

Customers' Desire towards Menu Labeling in Quick-service Restaurants

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Abstract

As people nowadays become more concerned with healthy food and thinking about what they eat to maintain their weight, so there is a demand for nutritional information to be posted in restaurants menus. Therefore, this research seeks to identify customers' desire for menu labeling. Also to determine what kind of nutritional information exactly they want. Also to demonstrate the format and method of presenting nutritional information in restaurants. A sample of 594 quick-service restaurant customers in Cairo responded to an online questionnaire. Results of this research revealed that customers have a significant desire toward presenting menu labeling in quick-service restaurants. In addition, restaurants have to obligate to post nutritional information on their menus. Also, they want to see the number of calories, amount of fats, cholesterol, protein, and sugar written in a percent daily value format and displayed in the menu boards and menus.

Keywords: Menu labeling, nutritional information, menu labels, Quick-service restaurants

Introduction

In recent years, customers' interest in nutritional and health issues has increased significantly. This increase in interest can be attributed to a number of factors which comprises people lifestyle, diffusion of diet-related diseases, nutritional knowledge, aging population, and dietary and safety concerns. The food industry has turned to provide more nutritional information on their food products and has made nutritious food items more accessible and available to individuals in supermarkets or restaurants, As a result of increased awareness of customers about what they consume and how it impact on their health (Shine *et al.*, 1997; Petrovici *et al.*, 2012).

Many customers thoughts that informing them about the nutritional content of menu items which may be harmful to their health or conflict with their beliefs is considered a side of the restaurants' social responsibility toward their customers. So some countries enacted legislation like " Truth in Menu Laws, and Nutrition Labeling and Education Act of 1990" with the aim to help the customer in identifying healthy food and to protect them from misleading information (Burton and Creyer, 2004). Menu labeling has become one of the main tools used in determining which food items are more healthful than others. It is an attempt to provide customers with relevant information about the nutrient content of food items, at the point of purchase, to make customers capable of choosing nutritionally suitable food (Grunert and Wills, 2007).

Previous researches have indicated that there is a customer desire for menu labeling to be available on restaurant menus and customers who saw this information will make healthier menu choices (Hwang and Lorenzen, 2008; Mills and Thomas, 2008).

Therefore, the objectives of this research were to: (1) identify customers' desire for nutritional information in restaurants; (2) determine what kind of nutritional information exactly they want; (3) demonstrate the format and method of presenting nutritional information in restaurants.

Literature review

Definition and background of menu labeling

American Heart Association (2009) defined menu labeling as "a concept that was introduced as part of the NLEA (Nutrition Labeling and Education Act) of 1990 to show information such as fat (saturated and unsaturated), cholesterol, carbohydrate, sodium, sugar, calories, and fiber in restaurants' menus". Another definition by Green (2014) showed that menu labeling means "the practice of clearly posting the calorie and nutritional content of a particular food or beverage item, as it is usually prepared or offered for sale, adjacent to the name of the standard menu item so that it can be clearly associated with the menu item at the point of purchase. Menu labels can appear on menu boards, food tags, or printed menus".

Nutritional information at the point of purchase for packaged food items was provided for consumers by the Nutrition Labeling and Education (NLEA) Act of 1990, but that act exempted ready-made foods like the ones sold in restaurants and movie theatres from this policy (Burton *et al.*, 2006). After passing Thirteen years, some legislation has begun to appear which influenced restaurants and required posting nutritional information at the point of purchase, specifically on menus for full-service restaurants and menu boards for quick-service restaurants (Walkup, 2004). On November 5, 2003, the U.S introduced the first Menu Education and Labeling (MEAL Act) Act which required restaurants whether medium sized (20 or more outlets) or large chains listed calories, saturated fat, trans-fat, and sodium at the point of purchase (Higgins, 2003). New York City is considered the first jurisdiction that passed a menu-labeling edict, this ordinance has required any restaurants with standard menu items providing nutritional information on menu boards and menus (Blumenthal & Volpp, 2010). The MEAL Act followed by The Labeling Education and Nutrition (LEAN) Act in 2009, which required also the declaration of calories on a menu board or (if used) on a sign similar to the menu board and located on the same wall, or on a sign at eye level in customer queue prior to point of purchase or in the menu, in a menu insert, in an appendix to the menu, or in a supplemental menu (King, 2010).

