



# Consumers Perception on the Importance of Food Labels in Benghazi/Libya

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## ABSTRACT

Food label is one of the most important direct means of communication of product information between consumers and food manufactures. The current study aims to determine the extent to which consumers understand the importance of food label. A descriptive cross sectional study was conducted at supermarkets and malls in Benghazi city. Study included four hundred participants, data were collected by questionnaires. Data were analyzed by using descriptive statistics. *Chi-Square* test used to examine the significant differences in the sample. The majority of participants were male, young and most of them were married, employers with high education level and middle income level. Results from this study indicated highly participants perception on the importance of food labels. However, more than (80%) of the present study population were perceived food labeling as very much important information, statistically significant difference in perceiving food labeling as important information was reflected by the *chi-square* test among participants with different levels of education, different genders and different occupations. Findings from this study will facilitate future public education efforts to promote the use of food labels.

**Keywords:** Perception; Benghazi; Consumers; Food; Labels; Socio-demographic

## INTRODUCTION

Food labeling includes any written, printed, or graphic matter that is presented on the label accompanying the food, or is displayed near food for the purpose of promoting its sale. "Pre packaged" or "pre packed food", means food, which is placed in a package of any nature, in such a manner that the contents cannot be changed without tampering it and which is ready for sale to the consumer. Food label is one of the most important direct means of communication of product

information between consumers and food manufactures. In addition, food labels found to be very important public health tools that are assist people who are on special diet or with nutrition related health problems and diseases such as obesity, diabetics, cardiovascular diseases and various types of cancers, as it helps them to make informed choices of food. Though food labelling itself is not sufficient to change eating habits, it can be an important motivating tool in the fight against obesity and chronic diseases which are related to nutrition. The underlying hope is that if consumers have

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reliable information available at the point of purchase and if they understand how their diet affect their risk of different disease, they will make risk-reducing food choices. Ultimately, this change in behavior could reduce the costs to society of treating conditions such as heart disease and some cancers. Poor nutrition knowledge may reduce the ability of some consumers to interpret the nutrition information. Study conducted in Malawi by Kasapila W and Shawa P, showed that among all label users (n=60), (7.3%) reported to understand well what they read on the nutrition panel, (18.9%) understood it partly and the rest (73.8%) did not understand the numerical information and terminology used. Moreover, the rural consumers were not familiar with the English language (64.3%) on food packages. The progressive opening of frontiers and the development of international trade have exposed both producer and consumer to a wide variety of products and brands of diverse origins. Such a situation has increased the choice opportunities offered to consumers and engaged companies into a fierce competition race. So that, packaging seems to be one of the most important factors in purchase decisions made at the point of sale. Visual elements, such as graphics, colour, size and the shape of packaging, as well as informational elements, such as the product information printed on labels or packaging and technologies used, can potentially influence consumer's purchasing decisions. When foods are packaged in bags, boxes, bottles, cans and wrappers, the consumer cannot know the quality and quantity of the food through their senses of sight, smell, taste and touch. This means that the producer has information about the product that is not known to the consumer. Therefore, a lack of information (*i.e.* information asymmetry) between producers and consumers might not allow consumers from making informed purchase decisions and not allow them to have insights into the implications of their purchase decisions on the food supply chain. In order to make people feel more responsible about their diet, and to induce them to make informed choices, hopefully opting for high quality food, several communication strategies have been taken. One of the simplest deals with food labels, which can provide some useful elements helping us to control our diet. A label serves the following three primary functions, namely, basic product information, healthy safety and nutrition information, and it also act as vehicle for food marketing, promotion and advertising. Potentially, food labelling is a community based approach providing information to consumers about the nutrient content of a food in order to make food selection environment more favorable to healthy choices. This information, along with a knowledge of basic nutrition principles leads to informed food purchase decisions. With regard to food purchasing, food labels have hence probably become the most important and most influential factor during consumer decision making, because most of the information that consumers require, such as branding and product ingredients, are printed on product labels that are prominently attached to the packaging, or form an integral part of the packaging. Kumar N and Kapoor S studied influence and usage of food labels on consumers purchase decision in India. A total number of samples involved in the study were 300 randomly selected

