



## UNPACKING CHOICES: A STUDY ON FOOD PACKAGE INFORMATION USE AMONG WELLNESS SEEKERS AND THOSE MANAGING LONG-TERM ILLNESSES

Misbah Ajaz<sup>1\*</sup>, Naeema Tahira Syed<sup>2</sup>, Areeba Muneer<sup>3</sup>, Javeria Barkat<sup>4</sup>, Warda Qamar<sup>5</sup>, Madiha Ajaz<sup>6</sup>

<sup>1</sup>\*Lecturer College of Human Nutrition and Dietetics, Ziauddin University,  
Email: misbah.ajaz@zu.edu.pk

<sup>2</sup>MS Scholar College of Human Nutrition and Dietetics, Ziauddin University,  
Email: tsyed1@outlook.com

<sup>3</sup>Clinical Nutritionist, Bio Informatics Child Preventive Health Services,  
Email: areebamuneer2597@gmail.com

<sup>4</sup>Senior Lecturer, Iqra University North Campus Karachi, Email: javeria.barkat@iqra.edu.pk

<sup>5</sup>Lecturer, College of Human Nutrition and Dietetics, Ziauddin University,  
Email: warda.qamar@zu.edu.pk

<sup>6</sup>PhD Scholar, Pharmacy and Medical Sciences, Griffith University,  
Email: madiha.ajaz@griffithuni.edu.au

**\*Corresponding Author:** Misbah Ajaz  
Lecturer College of Human Nutrition and Dietetics, Ziauddin University,  
Email: misbah.ajaz@zu.edu.pk

### ABSTRACT

**Introduction:** Nutrition labels were designed to help consumers choose foods according to their health status. Detailed nutritional tagging is essential to help buyer be informed about the component of the food and enabling consumers to make healthy choices according to their health status. Therefore, this study aims to assess and compare usage nutrition labels among healthy individuals and individuals with chronic diseases.

**Methodology:** A validated questionnaire was used to collect data from the sample of 410 participants through convenient sampling technique. Subjects recruited were healthy individuals and individuals with chronic diseases, aged  $\geq 18$  years. Version 20 of SPSS was used to analyzed the obtained data. Chi square test (level of significance 0.05) was used to determine the current knowledge and usage of food and nutrition labels among study participants.

**Results:** The results revealed that majority of the study participants (52%) were healthy, while (48%) are diagnosed with chronic disease. Additionally, results show that 85% individuals with chronic diseases read food and nutrition label. However, on contrary statistically no significant difference was identified ( $p = 0.192$ ) in usage of nutritional labels among healthy individuals and individuals with chronic diseases.

**Conclusion:** The usage of food label and nutrition facts information is common among population and the information consumers focus on food and nutrition labels is halal certification and date of expiry.

**Key words:** Food Labels, Nutritional Facts, Health Claims, Nutritional Label, Chronic disease

## **INTRODUCTION**

“Nutritional label is any tag, brand, pictorial or any descriptive matter printed, embossed or impressed on a food package”(1). Information found on a package of food include; serving size, expiry date, nutrient and a list of ingredients (2, 3). The purpose of nutritional tags is to help consumers built healthy buying practices and reinforce consumers in their efforts to improve their health (2, 4). Labeling make consumers aware about any unique characteristic of the food (5), its nutritional properties (6), handling details and how to store (7) As poor nutritional habits result in adverse health outcome, the awareness and use of nutritional tags is crucial in the prevention of chronic diseases. Truthful health claims promote positive nutrition label use behavior thus increases economic benefits. Moreover, providing nutrition information on products is a stimulant for producers to introduce more nutritious and healthy food choice, ultimately motivating consumers to spend more on healthy foods and less on diet related diseases(3, 6).

Multiple researches have resulted that the use of nutrition label and health conditions have varying results (8-10). A study reported that individual total fat; including saturated fat and cholesterol is inversely proportional to the use of nutrition fact label (11). Furthermore, a study on in hospital OPD revealed that patients who have chronic diseases are more incline to read nutrition labels on food products specifically fat content (12). Similarly, study on old age adults reported that 85% participants read nutrition labels when they are on special diets due to any health conditions (13). Individuals diagnosed with chronic diseases reported to have better awareness of nutrition and they often practice reading label during shopping (14, 15).

