., 2001). An onsite garden can be started practically anywhere, including a windowsill, rooftop, or backyard. A little garden with chives, mint, rosemary, and parsley could serve as an example of this, or a larger garden with a variety of seasonal fruits and vegetables might be more elaborate.

Reduce Portion Sizes
Consider the possibility of reducing the size of the meat portions in favor of an extra vegetable side dish or more greens. The recommended serving sizes for vegetables are two to three times larger than those for meat, so feel free to eat more of them to make up for the smaller portions of meat. According to one study, including vegetables in your meals lowers your risk of stomach upset, cancer, and diabetes. Additionally, because vegetables are much simpler to digest than meat, your clients will be able to finish more of what is on their plates, and there will be less waste in general(Bertoia et al., 2015).

Use less meat.
Reduce the amount of meat on each plate to a couple of ounces or less (this is the recommended serving size of protein for an adult) and/or reduce the serving sizes (Christoph & Dietetics, 2017).

Shrink Your Menu
Reduce the menu to a few sustainable standouts rather than attempting to green up dozens of meals. Chefs are better equipped to focus their skills and make each dish as sustainable as they can when there are fewer dishes to produce. Additionally, a smaller menu is less daunting to customers and facilitates decision-making (Bertoia et al., 2015).

Minimizing food waste
One strategy to keep food out of the trash is to reduce portion sizes, but this is not the only option. Ask the team to separate waste materials into several bins for ruined food, kitchen scraps, and client waste to begin a food audit (Legrand et al., 2016a). Once you are aware of the amount that is wasted, look for strategies to reduce spoilage and reuse kitchen waste. Use those ingredients in the menu to reduce waste and change offers, such as using animal bones to make stock or stale bread to make croutons. To reduce the amount of food that is wasted after it has been prepared (Bong et al., 2018),

Be Organic
Choosing organic ingredients is frequently a great way to make your restaurant more sustainable because they have so many advantages for the environment (Paul & Rana, 2012).

Partner with the neighborhood
Your dedication to sustainability shouldn't cease when your restaurant closes. Working together with neighborhood ranches or local gardening projects will help you reach a larger local region for your primary objective (Legrand et al., 2016b). For instance, you might design a special menu using ingredients from a local garden.

Ditch Disposable Packaging
Consider eco-friendly packing options for your delivery and takeout orders. this could entail utilizing biodegradable packaging or simply switching from plastic to cardboard (Nordin & Selke, 2010).

Consumers' Attitude
Sanchez-Bravo and colleagues, 2020 Using Schwartz's norm activation theory of altruism, the environmental concern might be interpreted as an awareness of consequences. (Sánchez-Bravo *et al.*, 2020). Observational data demonstrates that environmental concern has a wide range of impacts on pro-environmental behavior and, in turn, on perceptions and attitudes about sustainability. In this sense, it might encourage a sense of accountability, leading to activities that safeguard the environment. On a customer's psychographic and demographic characteristics, there may be a range in how eager they are to adopt green practices in restaurants. According to pertinent research, knowing a consumer's environmental consumption practices requires a grasp of their demographic traits. (Namkung & Jang, 2017).
According to (Seo *et al.*, 2016), environmental degradation has increased customers' concerns about mortality and a range of health scares and crises related to product safety, which has resulted in a gradual growth in the market share of sustainable products. Consumers now prefer to buy sustainable items because of these worries. How consumers seek out and react to the distribution of health information through their lifestyle choices frequently reflects their level of health consciousness. healthy eaters, it would seem, actively seek out restaurants that serve sustainable or environmentally friendly meals. The main restaurant business model in this environment has evolved to include sustainability. Many restaurants are encouraging sustainable food options and practices that reduce pollution, the formation of solid waste, the use of water and energy, and consumer demand for healthy and environmentally friendly products (Mbasera et al., 2016).
Customers' Attitudes Toward Green Practices: Influential Factors Customers who use the same good or service could learn about different elements of it and react in different ways

depending on their interests (Santosa et al., 2005). It is feasible that customers who participated in "green activities" would exhibit varying levels of behavior in the context of a green restaurant. As green practices began to be viewed as critical practices, many restaurateurs adopted them (Ham & Lee, 2011). The likelihood that customers will appreciate a restaurant's attempts to adopt green practices thereby increases. This study hypothesis that customers' involvement in green practices is commonly impacted by situational factors (such as the adoption of green practices) and/or their interest in green practices. Customers that actively practice green habits may also be more inclined to concentrate on the important details, which eventually affects customers' awareness of green habits.