Finally, the U.S Congress passed in March 23, 2010 the Patient Protection and Affordable Care Act of 2010 which in Section 4205: Nutrition Labeling of Standard Menu Items at Chain Restaurants, amended section 403

(q) (5) of the Federal Food, Drug, and Cosmetic Act (Food Labeling: Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments; Notification of Availability, 2015). The Food and Drug Administration announced that all food establishments declaimed in the PPACA for 2010 and its amendments must comply with the final rule by May 5, 2017. The final rules are aims to assist customers in making healthier food choices and comparing between menu items when dining out (USDA, 2015).

Customers' desire and attitude toward nutritional information

The main aim of menu labeling is to disclose the nutritional information about menu items to customers in an easy and accessible manner. The success of menu labeling in realizing its goal is depending on the customers' desire and attitudes toward menu labeling. If the customers haven't any desire or not willing to see and use it in their transactions with food, all the efforts of government agencies, food experts, and nutritionists will be useless. So there are many studies carried out to determine the customers' willing and attitudes toward menu labeling in restaurants. In a two worldwide research projects performed by Nielsen company in 2008 and 2012 found that respondents have a great desire for nutritional information, 48% of them look at it to know the amount of fat, calories content, and sugar respectively (Nielsen Company, 2008).

Customers around the world showed high support for menu labeling in quick-service restaurants. 49% of global respondents required the owners of restaurants to disclose the calorie content and other nutritional information about their menu items. The highest level of interest found between customers in Latin America, North America, and Europe, while the least level of interest was among respondents in the Middle East and Africa (Nielsen Company, 2012). Although in a study conducted by Hashad (2014) which investigated customers' awareness and desire toward nutritional information in five-star restaurants located in Cairo city found that the majority of respondents want to see menu labeling in all types of restaurants and in quick-service restaurants particularly. This result supported by a recent study performed by Hamdoun (2018) which investigated the awareness of restaurants managers and customers about menu calorie labeling in Luxor and Aswan governorates.

In terms of customers' attitude toward nutrition information, it was found that women (Krukowski *et al.*, 2006; Shannon *et al.*, 2009; Drichoutis *et al.*, 2005), elderly individuals (Cole & Balasubramanian, 2002), people with higher educational levels (Viswanathan *et al.*, 2009), higher income levels (Cole & Balasubramanian, 2002; Drichoutis *et al.*, 2005; Mahgoub *et al.*, 2007; Kasapila & Shawa, 2011) and households with children (Drichoutis *et al.*, 2006) are more positive and active about using nutritional information than other demographic groups.

Types of Menu Labels

The mean of presenting menu labeling could influence the comprehension and usage of the customer for nutritional information. The methods of displaying nutritional information in restaurants may include not limited to: Computer kiosk displaying PowerPoint slides, Availability upon request, Table tents containing nutritional information, Menus containing nutritional information (Sung-Yong *et al.*, 2001).

Based on the federal oversight some quick-service restaurants have put nutritional information on tray liners or on food packaging itself, but this process is poor because customers did not have access to this information until they purchase the food. while other restaurants made the nutritional composition of their menu items available upon customers requested or posted it on their websites. This method is difficult because it requires customers to seek out the information before visiting the restaurant consequently they can't make a suitable food decision when they visit the restaurant as they didn't remember the nutritional information (Berman & Lavizzo-Mourey, 2008).

There are numerous studies which carried out in recent years to determine the most effective type of menu labeling in decreasing purchased calories and preferred by customers (Roberto *et al.*, 2010; Liu *et al.*, 2012; Ellison *et al.*, 2014; Platkin *et al.*, 2014; Antonelli & Viera, 2015; Olstad *et al.*, 2015). The majority of customers who dining out in quick-service restaurants frequently prefer to find information about the item's content of calories published in menu boards at the point of purchase. As, posting nutritional information on menus/menu boards at the point of purchase was found to be correlated with improving the nutrition content of food items provided by restaurants, increase customer's awareness about the provided nutrition information, increased customer's satisfaction and repurchase intention (Fitch *et al.*, 2009).

