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Nutritional Food Label Use: Perception, Drivers, and Purchase Decision of Shoppers in Abeokuta Metropolis, Ogun State, Nigeria

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ABSTRACT
The increasing prevalence of diet-related health problems has amplified the importance of nutritional food labeling as a public health and marketing tool. This study examined the perceptions, drivers, and purchase decisions associated with the use of nutritional food labels among shoppers in Abeokuta Metropolis, Nigeria. The target population was 160 shoppers of packaged food products. Analytical techniques, including descriptive statistics, the Perception Index, Tobit regression, and Logit regression, were employed to evaluate the relationships among variables. Results revealed that the typical shopper is a young, educated, married female with moderate income and a small household size, who often shops with family members. The level of awareness indicates that 63.74% of respondents have a moderate *level of understanding, 28.13% a* low *level, and only 8.13% a* high *level, suggesting that although most consumers are somewhat aware of food labels, more targeted nutrition education is needed to enhance full understanding and utilization. Although most (60%) of shoppers are familiar with food labels and acknowledge their importance, more education is needed to deepen comprehension and promote consistent, informed use. Also, age, education, household size, and health concerns are the primary determinants of food label perception among shoppers. These factors jointly shape consumers' ability, motivation, and opportunity to engage with nutritional information. The results underscore the need for targeted nutrition education campaigns that focus on improving food label comprehension among younger, less-educated, and smaller household consumers. Consumer purchase decisions in supermarkets are influenced by a complex interaction of economic, psychological, social, and product-related factors.*
Keywords: *Choices, Consumption, Familiarity, Lifestyles, Knowledge*

INTRODUTION
Food labeling has emerged as a critical tool for promoting healthy eating and informed consumer choices in both developed and developing countries. Nutritional food labels provide essential information on the composition, quality, and safety of food products, thereby empowering

consumers to make healthier purchase decisions (Grunert and Wills, 2007; Campos *et al.*, 2011). In an era of rising diet-related diseases such as obesity, diabetes, and cardiovascular disorders, the availability and comprehension of nutritional labels are vital for influencing dietary behavior and achieving better nutritional outcomes (World Health Organization [WHO], 2020).

In Nigeria, the consumption of packaged and processed foods has significantly increased due to urbanization, income growth, and lifestyle changes (Adepoju and Olayemi, 2021). Consequently, understanding how consumers interpret and use nutritional information has become increasingly important. However, despite the presence of nutritional labeling regulations by agencies such as the National Agency for Food and Drug Administration and Control (NAFDAC), many consumers either do not use or poorly understand the information provided (Ogunleye *et al.*, 2022). This may be due to limited nutrition knowledge, low literacy levels, time constraints during shopping, or skepticism about the credibility of labels (Afolabi *et al.*, 2020; Asiegbu *et al.*, 2021).

The perception and use of nutritional food labels are influenced by various drivers, including demographic factors (age, gender, education), economic status, health consciousness, and marketing communication (Drichoutis *et al.*, 2006). Consumers who are health-conscious or educated are more likely to consult labels when making food choices, whereas those primarily motivated by price or taste may overlook such information (Grunert *et al.*, 2010). Understanding these drivers within the Nigerian context, particularly in urban centers such as Abeokuta, provides valuable insights into how labeling practices can be optimized to promote healthier consumption behaviours.

Despite the growing importance of food labeling as a consumer education tool, evidence from Nigeria suggests that awareness and utilization of nutritional information remain low among shoppers (Ogunleye *et al.*, 2022; Olayemi and Lawal, 2020). Many consumers either fail to read labels or misunderstand the nutritional values and health claims displayed on packaged foods. This gap between label availability and effective utilization raises concerns about the effectiveness of labeling as a behavioral change instrument in the country.

In the Abeokuta Metropolis, a fast-growing urban area with increasing access to supermarkets and processed foods, consumer purchase decisions are likely shaped by a combination of perceptions, socio-economic characteristics, and behavioral drivers. However, empirical studies that examine how these factors jointly influence the use and interpretation of nutritional labels are scarce. There is also a limited understanding of how shoppers' perceptions, such as trust in label accuracy, understanding of nutrition facts, or attitude toward health, affect their actual purchase decisions. Therefore, this study examines the perception, drivers, and purchase decision behavior associated with nutritional food label use among shoppers in Abeokuta Metropolis. The findings provide evidence for policymakers, marketers, and public health practitioners on how to strengthen food labeling strategies and promote healthier consumer choices.

METHODOLOGY

The study was conducted in Abeokuta. A shopping mall was chosen as the appropriate site for data collection, since consumers encounter food labels while purchasing food products. Potential respondents were approached after they had completed their purchases, as this could contribute to a reflection on their experiences of label information. Justrite at Ijeja, Ace Supermarket at Oke-Ilewo, Justrite at Kemta, Vanguard Pharmacy at Leme, Justrite at Fajol, Foodco Supermarket at Akinolugbade, Vanguard Pharmacy at Asero, and First Option Supermarket at Oke-Ibukun were chosen as the sites for data collection, as these supermarkets comprise of major shopping mall in Abeokuta. It is assumed that the inclusion of these supermarkets would be an effective way to ensure that consumers from a diverse socio-economic background were sampled for the study.