Hypotheses

Based on the research objectives and question, the following hypotheses are formulated:
H01: Health consciousness and the awareness of environmental problems are the most effective stimuli factors on customers' attitudes towards menu sustainability.

H01.1: There is a statistically significant impact of hotel customers' awareness of the concept of sustainability on their behavioral component to measure healthy and environmentally friendly lifestyles at the significance level of 0.05.

H01.2: There is a statistically significant impact of customers' awareness of hotels' sustainability applications on their behavioral component to measure healthy and environmentally friendly lifestyles at a significance level of 0.05.

H01.3: There is a statistically significant impact of hotel customers' awareness of menu sustainability availability on their behavioral component to measure healthy and environmentally friendly lifestyles at the significance level of 0.05.

H01.4: There is a statistically significant impact of hotel customers' knowledge about the importance of sustainability on their behavioral component to measure healthy and environmentally friendly lifestyles at the significance level of 0.05.

Methodology

This is a descriptive field study that aims to collect, sort, and analyze data about customers' attitudes toward menu sustainability in hotels. The study uses a quantitative approach to achieve its aim. Quantitative data is a method of gathering information from hotel guests via structured questionnaires. Customers in all Egyptian hotels couldn't be polled, so a representative sample was selected instead. The "green star hotel" (GSH) in the popular resort town of Hurghada on the Red Sea was chosen as a representative sample of Egyptian hotels because it has the most GSHs compared to Cairo, Alexandria, Sharm El Sheikh, and Giza (EHA, 2019). The study sample was conducted at three-star, four-star, and five-star hotels in the Red Sea. The sample was chosen based on the following inclusion criteria: The hotel should be certified a "green star hotel" because the "green star hotel" (GSH) is a national green certification and capacity-building program managed by the Egyptian Hotel Association (EHA) under the patronage of the Egyptian Ministry of Tourism. The GSH program offers an opportunity for hotels operating in Egypt to be internationally recognized for raising their environmental performance and social standards while reducing their operational costs. The population of the study is unlimited due to the difficulty of determining a specific number of guests in green-star hotels in Hurghada, so the acceptable sample size is an ideal method to apply in this study. The researcher was able to collect (421) responses from 500 questionnaires.

The questionnaire was divided into two main sections. Part one: This part concerned the demographic data of the sample of the study and consisted of 4 questions about gender, age,

educational level, and nationality. Part two: The Dimensions of the Study: In this part, the study includes two variables. An independent variable is health consciousness and the awareness of environmental problems, which include four dimensions (the concept of a sustainable restaurant includes the fulfillment of indicators, menu sustainability, and customer knowledge). The behavioral component used to assess healthy and environmentally friendly lifestyles is the dependent variable. There are many scales of variables in the study. All data were then analyzed utilizing procedures of the SPSS, 16 (Statistical Package for Social Science) for windows. Frequencies, means, standard deviation, and percentages were calculated. Then, one-way analysis of variance (One-Way ANOVA) to determine which group differs significantly from the other and multiple regressions between variables. Thereafter, Reliability and validity analysis was carried out to measure the reliability and validity of the results from the questionnaire.

Results

Part One: Demographic data
This section includes three personal data (gender, age, and finally level of education). This data aimed to recognize the demographic data of hotels' customers. The results are shown in Table 1.

Table 2: Demographic data of respondents.

Demographic Data	Attribute	Statistics		Rank
		Freq.	%	
Gender	Female	203	48.2	2
	Male	218	51.8	1
Total		421	100%	
Age	From 21 – 30 years	175	41.6	1
	From 31 – 45 years	153	36.3	2
	More than 45years	93	22.1	3
Total		421	100%	
Educational level	Average Degree	48	11.4	3
	University Degree	227	53.9	1
	Postgraduate Degree	146	34.7	2
Total		421	100%	

As can be observed from the previous table (1) that 51.8 of the respondents were male, and there were 48.2 female respondents. The result refers to that the guests usually visit the hotel with their families, where the percentage of male and female guests was similar. According to age group, among the 421 respondents, 41.6 % fell into the age group 21-30 years; this was followed by the age group 31-45 years 36.3%. The age group of more than 45 years was the smallest and represented 22.1%. This result indicated that most of the guests were from the youth age group. Concerning the educational level variable, a high proportion of the tested sample (53.9 %) has a university educational degree, this was followed by a postgraduate degree (34.7%). Meanwhile, guests with postgraduate degrees were the smallest group and represented (11.4%).

