The Implementation of Nutritional Menu Labelling on restaurant's menu and its effect on the customer's buying preference in Ireland.

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Abstract

The increasing risk of obesity and heart-related diseases directly related to the consumption of food away from home (especially at restaurants) without keeping a track on nutritious or unhealthy ingredient's intake has created an alarming concern among Ireland's customers dining at restaurants. Many types of research have shown that the impact of nutritional information present on the restaurant' menu has a very positive impact on the consumers. However, the information loses its value when the consumer does not take a look at it. This study emphasizes on investigating how many Dublin's population responses to the nutritional information given on the menu card before making a choice. Which ultimately means that do customers (after reading the nutritional information on the restaurant's menu) prefer to buy the healthy and nutritious option or prefer to buy the unhealthy one?

The quantitative approach using the cross-section method was adapted in this study. An anonyms survey was conducted by distributing a questionnaire set to the people in the selected location of Dublin. Cronbach alpha was used to check the reliability of the survey. Pearson correlation coefficient and Chi-Square test were performed for data analysis.

The result of the study indicated that the participants were aware and also had good knowledge related to nutrition information. Among the participants, more males compare to females preferred to dine at restaurants which provides (or will provide) nutritional information on their menu cards. Thus, few respondents showed a positive attitude (i.e. showed interest and will prefer buying nutritious food). While most respondents showed a negative attitude by not selecting nutritional information while ordering food at the restaurant.

Further, some recommendations were made from customers perception and their attitude towards the nutritional menu labelling law.

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1. Introduction

In the world, around 1.9 Billion people are overweight and obese, which making them lead with type 2 Diabetics and cardiovascular diseases (McDermott, 2018). Trinity College (Dublin) had found that people who are overweight and obese are the one who is affected by cancers. The further author has stated that almost 50 % of cancer causes to the individual due to obesity. The similar research was conducted in the past raising similar question whether people in Ireland to give importance to health consciousness or not?

The conclusion of research stated that 84 % people were health-conscious, whereas health survey Ireland states that, about 60 % people are obese and overweight amongst the population of Ireland, a one-third person consume beverages and one out of five are smokers (Hennessy, 2017). According to Admin (2017), in Ireland people use to eat outside only at the time of special occasion or wedding events, usual they never preferred eating outside. In the early 1960s & '70s, there were very few restaurants throughout Ireland, where Dublin is the capital of Ireland and also the City Centre for everyone. The change took place in the late '70s, and early 80's where fast-food restaurants occupied one corner of the market whereas on the other hand restaurants with variant dish were established in the market. The author has further analyzed that people living in Ireland, who travel most of the European countries are mostly attracted to the food, which leads them to visit restaurants most of the time. The diet of US people is changing due to the consumption of food at restaurants once a week, which is leading to obesity among most of the people (Wu, Sturm, 2013). To control this, the US government had placed a menu labelling law act. According to this act, nutritional information should be placed on the menu so that customers can choose their dish as per the information provided. Further, they have revealed that the study has addressed the gap of knowledge between the consumer's selection of food at restaurants and the importance of nutritional menu labelling. Hence, looking at the above study, it is essential to research on this topic **(Impact of nutritional menu labelling on restaurant's menu card and its effect on the customer buying behaviour).** So, the researcher can fill the gap between the customer's view related to the nutritional menu labelling and their buying preferences towards it.

1.1 Background of the Research

According to Callen (2016), Customer's spending on food in Bars and Restaurants went up by 9.1% every year. The survey carried out in 2016 showed that one in every three Ireland's population eats take away meals, fast food or at restaurants, three days in a week (Mulvaney, 2016). Furthermore, it was analyzed that shortly, Ireland can become the fast-food Nation. The wholefood Revolution's Founder Mr David Wallaie stated that the biggest concern of eating outside food (i.e. Fast food, ready meal, restaurant food) the customer is unaware of what all ingredients are present in the food. Many of these meals are made out of a cheap ingredient, lack of proper nutrient and also contain a high level of salt and sugar. All these are ultimately leading to higher health risks, and the chances are that by 2030, Ireland can become the fattest country in Europe (Mulvaney, 2016). The survey carried out in 2016 also revealed that two out of every three Ireland People do not consume fruits in their meals, but almost 91% of people in Ireland showed their willingness to eat and live a healthy life in the future. Eating Outside food has made Ireland the highest rating for obesity in Europe.

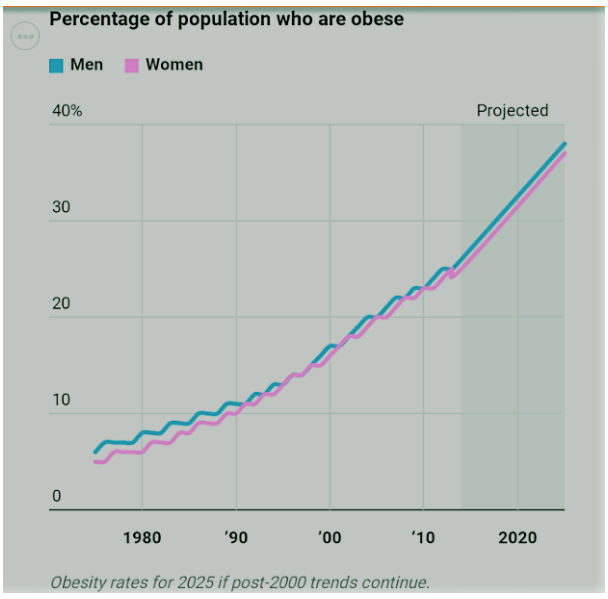

Figure 1:Obesity rate for men and women from 1980 to 2020. (Harris, 2018).

Almost one in every four kids and also one in every four adults is overweight. (Harris, 2018). Research analysis done by dietitian Sarah Noone and the Irish Heart Foundation revealed that eating outside food leads to increase risk factors for heart disease, high blood pressure, and high cholesterol.

McClenaghan (2019) showed concern about the individual's eating habit because and the news report which was published in media stated that "Bad diet Kill more people than smoking" (headline of the report). According to the author, this is an alarming situation because as per the Lancet report, the survey carried out in 195 countries (related to the unhealthy eating habits) demonstrated the shocking results. About 11 million people were habitual of consuming unhealthy food, and some of them end up with numerous cardiovascular diseases. The author further stated that every individual should look after his or her eating habits as no one will force them to eat healthily.

According to Lourenco and Hondru (2017), obesity has become the major health issues in both developed as well as developing countries. The global population around 39% are overweighed, and 13% obese, and the chances of increase in these percentages are high. Among the multiple health strategies carried out to influence the customer to eat healthy food, the most common and critical one is menu labelling. The nutritional, ingredients information present on the menu help's the customers to make the right decision for their diet. Increasing obesity level has put more pressure on making a nutritional menu labelling as mandatory on the restaurant's menu items. Also, consumers demand nutritional menu labelling is increasing. Cranage, Conklin, Lambert (2005), stated that when customers have required information, then they are enlightened to take a more informed decision. They have further stated that, if the customers are given access to the nutritional information of the food, it helps to enhance the customer buying experience and result in higher customer satisfaction (Gallicano, Blomme, Rheede, 2012). According to Lynam, McKevitt, Gibney (2011), there was significant growth in European Union policy in the sector of food and health in recent years. Also, the new legalization on nutrition and health the European Union policy had undertaken new legalization on food and nutrition labelling. This new nutrition and health regulation 1924/2006 concentrated on customer' s protection.

Therefore, the current study aims (and also the name of this topic) **Implementation of nutritional menu labelling on a restaurant menu and its effect on the customers buying preference in Ireland**. Which ultimately means that this study focuses on the efforts implemented by the restaurant (by making nutritional menu labelling) and the customer's preference to choose healthy and nutritious food while eating at a restaurant.

1.2 Research Problems

The current research addresses the problem relate to the person's attitude and their choice of food, which leads them towards the risk of obesity in Ireland. Thus, conducting this research will manage to spread awareness among the target population in Dublin. This study also points out the customer's attitude towards nutritional menu labelling, which will be recorded by surveying the people living in Dublin. Many authors had mentioned their concern towards the rising obesity rate among Ireland. The research problem figured out by the researcher was difficulty in gathering most of the population for this survey. The research has been conducted to fill the gap between the predicted behaviour of customers and the actual behaviour of the customer towards the nutritional menu labelling. The researcher had a personal interest in this area of study and wanted to know what do people living in Dublin, thinks about the law (Nutritional Menu Labelling law) and their attitude towards it. Thus, to study the current scenario, the researcher went through many previous studies (carried out by many types of research in the past based on the same topic) showed the difficulties faced by the government, customer and restaurant side after placing this law.

1.3 Research Aim and objectives:

After taking an overall look at Ireland's eating habit and its effect on their health, the objective of this study is to analyze the impact of nutritional menu labelling at a restaurant on the customers buying preference in Ireland.

To achieve this aim, this study will concentrate on the following research objectives:

1. To find out the benefits of nutrition information on restaurant menus on the consumer's health.
2. To explore the customer willingness to visit a restaurant which provides expected nutrition information on its menu.
3. To find out customers' awareness regarding Nutritional information on the menu and their adaptation towards it.
4. To find out up to what extent can the nutritional information change the dietary habits of consumers.
5. To find out whether the restaurants in Dublin influence the customers to select nutritious food while having a meal at restaurants.

1.4 Research Question

Q1] To what extent the customers aware of the nutritional menu labelling on the restaurant menu?

Q2] What kind of the Nutritional Information on the restaurant menu do customers find essential before placing the order?

Q3] By informing customers about total calories and micronutrients present in the food items before the point of purchase, does it affect the customers buying preference?

Q4] Do customers look and take the nutritional information present seriously on the restaurant menu?

Q5] Does the nutrition information about particular food ordered affects the customers buying preference?

1.5 Research Structure

The primary objective of the research is to find the impact of nutritional menu labelling on customer buying behaviour at a restaurant in Ireland. It will help to understand the attitude of people in Dublin, their level of acceptance towards the tools provided by the government to fight against the obesity crises. There are several steps involved in this research structure. There is a total of eight steps which structure's the research systematically.

So, the structure starts with an introduction (chapter 1) which briefs about the area of research, the problems and purpose of conducting this research, objective, research question (which gives an idea of what researcher wants to analyze). It highlights the main aim of the research, which is to find the importance of nutritional menu labelling and customer's awareness relates to this topic. Chapter two involves the Literature part, which consists the pervious literature work and also concentrates on current study related to the same topic. The Literature Review can be broken down into eight parts, Literature followed by theoretical concept, nutritional menu labelling (this two-step briefs about the background a pervious study in detail). Further, obesity falls in line with a brief discussion and how the government had provided a tool for the common people to fight against obesity. The sixth part consists of customer buying behaviour towards nutritional menu labelling, which gives a detailed idea about do people think about the law before placing an order

at a restaurant. Moreover, the seventh and eighth part of this research focuses on the challenges faced by the customer's side and also the challenges faced by the restaurant side

Methodology section (chapter three of this study) which is considered to be the main section of this research as it outlines, the detail of the research, how it was conducted and what all strategy, approaches were utilized to gain the outcome for the research. There are four main sub-points in the Methodology section. This starts with sampling and sampling procedure, which give the idea about the research sampling. This further emphasizes on, whom all were approached (participants), where they were approached, what all techniques were implemented is covered under this section. The second part informs about the instruments used for this study by the researcher. Further, Data analysis which briefs about the analysis techniques used in the research. The last part of the methodology is ethical consideration, which is a mandatory part of each research. The fourth chapter consists of finding and result from the current research. The finding briefs the actual outcome of this study. The fifth chapter of this research is the discussion based on the current results and the previous results. The sixth chapter is the conclusion, which gives the strong moral of the topic and the current and previous studies carried out for the same topic. Seventh part consists of reference, and eight parts is an appendix which consists of all extra material work under this section.

