DOI: https://doi.org/10.54393/pjhs.v4i04.442



PAKISTAN JOURNAL OF HEALTH SCIENCES

https://thejas.com.pk/index.php/pjhs Volume 4, Issue 4 (April 2023)



Original Article

Awareness About Nutrition Facts on Food Labels and Their Influence on Food Selection Among Consumers

ABSTRACT

Fuad Hameed Rai¹, Kinza Jalal², Zahra Hussain², Aliezeh Fatima Rai³, Mahliqa Maqsud⁴ and Maham khan²

¹Department of Community Medicine, Akhtar Saeed Medical College, Rawalpindi, Pakistan ²College of Allied Health Sciences, Akhtar Saeed Medical and Dental College, Lahore, Pakistan ³CMH Medical College, Lahore, Pakistan

⁴Services Institute of Medical Sciences, Lahore, Pakistan

ARTICLE INFO

Key Words:

Nutrition Facts, Food Labels, Awareness, Eating Habits

How to Cite:

Rai, F. H. ., Jalal, K. ., Hussain, Z. ., Fatima Rai, A. ., Maqsud , M. ., & Khan, M. . (2023). Awareness About Nutrition Facts on Food Labels and Their Influence on Food Selection Among Consumers: Nutrition Facts on Food Labels. Pakistan Journal of Health Sciences, 4(04).

https://doi.org/10.54393/pjhs.v4i04.442

*Corresponding Author:

Fuad Hameed Rai Department of Community Medicine, Akhtar Saeed Medical College, Rawalpindi, Pakistan drfuadrai@yahoo.co.uk

Received Date: 12th December, 2022 Acceptance Date: 18th April, 2023 Published Date: 30th April, 2023

INTRODUCTION

Nutrition facts on food labels contain complete information about nutrients (fats, proteins, cholesterol, salt, sugar and vitamins) and calorie content of packaged food items. In present time, awareness about the use of food labels is important because various health related conditions are prevailing due to consumption of unhealthy food product[1]. While buying any food product consumers must keep in mind to read nutrition facts on food labels, which helps them to identify whether that product is healthy or not. Most consumers are choosing unhealthy products because they are unaware of food labels or they cannot read information on labels, as it is difficult to understand [2]. A study was conducted in Maryland, to evaluate that the consumers are interested in what type of information on food labels, and conclusion was made that calorie information was mostly viewed information on nutrition facts panel [3]. This information helps in prevention of various diseases related to food intake like obesity, hypertension, diabetes and many more. In many countries like US, it is mandatory to provide nutrition facts panel on all packaged food items so that, consumers can adopt healthy eating patterns according to their

Nutrition facts on food labels contain complete information about nutrients (fats, proteins, cholesterol, salt, sugar and vitamins) and calorie content of packaged food items. **Objective:** To determine the awareness about nutrition facts on food labels and their influence on food selection among consumers. **Methods:** This is a cross-sectional study and was done by using self-designed questionnaire, among 206 individuals of age group between 18 to 65 years, which were selected from different grocery stores and nearby area, after getting their consent. **Results:** Study findings revealed that around 53% of selected respondents sometimes read nutrition facts on food labels, only 13.1% consumers always read nutrition facts, 14.5% of them never read food labels and only 39% changed their purchasing decision after reading food labels. Results also showed that 48.1% of consumers found nutrition facts helpful and reliable and 60% respondents felt confident an made better choices after reading food labels. **Conclusions:** The percentage of consumers using food labels is low which means that unhealthy eating is prevailing, so this study can be used as a reference to develop policies regarding awareness about use of nutrition facts on food labels, promoting healthy eating habits in the country.