Part Two: customer's attitudes towards menu sustainability in hotels:
This section is divided into five main independent dimensions, in addition to dependent dimensions. The purpose of these dimensions is to explore the customer's attitudes toward menu sustainability in hotels. The results are shown in the following tables.

The Customers' Awareness of the Concept of Sustainability

The purpose of this dimension is to explore the customers' awareness of health consciousness and the awareness of environmental problems which include the concept of sustainability. Table (2) shows the answer to these statements.

Table 2: The Customers' Awareness of the Concept of Sustainability

Factor	Sub-Variables	Freq.	Per.%	Mean	S.D.	R
Sustainable development is concentrated on the conservation of natural ecosystems and therefore the rational use of natural resources and improving the standard of the environment.	Strongly disagree	20	4.8	**4.23**	**1.081**	1
	Disagree	14	3.3			
	Neutral	46	10.9			
	Agree	109	25.9			
	Strongly Agree	232	55.1			
Sustainable food is imparted as a viable livelihood for farmers, processors, and retailers, whose employees enjoy a secure and hygienic working environment.	Strongly disagree	7	1.7	**3.96**	**.868**	3
	Disagree	10	2.4			
	Neutral	94	22.3			
	Agree	190	45.1			
	Strongly Agree	120	28.5			
Sustainable food is Safe, healthy, and nutritious, for consumers in shops, restaurants, hospitals, etc., and may meet the wants of the less well-off people	Strongly disagree	4	1.0	**3.97**	**.849**	2
	Disagree	12	2.9			
	Neutral	98	23.3			
	Agree	186	44.2			
	Strongly Agree	121	28.7			
Sustainable food is the same as organic food	Strongly disagree	31	7.4	**3.69**	**1.155**	4
	Disagree	30	7.1			
	Neutral	90	21.4			
	Agree	158	37.5			
	Strongly Agree	112	26.6			
Mean				**3.96**	**0.701**	--

Note: R= Rank, S.D.= Standard Deviation

According to the results shown in Table (2). Results indicate that variables' means range from 3.69 to 4.23; with a grand mean of 3.96. This result indicates the customers' awareness of the concept of hotel sustainability. The standard deviation of the previous indicators shows that the researcher can rely on the mean to give a meaningful representation of the data. A standard deviation from 0.849 to 1.15 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that

the highest statement "Sustainable development is concentrated on the conservation of natural ecosystems and, therefore, the rational use of natural resources and improving the standard of the environment" has gotten the highest percentage of agreement from the respondents (mean = 4.23). This result agrees with Sloan et al.'s (2013) conclusion that sustainable hospitality operations aim at reducing their impact on the environment and society. On the contrary, the lowest statement "Sustainable food is imparting a viable livelihood for farmers, processors, and retailers, whose employees enjoy a secure and hygienic working environment" is at (mean = 3.96). This result agrees with the definition of the United Kingdom government's Sustainable Development Commission.

The Sustainable Restaurant Includes the Fulfillment of Indicators

The purpose of this dimension is to explore the customers' awareness of health consciousness and the awareness of environmental problems which include the sustainable restaurant includes the fulfillment of indicators. Table (3) shows the answer to these statements.

Table 3: The Sustainable Restaurant Includes the Fulfillment of Indicators

Factor	Sub-Variables	Freq.	Per.%	Mean	S.D.	R
energy efficiency and conservation	Strongly disagree	9	2.1	**4.17**	**.892**	2
	Disagree	10	2.4			
	Neutral	54	12.8			
	Agree	177	42.0			
	Strongly Agree	171	40.6			
water saving	Strongly disagree	3	.7	**4.04**	**.818**	6
	Disagree	12	2.9			
	Neutral	78	18.5			
	Agree	199	47.3			
	Strongly Agree	129	30.6			
waste management and composting	Strongly disagree	3	.7	**4.28**	**.858**	1
	Disagree	9	2.1			
	Neutral	67	15.9			
	Agree	129	30.6			
	Strongly Agree	213	50.6			
chemical and pollution reduction.	Strongly disagree	3	.7	**4.16**	**.786**	3
	Disagree	7	1.7			
	Neutral	62	14.7			
	Agree	195	46.3			
	Strongly Agree	154	36.6			
Local and seasonal food	Strongly disagree	6	1.4	**4.07**	**.838**	5
	Disagree	7	1.7			
	Neutral	77	18.3			
	Agree	193	45.8			
	Strongly Agree	138	32.8			
Community engagement	Strongly disagree	11	2.6	**3.93**	**.934**	11
	Disagree	11	2.6			
	Neutral	99	23.5			
	Agree	174	41.3			
	Strongly Agree	126	29.9			
Recycling	Strongly disagree	4	1.0	**3.95**	**.931**	10
	Disagree	22	5.2			
	Neutral	103	24.5			
	Agree	154	36.6			
	Strongly Agree	138	32.8			
Eco-design in hotel/	Strongly disagree	6	1.4			