youths of age between 18 and 30 years. The result of study found that about (90%) of respondents gave importance to the food label while making their purchase decisions. In addition to, price, all the product attributes which had implications for the consumers health were considered as extremely important by the young consumers. In Pakistan, study carried out by Raheem A, and others, to determine role of packaging and labelling on Pakistani consumer's purchase decisions. The study conducted on 100 respondents through using a questionnaire. The results showed that the packaging and labelling were the most important factors affect consumer's purchase behaviors. Furthermore, the packaging elements like its color, packaging material, design of wrapper and innovation are more important factors while consumers making any buying decision. Cecchini M, and Warin L examined the importance of food labelling in increasing the selection of healthier products and in reducing calorie intake. The study compares the relative effectiveness of Traffic Light (TL) schemes, Guideline Daily Amount (GDA) and other food labelling schemes. The conclusion of this study found that food labelling would increase the amount of people selecting a healthier food product by about (17.95%). Food labelling would also decrease calorie intake/choice by about (3.59%), but there were not statistically significant. Also the study that traffic light schemes are marginally more effective in increasing the selection of healthier options. Benghazi is the second largest city in Libya and estimated to have a total population of 500,000 according to the national census in 2012. In Libya especially in Benghazi city, the information available in regard to consumer perception on food label was very meagre, therefore the present study is worthwhile and it will determine the extent to which consumers understand the importance of food labels. Findings from this study will facilitate future public education efforts to promote the use of food labels [1-8].

## MATERIALS AND METHODS

400 randomly selected Libyan adults aged 18 years and above were enrolled in the study. The subjects were purchasing pre packaged foods from 21 supermarkets and malls in Benghazi city between March and September 2019. The study sample represents 63% of the total population in Benghazi city according to the national census in 2012. Five regions were excluded from the study because they were going through hard post- war times during the study period. The non-Libyan citizens were excluded, since they may have different culture and attitude towards food labelling. Data were collected by using close ended questions questionnaire. The questionnaires were filled by one of the researchers. The questionnaire was based on the questions of previous studies with some modifications (2,10,18,19). Data entry and analysis were performed using the Statistical Package for Social Sciences (SPSS) version 20. *Chi square* test was performed to assess statistical significance between the socio-demographic characteristics of respondents and awareness of food labelling information. If ( $P < 0.05$ ) was considered statistically significant. Ethical approval for conducting this study was obtained from the directorate of graduate studies and training

of University of Benghazi. Permission to conduct the study in supermarkets and malls was obtained from the managers of each supermarket and mall. Informed consent was obtained from the participants [9-14].

## RESULTS

**Table 1** shows the participants characteristics. The largest

proportion of participants (45.8%) was in the age group 29 to 39 years. (74.3%) of participants were males; 25.8 were females. In addition, (54.5%) of participants were married. (43%) of participants had college/university education, followed by (40.8%) had secondary education. Furthermore, (38.8%) of participants earned a monthly income 550 to 749 Libyan Dinar (LYD). Moreover, employed, freelancers were account (69.5%), (20.5%) respectively [15,16].

**Table 1:** Scio-demographic characteristics.

Variables	Number	Percentage
Age (years)		
18-28	56	14
29-39	183	45.8
40-50	119	29.8
51-60	37	9.3
>60	5	1.3
Gender		
Male	297	74.3
Female	103	25.8
Marital status		
Single	180	45
Married	218	54.5
Widowed	0	0
Divorced	0	0.5
Education		
Primary	64	16
Secondary	163	40.8
University Level	172	43
No formal education	1	0.3
Income (Libyan dinars)		
350-549	48	12
550-749	155	38.8
750-949	141	35.3
>950	56	14
Occupation		
Student	35	8.8
Employee	278	69.5
Retired	4	1

Unemployed	1	0.3
Freelancers	82	20.5

Figure 1 shows that eighty percent of participants were perceived food labelling as very much important information, while eighteen point eight percent claimed to be moderately important, only one point three percent of participants claimed to be minimally important, and no one of participants claimed that food labelling on pre-packaged foods to be unimportant information.

