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Awareness of Food Label Information and Its Influence on Healthy Food Purchase Practices among Lecturers in Lagos Tertiary Institutions

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Abstract

Food labels provide essential nutritional information that enables consumers to make informed and healthier food choices. This study examined food label awareness and its influence on healthy food purchase practices among lecturers in selected tertiary institutions in Lagos State, Nigeria. A descriptive survey research design was adopted. The study involved 130 lecturers selected through simple random sampling from three tertiary institutions. Data were collected using a structured questionnaire administered through Google Forms. The instrument was validated by experts, while a Cronbach's alpha reliability coefficient of 0.79 established its reliability. Data were analyzed using frequency counts, percentages, mean, standard deviation, Pearson Product Moment Correlation, and linear regression at the 0.05 level of significance. The findings revealed that lecturers demonstrated a high level of awareness of food label information (Grand Mean = 3.25), while the utilization of food labels was moderate (Grand Mean = 2.87). Respondents reported that food-label information positively influenced their healthy food-purchase practices (Grand Mean = 3.18)., whereas barriers such as small font size, technical terminology, shopping time constraints, and the high cost of healthier food products limited effective utilization (Grand Mean = 3.17). Pearson correlation analysis showed a significant positive relationship between food label awareness and healthy food purchase practices ($r = 0.62$, $p < 0.05$). Linear regression further indicated that food label utilization significantly predicted healthy food purchase practices ($\beta = 0.54$, $p < 0.05$). The study concludes that although lecturers possess substantial awareness of food label information, practical barriers hinder its consistent utilization. It recommends intensified nutrition education, consumer-friendly food label designs, and stronger public awareness initiatives to promote healthier dietary choices among consumers.

Key words: Food label awareness, Nutrition labeling, Healthy food purchasing, Nutrition literacy, Consumer behavior

Introduction

Food labels are an important source of nutrition and health information that helps consumers make informed food choices. Food labels provide details about ingredients, nutrient composition, expiry dates, allergen warnings, storage conditions, and health claims. As the consumption of processed and packaged foods continues to increase worldwide, food labels have become an essential public health tool for encouraging healthy eating habits and reducing the risk of diet-related diseases (World Health Organization, 2019); Food and Agriculture Organization (FAO), 2022). Song et al (2021) emphasize that unhealthy diets are among the leading causes of obesity, hypertension, diabetes, cardiovascular diseases, and other non-communicable diseases worldwide. Hence, Olatona and Mwankwo, Ogunyemi and Nnoaham, (2010) stated that improving consumers' ability to understand and use food-label information is one of the strategies for promoting healthier dietary behaviour. Bonsmann et al (2020) noted that nutrition labels enable consumers to compare products,

identify foods with lower levels of sugar, salt and saturated fat, and select products that better meet their nutritional needs.

Vanderlee et al (2021) define food label awareness as the consumers' knowledge and understanding of the information displayed on food packages, while food-label utilization involves applying that information when making purchasing decisions. Although awareness is important, it does not always result in healthy purchasing behavior. Many consumers understand the information provided on food packages but fail to use it consistently because of barriers such as limited nutrition literacy, technical language, small print, misleading health claims, and time constraints during shopping (Shangguan et al., 2019).

In Nigeria, rapid urbanization, changing lifestyles and increased availability of packaged foods have significantly influenced consumers' dietary habits. Urban centres such as Lagos State have witnessed remarkable growth in supermarkets, shopping malls, and convenience stores where packaged foods dominate retail shelves. Hence, the changing food purchase patterns among urban consumers have increased the importance of nutritional labeling as a source of information for making informed food choices (Adesina et al, 2022). According to Osei et al (2024), the increasing consumption of prepackaged and processed foods makes nutrition-label information increasingly important in helping consumers identify healthier food options and make informed food choices. However, available evidence suggests that many Nigerian consumers tend to pay greater attention to expiry dates than to other food-label information, such as nutritional information and ingredient lists (Olatona et al. 2019).