restaurant architecture	Disagree	21	5.0	**3.91**	**.911**	12
	Neutral	95	22.6			
	Agree	180	42.8			
	Strongly Agree	119	28.3			
Responsible marketing for hotels and restaurants	Strongly disagree	5	1.2	**3.96**	**.909**	9
	Disagree	20	4.8			
	Neutral	92	21.9			
	Agree	173	41.1			
	Strongly Agree	131	31.1			
Responsible consumerism	Strongly disagree	6	1.4	**3.97**	**.910**	8
	Disagree	19	4.5			
	Neutral	87	20.7			
	Agree	178	42.3			
	Strongly Agree	131	31.1			
Social responsibility for sustainable business management	Strongly disagree	6	1.4	**4.01**	**.912**	7
	Disagree	15	3.6			
	Neutral	92	21.9			
	Agree	165	39.2			
	Strongly Agree	143	34.0			
Financing schemes and funds according to the sustainable principle	Strongly disagree	8	1.9	**4.09**	**.962**	4
	Disagree	14	3.3			
	Neutral	88	20.9			
	Agree	135	32.1			
	Strongly Agree	176	41.8			
Average Mean				**4.05**	**0.66**	--

Note: R= Rank, S.D.= Standard Deviation

According to the results shown in Table (3). Results indicate that the variables' means range from 3.91 to 4.28; with a grand mean of 4.05. This result indicates that The Sustainable Restaurant Includes the Fulfillment of Indicators. The standard deviation of the previous indicators shows that the researcher can rely on the mean to give a meaningful representation of the data. A standard deviation from 0.786 to 0.962 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which tells that there is little volatility in the sample. On the other hand, it is also found that the highest statement is the of "waste management and composting" has got the highest percentage of agreement from the respondents at (Mean=4.28). this result agreed with (Lita et al., 2014a)that sustainable restaurant includes the fulfillment of indicators like energy efficiency and conservation, water saving, and waste management. On the contrary, the lowest statement that "Eco-design in hotel/ restaurant architecture" is at (mean = 3.91). This result agreed This result in agreement with the result of Lita et al., (2014) that the sustainable restaurant includes the fulfillment of indicators like energy efficiency conservation, sustainable furnishings, Eco-design, and building materials.

The customers' Awareness of the Menu sustainability
The purpose of this dimension is to explore the customers' Awareness of health consciousness and the awareness of environmental problems which include menu sustainability. Table (4) shows the answer to these statements.

Table 4: The customers' Awareness of the Menu sustainability

Factor	Sub-Variables	Freq.	Per.%	Mean	S.D.	R
Sourcing products and ingredients locally from farmers' markets or suppliers who buy from local farmers.	Strongly disagree	4	1.0	**4.17**	**.857**	2
	Disagree	9	2.1			
	Neutral	73	17.3			
	Agree	159	37.8			
	Strongly Agree	176	41.8			
Support ingredients that are in the season (plant and animal)	Strongly disagree	1	.2	**4.03**	**.788**	4
	Disagree	9	2.1			
	Neutral	91	21.6			
	Agree	195	46.3			
	Strongly Agree	125	29.7			
In-House Production (homemade)	Strongly disagree	2	.5	**4.00**	**.863**	6
	Disagree	12	2.9			
	Neutral	109	25.9			
	Agree	160	38.0			
	Strongly Agree	138	32.8			
On-Site Garden	Strongly disagree	2	.5	**4.00**	**.892**	7
	Disagree	13	3.1			
	Neutral	115	27.3			
	Agree	142	33.7			
	Strongly Agree	149	35.4			
Reduce Portion Sizes	Strongly disagree	6	1.4	**3.89**	**.949**	10
	Disagree	25	5.9			
	Neutral	103	24.5			
	Agree	161	38.2			
	Strongly Agree	126	29.9			
Serve Less Meat	Strongly disagree	9	2.1	**3.86**	**.920**	11
	Disagree	14	3.3			
	Neutral	114	27.1			
	Agree	172	40.9			
	Strongly Agree	112	26.6			
The menu Instead of having dozens of dishes a green makeover should shrink down to a few sustainable standouts.	Strongly disagree	2	.5	**3.97**	**.891**	8
	Disagree	21	5.0			
	Neutral	98	23.3			
	Agree	166	39.4			
	Strongly Agree	134	31.8			
Reduce Food Waste	Strongly disagree	0	0	**4.10**	**.756**	3
	Disagree	7	1.7			
	Neutral	80	19.0			
	Agree	198	47.0			
	Strongly Agree	136	32.3			
Be Organic	Strongly disagree	2	.5	**3.90**	**.823**	9
	Disagree	12	2.9			
	Neutral	116	27.6			
	Agree	185	43.9			
	Strongly Agree	106	25.2			
Create a special menu made of produce grown in a very neighborhood garden.	Strongly disagree	3	.7	**4.00**	**.825**	5
	Disagree	12	2.9			
	Neutral	89	21.1			
	Agree	195	46.3			
	Strongly Agree	122	29.0			
Packing Switch from plastic to cardboard, or use fully biodegradable	Strongly disagree	3	.7	**4.20**	**.886**	1
	Disagree	12	2.9			
	Neutral	77	18.3			
	Agree	134	31.8			
	Strongly Agree	195	46.3			
Mean				**4.01**	**0.618**	--