2. Literature review

2.1 Theoretical concepts

According to Turner (2007) initially, food labelling was not considered important. Food law in the 19th century introduced food labelling first time in the UK. The main reasons behind the menu labelling area:

1. The rate of eating away from home is increasing, which indirectly results in increasing body fats.
2. The quantity of food eaten in the outside environment is revealed to be more.
3. The food ordered at restaurants (If they do not have a nutritional menu labelling) tends to have low nutrition level and more content of calories and sodium.
4. Most of the consumers overlook the calorie count.
5. Most importantly, the majority of people believe that menu labelling on a menu is very crucial.

6. It has also been noticed that customers with knowledge of nutrition (nutritionist) find it difficult to order an keep a track on calorie intake while eating at restaurants. (Roberto, Larsen, Agnew, Baik, Brownell, 2010)

By 2017, menu labelling was considered as the most popular and most important public health strategy to make the people aware about the food they consume in restaurants. (Lourenco, Hondru, 2017; Roberto et al. 2010). The country likes Canada, UK, Lithuania, and Ireland have undertaken the menu strategy. On the other hand, in Denmark, this strategy was under debate because there wasn't clear proof of the positive impact of nutritional menu labelling on people's eating habit and buying preference. Hwang, Lorenzen (2008) have stated that the nutritional information on restaurant menu has more impact on customers' buying behaviour compared to the nutritional information providing at the back of the packed food items. They have further added that providing Nutritional information is not only advantageous to the customer but also boosts the restaurant's revenue. Also, it enhances customer loyalty (towards the restaurant) and educates the customers regarding the healthy food menu options. As these (loyal customers) are the ones, who build a good image of the restaurant in front of the other new consumers.

H1: If nutritional menu labelling is present on the menu, it will influence the customers buying preference at a restaurant.

2.2 Nutritional Menu Labeling

Menu Labelling is considered as the important factor in the promotion of the healthy dietary choice for the consumer **(**Van Der Bend, Van Dieren, Marques, Wezenbeek, Kostareli, Rodrigues, Temme, Westenbrink, Verhagen, 2014). The awareness of food labelling is not only restricted to the appearance of the food product, but most importantly, it is about mentioning nutrition content in it. Nutritional information has become one of the most important issues in food processing, food service, and the food manufacturing industry. It has led to nutrition information or nutrition labelling to gain major attention (Din, Zahari, Othman, Abas, 2012). Some researchers have argued that being part of customer service, informing the consumer about the nutrition content in the food they order should be the social responsibility of the restaurants (Mills, Thomas, 2008). Restaurants unable to satisfy consumer's expectation (about the information of the food he/she has ordered) by providing incorrect nutritional information on the menu can set a bad example of a restaurant and the food quality offered by them.

The research carried out by Unilever's food solution division in 2011 (The world menu reports global research), wherein 3500 people from 7 different nations were surveyed. The research showed that almost 90% of the non-western countries and more than 90 % of western countries showed desired that, the restaurant should give more information about the nutrient level in the food they (consumers) order, which can help them to make appropriate decisions and also help them (customers) eat healthy (Gallicano, Blomme, Rheede, 2012).

The Nutritional menu labelling is not only necessary for adults but also for the children (as one in every four kids has been already overweight). A child's eating behaviour is the influence of his/her parents, and most children visit restaurants with their parents. Even though children have the independence to choose food, still, parents help them to select the food. Therefore, it becomes essential for parents to understand (what is exactly present in the food ordered) and then select the food for their kids (Ahn, Park, Lee, Kwon, Kim, Yang, Song, Lee, 2015). Few studies have shown that for these reasons (above mentioned) parents mostly choose restaurants which mention nutritional information on their menu item for their children.

H2: The customer cares about nutritional menu labelling at the restaurant.

2.3 Mixed Public Perception towards the Nutritional menu Labeling

Providing the consumer with relevant nutritional information helps them to make a better decision about their food choice, even if the customer's frequency of eating at a restaurant is high. (Genannt Bonsmann, Wills, 2012). Analyzed the research carried out in Europe (in 2007) regarding the impact of nutritional menu labelling on the customer's dietary choice at the restaurant (eating away from home). In Belgian, the nutritional information was spotted by star rating (for a healthier option). However, this strategy failed to improve the healthy food choice of the customers. The study carried out by Vyth, Hendrikson, Roodenburg, Steenhuis, Raaij, Verhagen, Brug and Seidell (2012) showed that the nutritional menu labelling strategy implemented in Dutch's workplace cafeterias showed a positive impact on customer's buying preference.

According to Ahn et al. (2015), many types of research have examined the impact of nutritional information on a menu item, but the studies have shown mixed results. Some studies have revealed that the intake of calories and unhealthy food items have decreased after mentioning nutritional information. Whereas, some studies also showed that there was not much difference in customer's food choice before and after the implementation of nutritional menu labelling. Mayfield, Tang,

Bosselman (2014) have stated that individual eating outside or at home can control themselves from eating unhealthy food by looking at nutritional information given on menu (at a restaurant) or behind the packed food items respectively.

According to Lynam, McKevitt, Gibney (2011), many pieces of research demonstrated that the reports of implementation of Nutritional Menu labelling (on restaurant's menu) were very less and the other point revealed was that, the nutrition labelling on the menu was not been understood by many customers. In many countries, Restaurant Industries have taken Nutritional menu labelling very seriously, and few countries like New York, Santa Clara, San Franciosi were sued when found out not following this regulation (Roberto et al. 2010). They further stated that many restaurants put efforts to educate people about the nutritional information on their menu cards by a combination of different mediums such as posters, brochures, and the Internet. Unfortunately, this information is not easily available to people, and only 0.1% of a customer reaches out to this information.

The research carried on the topics like, do customers gives importance to nutrition menu labelling and the customer's demand for the nutrition menu label, revealed that the nutritional labelling mentioning the number of fats, trans fat and saturated fats present in the food item (ordered by the consumer) was given most importance and also had great customer demand (Gallicano et al. 2012). Whereas, a study carried out by (Hwang, Lorenzen, 2008) showed that the new information regarding calories, macro nutrition, fats were given more importance and also had great customer demand.

2.4 Obesity

According to Quinlan (2018), Obesity is a major disease which leads to numerous another disease which can be dangerous to human health. Further, the author stated that, in entire Europe, Ireland is in 1st position where people are getting obese. The survey conducted by the author revealed some data and pictures of the people living in Ireland (collected during the survey) who were already in danger of obesity. Rossner (2014), each individual can prevent herself/himself from diseases caused due to obesity by avoiding unhealthy eating habits. Additionally, Global food Industry is (one among many other departments) responsible for people's health. The survey carried out in 2014 showed that Netherland was the only country in Europe with the lowest percentage rate of obesity. The further author stated that obesity is predicted as a slow killer which shortens human life. To prevent such disease author had suggested some tips such as support the

person who is obese instead of making him/her feel low, help such a people restructure their daily routine and inspire them to eat healthy food. To make it happen, social media and advertising can be one route to encourage them.

According to Mitchell (2018), Social media and advertising play a major role to pull the children towards Junk food, which ultimately leads them to obesity. An article published in the WHO (World Health Organization) stated that Ireland is going to be the fattest country in all Europe till 2030 (Amin, 2018). Watching too much TV and eating unhealthy food were one of the reasons considered causing obesity among people in Ireland. Compared to the cost required for the treatment of obesity, the cause of obesity in children is a major issue (Lean ,2014). The cause of obesity in children is primarily due to the changes in their day to day activities and secondly due to their parent's diet choice (as in most cases child's diet is suggested by his/her parents). Rossner (2014) stated that obesity could be the serious financial issue to the countries, where most of its population is obsessed. It was further analyzed that obesity leads to diabetes (in most of the adults as well as children), which might affect kidney failure in some cases. This shows that obesity causes physical as well as financial problems for people.

Keane, Kearney, Perry, Kelleher, Harrington (2014) have stated that obesity has become a very serious issue spreading all around the world, and most children are also being affected by this. It was also analyzed that, from the year 1984 to 2002, many children in Ireland were gaining more weight compared to their height. This showed morbid obesity among them. The rate of obesity and the rate of expenditure on food is increasing simultaneously and rapidly leading to the obesity crisis (Burton, Howlett, Tangari, 2009). According to Platkin (2009), as the government had placed warning labels on tobacco boxes which aware the people about the side effects of smoking, same way nutritional menu labelling can alert people about what they eat and will help consumers to choose healthy food. The survey conducted by US Centre of Disease Control and Demonstration in 2005 showed that even after the implementation of the Nutritional Menu Labelling law (by US Government) people were still gaining weight and were leading towards obesity. Obesity is considered as a health problem which ends up into many other diseases (Mayfield, Tang, Bosselman, 2014). Also, an obese person spends $1429 more in his/her treatment compared to a normal weighted person.

2.5 Government (NML) law as a tool to fight against obesity

The Nutritional Menu Labeling law was first placed in the US (1990) by their Federal and Local Governments under the 403(q) section (Lenahan, Thomas, Taylor, Call, Padberg, 1973; Roseman, Mathe-Soulek, Higgins, 2013). Initially, this law was only implemented to the chain restaurants, restaurants having more than 20 chains. As per this law, it is essential for the restaurants to mention all the nutrient content (on their menu cards) present in the dish ordered by the customer (Lenahan et al., 1973). This will help people to prevent themselves from risks associated with eating unhealthy food (Rossner, 2014). Nutritional information law was not only placed for the restaurant but also for packed food items Roseman et al., (2013). A survey conducted in 2013 showed that most of the people (78% of the respondents) look at the nutritional information while buying packed food at grocery stores as well as while ordering food at restaurants. Nutritional menu labelling law was first placed in the US, New York, and after a few years, this law was implemented in the United Kingdom. Initially in UK nutritional information was only mentioned on the packed food items and not on menu cards at restaurants. Traffic light symbols were used on the packed food items to aware people (in the UK) about the nutritional content in it. This strategy also helped people to make a clear choice. However, this traffic light symbols strategy was used only for the packed foods and not for the food available at restaurants. In Malaysia, it has been observed that few people had changed their unhealthy eating habit into healthy eating habits with the help of the nutritional menu labelling law (Azman, Shake, 2014). Nutritional menu labelling law was considered as the most important tool by some researchers as it educates people about what they should consume and helps them to place the order correctly (Delvarani, Ghazali, Othman, 2013). Many local chain restaurants had not accepted this law in New York (Alexander, O'Gorman, Wood, 2010). Evenly Strang moment was the president of New York obesity society Dr David B Ellison had also put his point of view and showed concern of consumer would start taking in food which is forbidden from New York and by this law the consumption of forbidden food will be high in the marketplace.