Figure 3 shows that the majority of participants (eighty eight point five percent) reported to use pre-packaged food labels prior purchase of such foods, and only eleven point five percent of them had never use the food labels in their purchasing decision.

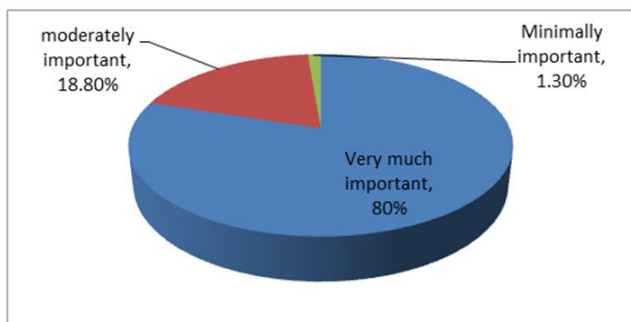


Figure 1: Distribution of participants according to importance food labelling information.

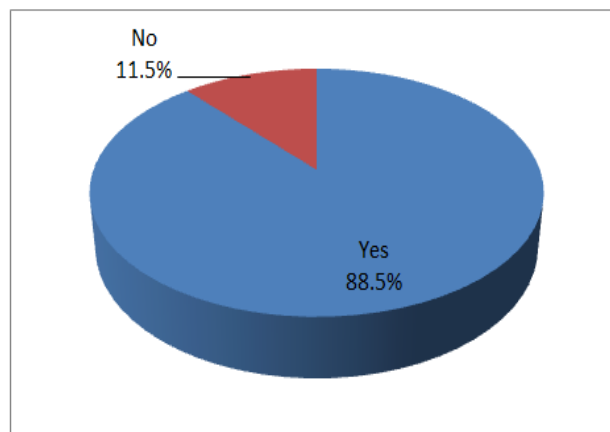


Figure 3: Distribution of participants according to use of food labels in purchasing decision.

Figure 2 shows that half of participants were totally confide in food labels, forty one point five percent partially agreed on that, while five point three percent were neutral. In contrast one point three percent totally disagreed, and only point five percent of participants partially insecure about food labels.

Table 2 shows the regarding to how does food labels help in selecting the food items; the result shows that more than half of participants read food labels to distinguish between different products, followed by nineteen point three percent to help in compare the nutrient content of different products, while fifteen point three percent to help avoid some nutrients, and only twelve point three percent of participants use food labels to select foods which contain nutrients they need.

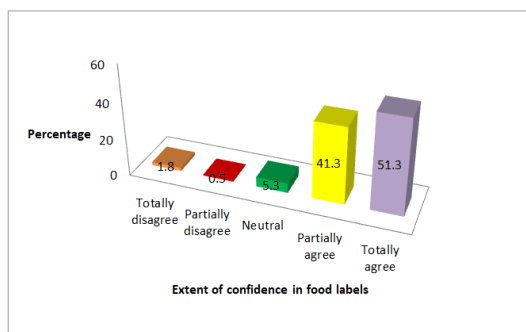


Figure 2: Distribution of participants according to extent of confidence in food labels.

Table 2: Distribution of the participants according to use of food label in the food items selecting.

Importance of food labels	No.	%
To distinguish between different products	243	58.5
To help avoid some nutrients	61	15.3
To select foods which contain nutrients they need	49	12.3
To compare the nutrient content of different products	77	19.3

Table 3 shows association between socio-demographic characteristics and perception of importance of food labelling,

association between socio-demographic characteristics and confidence in food label components.