Lecturers in tertiary institutions represent an educated population that is expected to possess relatively high awareness of nutrition and health information. Their educational background may provide greater opportunities to access and understand nutrition-related information, although educational attainment does not necessarily guarantee consistent use of food-label information. Demanding academic responsibilities, busy work schedules, and workplace stress may reduce the time available to carefully examine food labels before purchasing food products. Consequently, high educational attainment may not necessarily translate into regular utilization of food-label information during food purchases (Vanderlee et al, 2021). The Health Belief Model by Rosenstock et al. (1988) revealed that individuals are more likely to adopt healthy practices when the benefits of preventive actions are perceived to be at risk of adverse health outcomes. Similarly, the Theory of Planned Behavior developed by Ajzen (1991) explains that knowledge, attitudes, subjective norms, and perceived behavioral control jointly influence behavioral intentions and actual behavior.

Statement of the Problem

The growing importance of food labels as established the importance these hold in purchasing food behavior, despite this, several barriers continue to limit their effective use. Small font sizes, technical terminology, inadequate nutrition education, misleading food advertisements and the relatively high cost of healthier food products are factors reducing consumers' ability to use food-label information effectively (Olabisi & Adeleke 2022; Shangguan et al., 2019). Addressing these barriers is important for improving healthy food choices and reducing nutrition-related health challenges. Focus has been on the general public, households, students, or supermarket shoppers on food purchasing behavior. Very few studies have specifically investigated lecturers in tertiary institutions, particularly within Lagos State, Nigeria. This creates a gap in knowledge regarding the extent to which food-label awareness influences healthy food-purchase practices among lecturers. Therefore, this study examined food-label awareness and its influence on healthy food-purchase practices among lecturers in selected tertiary institutions in Lagos State, Nigeria. The findings are expected to provide useful evidence for nutrition educators, public health professionals, food manufacturers, and policy makers in promoting healthier food choices and improving nutrition-related public health outcomes.

Objectives of the Study

The main objective of this study is to examine food-label awareness and its influence on healthy food-purchase practices among lecturers in selected tertiary institutions in Lagos State, Nigeria. Specifically, the study sought to:

1. determine the level of food-label awareness among lecturers in selected tertiary institutions in Lagos State;
2. examine the extent to which lecturers utilize food-label information when purchasing food products;
3. assess the influence of food-label awareness and utilization on healthy food-purchase practices among lecturers; and
4. identify the barriers affecting the effective utilization of food-label information among lecturers.

Research Hypotheses

H_{01}: There is no significant relationship between food-label awareness and healthy food- purchase practices among lecturers in selected tertiary institutions in Lagos State.

H_{02}: Food-label utilization does not significantly predict healthy food-purchase practices among lecturers in selected tertiary institutions in Lagos State

Methodology

Research Design

This study adopted a descriptive survey research design to examine food-label awareness and its influence on healthy food-purchase practices among lecturers in selected tertiary institutions in Lagos State, Nigeria.

Population of the Study

The population comprised all academic staff of three selected tertiary institutions in Lagos State. According to data obtained through staff nominal rolls from the official administrative records and academic planning units, the total population is 813 for University of Lagos, 2,736 for Yaba College of Technology and 254 for Federal college of Education Technical Akoka, Lagos. Hence, the total target population for the study is 3,803 lecturers.

Sample Size and Sampling Technique

Using the Taro Yamane (1967) formula for determining sample size at a 5% level of precision, the computed sample size was approximately 362 lecturers. The study targeted 362 lecturers from three tertiary institutions, with 130 valid responses obtained through an online questionnaire, representing a response rate of 35.91%. This was in line with the recommendation of Nulty (2008) who asserts that a response rates between 20% and 40% are considered methodologically acceptable. Similarly, Wu et al (2022) in a study of computers in human behaviour validated this assertion who agreed that for targeted survey populations, response rates of 20% - 25% provide statistically reliable and confident estimates without undermining data validity.