2.6 Customer buying behaviour towards nutritional menu labelling

According to Krishna (2011), the different aspects of the product (e.g. taste, presentation, smell, touch) influences the customer buying preference, emotion perception, choice, memories etc. The author has defined this aspect as sensory marketing, which means the marketing strategy which manipulates the customer's sense and their buying decision. According to Choi, Zhao (2014), many

Americans are directed towards choosing healthier food choices (i.e. 35%, which was 32% in 2001). Further, they have conveyed that customers tend to consume healthy food not only at home but also at restaurants.

Overweight and obesity are becoming leading reasons for death, and this is directly related to the intake of the unhealthy components in the diet. This awareness has increased the concern of being health-conscious among consumers (Din et al., 2012) and also the type of food they eat at a restaurant or even at home. Customer's expectation is the summation of the physical appearance of the product as well as the customer's perception regarding that product. The possibility of the customer to keep the image of that product for a long time depends on how well the product is being explained to the customer (Mills, Thomas, 2008). According to Thomas, Mills (2006), some people follow different types of diet such as some are vegan or vegetarian whereas some follow diets plans such an Atkins, south beach, and so on, Therefore, such customers prefer restaurants mentioning nutritional information like, sugar, meat or milk product, carbohydrate, fibre content on their menu card. However, what influences the customer to select between nutrition and unhealthy food? It is because the customer feels they do not dine out frequently and tend to choose unhealthy options at times (Choi, Zhao, 2014). Generally, when people eat at a restaurant, they tend to consume more unhealthy food option which contains more saturated fat, fat & calories. Whereas, on the other hand, people consume more healthy option like fruit, vegetable, fibres when dining at home (Vanderlee, Hammond., 2014)

H3: The customer prefers eating healthy food at home rather than eating restaurant.

Few cases of research have demonstrated that the products or the restaurant's menu, which had the heart-healthy claim were more preferred by customers, as they believed these items more nutrition's and less harmful for health. Also, can prevent the causes of heart diseases and apoplexy. Therefore, this results in developing customer's positive attitude towards the food and also increase their buying preference (Kozup, Creyer, Burton, 2003).

The inability of a restaurant to satisfy customer's expectation regarding quantity, quality and also the nutritional information on the card, then the restaurants might lose their clients (Mills, Thomas, 2008). They have further stated that Nutritional menu labelling on restaurant menu has more impact on the consumers. Hwang, Lorenzen (2008) stated that the survey carried out by Yamamoto et al. (2005) reflected the change in consumer behaviour after implementation of nutrition information. It also showed the consumers' willingness to pay higher costs for nutrition

information and healthier food option available. This can help the restaurants to increase their revenue by being able to attract similar customer.

According to Drichoutis, Lazaridis, Nayga (2006), nutritional information on the restaurant's menu has shown a massive impact on customers' purchasing behaviour as it helps them to avoid unhealthy ingredients from their diet. This effect can be even stronger if the information campaign (which helps to educate the customer) is joined with the nutritional labelling. Fat, salt and sugar are the main three elements which are been used since ancestors. Though these elements were essential in the food, they have been consumed within limit by our ancestors. Currently, the food item is been considered tasty when it contains more fat, sugar & salt (Wansink, Huckabee, 2005). The survey carried out in Canada (stating the topic, which component does consumer notice before ordering the food) gave the result such as, 51.7% of the participant notice the calories contain, 32.8% of the participant look at the total fat contain and 37.4% of the participants notice the sodium content present in the food item before placing the order. It was further analysis that people like to select food with fewer calories, fat, carbohydrate and sodium. And people select food with more protein and fibre content.

H4: If Nutrition Menu Labeling is present on the menu, it will influence the customers buying perception.

The current research has placed four hypotheses. In this study, the above literature had mentioned pervious research statements, which show the customer buying behaviour get positive changes when they follow nutritional menu labelling. Hence, current research needs to analyses the data by using a hypothesis test, which can result, the impact of nutritional menu labelling law on the restaurant menu and its effect on customer buying behaviour at a restaurant in Ireland.

2.7 Challenges faced by the customer

Few studies have revealed that if the consumers are not attracted by nutritious options on the menu, then the chances of customer's choosing an unhealthy alternative increase (Reale, Flint, 2016). Some consumers try to order their food from the menu card, which has nutritional information on it but due to the inability to understand the menu they end up ordering the unhealthy item (Platkin, 2009). A survey carried out among 130 participants (who prefer to eat food outdoor more often) stated that (for some participants) nutritional menu labelling did not help them to choose the food and felt more complicated while ordering food. Though there were few people in the survey, who

placed positive feedback by stating they took advantage of menu labelling and follow the healthy food plan while dining out at restaurants. Lenahan, Thomas, Taylor, Call, Padberg (1973), indicated that 35.8% of participants were willing to pay three times more (compared to the actual price) for the nutritious food. From the customer's perspective, people go at the restaurant to satisfy their hunger with delicious food and not the have nutritious food (Alexander, O'Gorman, Wood, 2010; Yamamoto et al., 2005). According to some other consumers, it is unacceptable and unpleasant of counting calories when dining at restaurants. As sometimes, the food with fewer calories (seemed to be healthy) is less tasty (Alexander et al.,2010).

Generally, customers are afraid of trying healthy food by thinking of its taste. If a restaurant provides a better taste to healthy food items, then customers show a willingness to pay more for healthy food. Staying fit, healthy and good looking is the intention of many people being ordering or eating healthy food (Kang, Jun, Arendt, 2015). Few restaurant managers have observed that nutritional information at least make the customer feel guilty before ordering the unhealthy food on the menu. Sometimes customers are influenced by the healthy options available on the menu, but they end up ordering the food which they like (which might be healthy or even unhealthy at times) (Glanz et al., 2007**).**

2.8 Challenges faced by restaurant industries after implementation of Nutritional Menu Labeling Law

Some operational and non-operational challenges faced by the restaurant industries were as follows; firstly, the food ordered by customers is made with a touch of taste and quantity by chefs in the kitchen rather than giving much importance to the actual proportion of ingredient in the dish. So, to prepare the tasty dish, chefs cannot follow the standardized menu recipe, which ultimately makes the menu information wrong. However, after the implementation of nutritional menu labelling law, chefs focus on moulding their recipes as per the standard set by the menu labelling law. It was found out that this process was very time consuming and increased the workload of administrative and kitchen staff at restaurants (Thomas, Mills, 2006; Thomas, 2016; Alexander et al.,2010). Many oppositions stated that this law limits the chef's innovative skills in making the dish very presentable. Due to this policy, other challenges faced by restaurants are such as hiring expertise, cost and time involved in educating of waiters about the nutrition information and much more. To supply the most precise nutrition information, many restaurants had hired dietitians who

help them to compute the accurate quantity of nutrition placed on the menu. Many take away or sit in a restaurant cannot provide actual information. For example, a pizza shop doesn't provide the calorie information as per the topping ordered in pizza. Some small restaurants were at risk to shut down due to these challenges. Some British hospitality also agreed that nutrition menu labelling law was causing the high cost to the restaurant industry, and comparatively was making a very small profit for human health**.**

A survey carried out among 395 adult respondents by Delvarani, Ghazali, Othman (2013), revealed that only 41% of people look at the nutritional information on the menu, rest follow their attitude towards eating. The most challenging element for the restaurants in Malaysia is that they need to present their menu is such a friendly way that can encourage the customer to order healthy food. The main objective of the menu labelling law was to make people's life healthy, but it had a major negative impact on restaurants profit.

In New York, Starbucks and its competitor, Dunking Doughnuts, were also affected by this law. There was a dramatic fall in their revenue as people started following the law. Starbucks showed a decline in revenue by 6% compared to Dunkin Donuts (Bollinger, Leslie, Sorensen, 2011). Royal (2011) stated that US government had put a financial burden on the restaurant industry by placing this law, as restaurants were investing more money and generating less revenue. Also, it was difficult to execute. The nutritional menu labelling law makes no point unless the customer is aware of how to calculate and apply that information for their dish.

Yamamoto et al., (2005) shared their opinion by saying that, it is a risky and scary decision for restaurants to put nutritional information law which might result in losing customers interest in them. The most difficult part is to mention nutritional information while dining at restaurants with buffet system because it becomes impossible to calculate nutritious component consumed by each individual (Alexander et al., 2010). Restaurant business operates with the unpredicted path; the crowd at the restaurant can never be predicted. To deal with this issue, managers and the chefs need to be ready about the storage room and their menu item as its difficult to maintain healthy stock such as vegetable in storage room for a long time which becomes challenging aspect of restaurant side and turn profit margin in Laos. Though taking a risk and placing healthy menu selection on the menu board makes them, unlike their surrounding competitor.

It was observed that on one hand where Nutritional menu labelling is proving beneficial in some extent but on another hand, providing too much nutritional information has proven to create

confusion and hence to ruin the enjoyment of the customers dining at restaurants (Hwang, Lorenzen, 2008; Johns, Edwards, Hartwell, 2013). So, it becomes essential for the restaurant on how they present this information to the customer as this is the primary responsibility of the restaurant and also a source to increase their revenue. According to Gallicano et al., (2012) the research carried out by (Glanz et al., 2007) showed that the restaurant owners who implemented the 2007's new regulation (Nutritional Menu Labelling) which was to provide a healthier option to the consumers discovered a major decrease in their profit margin.

3. Methodology

3.1 Sampling and Sampling Procedures

This Research is conducted to aware the people of Dublin about nutritional menu labelling and their eating habits at a restaurant can get healthy by looking at the nutritional information provided on the menu. This study only focuses on the customers (Population of Dublin) who prefer to eat out or the ones who eat takeaway food. Another purpose is to spread awareness and to know the customer's point of view towards the nutritional menu labelling. This research is essential for every person who lives in Dublin. In most of the similar previous researches, authors have used a quantitative method using survey techniques to know the customers' opinion towards the nutritional menu labelling and their buyer's perception at the restaurant towards it. For example, Josiam, Foster (2009), had conducted surveys with specific categories of adult participants in their research. A questionnaire form was provided to customers to gather the data for their preference towards the nutritional menu labelling law. There are previous researches and literature who carried interviews, mixed-method and more techniques to find out the actual result under this area of study. However, in this research, the researcher has aimed to focus on the customer side, which can also create awareness among the targeted people in Dublin.

It is essential to research Nutritional Menu Labelling in Ireland, Dublin because most of the authors had published an article by showing concern toward the obesity among the people in Ireland. (McClenaghan, 2019; Quinlan, 2018; Mulvaney, 2016; Harris, 2018) Have stated that, the obesity among the population of Ireland has a direct relation to food consumption outside the house. Some said that out of every ten people, one person is obese in nature. It is essential to know

the thinking of the population living in Dublin and their concern or attitude toward the nutritional menu labelling law.

According to Arsenault (2010), nutritional labelling and the educational act was first published in 1990 by the US government for the packed food which was implemented in 1994. Later, many surveys and research showed that food eating at restaurants and takeaways were increasing daily, which caused obesity and serious challenge for the government. Looking at the this, the government had placed a new health care act in 2010 which was applied to restaurant industries to have nutrition information on their menu become mandatory which can aware people about healthy and nutritional food. According to Heneghan (2017), most of the people living in Ireland eat their meal outside the house once a week.