Additionally, a previous research focused on examining consumers’ knowledge, attitudes and use of nutrition labels with gender differences (16). Few studies analyzed the assertion that consumers become well-informed by using nutritional labels and leads to healthy life(17, 18).

A study in Pakistan was conducted to evaluate whether people read nutritional labels while shopping (19). But no previous study on usage of nutrition labels among chronic patients and their comparison with healthy individuals is reported in literature in Pakistan. It is a premise that health literacy can make consumer well informed. Therefore, this study aims to evaluate use nutrition labels is more common among healthy individual or individuals with chronic diseases. Thus, the objective of this research is to determine the difference in the usage of nutrition labels among healthy individuals and individuals with chronic diseases.

## **METHODOLOGY**

### **Study Design and Sampling Technique:**

A cross observational study was conducted among the residents of Karachi. Sample size was identified using Open epi software. 410 participants were recruited in the study using convenient sampling technique. The participants of the study were working males and females aged  $\geq 18$ , belonging to middle- and high-income level. Participant eligibility was determined through interview method. All participants were provided written informed consent before data collection. The duration of this study was 6 months after synopsis approval.

### **Data Collection:**

The data was collected by adopting a validated self-administered questionnaire. The questionnaire was divided into two sections. 1<sup>st</sup> section included demographic information and 2<sup>nd</sup> section focused to explored current knowledge and usage of nutrition labels, motivating factors, sources of nutrition labeling information. A pilot study among 20 participants was conducted to ensure that each question is understood and comprehended fully.

**Data Analysis:**

Data entry and descriptive statistics were carried out using SPSS (version 20) percentages were used to report demographic data including, age, sex, level education, and monthly income. Quantitative variables with yes/no responses related to information about nutrition labels and usage and perception about healthy claims are reported using descriptive statistics. Qualitative data of common responses were organized into ranges, tallied and summarized as percentages. Hypothesis testing was conducted using chi square test with 95% confidence interval (p-value = 0.05).

**RESULTS**

Table 1 illustrates that total out of 410 participants of the study 212 were healthy and 198 respondents had chronic disease. The majority of them were males, with the mean age of approximately 27 years. 55.5% of the study participants were graduate and more than half 60% had income > 60,000.

**Table 1.** Demographic characteristics

Characteristics	Frequency	Percentages
<b>Sex</b>		
Female	152	37%
Male	258	63%
<b>Age</b>		
18-33	262	64%
34 & above	148	36%
<b>Income level</b>		
>30,000 - 59999	167	40%
>60,000	243	60%
<b>Marital Status</b>		
Single	213	52%
Married	181	44%
Divorced	16	4%
<b>Educational level</b>		
Undergraduate	59	14.5%
Graduate	227	55.5%
Postgraduate	124	30%
<b>Status of Health</b>		
Healthy	212	52%
Diagnosed with chronic disease	198	48%

Findings of the study showed that both healthy individuals and individuals with chronic diseases indicated that when they have to follow special diet (45% & 42% respectively) and while buying a new food product (45% & 47% respectively), they use food and nutrition information to make their decisions, illustrated in table 2.