Formats of Menu Labels

Menu labeling format aimed to provide nutritional information to the customers in an effective manner that will promote more healthy food choices. absolute numbers, adjective distributors, health icons and health claims, percent daily value are the most common formats used in menu labels (Hieke and Taylor, 2012). In addition, there are some uncommon formats that not applicable to a menu because entrees are so different and customers didn't want nutritional information in that way such as a summary score format (Seiders and Berry, 2007), and the average reference point format (Viswanathan, 1996).

While other formats like highlighting negative nutrients (Levy *et al.*, 1996), stop light (Baic and Heathcote, 2011), number minutes an average person would have to run to burn off the calories consumed (Fitch *et al.*, 2009), an apple symbol or colored dots (Almanza and Hsieh, 1995), pie charts (Lewis and Yetley, 1992), and bar graphs (Levy *et al.*, 1996) not effective in

disseminating the overall nutritional value of items because it could lead to a halo or magic effect which incline to be misleading or unnecessary. Furthermore, they could block customers from selecting healthier menu items.

The percentage declaration of the different nutrient quantities depending on the daily values for each nutrient considered the most format that produces most positive dietary benefits consistently. Customers incline to perform badly with manipulation of quantitative nutrient information regarding food items in restaurants. Furthermore, The majority of customers are preferred the use of colored nutrition panels, bold text, and whole numbers rather than decimals and calories instead of joules "in a typical EU nutritional label, energy has to be expressed both in terms of calories and joules where 1 kcal=4,18 kjoules" in offering nutritional information on restaurant menus (Drichoutis *et al.*, 2006).

Menu Labeling Implementation in QSRs

The Food and Drug Administration (FDA) enforced menu labeling regulation, which will require chain restaurants, coffee chains, convenience stores, and supermarkets, amusement parks, and movie theaters, and other similar retail establishments with 20 or more outlets serving food like restaurants to post nutritional information on the menu or menu board. Categories which mentioned in this regulation must also provide additional nutrition information regarding fats, protein, sodium and other nutrients upon a customer's request. Outlets have to comply with this regulation until May 5, 2017, which means that food establishments that have not already adjusted their status they will have to get started to meet the stated deadline (TraceGains / Food Directions, 2015; FDA, 2013). TraceGains / Food Directions (2015) established ten essential steps so any restaurant can implement menu labeling in the light of these steps as the following: Analyze the act and its explication, Assemble application team, Define the process, steps, systems, timeline and resources, Recipe confirmation and documentation, Prepare for nutrient analysis, Nutrition Analysis, Training, Menu Redesign and Printing Cycle, Availability of Supplemental Information upon Request, Consideration Post-implementation.

Benefits of Menu Labeling

In order to enable customers to make an informed and healthful dietary choices whilst dining out, the estimated outcomes from the application of menu labeling were made available in a direct and accessible manner by customers. This practice was built on the hypothesis that making the nutritional information for specific food options more easily accessible will increase the probability of using customers for this information to make healthful dietary choices based on informed decisions (Ogden *et al.*, 2010). Specifically, The FDA estimated these benefits based on the predictions regarding the industry and customer response to this rule, which including:

1. Increased customer awareness with respect to the content of the foods of calories which offer for sale by covered establishments, that may assist in decreasing the present-bias in customer preferences, thus stimulating customers' consumption for lower calorie options. 2. Increasing customer attention in lower calorie options, as well as raising transparency related to menu items content of calories, which could give companies an incentive to: a. decreasing the caloric content of current menu items through reformulation or by lowering offered portion sizes. b. Providing extra menu items with lower caloric formulations (FDA, 2014). Another benefit of menu labeling is reformulation; some restaurant chains or establishments may reply to customers' increased interest on caloric content for standard menu options by reformulating current menu items or by providing new, lower calorie items (Bruemmer *et al.*, 2012).