Further, it was analysed that 82% of people in the age group of 18-34 agreed with this statement and 62% fall in the age group 35-44 voted. As mentioned in the literature review (above), the obesity level of children in Ireland as well as globally is increasing tremendously. Ahn et al. (2015**)** stated that in South Korea, the meal choice for the children is made by their parents. It is very important to aware every individual about the cause of obesity and which food items affect their health (i.e. main cause of obesity).

The research for this study is anonymous in nature with a quantitative method approach using survey techniques to collect the data. For this research, the cross-section design is being used to collect the data. This cross-section design helps the researcher to take the random data on the new population rather than adapting to the same population. The cross-section is also called as descriptive and observation in nature. According to Kothari (2004), the sample design is used to collect the data from the desired amount of the population targeted by the researcher. Two types of sampling are available, one is Probability, and another one is Non-probability.

Further, these two stages have more sampling techniques. The survey was anonymous, and the participants were the population of Dublin. This research follows the probability sampling method to collect the data among the population of Dublin. The participants were briefed about the content, topic, research strategy, actual outcome and were requested to fill the form which was available on google form site.

The research carried out by Yepes (2015), used the quantitative method (survey techniques) to collect the data in the study. The questionnaire and email were the techniques which were applied by the author. Invitation through email was sent to the participants. Questionnaire set included both, the dependent as well as the independent variable. The current research is based on a similar idea, and the researcher has used the same method and techniques to collect the data for this research. This study has adopted a quantitative method with survey techniques. The current research includes deductive approach under quantitative method. Appearing at the current scenario of the obesity rate and its harmful effect on health in Dublin, the main aim of this enquiry is to survey Dublin. The participants were approached randomly among the Dublin areas such as Rathgar, Dundrum, City Centre, Rathmines, UCD Campus, NCI campus. Further, in this study, the researcher has implemented the cluster sampling method which narrows the geographical area of Dublin and further without making a group of participants, the researcher has approached the participant individually within the selected area of Dublin.

This area of study concentrates on the population on Dublin and their health condition about their obesity, the impact of nutritious menu labelling on the customer buying behaviour and their preference toward it. It is necessary to understand the specification of a participant who is involved in this research, such as age, their education level, participant gender and all this data is essential for researchers to present study of this demographic question. Thus, the research consists of five demographic questions, which includes Age, Gender, Education level, Health rating, frequency of eating outside. If we look at the previous questionnaire sets (used by some other researchers) also includes the demographic questions and which is common for all research. For example, (Yepes, 2015; Josiam, Foster, 2009) are the authors who had mentioned the demographic questions in their researches.

This course of study follows the primary data collection techniques which are part of the quantitative research method. According to Kothari (2004), the essential data which are required to be collected to complete the research using the survey technique is called as the primary data collection. Further, the author states that, if the researcher follows the descriptive research technique by taking a survey, then the researcher is using the primary technique of data collection. In primary data, there is no repetition of participating, so it is considered as a freshly collected data, and it is also considered as the original form of participants characteristic. This study aims to

collect the data from the "customer" who visits the restaurant. Anonyms survey was being demonstrated, which was being conducted in Dublin, Ireland. It is very important to target people and acknowledge the research topic and the concern behind this research. Melia (2019), stated that Dublin is the main county where the major economy of the country (Ireland) is being generated, and the capital is penetrating 11 different counties. The document 'Ireland 2040' launched by Taoiseach Enda Kenny and Housing Minister Simon stated that since the last two decades Dublin was the main area where half of the population is being based. According to Heneghan (2017), a survey conducted with Dr. Mary McCrecry (who is one of the nutritional dieticians) reported in their survey that, 71% of the people in Dublin had admitted that they eat takeaway once in a week and 50% placed feedback stating that they prefer to eat at a restaurant once in a week's time. Considering the above report, we can assume that about 70% of Dublin population prefer eating outside once a week. So, considering the target population of 70%, then it is impossible to collect data from such a huge population or participant. So, this research would target random 150 participants who would like to contribute their view for this survey. All responses from the participant will directly be collected in the google form.

As per the planning process of sampling strategy, the hypothesis test and the sampling size method had approached in this research and finalised their target population, which is 150 participants which were also mentioned in the previous proposal. After finalising population, the researcher selected the sampling design, method and techniques which help him to get the accurate data. In this research, the hypothesis test called chi-square will be performed to analyse and compare the four proposed hypothesis placed by the researcher, and the sample size was (n=97) and by keeping the confidence margin of 90% with a margin error of 5 % which standard margin for all kinds of researches. To get the access to the participant, the researcher had selected some area in Dublin, which are crowed area, having a lot of restaurant and shopping area nearby to the location and promoted the survey by distributing template containing all information of researcher and survey topic.

Every individual passing through the area (mentioned above) were approached during the distribution of templates. Every individual who showed interest in the research was briefed about the research detail, topic, researcher name, college purpose of this research, benefits and outcome of this research were explained to participate and also template sheet was provided which include

the link of the form where they can fill and submit the form. To approach a single person on the field, it took approximately 3 minutes to the researcher. Thus, Research had contributed three weeks for distribution of templates and the promotion of the subject and the same time frame was the allocated for collecting the data. As promotion of this research was done individually and without the help of any team, so the responses were expected to be less. Hence, information collected from the survey (which was collected on google form) will be stored on file with a secure password and also one additional copy will be safely placed in the researcher's hard disk.

A pilot study is an essential technique used in research before conducting any survey. This is also known as Pilot survey. This is the kind of strategy which helps the researchers to be more accurate and specific in their survey. The pilot survey is conducted before the actual survey. The researcher distributes the actual survey to a few response's teams, which give their feedbacks related to the questionnaire, research topic, ideas, unwanted term used in surveying, repetition of questions. After getting all the feedback, the researcher needs to make the changes and implement it and processed it for the survey. (Kothari, 2004)

For this research, the pilot survey was conducted among 5 participants who were randomly approached with templates, questionnaire set and asked them to fill the detail and also asked to advise if any point they need to mention or which they think is not appropriate. This pilot survey was conducted one week before the actual survey, i.e. On 26th April 2019 at Rathgar, Dublin. The feedback which was collected mentioned one repetitive question; two participants stated that they didn't understand the last section by selecting an answer as they were on the Likert scale. While the other participants of the pilot study stated that the overall set was nice, perfect and easy to understand. The suggestion got from participants was accepted and made changes in the survey questionnaire set. As per the feedback from one of the Pilot Study participants, the repetitive questions were removed, and an alternative question was being placed. Secondly, in the last section, the Likert scale was changed with the multiple-choice grid pattern, which seemed easy for the participant and the question were framed as per the multiple-choice pattern.

The promotion of the research was conducted and approached most of the individual. As this research is anonyms and a selection of the participant was also random, so, there was no point of taking permission for the participant. An approach to collect the data was placed near the restaurant

so that the researcher could distributing the questionnaires to the customers who come to dining, but the restaurant didn't allow to research their premise.

3.2 Instrument

According to the researcher, the research's main aim is to know the population's point of view towards the nutritional menu labelling and their buying behaviour towards it. The data for framing the questionnaire set was collected from previous researches conducted by (Josiam, Foster, 2009). These researchers used **a** quantitative method using questionnaire techniques. After adapting the pilot study, the authors (mentioned above) had confirmed their structure for the questionnaire. So, for this research, the demographic questions pattern was adopted from (Josiam, Foster, 2009). In this research, after conducting a pilot study, the survey question for the research was,

1. Demographic study
2. Yes and No pattern questions relate to customer's opinion, knowledge and preference for nutritional menu labelling.
3. Multiple-choice questions in the form of (Five-point) strongly disagree, disagree, neither agree nor disagree, agree, strongly agree which relate the customer choice in the nutritional information content present on the menu.

The required information which is relevant to the method of research can be collected through instrument study. The best outcome of the research is only possible if the researcher carries out the research instrument, design, type and techniques in a perfect manner (Brimingham, 2003). So, there are few methods from which a researcher can gather all the required data, or the researcher may also use it as a tool to determine the factual issue. In this inquiry, the survey questionnaire is utilized as a tool to gather the data from the participant. Further, in the questionnaire method, the researcher implemented the online survey method to gather the responses from all the participants.

The researcher had used the previous researcher's Josiam, Foster (2009), questionnaire set and objectives to frame the survey questionnaire set. However, the questions were composed of seven different types of research and seven different writers. To access those questions for the current research, the researcher has mailed all authors, among which only four had grand permission. Other didn't revert. Among them, one or two had shown interest and asked for the research copy after it gets published or granted by the college. The demographic question does not ask any license as it was built by the proprietor. Hence, The final questionnaire set was framed from following

authors: (Yepes, 2015) (Kozup, Creyer, Burton, 2003), (Josiam, Foster, 2009), (Mayfield, Tang, Bosselman, 2014), (Avcibasioglu, Cardinale, Dommeyer, Lebioda-Skoczen, Liu Schettig, 2011), (Vanderlee et,al., 2014) (Din, Zahari, Shariff, 2012). The customer's point of view and his or her attitude was measured by Multiple choice questions which had an option available of disagreeing, agree, disagree, neither agree nor disagree, agree, strongly agree.

Some researchers involve multiple methods under quantitative, but this research follows the mono method quantitative, which involves only single techniques of collecting data through a survey in this research. The inquiries which were analyses to make the questionnaire had responses on a Likert scale. This research had adopted the same Likert scale in this study, simply during the pilot study one customer had mentioned of difficulty in understanding to provide the reaction on a Likert scale, due to this Likert scale question has varied to a multiple-choice pattern which seems comfortable.

The data collection has various methods under survey techniques. The survey can be conducted in the form of a questionnaire or interview. Thus, the questionnaire can be done in several types, such as a physical survey by circulating the questionnaire sets to participants and collecting data, phone survey conducted by asking questions to the participants over telephone, online survey or email survey where the survey can be sent by email and also collect by form or by third party internet survey (Kothari, 2004). This research follows a physical survey technique. The questionnaire sets were distributed to people at few places in Dublin and also online survey technique as a questionnaire set was published on Google form. Further, all the responses were collected through a google form. As participants were requested to complete the survey published online.

The researcher found that these survey methods would be the best method to approach. This was considered because Sweeney (2019), has stated that (in The Irish Times article) 90% of Ireland's population falls under the age group of 18 to 75 and mostly everyone owns a smartphone. According to Pope, (2018), a survey conducted by Deloitte group in Ireland revelled that, 1 out of every 10 people pick up their phone more than 100 times a day in Ireland. The further author state that 56 % of Ireland's smartphone user depended on their device most of the time. This is considered to be the highest figure in entire Europe. So, collecting data through an online survey was considered the best method. Also, with this approach, participants were not required to wait and fill the forms. Secondly, no one could copy each other's review and also ones the survey is

submitted, and it cannot be changed. The limitation faced by the researcher was on the field while approaching people. After distributing more than 500 templates on locating areas, the response percentage was very low.

The data were gathered directly on google form, and the researcher had access only to those forms. The survey was anonymous, and information was collected as per supervisor's guidelines. This research was conducted very carefully without opposing any rule and regulations. The researcher has securely stored the collected data in a hard disk with a secure password. And the only researcher has access to that data.