requirements. Consumers' use of food label information largely depends on the way it is presented so, it should be easy and concise to be read [4]. A study was conducted among selected Filipino adults to determine the prevalence of use nutrition facts labels information, and it was found that 87.73% adults read nutrition facts labels before buying any food product. Different factors affect use of nutrition labels like intentions, time for shopping, age, gender, searching for desired information, socioeconomic status, educational status, occupation, monthly income, nutrition knowledge and understanding of nutrition facts labeling [5]. Mostly women use nutrition facts label more than men because they have responsibility for the healthy lifestyle of family as they do groceries more often, so it is necessary for them to have much knowledge about nutrition information on labels [6]. Food labels on different packages attract consumers in various grocery stores and market areas, which help them to distinguish healthy and unhealthy food in different perspective. In some countries there is demand of food label information which indicate the awareness about nutritional knowledge of people [7]. This increased awareness has helped consumers about food safety, various eating disorders and healthy eating habits. Many studies have been conducted to evaluate the use of nutrition facts on food labels and how consumers perceive and understand that information, as some consumers read the information but cannot understand that information due to lack of knowledge and awareness about that information [8]. When a consumers read nutrition fact label and find information according to his desire, like if he or she is searching for low fat food item and on the label, this is mentioned clearly in the list than he or she will definitely buy that product, otherwise he will not buy that product [9]. Consumers from both urban and rural areas have almost same opinions regarding nutrition facts while buying food products because they provide healthy and useful information according to them [10]. If they are aware about healthy food and their effects on health and also their requirements for that, only than they will be able to choose healthy product. Consumers' purchasing decisions depends majorly on their knowledge and perceptions about that information [11]. Another factor which affects purchasing of food products is income level. Consumers' having high income are more concerned about what they are eating and more involved in purchasing processed pre-packaged products so, nutrition facts here play important role in choosing healthy product [12]. So, a clear understanding about nutrition facts on food labels will help her in choosing healthy food items among all other unhealthy and expensive products. Deciding food label reading indicators and barriers is an important measure in promoting healthy eating [13]. Individuals having less DOI: https://doi.org/10.54393/pjhs.v4i04.442

knowledge to calculate their daily requirements or not being able to interpret information provided on labels can result in choosing unhealthy products which can affect their health as well as their family's health if they are choosing for them also [14]. When individuals are concerned about their health only then they will make steps towards choosing healthy foods, and that is possible only by reading nutrition facts on products to see which ones are healthier and more required by them. So, different measures should be taken to increase the awareness about nutrition facts on food labels use to decrease the risks of diet related disorders among all generations [15].

METHODS

This study was conducted from June 2021 to October 2021. For study, data were collected from different consumers of grocery stores and nearby area of locality. The design of this study was cross-sectional in nature. Consumers from supermarkets of age group 18-65 years were selected for the study. The following category was excluded from this study: Consumers younger than 18 years and older than 65 years were not part of the study. Sample size constituted randomly selected individuals from grocery stores. Considering 95% confidence interval with 5% margin of error and 87% prevalence, the sample size came out to be 206 individuals (both males and females). The data were collected by using self-designed questionnaire technique. All participants, willing to participate in study were requested to answer the designed questionnaire. All collected data were analyzed by SPSS (Statistical Program for the Social Sciences) version 25.0.

RESULTS

Table 1 shows frequency and percentages of demographic information of respondents in the study, which includes age, gender, marital status, occupation and education status of participants.

Table 1:	Demo	graphics	ofrespo	ondents
----------	------	----------	---------	---------

Variables	Frequency (%)			
Age				
18-25	96(46.6)			
26-45	58(28.2)			
46-65	52(25.2)			
Gender				
Male	89(43.2)			
Female	117(56.8)			
Marital status				
Married	108(52.4)			
Not married	98(47.6)			
Occupation				
Business	31(15)			
Employee	57(27.7)			
Student	59(28.6)			
House wife	59(28.6)			
Education				
Matric	4(1.9)			

Rai FH et al.,

Intermediate	26(12.6)	
Bachelors	145(70.4)	
Masters	31(15)	

Table 2 shows that out of 206 respondents only 27 of them always read nutrition facts on food labels, 42.2% of them found that information sometimes difficult, 46.1% found information on food labels helpful and reliable and 110 of them were willing to buy any product which is expensive but have suitable nutrition facts.

Table 2: Frequency and percentages of all variables

Variables	Frequency (%)				
Do you read nutrition facts on food labels while buying any food item?					
Quite often	39(18.9)				
Always	27(13.1)				
Sometimes	110(53.4)				
Never	30(14.5)				
The information about nutrition facts is easy to understand or difficult for you?					
Easy	66(32)				
Quite easy sometimes	40(19.4)				
Sometimes difficult	87(42.2)				
Always difficult	13(6.3)				
In last one month, is there any instance where you changed your decision to buy any food product after reading nutrition facts on food label?					
Yes	82(39.8)				
No	78(37.9)				
l don't remember	46(22.3)				
Do you feel confident and make better choices after reading nutrition facts on food labels?					
Yes	125(60.7)				
No	24(11.7)				
Sometimes	57(27.7)				
Do you find nutrition facts on	food labels helpful and reliable?				
Yes	99(48.1)				
Sometimes	95(46.1)				
Not at all	12(5.8)				
If the product which you are buying is expensive but have suitable nutrition facts, will you buy that product?					
Yes	110(53.4)				
No	53(25.7)				
May be	43(20.9)				
Do you think that nutrition information is the major factor that determine the consumers choice of food product?					
Strongly agree	30(14.6)				
Agree	109(52.9)				
Neutral	56(27.2)				
Disagree	11(5.3)				
Strongly disagree	0(0)				