The implementation of menu labeling in restaurants will bring a lot of benefits for both clients and restaurants which comprise: promoting public health (Burton *et al.*, 2006; Bassett *et al.*, 2008), meeting customer demand for information about menu items (Cranage *et al.*, 2004), answering customers' questions regarding nutrition and allergens (Stein, 2010), increased menu profit margin (Wansink *et al.*, 2001; Hwang and Lorenzen, 2008), attracting new customers (Stein, 2010; Pulos and Leng, 2010), gain customers' loyalty (Cranage *et al.*, 2004), and dietary changes (Teisl *et al.*, 2001; Josiam and Foster, 2009) and substitutions (Teisl *et al.*, 2001).

Research Methodology

Population and Sample

An online questionnaire was developed to identify the desire of customers for menu labeling in quick-service restaurants. Since, there are no statistics on the number of fast food restaurants generally in Egypt and particularly in the city of Cairo. The five most well known and widespread international fast-food chains (McDonald's, KFC, Pizza Hut, Hardee's, Burger King) in Egypt in terms of number of branches were selected, as well as the top five local fast-food chains (Cook Door, Buffalo Burger, Mo'men, Prego, Butcher's Burger). A total of 594 forms were received representing a response rate of 100 %.

The questionnaire consists of two sections, which include a total of 14 questions in this survey. Section (1) Demographic data: a group of questions was designed to mainly identify demographic data. This includes gender, age, and educational level. Section (2): contains two group of questions to determine the customers' desire and attitudes toward menu labeling in quick-service restaurants through a 5 point Likert-type scale, and a multiple choice questions.

Reliability and validity

The instrument was presented to four experts in the field to review it in terms of content, measurement, wording, and layout. As well as piloted by 115 customer for appropriateness and clarity. The instrument was then revised and finalized based on the received feedback. The reliability of the research was tested by using Cronbach' alpha coefficient to measure internal reliability. The values of the test is ranging from 0 to 1 and higher values indicate greater reliability (Nunnally and Bernstein, 1994). Cronbach' alpha for this study was 0.98 as indicated in table (1).

Table (1): Reliability coefficient of the questionnaire items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.985	0.987	8

Results and discussion

Demographic Characteristics for respondents

Table (2) shows that the majority of respondents were female, where out of 594 respondents it was 339 female which represent 57.1% and 255 male which represents 42.9%. In addition, 424 respondents their ages ranging from 20 years to less than 40 years where this number represents the majority of respondents (71.4%), followed by 136 respondents (22.9%) their ages under 20 years, there was also a little percent 5.7% (34 respondents) their ages ranging from 40 to less than 60 years. In term of educational level, the highest percentage of respondents 51.7% have bachelors degree which represents 307 out of 594 respondents, followed by 33.2% (197 respondents) still studying, then 12.3 % (73 respondents) have a master or Ph.D. degrees, and lastly a small number 17 respondents represent 2.9% have diploma.

Table (2) Demographic Characteristics

Demographic Profiles	Classes	Frequency	Percentage %
1.Gender	Male	255	42.9
	Female	339	57.1
2.Age	Less than 20 years	136	22.9
	From 20 to less than 40 years	424	71.4
	From 40 to less than 60 years	34	5.7
3.Educational Level	Students	197	33.2
	Diploma	17	2.9
	Bachelors	307	51.7
	Post Studies	73	12.3

Customers' desire and attitude toward menu labeling

As shown in table (3) the majority of respondents concerned with eating healthy food and care to notice nutrition labels on packaged foods where the mean were 4.11 and 3.98 with a standard deviation was 0.894 and 0.910 respectively. The respondents have a great desire toward menu labeling and it is important to them (4.19) so they want it to be available in restaurants (4.40) and it will affect their food selection, purchases and selecting a specific restaurant (3.93, 4.12, 4.00). "Restaurants should obligated to provide menu labeling" statement has a high degree of agreement among respondents where the mean was 4.23 and standard deviation was 0.775.

Generally, the total mean on this section is 4.12 with total standard deviation 0.822 which mean that there is a significant agreement on all statement of the section and the respondents have a higher desire and positive attitude toward menu labeling. This result agree with previous studies which indicated that the majority of respondents want to see menu labeling in all types of restaurants and in quick-service restaurants particularly (Hashad, 2014; Hamdoun, 2018).