3.3 Data Analysis

The data which were gathered from the survey was analyzed under the IBM SPSS (Statistical Package of Social Science) Version 25 technique. To detect actual analysis, the first step is data collection, which was collected through a survey after which it undergoes through the data cleaning process. The data cleaning process is conducted to manage inconsistency data in the survey. For example, let's consider the question of education level asked to participants. It had four options as follows, PhD, Diploma, Degree, Other. So, the inconsistency data occurs when participants choose "other" as their option and mention which degree they actually hold. This inconsistency data is not accepted in SPSS analysis.

According to Crossman (2018), nominal, ordinal, interval and ratio are the four different types of tools of measurement. Nominal scale specifies the category of each variable (i.e. question) in the research. In the current study, Nominal scale is used for the demographic questions. Which specifies the age, gender educational level etc. (category) of each variable. So, in this study, only nominal and ordinal scales were used for data analysis.

Further, to check the reliability of the survey, the Cronbach alpha test was performed. Yepes (2014), had used the internal consistency Cronbach alpha to check the reliability for the research. Gliem, Gliem (2003), stated that Cronbach alpha is usually used to check the internal reliability of the items which are available on the scale. The range for Cronbach alpha is usually between 0 and 1. If the score falls below 0.5 or more than 0.5, then it is considered to be a poor score for the scale item. If the score is 0.7 or 0.8, then the survey is considered to be reliable. In the current study, the value of Cronbach Alpha is ($\alpha = 0.858$), which mean the current study is reliable in nature.

The data set (i.e. first set consists of a demographic question, second is Yes/No questions, and the third set of questions is based on the level of agreement and disagreement) was already available in three sections, as mentioned above. Thus, the tests were performed separately on each question. No theme or grouping of questions was used to analyze data. Thus, in this study Cronbach Alpha was performed to check the reliability of the survey, Pearson Correlation Coefficient was run simultaneously to check the correlation among the questions (variables), and Chi-Square test was performed for hypothesis testing. The real results are indicated in the percentage pattern.

3.4 Ethical Consideration

The researcher should go through (and follow) all different principles and rules carefully in the study, for the research to be ethical. If a researcher is following either quantitative or qualitative methodology (where people are involved), then the researcher should work carefully with participants personal information by considering ethical obligation and maintaining low risk (Khanlou, Peter, 2005). According to Clark - Kazak (2017), every researcher who has used data collected from people in his/her research, then it is the researcher's duty to maintain the privacy of data safely, without disclosing participant's name anywhere.

To obtain a proper result without misinterpretation of primary and secondary data, the researcher has carefully implemented ethical consideration. Before approaching and conducting a survey for this research, the researcher gave major attention to inform the participants (who were interested) and briefly explained them about the research content and how their name or any personal information will not be disclosed at any point. The researcher has properly studied and understood the secondary data used in this study and has taken special care of plagiarism. The researcher has mentioned other authors works with proper citation, also provided all references which were used in this research. Also, for current study researcher emailed the authors (who have conducted research on a similar topic) in relation to use their questionnaire structure. Out of seven, authors of four papers granted permission. All data collected from the survey were studied under the supervisor's guidance. The data will be secured will password protection and will be with the researcher for that period. The security of data will be taken care and participant who are involved were anonymous. The GDPR rule was considered, and no personal details were asked from the participants neither while approaching nor in the questionnaire sheet. The demographic questions cover the general information such as participant's age, gender, health rate, to analyze the outcome

of the inquiry. Not even a single person was forced to participate in this study. Every soul who is involve were randomly chosen for the study, and they willing responded.

4. Finding and Results:

The current study on "Impact of Nutritional menu labelling on a restaurant menu and its effect on customer buying behaviour at a restaurant in Ireland", had approached quantitative method using survey technique to find out the expectation and actual outcome of the consumers. Further to analysis, the data which was gathered from the survey using questionnaire pattern was placed under statistical analysis (SPSS version 25), which is the latest version. Turconi, Celsa, Rezzani, Biimo, Sartirana, Roggi, (2003), performed a reliability test to check whether the data which was gathered from the survey is reliable in nature or not. To perform a reliability test, authors used Cronbach alpha and simultaneously, another method called the Pearson correlation coefficient was utilized to check correlation among the questions which was asked in the survey. Thus, for the current study, the researcher had applied Cronbach alpha to check the reliability test. Gliem, Gliem (2003), stated that the decent value for Cronbach alpha is between 0.8 to 1. For the value below this range, the reliability (of the survey) is inaccurate in nature. Cronbach alpha is used to check the internal reliability of question, which is on the scale (like Likert scale, multiple grid choice scale, etc.).

The value of Cronbach alpha for the current study is $\alpha = 0.858$, which states that the research is reliable in nature. Turconi et al., (2003), had run two different tests (Cronbach Alpha and Pearson Correlation coefficient) at two different times in their research. Whereas for the current research, the researcher got the opportunity to run the Cronbach alpha test and Pearson correlation coefficient test simultaneously. This was possible because the researcher used the IBM SPSS Version 25, which is the latest version.

According to Mukaka (2012), the Pearson correlation coefficient is mostly used in statistical analysis for caring out the strength of the paired variables, which shows the correlation among the variables. This response of parried variable are interpreted in scale form such as if the value of parried variable lies on range of 0.9 to 1 then it considered as very high correlation, if it lies on range 0.7 to 0.9 then its high correlation, 0.5 to 0.7 moderate correlation, 0.3 to 0.5 its low correlation and if its 0.3 to 0.00 then its negligible correlation. For the current study, it can be seen that the participants who considered the information of fat as an important component before

choosing the food also (same participants) considered the information of Trans fat equally important component before making their decision. Pearson correlation coefficient (of above-discussed variables) is 0.525. This shows the moderate correlation between these two variables. Secondly, the participants who prefer to eat healthy food at home rather than at the restaurant do not show more concern about the information on sodium content present in their food while dining at a restaurant. Thus, the Pearson correlation coefficient is 0.007. This means that there is a negligible correlation between the above variables.

The Participants:

45.5% were female participants (i.e. n = 44), 51.5% were male (i.e. n = 50) and 3.1% preferred not to disclosed their gender (n = 3). It was further analysis that the participant following under the age group 18 – 35 (n = 57) 57.7% were the highest respondents, 36.1% of participant falling in the age group 36 – 60 (n= 35) and 6.2% of respondents were 61 years and above (n = 6). The sample also showed that 15.5% of participant were underweight (n = 15), the majority of participant were falls under normal weight category which was 51.5% (n = 50) and the participant which were overweight 22.7% (n = 22), the obese participants were 10.3% (n = 10). Further for the question, participant who frequently eat at restaurant showed that, 7.2% (n = 7) were the participant who eat at restaurant every day, 20.6% of participant (n = 20) who eat most of the days in a week at restaurant, 17.5% participant eat at restaurant few days a week (n = 17). 40.2% of the participants (n = 39) eats a few days a month at a restaurant, and only 14.4 % (n = 14) of participant do not prefer eating restaurant food. The sample alps showed that 69.1% of the participants had degree-level education, 12.4% had a diploma, and 7% had PhD level education.

The Results from Survey:

To determine, customer's buying preference from the restaurants with Nutritional menu labelling, the chi-square test was run under the SPSS Version 25. There were 98 participants. (numbers of Female = 44 and numbers of Male = 50 and others=4).

1. Do Nutritional Information help you to choose the right food from the menu at a restaurant? (Yes/No)
2. Do you care less about whether a restaurant having nutritional information or not? (Yes/No).

3. Are you quite Knowledgeable about Nutritional Information? (Yes/No).
4. If the Calories information was provided on the menu and you learned that your typical meal had calories value much higher than you excepted, would this information impact your meal purchasing decision? (Yes/No).
5. Do you believe that calories information should be required on the restaurant menu? (Yes/No).

Further, it was analyzed that 43.3% of participant (F=22, M=20; p=0.026) agreed that nutritional information helps select healthier food option from the menu card. On the other hand, 39.2% participants (F=17, M=20; p=0.00) said they really care about the nutritional information provided by the restaurants. Also, 51.5% (F=18, M=31; p=0.00) participant believes that it is essential for a restaurant to mention calories content on their menu card. This shows that males are more conscious about their health compared to female. Also, males are more attracted to the Nutritional Menu Labeling law.

The statement regarding the knowledge of nutritional information among the participants revealed that (half of the participants) 50.5% participants (F=24, M=24; p=0.00) had knowledge about the law. This shows that the same number of males and females are aware of the knowledge of Nutritional Information. Through the sampling, it was also indicated that the meal purchasing decision of 49.5% participants (F=25, M=23; p=0.00) would be impacted by the calorie's information (much higher than the expectation) present on the menu card. It was also demonstrated that 32.5% of participants (F=12, M=20, p=0.00, Mean=3.19) agreed that they follow as well as consider nutritional menu labelling law. But among total participants (n=98), few of them (n=28) do not consider nutrition menu labelling law important. Thus, these finding (p=0.00 for each statement) support and accept the first hypothesis H1 (i.e. If nutritional menu labelling is present on the menu, will influence the customer buying preference at restaurants).

Table 1: The result of the chi-square test relates to buying preference of customers towards nutritional menu labelling by their gender.

Do you care less whether restaurant having nutrition information or not?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
Female	17	(37.7)	17	(37.7)	10	(22.2)	45	(100.0)	
Male	23	(46.0)	20	(40.0)	7	(14.0)	50	(100.0)	0
Prefer not to say	2	(66.6)	1	(33.3)	0	0.0	3	(100.0)	
Total	42	(42.8)	38	(38.7)	17	(17.3)	98	(100.0)	

Are you quite knowledgeable about nutrition information?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
female	24	(53.3)	16	(35.5)	5	(11.1)	45	(100.0)	
male	24	(48.0)	19	(38.0)	7	(14.0)	50	(100.0)	0
prefer not to say	1	(33.3)	1	(33.3)	1	(33.3)	3	(100.0)	
Total	49	(49.8)	36	(36.7)	13	(13.2)	98	(100.0)	

If the calories information was provided on menu and you learned that your typical meal had calories value much higher than you execpted, would this information impact your meal purchasing decision?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
female	25	(55.5)	15	(33.3)	5	(11.1)	45	(100.0)	
male	23	(46.0)	21	(42.0)	6	(12.0)	50	(100.0)	0
prefer not to say	0	0.0	0	0.0	3	(1.0)	3	(100.0)	
Total	48	(48.8)	36	(36.7)	14	(14.2)	98	(100.0)	

Do you consider and follow the law of nutritional menu labeling?													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	4	(8.8)	9	(2.0)	19	(42.2)	8	(17.7)	5	(11.1)	45	(100.0)	0
male	7	(14.0)	8	(16.0)	15	(30.0)	12	(24.0)	8	(16.0)	50	(100.0)	
prefer not to say	1	(33.3)	2	(66.6)	0	0.0	0	0.0	0	0.0	3	(100.0)	
Total	12	(12.2)	19	(19.3)	34	(34.6)	20	(20.4)	12	(12.2)	98	(100.0)	

In the Survey, when it was asked to the participants did, they notice the nutritional information on the menu card, only 34% (n=34) participants responded yes (i.e. they notice the information) out of which n=20 were female and n=13 were male (p=0.082). This shows that only less % of female compared to male notices the nutritional information on the menu. Whereas, 53.6% (n=52) never notices this information.