DISCUSSION

Nutrition facts on food labels are important tool in choosing healthy products which lead towards a healthy lifestyle in present time, when risk of food related diseases is prevailing. It is seen in this research that consumers change their purchasing behaviors after reading nutrition facts on food labels. Use of nutrition facts panel on food labels was assessed in this research and it can be seen in table 1.2 that, around 53% of selected consumers read nutrition facts sometimes before buying any product and DOI: https://doi.org/10.54393/pjhs.v4i04.442

only 13% of them always read food labels. This shows that percentage of people reading nutrition facts on labels in low as compared to other countries' researches. In one study conducted in New Zealand, it was shown that out of total 460 respondents only 100 of them routinely used nutrition facts on food labels. This shows that use of food labels should be increased worldwide, as it is a major step towards healthy disease-free lifestyle [16]. From our study results as shown in table 1.2, it is seen that more females are concerned about reading nutrition facts on labels than males, like information regarding fat or sugar in any food product besides other information. These results are also seen in research, conducted in Poland in which they also found out that more females (56%) are influenced by nutrition information on labels [17]. Also, in our study it is shown that, 48.1% of respondents thought that nutrition facts on food labels were helpful and reliable in choosing food products, these same results were provided by researchers of Sri Lanka, who concluded that around 41.8% of their respondents thought that nutrition facts were most of the time helpful and readable [18]. Understanding of nutrition facts information is really important factor in choosing healthy product, if any consumes wants to buy a healthy food item but he or she is not able to understand nutrition information correctly due to any reason, then the purpose of nutrition facts will not be fulfilled. In our findings as shown in table 1.2, it can be seen that only 32% of selected respondents thought that nutrition information on food labels was easy to understand and around 75% of them found information sometimes difficult. Research was conducted in South Africa, on consumer's opinion and use of food labels in which they found out that 65% of their respondents found information on food labels easy to understand and only 16% disagreed to that. This shows that in our country food industries should take this problem into account for healthier food choosing habits [10]. If someone is interested in making healthy lifestyle than he or she has to make healthy food choices, this can be made possible by using nutrition facts panel while buying food items. In our study we have seen that around 60% of respondents were confident and made healthier choices after reading food labels. A study was conducted in US, in which they found out that around 80% of their selected respondents chose healthy products after reading nutrition information on food labels. This shows that nutrition facts are very helpful in choosing healthy products as evidenced by researches. If they are used more often than risk of various food related disorders can be minimized [19]. One thing, very important to consider, is that purchasing power of consumers should be influenced by reading nutrition facts on food labels. According to our study, only 82(39%) out of 206 selected respondents changed their purchasing decision after

DOI: https://doi.org/10.54393/pjhs.v4i04.442

reading nutrition information on labels. This is not a convincing result as importance of nutrition facts is much more important than that. Research was conducted in India by Kumar and Kapoor, in which researchers assessed the influence of food labels on purchase decision, and they found out that only 162(43%) out 371 often changed purchasing decision after reading nutrition information and only 11% always changed their decision after reading nutrition facts on food labels[20].

CONCLUSIONS

According to the survey conducted, it was concluded that the awareness of nutrition facts on food labels was lacking among most of the consumers. Most of the participants think that nutrition information on food labels is important factor in determining choice of a healthy product. This emphasizes the need to develop different programs to improve the usage of nutrition facts on food labels among consumers to improve healthy choices of packaged food products as their use is increasing day by day in our country. Majority of consumers agreed that nutrition facts is an important factor in choosing healthy food products.

Authors Contribution Conceptualization: FHR, KJ Methodology: AFR, MK Formal Analysis: AFR, ZH Writing-review and editing: FHR, MM

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest The authors declare no conflict of interest

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article.

$\mathsf{R} \to \mathsf{F} \to \mathsf{R} \to$

- [1] Huang Z, Li H, Huang J. Analysis of Chinese Consumers' Nutrition Facts Table Use Behavior Based on Knowledge-Attitude-Practice Model. International Journal of Environmental Research and Public Health. 2021 Jan; 18(22): 12247. doi: 10.3390/ ijerph182212247.
- [2] Seyedhamzeh S, Nedjat S, Hosseini H, Shakibazedeh E, Viera AJ, Dorosty Motlagh A. Potential effect of different nutritional labels on food choices among mothers: a study protocol. BMC Public Health. 2020 Dec; 20(1): 1-7. doi: 10.1186/s12889-020-8411-8.
- [3] Bleich SN, Herring BJ, Flagg DD, Gary-Webb TL. Reduction in purchases of sugar-sweetened beverages among low-income black adolescents after exposure to caloric information. American Journal of Public Health. 2012 Feb; 102(2): 329-35.

doi: 10.2105/AJPH.2011.300350.