**Table 2.** Different Situations of Reading Food Labels (n=410)

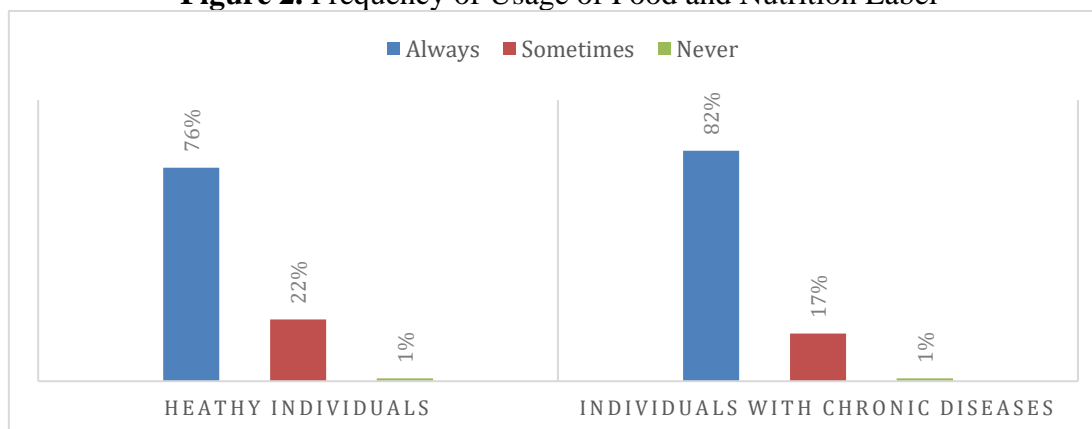
Situations	Frequency of Reading Food Labels			
	Health Status	Always	Sometimes	Never
While at Home	Healthy individual	37%	47%	16%
	With chronic disease	30%	44%	26%
When following a Special Diet	Healthy individual	42%	34%	24%
	With chronic disease	45%	31%	24%
When Confirming Fat Content	Healthy individual	33%	40%	27%
	With chronic disease	29%	45%	26%
When buying a new food product	Healthy individual	47%	28%	25%
	With chronic disease	45%	31%	24%
While doing food shopping	Healthy individual	27%	51%	22%
	With chronic disease	32%	52%	16%

**Figure 1:** Different Situations of Reading Food Labels (n=410)



Figure 2, shows that individuals with chronic diseases (82%) are inclined towards using food label information. However, there is no significant difference ( $p=0.192$ ) in the usage of food and nutrition labels among healthy individuals and individuals with chronic diseases.

**Figure 2.** Frequency of Usage of Food and Nutrition Label



## DISCUSSION

Nutritional labelling has emerged as a significant factor influencing food buying decisions of the consumers. Present study conducted to investigate the usage of nutrition labeling information among healthy individuals and individuals with chronic diseases. Results illustrated that majority of the individuals with chronic diseases use food labels to improve their health status. The results are completely aligned with the previous study carried out by Food Standards Agency UK, which found out that it is likely that consumers read nutrition labels when trying to control intake of certain nutrients, for instance salt(5). Studies have shown that consumers with chronic diseases were more aware of nutritional recommendations, and more often check for specific nutrients, and use nutrition information on food labels than did between diet and cancer participants without such diseases (20). A survey in Washington State found that knowledge and use of the nutrition label is associated with the cardiovascular diseases, and that food label use was significantly associated with lower fat intake (21). Additionally, the result of this study indicated that almost half (48%) of consumers with chronic diseases were reading food labels to make better food choices. Similarly, research conducted by Food Safety Authority of Ireland, has revealed that health status does seem to influence consumers purchasing decisions, with at least two third of respondents saying that their or any family member's health status, specifically CVD effect their choices during food purchasing (22). Additionally, the results of the another study showed that majority of the respondents (91%) read expiry date and (92%) check halal label which is similar to a previous study, in which production and expiry dates are indicated necessary information preferred by consumers, as a fact that indicates their concern about risk of consuming expired foods. Participants also expressed their concern about the country of manufacturing (23).

Nutrition related knowledge facilitates the use of label by positively impacting the benefits thus increasing the consumer interest in health (12). Recent studies on usage of nutrition label reported that nutritional knowledge or self-perception of knowledge is associated with use of specific nutritional claims (24). Current study revealed that healthy individuals are more informed about food labels than individuals with chronic diseases which aligns with studies conduct in different countries and concluded that health-conscious consumers have higher level of understanding of label as compare to any other (25). In another study conducted in Australia revealed that generally consumers understanding of food labels was found to be greatly influenced by life stage and health status (26). A study conducted in UAE, assessed consumers' knowledge, attitude and practice towards food labeling and revealed that there is a need to raise level of awareness of consumers especially on nutritional aspect of food labeling in order to assist them make healthy food choices (27).

## CONCLUSION:

Food labels provide information help that helps consumers make purchasing decisions according to their health conditions. Literature has shown that frequency of label reading is influenced by presence of certain health conditions like Diabetes, CVD or food allergies. Similarly, the current study concluded that the usage of nutritional labels is greater in individuals with chronic diseases however, statistically here is no significant difference in the usage of healthy individuals or individuals with chronic diseases.

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