Further through the sample, it was analyzed that, only 36.1% (n=35) participants use the nutritional information before selecting the food. And (n=52) never notice and also never uses the nutritional information before selecting the food. So, the chi-square test for the question 'does customer use nutrition information on menu to select food before ordering?' gave value p=0.641. This shows that the hypothesis H2 (i.e. The customers really care about the nutritional menu labelling at the restaurant) is been rejected. Which means that only a few customers really do not care about nutritional menu labelling at restaurants.

Table 2 :the test results consist of customer care towards nutrition information at restaurant by their gender.

Do you notice Nutrition Information when it is posted on menu?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
Female	21	(46.6)	17	(37.7)	7	(15.5)	45	(100.0)	
Male	13	(26.0)	33	(66.0)	4	(8.0)	50	(100.0)	0.082
Prefer not to say	0	0.0	2	(66.6)	1	(33.3)	3	(100.0)	
Total	34	(34.6)	52	(53.0)	12	(12.2)	98	(100.0)	

Do you use Nutritional Information on menu to select food before ordering?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
Female	18	(4.0)	21	(46.6)	6	(13.3)	45	(100.0)	
Male	15	(3.0)	30	(6.0)	5	(10.0)	50	(100.0)	0.641
Prefer not to say	2	(66.6)	1	(33.3)	0	0.0	3	(100.0)	
Total	35	(35.6)	52	(53.0)	11	(11.2)	98	(100.0)	

Do Nutritional Information help you to choose right food from menu at restaurant?									
Gender	Yes		No		Prefer not to Say		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	
Female	22	(48.8)	15	(33.3)	8	(17.7)	45	(100.0)	
Male	20	(40.0)	26	(52.0)	4	(8.0)	50	(100.0)	0.26
Prefer not to say	0	0.0	3	(1.0)	0	0.0	3	(100.0)	
Total	42	(42.8)	44	(44.8)	12	(12.2)	98	(100.0)	

To find out the customer's preference of eating healthy food at home or at restaurants, participants were able to give their opinion by choosing from the options, strongly disagree, disagree, neither agree nor disagree, agree, strongly agree on the multiple grid choice scales. the results showed that 38.1% participants (F=20, M=16) agreed that they choose to eat healthy food at home and 17.5% (F=5, M=12; p=0.00) strongly agree to the above statement (Mean= 3.45). To elaborate more on

the third hypothesis, participants were asked whether eating healthy, and nutritious food was crucial to them while dining at the restaurant. 29.6% (F=17, M=12) agreed and 16.3% (F=5, M=11; p=0.00) strongly agreed (Mean=3.53) to the above statement respectively. These results support hypothesis three H3 (i.e. the customers prefer eating healthy food at home rather than eating at a restaurant).

Table 3:This result demonstrates the customer choice of eating healthy food by their age group.

Do you choose to eat healthy at home rather than in restaurant?													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
Female	2	(4.4)	7	(15.5)	10	(22.2)	20	(44.4)	6	(13.3)	45	(100.0)	0
Male	5	(10.0)	8	(16.0)	9	(18.0)	16	(32.0)	12	(24.0)	50	(100.0)	
Prefer not to say	2	(66.6)	0	0.0	0	0.0	1	(33.3)	0	0.0	3	(100.0)	
Total	9	(9.1)	15	(15.3)	19	(19.3)	37	(37.7)	18	(18.3)	98	(100.0)	

When you eat at restaurant, is healthy and nutrition food important for you?													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	0	0.0	9	(2.0)	13	(28.8)	17	(37.7)	6	(13.3)	45	(100.0)	0
male	4	(8.0)	5	(10.0)	18	(36.0)	12	(24.0)	11	(22.0)	50	(100.0)	
prefer not to say	1	(33.3)	1	(33.3)	1	(33.3)	0	0.0	0	0.0	3	(100.0)	
Total	5	(5.1)	15	(15.3)	32	(32.6)	29	(29.5)	17	(17.3)	98	(100.0)	

To find out the information on which nutritional content is important for the customers before they purchase their food items. Participants were asked to state their degree of agreement and disagreement towards the statement ‘does calories and macronutrients information on the menu card impact their purchasing decision’. 24.5% participants (F=13, M=11) agreed and 6.1% participants (F=2, M=4; p=0.00) strongly agreed (Mean=3.10) to this statement. Whereas, approximately 47% of participants in the survey neither agreed nor disagreed to this statement.

Additionally 46% participants (F=17, M=27; p=0.00) showed their concern about the calorie content in their food (Mean=3.50).

To discover more on the fourth hypothesis, participants were as asked to choose which component or components are essentials for them while selecting the food at a restaurant. The following component was Fat, Saturate Fat, Trans Fat, Cholesterol, Sugar, Protein, Total Calories, Carbohydrates and Sodium. The outcome was such that, the most important component was the information of total calories on the menu, which was supported by 48% of participants (F=24, M=22; p=0.00) and (Mean=3.34). 45.9% participants considered information of sugar (F=20, M=25; p=0.00; Mean=3.45) and carbohydrate (F=21, M=24; p=0.00; Mean=3.37) content as the second most important component before choosing the food. Followed by 41.8% participants looks at cholesterol (F=20, M=18; p=0.00; Mean=3.35) and protein (F=24, M=16; p=0.00; Mean=3.30). Remaining fat and trans-fat (40.8%), sodium (37.6%) and least important factor were saturated fat (34.5%).

This result shows that total calories component is most important, followed by sugar and carbohydrate, cholesterol and protein and then fat and trans-fat. Also, the p-value of each statement was (p=0.00) so this support fourth hypothesis H4 (i.e. from the nutritional information on the menu card customer gives more important to macronutrients such as Fat content, total calories, carbohydrate and sugar present in the food item they order).\

Table 4:The result state which component influence the customer to purchase healthy food at restaurant.

How much does the presence of total calories and macro nutrient information on restaurant menu influence the intension to purchase an item?													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	3	(6.6)	5	(11.1)	21	(46.6)	13	(28.8)	3	(6.6)	45	(100.0)	0
male	7	(14.0)	5	(21.7)	23	(46.0)	11	(22.0)	4	(8.0)	50	(100.0)	
prefer not to say	0	0.0	1	(33.3)	2	(66.6)	0	0.0	0	0.0	3	(100.0)	
Total	10	(10.2)	11	(11.2)	46	(46.9)	24	(24.4)	7	(7.1)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (FAT)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	3	(6.6)	9	(2.0)	10	(22.2)	15	(33.3)	8	(17.7)	45	(100.0)	0
male	3	(6.0)	11	(22.0)	18	(36.0)	11	(22.0)	7	(14.0)	50	(100.0)	
prefer not to say	1	(33.3)	1	(33.3)	1	(33.3)	0	0.0	0	0.0	3	(100.0)	
Total	7	(7.1)	21	(21.4)	29	(29.5)	26	(26.5)	15	(15.3)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (Trans FAT)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	5	(11.1)	10	(22.2)	12	(26.6)	13	(28.8)	5	(11.1)	45	(100.0)	0
male	4	(8.0)	9	(18.0)	14	(28.0)	20	(40.0)	3	(6.6)	50	(100.0)	
prefer not to say	2	(66.6)	0	0.0	1	(33.3)	0	0.0	0	0.0	3	(100.0)	
Total	11	(11.2)	19	(19.3)	27	(27.5)	33	(33.6)	8	(8.1)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (Saturated FAT)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	2	(4.4)	13	(28.8)	14	(31.1)	12	(26.6)	4	(8.8)	45	(100.0)	0
male	2	(4.0)	14	(28.0)	16	(32.0)	11	(22.0)	7	(14.0)	50	(100.0)	
prefer not to say	0	0.0	1	(33.3)	1	(33.3)	1	(33.3)	0	0.0	3	(100.0)	
Total	4	(4.0)	48	(48.9)	31	(31.6)	24	(24.4)	11	(11.2)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (CHOLESTROL)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	2	(4.4)	8	(17.7)	14	(31.1)	16	(35.5)	5	(11.1)	45	(100.0)	0
male	3	(6.0)	15	(30.0)	14	(28.0)	6	(12.0)	12	(24.0)	50	(100.0)	
prefer not to say	0	0.0	0	0.0	0	0.0	3	(1.0)	0	0.0	3	(100.0)	
Total	5	(5.1)	23	(23.4)	28	(28.5)	25	(25.5)	17	(17.3)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (SUGAR)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	3	(6.6)	8	(17.7)	13	(28.8)	15	(33.3)	6	(13.3)	45	(100.0)	0
male	4	(8.0)	5	(10.0)	16	(32.0)	13	(26.0)	12	(24.0)	50	(100.0)	
prefer not to say	0	0.0	2	(66.6)	1	(33.3)	0	0.0	0	0.0	3	(100.0)	
Total	7	(7.1)	15	(15.3)	30	(30.6)	28	(28.5)	18	(18.3)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (PROTEIN)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	4	(8.8)	8	(17.7)	8	(17.7)	18	(36.0)	7	(15.5)	45	(100.0)	0
male	4	(8.0)	13	(26.0)	17	(34.0)	8	(16.0)	8	(16.0)	50	(100.0)	
prefer not to say	1	(33.3)	0	0.0	1	(33.3)	0	0.0	1	(33.3)	3	(100.0)	
Total	9	(9.1)	21	(21.4)	26	(26.5)	26	(26.5)	16	(16.3)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (TOTAL CALORIES)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	7	(15.5)	6	(13.3)	7	(15.5)	17	(37.7)	8	(17.7)	45	(100.0)	0
male	7	(14.0)	7	(14.0)	14	(28.0)	12	(24.0)	10	(20.0)	50	(100.0)	
prefer not to say	1	(33.3)	1	(33.3)	0	0.0	1	(33.3)	0	0.0	3	(100.0)	
Total	15	(15.3)	14	(14.2)	21	(21.4)	30	(30.6)	18	(18.3)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item? (CARBOHYDRATE)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	6	(13.3)	8	(17.7)	9	(2.0)	16	(35.5)	6	(13.3)	45	(100.0)	0
male	2	(4.0)	6	(12.0)	18	(36.0)	18	(36.0)	6	(12.0)	50	(100.0)	
prefer not to say	1	(33.3)	2	(66.6)	0	0.0	0	0.0	0	0.0	3	(100.0)	
Total	9	(9.1)	16	(16.3)	27	(27.5)	34	(34.6)	12	(12.2)	98	(100.0)	

If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(SODIUM)													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	4	(8.8)	9	(2.0)	13	(28.8)	16	(35.5)	3	(6.6)	45	(100.0)	0
male	5	(10.0)	8	(16.0)	19	(38.0)	12	(24.0)	6	(12.0)	50	(100.0)	
prefer not to say	1	(33.3)	0	0.0	1	(33.3)	1	(33.3)	0	0.0	3	(100.0)	
Total	10	(10.2)	17	(17.5)	33	(33.6)	29	(29.5)	9	(9.1)	98	(100.0)	

How you like to show about your concern about the number of calories you eat in your food?													
Gender	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Total		p value
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	(n)	(%)	
female	1	(2.2)	8	(17.7)	18	(4.0)	13	(28.8)	5	(11.1)	45	(100.0)	0
male	3	(6.0)	10	(20.0)	10	(20.0)	18	(36.0)	9	(18.0)	50	(100.0)	
prefer not to say	0	0.0	0	0.0	2	(66.6)	1	(33.3)	0	0.0	3	(100.0)	
Total	4	(4.1)	18	(18.3)	30	(30.6)	32	(32.6)	14	(14.2)	98	(100.0)	

5. Discussion

Four hypotheses were placed in the study to demonstrate the actual outcome of the research. Among all four hypotheses, the second hypothesis was rejected, and the rest three hypothesis was supported by the data. The current study states that majority of the participant were conscious about their health, and so, they agreed that nutrition information helps then to select healthier food option from menu card while dining at a restaurant. It was further analyzed that the participants who were in favour of nutrition information felt that it is essential for the restaurant to maintain calories content. Thus, the study showed that males compare to female are more aware of nutritional menu labelling and are more particular in selecting their food (base on calorie content) while having food at a restaurant. Most importantly, it was seen that maximum respondents who actively participated in the survey were falling under the age group 18-35. Avcibasioglu et al. (2011) stated that the survey conducted in California relating to the same topic (nutritional menu labelling) showed that females compared to males were using more nutritional information to select their food at the restaurant. The further author stated that the target population in the research showed positive responses towards the nutritional menu labelling law. Females should be the target customers of restaurants as they seem to be more influence towards nutritional information compare to men while dining out at a restaurant (Josam et al. 2009). Further author resulted that, the participants (males as well as females) were not having more knowledge about nutrition information. Though, the current study had revealed the result that the majority of male and female had knowledge about the nutrition information present in the menu card.