- [4] Wolfson JA, Graham DJ, Bleich SN. Attention to physical activity-equivalent calorie information on nutrition facts labels: an eye-tracking investigation. Journal of nutrition education and behavior. 2017 Jan; 49(1): 35-42. doi: 10.1016/j.jneb.2016.10.001.
- [5] Sy DC and Bullecer ER. Prevalence and factors associated with nutrition label use among selected Filipino adults. Acta Medica Philippina. 2020 Oct; 54(5): 612-9. doi: 10.47895/amp.v54i5.2269.
- [6] Besler HT, Buyuktuncer Z, Uyar MF. Consumer understanding and use of food and nutrition labeling in Turkey. Journal of Nutrition Education and Behavior. 2012 Nov; 44(6): 584-91. doi: 10.1016/j. jneb.2012.01.005.
- [7] Wahab RA. Food label use and awareness of nutritional information among consumers in Bahrain: an exploratory study. KnE Life Sciences. 2018 Oct; 4(6): 26-36. doi: 10.18502/kls.v4i6.3088.
- [8] Madilo FK, Owusu-Kwarteng J, Kunadu AP, Tano-Debrah K. Self-reported use and understanding of food label information among tertiary education students in Ghana. Food control. 2020 Feb; 108: 106841. doi: 10.1016/j.foodcont.2019.106841.
- [9] Buttriss JL. The role of nutritional labelling and signposting from a European perspective. Proceedings of the Nutrition Society. 2018 Aug; 77(3): 321-30. doi: 10.1017/S0029665117004098.
- [10] Van der Merwe D, Bosman M, Ellis S. Consumers' opinions and use of food labels: Results from an urban- rural hybrid area in South Africa. Food Research International. 2014 Sep; 63: 100-7. doi: 10.1016/j.foodres.2014.03.032.
- [11] Abdul Latiff ZA, Rezai G, Mohamed Z, Amizi Ayob M. Food labels' impact assessment on consumer purchasing behavior in Malaysia. Journal of Food Products Marketing. 2016 Feb; 22(2): 137-46. doi: 10.1080/10454446.2013.856053.
- [12] Mohan Kathuria L and Singh V. Product attributes as purchase determinants of imported fruits in Indian consumers. Journal of Food Products Marketing. 2016 Ma; 22(4): 501-20. doi: 10.1080/10454446.2014. 885865.
- Jackey BA, Cotugna N, Orsega-Smith E. Food label knowledge, usage and attitudes of older adults. Journal of nutrition in gerontology and geriatrics. 2017 Jan; 36(1): 31-47. doi: 10.1080/21551197.2017. 1280868.
- [14] Zhang J, Zhai L, Osewe M, Liu A. Analysis of factors influencing food nutritional labels use in Nanjing, China. Foods. 2020 Dec; 9(12): 1796. doi: 10.3390/ foods9121796.

DOI: https://doi.org/10.54393/pjhs.v4i04.442

- [15] Huang Z, Huang B, Huang J. The Relationship between Nutrition Knowledge and Nutrition Facts Table Use in China: A Structural Equation Model. International Journal of Environmental Research and Public Health. 2021 Jun; 18(12): 6307. doi: 10.3390/ ijerph18126307.
- [16] Ni Mhurchu C, Volkova E, Jiang Y, Eyles H, Michie J, Neal B, et al. Effects of interpretive nutrition labels on consumer food purchases: the Starlight randomized controlled trial. The American Journal of Clinical Nutrition. 2017 Mar; 105(3): 695-704. doi: 10.3945/ ajcn.116.144956.
- [17] Bryła P. Who reads food labels? Selected predictors of consumer interest in front-of-package and backof-package labels during and after the purchase. Nutrients. 2020 Aug; 12(9): 2605. doi: 10.3390/nu120 92605.
- [18] Talagala IA and Arambepola C. Use of food labels by adolescents to make healthier choices on snacks: a cross-sectional study from Sri Lanka. BMC Public Health. 2016 Dec; 16: 1-1. doi: 10.1186/s12889-016-3422-1.
- [19] Mhurchu CN, Eyles H, Jiang Y, Blakely T. Do nutrition labels influence healthier food choices? Analysis of label viewing behaviour and subsequent food purchases in a labelling intervention trial. Appetite. 2018 Feb; 121: 360-5. doi: 10.1016/j.appet.2017.11.105.
- [20] Kumar N and Kapoor S. Do labels influence purchase decisions of food products? Study of young consumers of an emerging market. British Food Journal. 2017 Feb; 119(2): 218-29. doi: 10.1108/BFJ-06-2016-0249.