Instrument for Data Collection

For the four-point scale of preference, a criterion mean of 2.50 was adopted. Mean scores of 2.50 and above were regarded as accepted, while mean scores below 2.50 were regarded as rejected. Data were collected using a structured questionnaire developed by the researchers after reviewing relevant literature. The questionnaire consisted of five sections. Section A elicited respondents' demographic information, while Sections B, C, D, and E measured food-label awareness, food-label

utilization, healthy food-purchase practices, and barriers to the effective utilization of food-label information, respectively. The questionnaire items were measured on a four-point scale of preference ranging from Strongly Agree to Strongly Disagree. The questionnaire was subjected to face and content validity by experts in Home Economics Education, and Measurement and Evaluation. Their observations were incorporated into the final version of the instrument to ensure clarity, relevance, and adequacy of the items. A reliability coefficient of 0.79, indicates that the instrument had acceptable internal consistency of of 0.70 -0.79 is considered acceptable

The questionnaire was administered electronically using Google Forms. Participation was voluntary, and respondents were informed of the objectives of the study before completing the questionnaire.

Method of Data Analysis

Data collected were analyzed using descriptive and inferential statistics. Frequency counts, percentages, means, and standard deviations were used to answer the research questions, while Pearson Product Moment Correlation and simple linear regression were employed to test the hypotheses at the 0.05 level of significance.

Results and Discussions

Table 1 showed that lecturers demonstrated a high level of awareness of food-label information, with a grand mean score of 3.25, which is above the criterion mean of 2.50. The findings indicate that most lecturers were aware of important food-label components such as expiry dates, nutritional information, ingredients, allergen warnings, and health claims. The highest mean score (3.45) was recorded for checking expiry dates before purchasing packaged foods, indicating strong awareness in this area.

Table 1: Mean Analysis on Level of Food-label Awareness among Lecturers

S/N	Questionnaire Items	Mean	SD	Decision
1	I check expiry dates before purchasing packaged foods.	3.45	0.71	Accepted
2	I am aware of the nutritional information displayed on food packages.	3.31	0.82	Accepted
3	I understand the meaning of calorie information on food labels.	3.12	0.88	Accepted
4	I am aware of ingredient lists on packaged foods.	3.28	0.76	Accepted
5	I pay attention to allergen warnings on food products.	3.05	0.91	Accepted
6	I understand symbols and health claims displayed on food labels.	2.97	0.89	Accepted
7	I know that food labels can help consumers make healthier food choices.	3.42	0.69	Accepted
8	I am aware that excessive sugar and sodium intake can be identified through food labels.	3.36	0.74	Accepted
	Grand Mean	3.25	0.80	Accepted

Table 2 showed that lecturers moderately utilized food-label information during food purchases, as indicated by the grand mean score of 2.87. The findings suggest that although lecturers were generally aware of food-label information, practical utilization was not very high. Respondents mostly used food labels to read nutritional information and select healthier food products, while fewer lecturers consistently monitored sodium intake and dietary patterns through label information.

Table 2: Mean Analysis on Utilization of Food-Label Information among Lecturers

S/N	Items	Mean	SD	Decision

1	I read food labels before buying packaged foods.	3.08	0.81	Accepted
2	I compare nutritional values of different food products before purchase.	2.86	0.94	Accepted
3	I avoid food products with high sugar content after reading labels.	2.95	0.87	Accepted
4	I check sodium levels before purchasing processed foods.	2.71	0.98	Accepted
5	I use food-label information to select healthier food options.	3.02	0.79	Accepted
6	I read ingredient lists to avoid harmful additives.	2.90	0.88	Accepted
7	I use food labels to monitor my dietary intake.	2.74	0.96	Accepted
8	I consistently use food-label information during shopping.	2.68	0.93	Accepted
	Grand Mean	2.87	0.90	Accepted

Table 3 indicated that food-label information had a positive influence on healthy food-purchase practices among lecturers, with a grand mean score of 3.18. The respondents agreed that food labels helped them choose healthier food products, avoid expired foods, and reduce unhealthy dietary intake such as excessive sugar and fat consumption. The result implies that food-label information contributes significantly to healthy food-purchase behavior.