The current survey has revealed that majority participants agreed that nutritional information helps them to select healthier food options while dining at a restaurant. But at the time of ordering food when customers were asked 'whether they ever notice the nutritional information on the menu card?'. 53.6% (n=52) participants stated that they never notice nutritional information. Further, 53.9% of the participants stated that, neither they notice nor they used nutrition information before selecting food at the restaurant. Thus, this output does not support the second hypothesis (which is customer really care about the nutritional menu labelling at a restaurant). Hence current study shows that people are aware of the nutritional information and also accept that this information can help them to choose healthy food and live a healthy life. When it comes to the implementation of this law and knowledge in customers practical life, many neglects to do so and do not want to change their attitude. Though, when it comes to implementing the law and knowledge information

to select food in their daily routine, participants neither notice nor use the information before ordering food at a restaurant.

Limitation:

There were multiple limitations faced by the current study, as follows:

1 The questionnaire set for the current study was structured based on the questionnaire set used by previous researchers. Questionnaire set was taken from similar research carried out in seven papers. To get access to the questions, researcher emailed (the confirmation from the authors is available in appendix 1) authors of these seven papers out of which authors of four paper reverted back and granted permission to use the questionnaire set.

2 For the current study, initially, it was planned that the survey set would be distributed to the customers outside the restaurants in Dublin (especially areas like Rathgar, Rathmines, etc.). Restaurants did not grand the permission for this as they thought that this survey could have a negative impact on their customers.

3 The research was anonyms in nature. The researcher tried very best to approach maximum people in the selected area but compared to questionnaire sets distributed few people responded to the survey. Thus, this led to a limitation in finding the outcome.

6. Conclusion

The results and findings of this research show that it is essential for the restaurants to mention nutritional information on their menu. Also, consumers must take a serious look at this information before selecting and buying their food. As it is the alarming situation in Ireland. Through the survey, it can be stated that on one hand where people in Ireland are showing awareness about this law (Nutritional menu labelling law) and are even conscious about their health on other hands some are totally neglecting this information.

It was also seen that young generation (people falling in the age group between 18 to 34) are more educated and aware of this law. Also, they know the importance and benefits of nutritional information. It was little surprise that more males compared to females showed more interest as well as concern about the calorie content in the food item they eat.as few previous studies have demonstrated that generally, females are more conscious about the calorie intake. Also, more men agreed that in future they would look at the nutrition information before they select food.

Through the current study, the information of calories, total fat, trans fat, carbohydrate, sugar, protein, were considered main elements by the consumer. This shows that if correct information of all these elements (present in food item ordered by the customer) is mentioned then the chances are that, the customer would not prefer to buy food item which has a higher content of the above-mentioned nutrients. It was observed through some studies that, nowadays, some customers do not prefer to buy food when they see the content of total calories and fat in it (Mayfield, 2011). This is because people are becoming aware of the side-effects caused due to more intake of calories and fat.

Where few participants showed a positive attitude towards this law and showed that they would not prefer to dine at restaurants which do not mention the nutritional information. On the other hand, some showed a totally negative attitude. This means that up to some extent, this might reduce the risk of Ireland to become the fattest nation in the near future. The above discussion demonstrated to put more effort, and some effective and efficient marketing strategy should be implemented to aware people and also restaurants about this topic.

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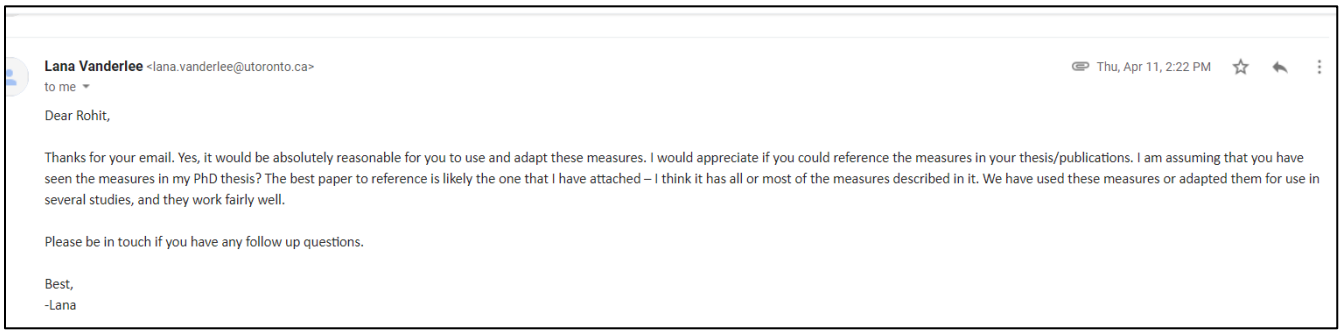
8. Appendix

APPENDIX: 1

Permission to use Questionnaire

(1)



Lana Vanderlee <lana.vanderlee@utoronto.ca>
to me

Thu, Apr 11, 2:22 PM

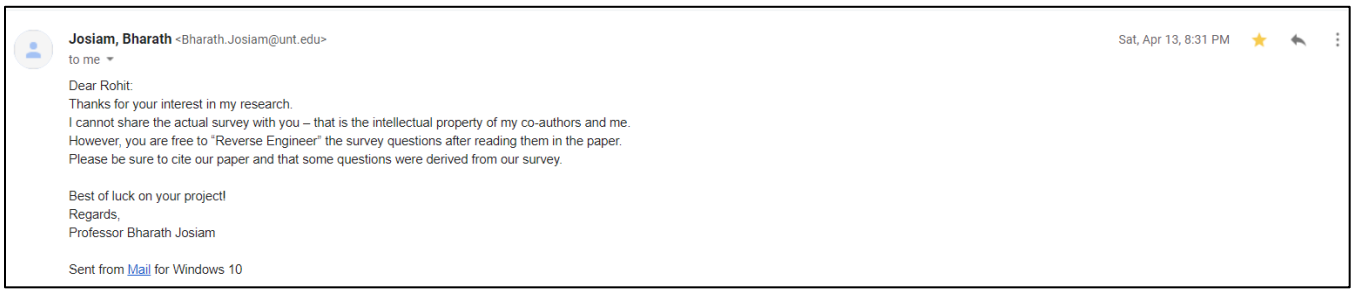
Dear Rohit,

Thanks for your email. Yes, it would be absolutely reasonable for you to use and adapt these measures. I would appreciate if you could reference the measures in your thesis/publications. I am assuming that you have seen the measures in my PhD thesis? The best paper to reference is likely the one that I have attached – I think it has all or most of the measures described in it. We have used these measures or adapted them for use in several studies, and they work fairly well.

Please be in touch if you have any follow up questions.

Best,
-Lana

(2)



Josiam, Bharath <Bharath.Josiam@unt.edu>
to me

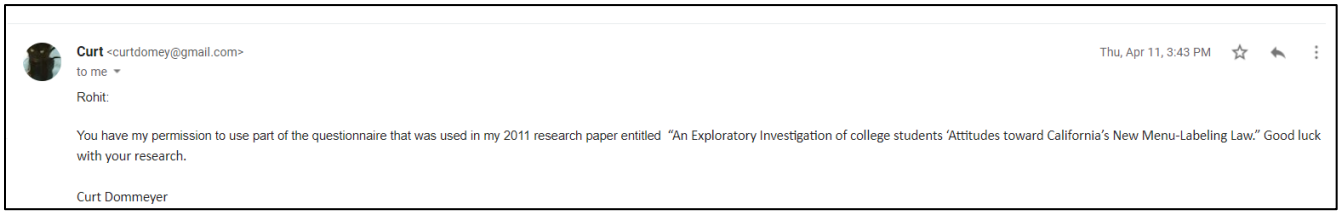
Sat, Apr 13, 8:31 PM

Dear Rohit:
Thanks for your interest in my research.
I cannot share the actual survey with you – that is the intellectual property of my co-authors and me.
However, you are free to "Reverse Engineer" the survey questions after reading them in the paper.
Please be sure to cite our paper and that some questions were derived from our survey.

Best of luck on your project!
Regards,
Professor Bharath Josiam

Sent from Mail for Windows 10

(3)



Curt <curtdomey@gmail.com>
to me

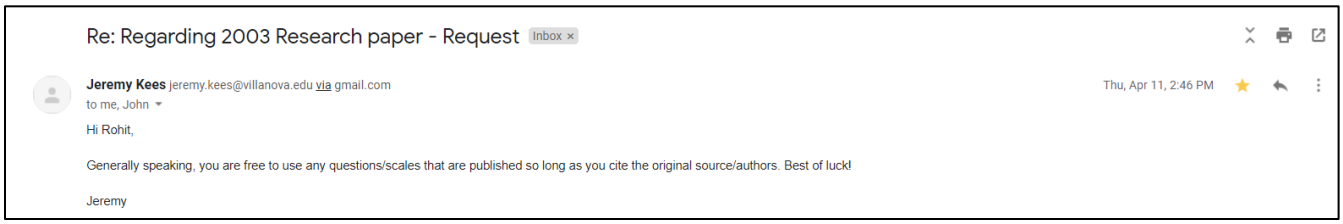
Thu, Apr 11, 3:43 PM

Rohit:

You have my permission to use part of the questionnaire that was used in my 2011 research paper entitled "An Exploratory Investigation of college students 'Attitudes toward California's New Menu-Labeling Law." Good luck with your research.