Note: R= Rank, S.D.= Standard Deviation

According to the results shown in Table (4). Results indicate that variables' means range from 3.86 to 4.20; with a grand mean of 4.01. This result indicates that The Sustainable Restaurant Includes the Fulfillment of Indicators. The standard deviation of the previous indicators shows that the researcher can rely on the mean to give a meaningful representation of the data. A standard deviation from 0.756 to 0.949 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which shows that there is little volatility in the sample. On the other hand, it is also found that the highest statement statement "Packing Switch from plastic to cardboard or use fully biodegradable" has got the highest percentage of agreement from the respondents at (Mean=4.20). this is agreed with (Nordin & Selke, 2010)Take a glance at sustainable packaging alternatives for your takeout and delivery orders. This could mean making the easy switch from plastic to cardboard or using fully biodegradable packaging. On the contrary, the lowest statement that " Serve Less Meat " is at (mean = 3.86). This result agreed on agreement with (Bertoia et al., 2015) In the case of a restaurant's menu, less is truly more. Instead of trying to give dozens of dishes a green makeover, shrink your menu down.

The Customers' Knowledge of the application of Hotels Sustainability
The purpose of this dimension is to explore the customers' Awareness of health consciousness and the awareness of environmental problems which include the customers' knowledge of the application of hotel sustainability. Table (5) shows the answer to these statements.

Table 5: The Customers' Knowledge of the application of Hotels Sustainability

Factor	Sub-Variables	Freq.	Per.%	Mean	S.D.	R
Show high interest in environmental issues raised through various media	Strongly disagree	11	2.6	**3.96**	**.955**	
	Disagree	14	3.3			
	Neutral	93	22.1			3
	Agree	167	39.7			
	Strongly Agree	136	32.3			
I find myself very concerned about environmental issues	Strongly disagree	3	.7	**3.89**	**.797**	
	Disagree	13	3.1			
	Neutral	102	24.2			4
	Agree	212	50.4			
	Strongly Agree	91	21.6			
I believe that by working with others positively toward the environment we can solve many environmental issues	Strongly disagree	1	.2	**4.06**	**.799**	
	Disagree	9	2.1			
	Neutral	89	21.1			2
	Agree	186	44.2			
	Strongly Agree	136	32.3			
The earth has a lot of natural resources if we know how to develop and exploit them optimally	Strongly disagree	3	.7			
	Disagree	6	1.4			
	Neutral	64	15.2	**4.25**	**.815**	1
	Agree	158	37.5			
	Strongly Agree	190	45.1			
Mean				**4.03**	**0.664**	--

Note: R= Rank, S.D.= Standard Deviation

According to the results shown in Table (5), the results indicate that variables' means range from 3.89 to 4.25; with a grand mean of 4.03. This result indicates that the Customers' Knowledge of the application of Hotels Sustainability.

The standard deviation of the previous indicators shows that the researcher can rely on the mean to give a meaningful representation of the data. A standard deviation from 0.797 to 0.955 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which shows that there is little volatility in the sample. On the other hand, it is also found that the highest statement "The earth has a lot of natural resources if we know how to develop and exploit them optimally" has got the highest percentage of agreement from the respondents at (Mean=4.25). Sustainable development is concentrated on the conservation of natural ecosystems and therefore the rational use of natural resources and improving the standard of the environment. Sustainable practices are focusing on energy, water, and other natural resources conservation, increasing recycling, and encouraging the use of sustainable materials and alternative energy sources (International Hotel & Restaurant Association, 2016). On the contrary, the lowest statement that "I find myself very concerned about environmental issues" at (Mean=3.89). Lorenzini (1994) mentioned that a sustainable restaurant may be a new or renovated structure designed, constructed, operated, and demolished in an environmentally friendly and energy-efficient manner.