Table (3) Descriptive statistics of customer desire and attitude

Statements	N	Mean	Std. Deviation
I'm concerned with eating healthy food.	594	4.11	0.894
I care to notice nutrition labels on packaged food.	594	3.98	0.910
I have a desire for nutritional information, and it is important to me.	594	4.19	0.744
The nutrition labels influence me to purchase specific kind of food.	594	3.93	0.903
Menu labeling should be available in restaurants.	594	4.40	0.621
The presence of menu labeling in the restaurant has influence on my food selections.	594	4.12	0.840
The presence of menu labeling influence me to choose a specific restaurant.	594	4.00	0.890
restaurants should obligated to provide menu labeling.	594	4.23	0.775
Total average		4.12	0.822

Method and format of presenting menu labeling

Table (4) showed that the most wanted method of presenting nutritional information in quick-service restaurants is on the menu boards where 252 respondents which represents (42.4%) selected this method, followed by on the menu 33.8% (201 respondents). The other methods of presenting nutritional information have a little percentages which mean that respondents doesn't prefer these methods for presenting nutritional information.

Table (4) method of presenting menu labeling

Method	Frequency	Percentage %
On the menus	201	33.8 %
On the menu boards	252	42.4 %
On the takeout packages	29	4.9 %
In the brochures	32	5.4 %
On the posters	45	7.6 %
On the tray liners	24	4.0 %
On the restaurants websites	11	1.9 %
Total	594	100 %

Format of presenting nutritional information

The results shown in table (5) expressed that the majority of the sample 247 respondents which represents (41.6%) reported that they want to see nutritional information in the form of percent daily value. While other 143 respondents who represents 24.1% of the sample prefer nutritional information in the form of absolute number. In addition, 115 respondents who represents 19.3% selected health icons format, and the rest of respondents 15.0% choose adjective descriptors.

Table (5) format of presenting nutritional information

Format	Frequency	Percentage %
Health Icons	115	19.3 %
Absolute Number	143	24.1 %
Adjective Descriptors	89	15.0 %
Percent Daily Value	247	41.6 %
Total	594	100 %

Kind of nutritional information desired

The following table (6) indicates the higher percentages of nutritional information that customers want to see in restaurants. The information are number of calories, amounts of fats, sugar, proteins, vitamins, minerals, carbohydrates, and fiber arranged in descending. The number of calories comes in the first stage with 76.3%, at the second stage 409 respondents representing (68.9%) selected amount of fats, followed by amount of sugar with 262 respondents (44.1%), then amount of proteins 261 respondents (43.9%), amount of vitamins 228 respondents (38.4%), amount of minerals 179 respondents (30.1%), amount of carbohydrates 178 respondents (30.0%), and lastly the amount of fiber 157 respondents representing (26.4%).

Table (6) kind of nutritional information

Nutritional information	Frequency	Percentage %
Number of Calories	453	76.3 %
Amount of Fats	409	68.9 %
Amount of Sugar	262	44.1 %
Amount of Proteins	261	43.9 %
Amount of Vitamins	228	38.4 %
Amount of Minerals	179	30.1 %
Amount of Carbohydrates	178	30.0 %
Amount of Fiber	157	26.4 %

Relationship between concerning with eating healthy food and desire for menu labeling

To show the relationship between the desire for menu labeling an independent variable and the customers concerning with healthy food as a dependent variable, a correlation was measured. The findings in the following table (7) showed that there was a significant relationship between the two variables. The Spearman’s correlation is positive and strong (0.909+) at (0.01) level.

Table (7) Relationship between concerning with eating healthy food and desire for menu labeling

	Variable		I'm concerned with eating healthy food	I have a desire for menu labeling
Spearman	I'm concerned with eating healthy food	Correlation Sig. N	1.000 594	0.909 ** .000
	I have a desire for menu labeling	Correlation Sig. N	0.909 ** .000	1.000 594
** Correlation is significant at the 0.01 level (2-tailed)				

Relationship between care to notice nutrition labels on packaged food and desire for menu labeling

As shown in table (8) a highly positive correlation of Spearman equal (0.900) was obtained between customers care to notice nutrition labels on packaged foods and customers' desire toward menu labeling in quick-service restaurants. This result indicated a high significant at (0.01) level.