Curt Dommeyer

(4)



Re: Regarding 2003 Research paper - Request Inbox ×

Jeremy Kees jeremy.kees@villanova.edu via gmail.com
to me, John

Thu, Apr 11, 2:46 PM

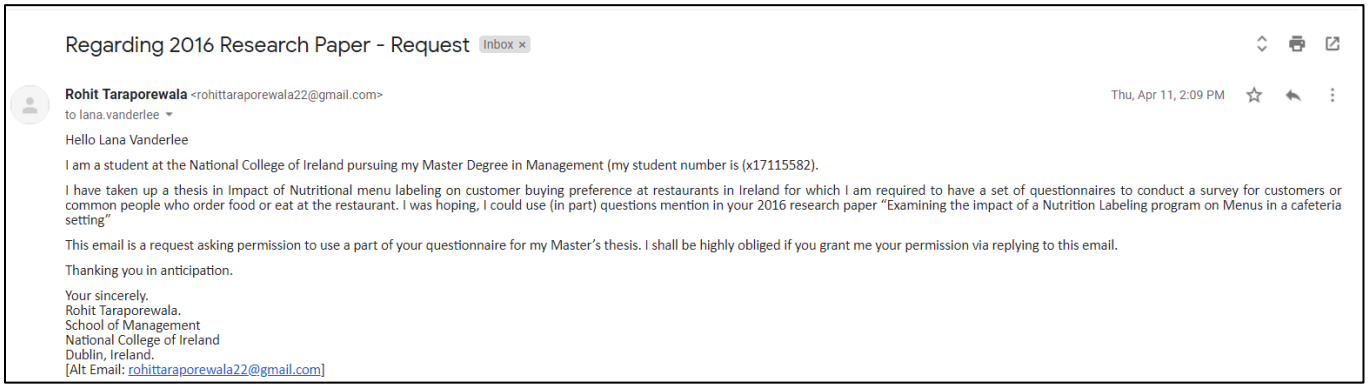
Hi Rohit,

Generally speaking, you are free to use any questions/scales that are published so long as you cite the original source/authors. Best of luck!

Jeremy

APPENDIX: 2

Permission for Paper Request



Regarding 2016 Research Paper - Request Inbox ×

Rohit Taraporewala <rohittaraporewala22@gmail.com> Thu, Apr 11, 2:09 PM

to lana.vanderlee

Hello Lana Vanderlee

I am a student at the National College of Ireland pursuing my Master Degree in Management (my student number is (x17115582).

I have taken up a thesis in Impact of Nutritional menu labeling on customer buying preference at restaurants in Ireland for which I am required to have a set of questionnaires to conduct a survey for customers or common people who order food or eat at the restaurant. I was hoping, I could use (in part) questions mention in your 2016 research paper "Examining the impact of a Nutrition Labeling program on Menus in a cafeteria setting"

This email is a request asking permission to use a part of your questionnaire for my Master's thesis. I shall be highly obliged if you grant me your permission via replying to this email.

Thanking you in anticipation.

Your sincerely.
Rohit Taraporewala.
School of Management
National College of Ireland
Dublin, Ireland.
[Alt Email: rohittaraporewala22@gmail.com]

APPENDIX: 3

Survey Questionnaire

Impact of Nutritional Menu Labeling on customer buying preference at restaurant (Main questionnaires: Customer)

Age: ☐ 10-35 ☐ 36-60 ☐ Other

Gender: ☐ Female ☐ Male ☐ Prefer Not say

Education Level: ☐ Diploma ☐ Degree ☐ PhD

How you would like to rate your fitness: ☐ Underweight ☐ Normal Weight ☐ Overweight ☐ Obese

Frequency You eat at Restaurant: ☐ Everyday ☐ Most day a week ☐ Few days week ☐ Few Days a month ☐ Don't prefer restaurant food

Please tick the desire answer (1 – 7):

	Yes	No	Prefer Not to Say
1. Do you notice Nutrition Information when it is posted on menu?	☐	☐	☐
2. Do you use Nutrition Information on menu to select food before ordering?	☐	☐	☐
3. Do Nutritional Information help you to choose right food from menu at restaurant?	☐	☐	☐
4. Do you care less whether restaurant having nutrition information or not?	☐	☐	☐
5. Are you quite knowledgeable about Nutrition Information?	☐	☐	☐
6. If the Calories information was provided on menu and you learned that your typical meal had calories value much higher than you excepted, would this information impact your meal purchasing decision? 7. Do you believe that calories information should be required on restaurant menu?	☐	☐	☐

Please consider the following statement (8 – 13) and provide a level of (Dis) agreement where as: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree or Disagree, 4 =Agree, 5 = Strongly Agree.

	Strongly Disagree **[1]**	Disagree **[2]**	Neither Agree or Disagree **[3]**	Agree **[4]**	Strongly Agree **[5]**
8. How much does the presence of total calories and macro nutrient information on restaurant menu influence the intension to purchase an item?	☐	☐	☐	☐	☐
9. Do you choose to eat healthy at home rather than in restaurant?	☐	☐	☐	☐	☐
10. If Nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?					
☐ Fat	☐	☐	☐	☐	☐
☐ Saturated Fat	☐	☐	☐	☐	☐
☐ Trans Fat	☐	☐	☐	☐	☐
☐ Cholesterol	☐	☐	☐	☐	☐
☐ Sugar	☐	☐	☐	☐	☐
☐ protein	☐	☐	☐	☐	☐
☐ Total calories	☐	☐	☐	☐	☐
☐ Carbohydrate	☐	☐	☐	☐	☐
☐ Sodium	☐	☐	☐	☐	☐
11. When you eat at restaurant, Is healthy and nutrition food important for you.?	☐	☐	☐	☐	☐
12. How you rate about your concern about the number of calories you eat in your food?	☐	☐	☐	☐	☐
13. Do you follow and consider the law of nutritional menu labeling?	☐	☐	☐	☐	☐

APPENDIX: 4

Data Dictionary of Research

Column	Abrevation	Full Name of Variable	Definition of Variable	Source	Type of Variable			Coding Option
					Qualitative/ Quantitative	Categorical/ Discr/Contin	Level of Measurement	
A1	1.1	Age	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=18-35;2=36-60;3=61and above;999=missing/unknown
A2	1.2	Gender	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Female;2=male;3=prefer not to say;999=missing/unknown
A3	1.3	Education Level	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Diploma;2=degree;3=phd;4=none;999=missing/unknown
A4	1.4	How you would like to rate your fitness	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=under weight;2=Normal weight; 3=overweight;4=Obese;999=missing/unknown
A5	1.5	Frequrency you eat at Resturant	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=everyday;2=most day a week;3=few day a week;4=few day a month;5=don't prefer restaurant food;999=missing/unknown
A	Q1	Do you notice Nutritional information when it is posted on menu	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
B	Q2	Do you use Nutritional Information on menu to select food before ordering?	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
C	3	Do Nutritional Information help you to choose right food from menu at resturant	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
D	4	Do you care less whether restaurant having nutrition information or not?	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
E	5	Are you quite knowledgeable abouty Nutritional Information?	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
F	6	Is there a risk that your work could lead to others being injured?	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nominal	1=Yes;2=No;3=prefer not to say;999=missing/unknown
G	7	do you believe that Calories information should be required on restaurant mneu?	Question Self Explanatory	Survey Instrument	Qualitative	Categorical	Nomial	1=Yes;2=No;3=prefer not to say;999=missing/unknown
H	8	How much does the presence of total calories and macro nutrient information on resturant menu infuenece the intension to purchase an item?	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
I	9	Do you choose to eat healthy at home rather than restaurant?	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.1	10	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (FAT)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown

J.2	11	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (SATURATED FAT)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.3	12	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (TRANS FAT)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.4	13	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (CHOLESTROL)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.5	14	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (SUGAR)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.6	15	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (PROTEIN)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
J.7	16	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (TOTAL CALORIES)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agreen;999=missing/unknown
J.8	17	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (CARBOHYDRATE)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;6=Prefer not to say;999=Missing/Unknown;999=missing/unknown
J.9	18	If Nutritonal information is presented on a restaurnt menu will the amount of the following nutriton influence your decision to purchase the food item? (SODIUM)	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
K	19	When you eat at restaurant, is healthy and nutriton food important for you?	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
L	20	How you would like to show about your concern about the number of calories you eat in your food?	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown
M	21	Do you consider and follow the law of nutritonal menu labelling?	Question Self Explanatory	Survey Instrument	Quantitative	Categorical	Ordinal	1=Strongly Disagree;2=Disagree;3=Neither Agree or Disagree;4=Agree;5=Strongly Agree;999=missing/unknown

Appendix: 5

Pearson Correlation Coefficient

Inter-Item Correlation Matrix

	How much does the presence of total calories and macro nutrient information on restaurant menu influence the intension to purchase an item?	Do you choose to eat healthy at home rather than in restaurant?	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(FAT)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Saturated FAT)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Trans FAT)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(cholestrol)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(sugar)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(protein)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(total calories)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Carbohydrate)	If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food	When you eat at restaurant, is healthy and nutrition food important for you?	How you like to show about your concern about the number of calories you eat in your food?	Do you consider and follow the law of nutritionla menu labeling?
How much does the presence of total calories and macro nutrient information on restaurant menu influence the intension to purchase an item?	1.000	0.229	0.339	0.064	0.223	0.204	0.154	0.123	0.155	0.278	0.256	0.265	0.333	0.372
Do you choose to eat healthy at home rather than in restaurant?	0.229	1.000	0.250	0.129	0.270	0.184	0.142	0.130	0.241	0.221	0.007	0.180	0.256	0.193
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(FAT)	0.339	0.250	1.000	0.457	0.525	0.476	0.216	0.454	0.343	0.449	0.396	0.364	0.340	0.296
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Saturated FAT)	0.064	0.129	0.457	1.000	0.473	0.378	0.301	0.241	0.308	0.338	0.351	0.226	0.199	0.224
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Trans FAT)	0.223	0.270	0.525	0.473	1.000	0.413	0.294	0.212	0.255	0.440	0.328	0.099	0.304	0.286
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(cholestrol)	0.204	0.184	0.476	0.378	0.413	1.000	0.377	0.435	0.399	0.419	0.535	0.284	0.293	0.266
f nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(sugar)	0.154	0.142	0.216	0.301	0.294	0.377	1.000	0.153	0.384	0.400	0.378	0.229	0.257	0.287
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(protein)	0.129	0.130	0.454	0.241	0.212	0.435	0.153	1.000	0.440	0.402	0.387	0.337	0.077	0.290
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(total calories)	0.155	0.241	0.343	0.308	0.255	0.399	0.384	0.440	1.000	0.486	0.359	0.307	0.360	0.131
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Carbohydrate)	0.278	0.221	0.449	0.338	0.440	0.419	0.400	0.402	0.486	1.000	0.439	0.308	0.283	0.375
If nutritional information is presented on a restaurant menu will the amount of the following nutrition influence your decision to purchase the food item?(Sodium)	0.256	0.007	0.396	0.351	0.328	0.535	0.378	0.387	0.359	0.439	1.000	0.492	0.297	0.230
When you eat at restaurant, is healthy and nutrition food important for you?	0.265	0.180	0.364	0.226	0.099	0.284	0.229	0.337	0.307	0.308	0.492	1.000	0.316	0.375
How you like to show about your concern about the number of calories you eat in your food?	0.333	0.256	0.340	0.199	0.304	0.293	0.257	0.077	0.360	0.283	0.297	0.316	1.000	0.446
Do you consider and follow the law of nutritionla menu labeling?	0.372	0.193	0.296	0.224	0.286	0.266	0.287	0.290	0.131	0.375	0.230	0.375	0.446	1.000

APPENDIX 6

Template for survey

APPENDIX 7

Cronbach Alpha

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.858	0.858	14