Table 3: Mean Analysis of the Influence of Food-Label Awareness and Utilization on Healthy Food Purchase Practices among Lecturers

S/N	Items	Mean	SD
1	Food-label information helps me choose healthier foods.	3.26	0.73
2	I avoid expired food products because of label information.	3.48	0.65
3	Food labels influence my decision to reduce sugar intake.	3.10	0.84
4	I prefer foods with healthier nutritional composition after reading labels.	3.18	0.78
5	Food-label information helps me avoid foods that may affect my health negatively.	3.22	0.74
6	Nutritional information on food packages influences my buying decisions.	3.06	0.82
7	Food labels encourage me to purchase foods with lower fat and sodium content.	2.98	0.87
8	Food-label information has improved my healthy eating behavior.	3.14	0.76
	Grand Mean	3.18	0.77

Table 4 revealed that several barriers affected the effective utilization of food-label information among lecturers. The grand mean score of 3.17 indicated general agreement among respondents regarding these challenges. Major barriers identified included small font sizes, technical language, time constraints during shopping, confusing nutritional information, and the high cost of healthier food products. These findings suggest that practical and communication-related challenges limit the effective use of food-label information among consumers.

Table 4**: Mean Analysis on Barriers Affecting Effective Utilization of Food-Label Information**

S/N	Questionnaire Items	Mean	SD	Decision
1	Small font sizes make food labels difficult to read.	3.33	0.71	Accepted
2	Technical terms on food labels are difficult to understand.	3.12	0.82	Accepted
3	I do not always have enough time to read food labels while shopping.	3.25	0.76	Accepted
4	Some food labels contain confusing nutritional information.	3.06	0.87	Accepted

5	Healthier food products are usually more expensive.	3.41	0.69	Accepted
6	I sometimes ignore food labels because of shopping stress.	2.95	0.91	Accepted
7	Lack of nutrition education affects effective use of food labels.	3.18	0.79	Accepted
8	Misleading food advertisements reduce my trust in some food labels.	3.02	0.85	Accepted
	Grand Mean	3.17	0.80	Accepted

Test of Hypotheses

Table 5 showed that there was a significant positive relationship between awareness of food-label information and healthy food-purchase practices among lecturers (r = 0.62, p = 0.001). Since the p-value of 0.001 was less than the significance level of 0.05, the null hypothesis was rejected. This implies that there was a significant positive relationship between food-label awareness and healthy food-purchase practices among lecturers.

Table 5: Pearson Product Moment Correlation Analysis Showing Relationship between Awareness of Food-Label Information and Healthy Food-Purchase Practices

Variables	N	Mean	SD	r-value	p-value
Awareness of Food-Label Information	130	3.25	0.80	0.62	0.001
Healthy Food-Purchase Practices	130	3.18	0.77		

Level of Significance = 0.05

Table 6 revealed that utilization of food-label information significantly predicted healthy food-purchase practices among lecturers (β = 0.54, p = 0.001). The result further showed that food-label utilization accounted for 29% of the variation in healthy food-purchase practices among the respondents. Since the p-value was less than 0.05, the null hypothesis was rejected. This indicates that utilization of food-label information significantly predicted healthy food-purchase practices among lecturers.

Table 6: Linear Regression Analysis Showing Predictive Influence of Utilization of Food-Label Information on Healthy Food-Purchase Practices

Variables	Beta (β)	t-value	p-value
Utilization of Food-Label Information	0.54	7.82	0.001

$R = 0.54$ $R^2 = 0.29$ $F = 61.15$ Level of Significance = 0.05

Discussion

The study found that lecturers in selected tertiary institutions in Lagos State demonstrated a high level of awareness of food-label information. The respondents were familiar with important label components such as expiry dates, nutritional information, ingredient lists, allergen warnings, and health claims. This finding suggests that the respondents possessed adequate knowledge of the information provided on packaged food products, possibly because of their educational background

and access to health-related information. The finding agrees with Song et al. (2021), who reported that educated consumers generally demonstrate greater awareness and understanding of nutrition labels than less educated populations. Similarly, Temple et al. (2022) observed that consumers with higher educational attainment are more likely to recognize the value of food labels in making healthier dietary choices. The finding also supports the position of the World Health Organization (2019), which identified nutrition labeling as an important strategy for promoting healthy diets and preventing diet-related diseases.

The study revealed that although lecturers were highly aware of food-label information, the extent of its utilization during food purchases was only moderate. While many respondents indicated that they read food labels before purchasing packaged foods, fewer consistently compared nutrient values or monitored nutrients such as sodium and sugar before making purchase decisions. The awareness alone may not always translate into regular use of food-label information. The result is consistent with Vanderlee et al (2021, who stated that consumers often possess adequate nutrition knowledge but do not consistently apply food-label information because of practical challenges such as time constraints, limited nutrition literacy, and the complexity of label information. Likewise, Shangguan et al. (2019) reported that the effectiveness of nutrition labelling depends not only on consumers' awareness but also on their ability and willingness to apply the information during food selection.