Table (8) relationship between customers care to notice nutrition labels on packaged foods and customers' desire toward menu labeling

	Variable		I care to notice nutrition labels on packaged food	I have a desire for menu labeling
Spearman	I'm concerned with eating healthy food	Correlation Sig. N	1 594	0.900 ** .000
	I have a desire for menu labeling	Correlation Sig. N	0.900 ** .000	1 594
** Correlation is significant at the 0.01 level (2-tailed)				

Conclusion

This research aimed to determine the customers' desire toward menu labeling in quick-service restaurants. The results indicated that customers have a significant desire for menu labeling, and it is very important to them while dining out. There is a consensus that menu labeling should be obligated and available in quick-service restaurants. The presence of menu labeling in restaurants will affect them to select and purchase specific kind of food items which suitable with their diet. In addition, the customers' decision to choose a restaurant to dine in will depend on whether the restaurant provides nutritional information or not. The results also showed that the customers prefer to see nutritional information "number of calories, amounts of fats, amount of sugar, and so on" written in percent daily value format and displayed on the menu boards and menus. As well as, the results reveal a significant relationship between the customers desire toward menu labeling as an independent variable, customers concerning with healthy food, and customers who care to notice nutrition labels on packaged foods as a dependent variables.

Recommendations

Menu labeling is a global trend nowadays developed to fight obesity epidemic, and increase the customers' nutritional awareness to be aware about their dietary needs and to make their food selections based on an informed decision. Based on the aforementioned results, we recommend the following:

- Quick-service restaurants should provide menu labeling on their menu boards and menus.
- Quick-service restaurants should put a sign declare that nutritional information is available within the restaurant.
- Quick-service restaurants should write nutritional information with percent daily value format and a statement indicate average daily caloric intake.

- Quick-service restaurants should insert menu labeling in their promotional and advertising campaigns to inform people.
- Government should enact a rule obligated restaurants to post the nutritional information about their menu items.
- The Ministry of Tourism should make provision of nutritional information one of the conditions for obtaining a tourist license.

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رغبة العملاء تجاه المعلومات التغذوية بقوائم الطعام في مطاعم الخدمة السريعة

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الملخص العربي

نظرًا لأنه في هذه الأيام أصبح الأفراد أكثر اهتمامًا بالأطعمة الصحية ويفكرون فيما يتناولونه للحفاظ على وزنهم، لذلك فهناك طلب متزايد على نشر المعلومات التغذوية في قوائم المطاعم. ومن هذا المنطلق، يسعى هذا البحث إلى تحديد رغبة العملاء تجاه وجود المعلومات التغذوية بقوائم طعام مطاعم الخدمة السريعة، تحديد نوعية المعلومات التغذوية التي يريدونها بالضبط، بالإضافة إلى توضيح أفضل شكل وطريقة لتقديم المعلومات التغذوية في المطاعم. أجابت عينة من ٥٩٤ شخص من عملاء مطاعم الخدمة السريعة (المحلية والدولية) في القاهرة على استبيان تم توزيعها عبر الإنترنت. وقد كشفت نتائج هذا البحث أن العملاء لديهم رغبة كبيرة تجاه ضرورة توافر المعلومات التغذوية بمطاعم الخدمة السريعة. بالإضافة إلى ذلك، يجب أن تُلزم المطاعم بنشر المعلومات التغذوية على قوائمها، وتشمل هذه المعلومات التي يرغبون في رؤيتها عدد السعرات الحرارية وكمية الدهون والكوليسترول والبروتين والسكر مكتوبة بتنسيق القيمة اليومية المئوية ومعروضة في لوحات القوائم والقوائم الغذائية.

الكلمات الدالة: المعلومات التغذوية، الملصقات الغذائية، مطاعم الخدمة السريعة.