The Behavioural component to measure healthy and environmental lifestyles
The purpose of this dimension is to explore the behavioral component to measure healthy and environmentally friendly lifestyles. Table (6) shows the answer to these statements.

Table 6: The behavioral component to measure healthy and environmental lifestyles

Factor	Sub-Variables	Freq.	Per.%	Mean	S.D.	R
The food I eat must contain vitamins and minerals keeps me healthy	Strongly disagree	4	1.0	**4.22**	**.844**	1
	Disagree	9	2.1			
	Neutral	62	14.7			
	Agree	160	38.0			
	Strongly Agree	186	44.2			
I select a place to eat based on its reputation for sustainable food rather than on prices	Strongly disagree	6	1.4	**3.85**	**.891**	4
	Disagree	24	5.7			
	Neutral	100	23.8			
	Agree	190	45.1			
	Strongly Agree	101	24.0			
It is more important to have sustainable food rather than tasty food.	Strongly disagree	9	2.1	**3.76**	**1.005**	6
	Disagree	35	8.3			
	Neutral	117	27.8			
	Agree	149	35.4			
	Strongly Agree	111	26.4			
Before I book at the hotel I check if he supports the environment with his menu sustainability	Strongly disagree	11	2.6	**3.73**	**1.051**	7
	Disagree	42	10.0			
	Neutral	111	26.4			
	Agree	141	33.5			
	Strongly Agree	116	27.6			
I always book with a green star hotel to support the environment	Strongly disagree	6	1.4	**3.81**	**1.018**	5
	Disagree	40	9.5			
	Neutral	110	26.1			
	Agree	138	32.8			
	Strongly Agree	127	30.2			
I eat three healthy meals every day	Strongly disagree	7	1.7	**3.90**	**1.021**	3
	Disagree	40	9.5			
	Neutral	80	19.0			
	Agree	155	36.8			
	Strongly Agree	139	33.0			
I am doing sports every day	Strongly disagree	5	1.2	**4.03**	**1.031**	

	Disagree	31	7.4			
	Neutral	95	22.6			2
	Agree	107	25.4			
	Strongly Agree	183	43.5			
Mean				**3.90**	**0.771**	--

Note: R= Rank, S.D.= Standard Deviation

According to the results shown in Table (6). Results indicate that variables' means range from 3.73 to 4.22; with a grand mean of 3.90. This result indicates that the behavioral component measures healthy and environmentally friendly lifestyles. The standard deviation of the previous indicators shows that the researcher can rely on the mean to give a meaningful representation of the data. A standard deviation from 0.844 to 1.05 is not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which shows that there is little volatility in the sample. On the other hand, it is also found that the highest statement is the statement " The food I eat must contain vitamins and minerals keeps me healthy" has got the highest percentage of agreement from the respondents at (Mean=4.22). On the contrary, the lowest statement that "Before I book at the hotel I check if he supports the environment with his menu sustainability" (Mean=3.73). All the above results agreed with the results of Nielsen (2015). consumers' level of health consciousness is often reflected in how they seek out and respond to the provision of health information through their lifestyle decisions. It seems to sense that people who live healthy lifestyles actively look for ways to make environmentally friendly or sustainable food choices when they eat at restaurants.

Relationships Between Research Variables
In this part, the researcher seeks to explore and analyze the relationships between both independent and dependent variables. These relationships are divided into two main forms: Correlation relationship and Variance relationship. Before determining the relationship between variables, it should be important to test the distribution of data normality to identify the best statistical method either parametric or non-parametric tests.

Test of distribution data normality:
This part aims to determine if the distribution of data follows parametric or non-parametric tests. This stage is significant in choosing the best tests during the measurement of Relationships between the Variables of the study. Table (7) shows the results

Table 7: Tests of Normality for guests' Questionnaire Dimensions

Dimensions	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	**df**	**sig.**	**statistic**	**df**	**sig.**
Guests' Questionnaire						
Concept	.169	421	.064	.891	421	.000
sustainable restaurant	.093	421	.001	1.021	421	.001
Menu sustainability	.181	421	.071	.965	421	.109
Customer knowledge	.174	421	.000	.887	421	.000
Behavioral component	.153	421	.059	.798	421	.053

Significant at <0.05.

