

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

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].

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.

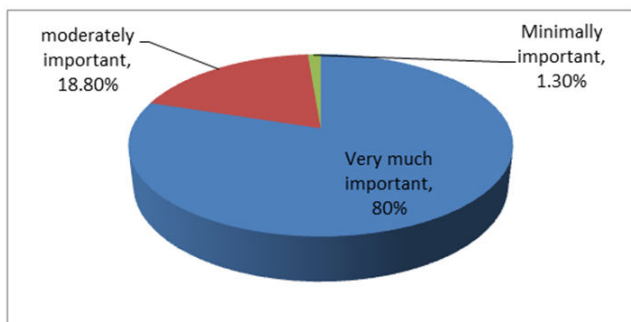


Figure 1: Distribution of participants according to importance food labelling information.

Figure 2 shows that half of participants were totally confident 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.

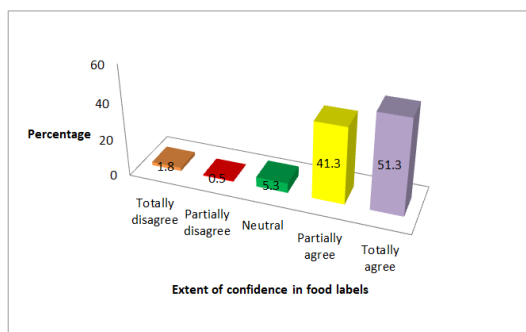


Figure 2: Distribution of participants according to extent of confidence in food labels.

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.

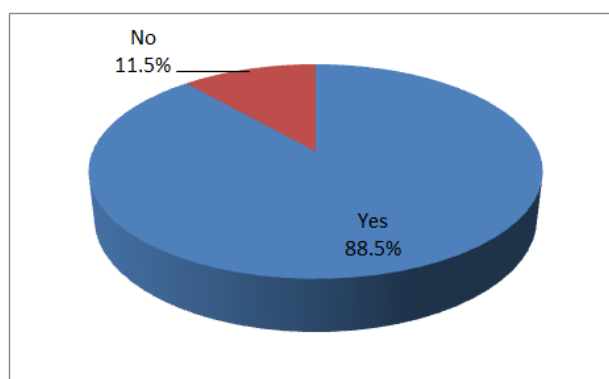


Figure 3: Distribution of participants according to use of food labels in purchasing decision.

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.

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	
	χ^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.

ACKNOWLEDGEMENTS

Authors are grateful to all subjects who participated in the study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ababio PF, Adi DD, Amoah M (2012) Evaluating the awareness and importance of food labelling information among consumers in the Kumasi metropolis of Ghana. *Food Control*. 26(2):571-574.
2. Bacarella S, Altamore L, Valdesi V, Chironi S, Ingrassia M (2015) Importance of food labeling as a means of information and traceability according to consumers. *Adv Horti Sci*. 29(3):145-151.
3. Balasubramanian SK, Cole C (2002) Consumers search and use of nutrition information: The challenge and promise of the nutrition labeling and education act. *J Mark*. 66(3):112-127.
4. Cecchini M, Warin L (2016) Impact of food labelling systems on food choices and eating behaviours: A systematic review and meta-analysis of randomized studies. *Obes Rev*. 17(3):201-210.
5. Cowburn G, Stockley (2005) Consumer understanding and use of nutrition labelling: A systematic review. *Public Health Nutr*. 8(1):21-28.
6. Dutta S, Patel D (2017) Study of consumer awareness on food labeling and use of pack information for purchase of pre-packaged food products. *Int J Indian Psychol*. 4(4): 63-74.
7. Jadapalli M, Somavarapu S (2018) A Survey on perception of food labels among the population of Nellore District. *Am J Food Nutr*. 5(1):1-16.
8. Jain S, Gomathi R, Kar SS (2018) Consumer awareness and status of food labeling in selected supermarkets of Puducherry: An exploratory study. *Int J Adv Med Health Res*. 5(1):36-40.
9. Jeddi N, Zaiem I (2010) The impact of label perception on the consumers purchase intention: An application on food products. *IBIMA Bus Rev*. 476659:1-14.
10. Kasapila W, Shawa P (2011) Use and understanding of nutrition labels among consumers in Lilongwe (Malawi). *Afr J Food Agric Nutr Dev*. 11(5):5171-5186.
11. Kumar N, Kapoor S (2017) Do labels influence purchase decisions of food products? Study of young consumers of an emerging market. *Br Food J*. 119(2):218-229.
12. Mahdavi AM, Abdolahi P, Mahdavi R (2012) Knowledge, attitude and practice between medical and non-medical sciences students about food labeling. *Health Promot Perspect*. 2(2):173-179.
13. Nouh F (2021) Prevalence of Food Insecurity in Eastern Part of Libya: A Study of Associated Factors. *Sch Acad J Biosci*. 9(8):192-198.
14. Prendergast PG, Pitt L (1996) Packaging, marketing, logistics and the environment: Are there trade-offs?. *Int J Phys Distrib Manag*. 26(6):60-72.
15. Prinsloo N, Merwe VDD, Bosman M, Erasmus AC (2012) A critical review of the significance of food labelling during consumer decision making. *J Fam Ecol Consum Sci*. 40:83-95.
16. Raheem AR, Nawaz A, Vishnu P, Imamuddin K (2014) Role of packaging and labelling on Pakistani consumers purchase decision. *Eur Sci J*. 10(16):464-473.
17. Viola GCV, Bianchi F, Croce E, Ceretti E (2016) Are food labels effective as a means of health prevention? *J Public Health Res*. 5(3):768.
18. Wahab RA (2014) Food label use and awareness of nutritional information among consumers in Bahrain: An exploratory study. *KnE Life Sciences*. 4(6):26-36.
19. Washi S (2012) Awareness of food labeling among consumers in groceries in Al-Ain, United Arab Emirates. *Int J Mark Stud*. 4(1):38-48.