**Table 3:** Association between socio-demographic characteristics and perception of food labelling.

Socio-demographic variables	Awareness level of food labels	
	$\chi^2$	P
Perception of importance of food labelling		
Age	7.834	0.45
Gender	7.742	0.021
Marital status	4.329	0.363
Education	18.537	0.001
Income	10.076	0.122
occupation	23.659	0.003
Confidence in food label components		
Age	21.677	0.154
Gender	4.767	0.312
Marital status	8.478	0.388
Education	27.24	0.001
Income	21.258	0.047
occupation	21.385	0.164

## DISCUSSION

As indicated in **Table 1**, most of participants were aged from twenty nine years old to fifty years old with (75.6%) of the total participants. The majority of participants were male with (74.3%). The majority of the study participants were middle-income earners. Accordingly, individuals who purchase pre-packaged food products in Benghazi city were male, young or middle ages and most of them were married. As shown in **Figure 1**, results from this study indicated highly participant's perception on the importance of food labels. However, more than three quarters of the present study population (80%) were perceived food labelling as very much important information, while (18.8%) claimed to be moderately important, and (1.3%) were claimed to be minimally important information. As shown in **Table 3**, statistically significant difference in perceiving food labelling as important information was reflected by the chi-square test among participants with different levels of education ( $P=0.001$ ) ( $\chi^2=18.537$ ), different genders ( $P=0.021$ ) ( $\chi^2=7.742$ ) and different occupations ( $P=0.003$ ) ( $\chi^2=23.659$ ). This implies that perception of food labelling as important information increase as level of education increased, males were more aware of food labelling as important information than the females, while formal employment had more potential to influence one's perception on the importance of food labelling than informal employment. So that the highly education level among the participants (43% university, 40% secondary) may

explain that (80%) of the sample indicated that the presence of food label on pre-packaged foods as very much important information. A similar study done at Nellore district, India, had agreed with present study result. The study shown that two-thirds (60%) of participants feel food labelling is very important, while (20%) feel it's somewhat important, (11%) feel it's minimally important, and (9%) were feeling it's not important. This result was quite consistent to a cross-sectional survey in India, aimed to study influence and usage of food labels on consumer's purchasing decision. The study which revealed that approximately (90%) of participants gave importance to the food labels, somewhat important (9.2%), and not important (2.2%). Moreover, the results of present study were agreed with the findings of a similar study done at Bahrain, where a total of 430 individuals participated in the survey which aimed to assess consumer's knowledge, attitudes and practices towards food labelling. This study showed that in the total sample (48.4%) perceived reading food label as very important, (36.5%) respondents perceived it as moderately important, while (15.3%) respondents perceived reading food label as not important. Extent of confidence of food label as shown in **Figure 2**, that (51.5%) of the total participants totally agreed that the information on food labels was helpful and it can be trusted, (41.5%) partially agreed, and only (5.3%) neutral (1.3%) totally disagree, while (0.5%) partially disagree. Among the social demographic characteristics of respondents, results have shown statistically significant relationships between level of education ( $P=0.001$ ) ( $\chi^2=27.240$ ) and income ( $P=0.047$ ) ( $\chi^2=21.258$ ) with the extent

of confidence about food labelling. These results suggested that may probably be highly educated men as well as women were becoming increasingly aware of diet and health and it is those who perceive diet as important to their lifestyle who were more likely to use and confidence food label information [17-19]. In comparable study were done among consumers who were found purchasing pre-packaged foods in selected supermarkets in India, included 200 participants aged between 20 and 60 years, had revealed that more than a half (51%) of participants agreed that the information that was provided on the food label can be trusted, (31%) partially agree, (8.5%) neutral, (2.5%) totally disagree.

## CONCLUSION

Individuals who purchase pre-packaged food products in Benghazi city were male, young or middle ages and most of them were married. Employers with high education level and middle-income were the predominate categories. Participants shown highly perception of importance of food labels, which significantly affected by socio-demographic characteristics including gender and education level, occupation and income. Special efforts should be made to enhance Benghazi population about food labels among the lower educated consumers by encouraging them through public education to look out for food label information on pre-packaged foods they purchase.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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