As can be observed from the previous table (7) that, the significance of the data is more than 0.05, so it could be accepted the hypothesis that the study follows parametric tests. As regards this result the researcher used Kruskal-Wallis variance analysis and the Person test in correlation analysis.

Correlation Relationships

Studying relationships between thesis variables is important to identify the degree of correlation for each factor of the behavioral component to measure healthy and environmentally friendly lifestyles. The researcher chooses correlation analysis (R), to study relationships between thesis variables.

Table 8: Correlation Coefficient between hotel customers' awareness of the concept of sustainability and the behavioral component of customers

parametric Test			awareness of the concept of sustainability	Behavioral component
Person	awareness of the concept of sustainability	Correlation Coefficient	1	.197**
		Sig. (2-tailed)		.000
	Behavioral component	Correlation Coefficient	.197**	1
		Sig. (2-tailed)	.000	

*Correlation is significant at the 0.05 level and less

According to the results in the previous table, it could be concluded that there is a positive correlation between hotel customers' awareness of the concept of sustainability and the behavioral component of customers. When the correlation coefficient of Person was 0.197, it is a positive correlation. This positive correlation indicates that hotel customers' awareness of the concept of sustainability increased, the more the behavioral component of customers increased, and the opposite is true.

Table 9: Correlation Coefficient between customers' awareness of hotels` sustainability applications and the behavioral component of customers

parametric Test			hotels sustainability application	Behavioral component
Person	hotels sustainability application	Correlation Coefficient	1	.294**
		Sig. (2-tailed)		.000
	Behavioral component	Correlation Coefficient	.294**	1
		Sig. (2-tailed)	.000	

*Correlation is significant at the 0.05 level and less

According to the results in the previous table, it could be concluded that there is a positive correlation between customers' awareness of hotels` sustainability applications and the behavioral component of customers. When the correlation coefficient of Person was 0.29, the correlation significant level is less than 0.05 and it is a positive correlation. This positive correlation indicates that; the more customers' awareness of hotels` sustainability applications increased, the more the behavioral component of customers increased, and the opposite is true.

Table 10: Correlation Coefficient between hotel customers' awareness of menu sustainability availability and the behavioral component of customers

parametric Test			menu sustainability	Behavioral component
Person	awareness of menu sustainability availability	Correlation Coefficient	1	.346**
		Sig. (2-tailed)		.000
	Behavioral component	Correlation Coefficient	.346**	1
		Sig. (2-tailed)	.000	

*Correlation is significant at the 0.05 level and less

According to the results in the previous table, it could be concluded that there is a positive correlation between hotel customers' awareness of menu sustainability availability and the behavioral component of customers. When the correlation coefficient of Person was 0.346, the correlation significant level is less than 0.05, it is a positive correlation. This positive correlation indicates that; the more hotel customers' awareness of menu sustainability availability increased, the more the behavioral component of customers increased, and the opposite is true.

Table 11: Correlation Coefficient between hotels customers' knowledge about the importance of sustainability and the behavioral component of customers

parametric Test		hotels customers' knowledge	Behavioral component
Person	hotels customers' knowledge	Correlation Coefficient	1	.498**
		Sig. (2-tailed)		.000
	Behavioral component	Correlation Coefficient	.498**	1
		Sig. (2-tailed)	.000	

*Correlation is significant at the 0.05 level and less

According to the results in the previous table, it could be concluded that there is a positive correlation between hotel customers' knowledge about the importance of sustainability and the behavioral component of customers. When the correlation coefficient of Person was 0.50, the correlation significance level is less than 0.05, and it is a positive correlation. This positive correlation indicates that the more hotel customers' knowledge about the importance of sustainability increased, the more the behavioral component of customers increased, and the opposite is true.

Multiple Regression Model:
The following table shows the relationships between the independent variable "hotels customers' awareness towards menu sustainability" and the dependent variables "behavioral component to measure the healthy and environmentally friendly lifestyles ".

Table 12: The impact of hotels customers' awareness of menu sustainability on their behavioral component to measure the healthy and environmentally friendly

ANOVAᵃ						
Model		**Sum of Squares**	**df**	**Mean square**	**F**	**Sig.**
1	**Regression**	64.905	4	16.226	36.589	.000ᵇ
	Residual	184.488	416	.443		
	Total	249.393	420			

*Impact is significant at the 0.05 level and less

It is noticed from the above table; the values of the parameters of regression are less than 0.05 which refers that hotel customers' awareness towards menu sustainability impacts their behavioral component to measure the healthy and environmentally friendly.