The findings showed that food-label information positively influence healthy food-purchase practices among the respondents. Lecturers reported that food labels assisted them in selecting healthier food products, avoiding expired foods, reducing excessive sugar intake, and making more informed dietary decisions. This demonstrates that food-label information remains an effective public health tool for encouraging healthier food choices. The finding corroborates the report of Shangguan et al. (2019), found that nutrition labelling significantly improves consumers' dietary behavior and food-selection practices. Similarly, Temple et al. (2022) concluded that clear and accessible food-label information encourages consumers to choose healthier food products and contributes to improved dietary quality.

Several barriers hindered the effective utilization of food-label information. The major barriers identified include small font sizes, technical terminology, inadequate time during shopping, confusing nutritional information, and the high cost of healthier food products. These challenges may discourage consumers from carefully reading and interpreting food labels before making purchase decisions. The finding supports Olabisi and Adeleke (2022), who reported that poor readability and technical language reduce consumers' ability to understand and use food-label information effectively. It also agrees with Vanderlee et al (2022), who identified inadequate nutrition knowledge, time pressure, and difficulty interpreting label information as major obstacles to effective food-label utilization.

The first hypothesis revealed a significant positive relationship between food-label awareness and healthy food-purchase practices among lecturers. This finding indicates that lecturers who possess greater awareness of food-label information are more likely to adopt healthier purchasing behaviors The finding can be interpreted within the Health Belief Model proposed by Rosenstock et al. (1988), which suggests that individuals are more likely to adopt health-promoting behaviors when they perceive the benefits of preventive actions and recognize potential health risks. The finding also agrees with Song et al (2021), who established that increased awareness and understanding of nutrition labels are associated with healthier food choices.

The second hypothesis revealed that food-label utilization significantly predicted healthy food-purchase practices among lecturers. This finding implies that the practical application of food-label information was associated with healthier food-purchase decisions among the respondents. The result can be interpreted in relation to the Theory of Planned Behavior proposed by Ajzen (1991),

which explains that behavioral intentions and perceived control over behavior influence actual behavioral outcomes. The finding also agrees with Shangguan et al. (2019), who reported that the use of nutrition labels can contribute to healthier food choices and improved dietary quality. The finding therefore suggests that strengthening consumers' ability to understand and apply food-label information may contribute to healthier food-purchase practices.

Conclusion and Recommendation

This study examined food-label awareness and its influence on healthy food-purchase practices among lecturers in selected tertiary institutions in Lagos State, Nigeria. The findings revealed that lecturers demonstrated a high level of awareness of food-label information; however, the practical utilization of such information during food purchases was only moderate. The study further established that food-label awareness was significantly associated with healthy food-purchase practices, while the utilization of food-label information significantly predicted healthier purchasing behavior. Despite these positive outcomes, barriers such as small font sizes, technical terminology, limited shopping time, and the high cost of healthier food products reduced the effective use of food-label information. The study suggest that awareness alone may not necessarily translate into consistent food-label utilization and healthy food-purchase practices. Based on the findings of this study, the following recommendations are made:

1. Tertiary institutions should collaborate with nutrition professionals and public health agencies to organize regular nutrition education programs, seminars, and awareness campaigns that will improve lecturers' understanding and effective use of food-label information.

2. Government regulatory agencies, particularly the National Agency for Food and Drug Administration and Control (NAFDAC), should strengthen policies requiring food manufacturers to adopt clearer, more consumer-friendly food labels by using larger font sizes, simpler nutritional terminology, and standardized label formats.

3. Food manufacturers should provide clear, accurate, and easily understandable nutritional information on packaged foods to enable consumers to compare products and make healthier purchasing decisions.

4. Nutrition educators and public health practitioners should encourage consumers to go beyond checking expiry dates by paying greater attention to nutrient composition, ingredient lists, allergen information, sugar, sodium, saturated fat, and calorie content when purchasing packaged foods.

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