Table 13: Multiple Regression Model

Customers' awareness of menu sustainability	(B)	T-test	p-value	Rank
(Constant)	1.160	4.469	.000	
Concept	.069	1.378	.169	The third
sustainable restaurant	-.031-	-.479-	.633	The fourth
Menu sustainability	.104	1.695	.091	The second
Customer knowledge	.441	8.638	.000	The first

* = Highly significant at P≤ 0.05

It is noticed from the above table; the values of the parameters of regression are less than 0.05 in Customer knowledge. This means that hotel customers' knowledge about the importance of sustainability affects the behavioral component of customers. Meanwhile, other factors do have not the same effect and the Parameters of Regression are more than 0.05.

Conclusion

Hotels and restaurants are becoming more sustainable as they embark on a wide range of measures designed to reduce their impact on the environment. To develop a better understanding of the relationship between health consciousness and the awareness of environmental problems and behavioral components an empirical investigation of hotel and restaurant guests was conducted. This study was carried out using the survey questionnaire, which was distributed to 421 guests. From the original sample, 421 questionnaires were used, representing a 93.6.1% response rate. The major purpose of this study was to identify Health consciousness and the awareness of environmental problems and behavioral components to measure healthy and environmentally friendly lifestyles and to define the most significant factors of the guest behavioral component. Furthermore, in this study, the researcher developed a valid and reliable scale to assess the guest health consciousness of restaurants in the Egyptian context from guest viewpoints. Also, the result of the survey in this research indicated that the highest health consciousness factors positive effect on the guest behavioral component. and are ranked as follows: sustainable restaurants, followed by customer knowledge, menu sustainability, and concept. In addition, the highest factor is a sustainable restaurant, and the lowest factor is a concept, therefore the restaurant manager should take into consideration the improved dimension concept to be a sustainable model and match with the concept of the sustainable menu.

Theoretical and practical contributions

The study contributes to the theoretical and methodological advancement of customers' attitudes toward menu sustainability and sustainable food literature by developing a scale to measure the customer's attitudes toward menu sustainability in hotels. one paper was adapted from the current study and become ready for publishing under the next titles Restaurants' customers' attitudes toward menu sustainability and sustainable food. The current study provides interesting managerial and practical implications for the hotels sector in general and Red Sea –Hurghada hotels under investigation in particular. The significant relationship between Health consciousness and the awareness of environmental problems and behavioral components to measure the healthy and environmentally friendly lifestyles that were reported in the current study may encourage hotel managers to adopt effective strategies for implementing sustainability practices in restaurants on hotels.

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اتجاهات عملاء المطاعم نحو القوائم المستدامه والطعام المستدام

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الملخص العربي

القائمة المستدامة هي قائمة تراعي الجوانب البيئية والأخلاقية(المجتمع المحلي) , والمكونات الموسمية والمحلية والمزروعة عضويًا، وتعزز في النهاية الرفاهية المستمرة لأنفسنا وكوكبنا. الدراسات السابقة التي أجريت لفحص سلوك العملاء تجاه القوائم المستدامه عادة ما تتناول عاملاً واحدًا فقط كعامل مؤثر. قد يكون هذا العامل هو التجربة السياحية تجاه الطعام , أو الدوافع السياحية لاستهلاك الطعام المحلي، أو التصورات السياحية لتجارب المطبخ المحلي أو إرضاء السائحين. وبالتالي , لا توجد دراسة ركزت على غالبية هذه العوامل مجتمعة. لذلك ، يسعى هذا البحث إلى التحقيق في كيفية إدراك العملاء لاستدامة قائمه الطعام في الفنادق. أيضًا ، تأثر اتجاهات العملاء نحو هذه القوائم المستدامه بميلهم إلى تقدير الفوائد البيئية والمساهمه بها. أجابت عينة من 421 شخص من نزلاء فنادق الغردقه وبالتحديد الفنادق الحاصله علي النجمه الخضراء بالرد على استبيان تشير نتائج هذا البحث إلى أن وعي عملاء الفنادق باستدامة قائمة الطعام يؤثر على سلوكهم في الاختيار من بين قائم الطعام الصحية والصديقة للبيئة بالإضافة إلى ذلك استنتج أن هناك اختلافات بين استجابات عينة الدراسة فيما يتعلق باتجاهات عملاء الفنادق اتجاه استدامة القائمة واتجاه الجنس والعمر والمستوى التعليمي.

الكلمات الداله: قائمة الطعام المستدامة ، الطعام العضوي ، المطعم المستدام ، الطعام المحلي