The target population consists of shoppers of packaged food products who are 18years or older living in Abeokuta metropolis, the capital city of Ogun State. Only consumers involved in the purchasing of household food products were included, as these consumers were exposed to food labels while making food purchases. This study employed a two-staged sampling technique with 160 respondents, who were randomly selected from eight shopping malls listed above.

Stage One: A simple random selection of 8 (eight) major supermarket were chosen among 12 shopping malls within the Abeokuta metropolis.

Stage Two: Systematic random selection of 20 (twenty) shoppers from each of the eight selected supermarkets was chosen, making a total of 160 respondents.

Primary data collection was used in the study. The primary data were collected through a structured questionnaire and were supplemented with interviews in cases where respondents could neither read nor write. The questionnaire was distributed among the shoppers who were willing to participate, and information was collected from individuals of varying status.

Data for this study were analyzed using descriptive statistics, Perception Index, Tobit regression model, and Logit regression model. Descriptive statistics were used to describe the socioeconomic characteristics, nutritional food labeling awareness, perception, and purchase decision. Frequency Tables, Percentages, and Means were duly adopted

$$\text{Perception Index} = \text{Number of Affirmative Answers to the Indicators} / \text{Total Number of Indicators} \quad (1)$$

The perception was assessed based on responses to questions highlighting the perception indicators, such as checking expiring dates, NAFDAC number, and nutritional contents before product purchase. The level of perception was later categorized using principal component analysis into three levels:

Low Level: 0.01-0.33

Moderate Level: 0.34-0.66

High Level: ≥ 0.67

The Tobit regression model was used to examine the factors influencing shoppers' level of perception of food labeling. The Tobit regression model is expressed as

$Y = \beta_o + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + e$ (2)

Y = level of perception (index)

X_1 = Age (years)

X_2 = Education level in years spent in school

X_3 = Marital status (Married = 1, otherwise = 0)

X_4 = Income (Naira per month)

X_5 = Sex (Male = 1, female = 0)

X_6 = Purchase pattern of household members (safety-conscious consumers 1, otherwise 0)

X_7 = Household size (number of people)

ß = Regression coefficient explaining changes caused in Y by changes in the independent variables,

µ = error term.

To determine the effects of food label perception on the purchase decisions of food without labels. Logit Regression Model was used following Fred *et.al.* (2021). The explicit logit model is expressed as:

$\log Y = ß_1X_1 + ß_2X_2 + ß_3X_3 + ß_4X_4 + ß_5X_5 + ß_6X_6 + ß_7X_7 + ß_8X_8 + ß_9X_9 + \mu$ (3)

Y = Purchase decision (1=yes, 0=No)

ß are the regression coefficients for predictor variables

µ= error terms

X_1 = Perceived Price sensitivity **(**1 = Yes, 0 = Otherwise)

X_2 = Perceived product quality (1 = Good, 0 = Otherwise)

X_3 = Brand perception (1 = Good, 0 = Otherwise)

X_4 = Cultural and Social Influences (1 = Yes, 0 = Otherwise)

X_5 = Perceived store environment (1 = Good, 0 = Otherwise)

X_6 = Marketing communication and promotion (1 = Yes, 0 = Otherwise)

X_7 = Food label perception (index)

X_8 = Proximity, Convenience, and Accessibility (Km)

Demographic Characteristics

X_9 = Age (years)

X_{10} = Sex (1 = Male, 0 = Female)

X_{11} = Household size (Number of persons)

X_{13} = Education (Years of schooling)

X_{14} = Marital status (1 = Yes, 0 = Otherwise)

X_{15} = Employment status (1 = Yes, 0 = Otherwise)

X_{16} = Income (₦/Month)

μ = error term.

RESULTS AND DISCUSSION

Socioeconomic characteristics of shoppers

The details presented in Table 1 with the respondents' socioeconomic characteristics. The findings show that 73.75% of shoppers were female, while 26.25% were male, indicating that shopping activities are largely dominated by women. This aligns with studies showing that women are primary household shoppers, as they often make decisions related to food, clothing, and household products (Kotler and Keller, 2016; Olayemi and Lawal, 2020). The dominance of female shoppers implies that marketing strategies and retail promotions should be tailored toward the needs, preferences, and behavioral patterns of women consumers.

Most shoppers (69.38%) were below 30 years, with a mean age of 26 years. This indicates that shopping activities are largely driven by young adults, who tend to be more technology-oriented and brand-conscious (Kotler *et al.,* 2019). Young consumers are often influenced by social media, peer behavior, and lifestyle trends when making purchasing decisions (Rahman and Azhar, 2018). The smaller proportions in higher age categories (31–50 years and above) suggest that older consumers may shop less frequently or delegate shopping responsibilities to younger family members.

A majority of respondents (62.5%) had HND/BSc qualifications, while only 6.25% had ND/NCE and 6.88% had MSc/PhD degrees. None of the respondents lacked formal education. This shows that most shoppers are well educated, a factor known to positively influence consumer awareness and rational decision-making (Ajzen, 1991; Ogunleye *et al.,* 2022). Educated consumers tend to be more conscious of product quality, nutritional content, and environmental implications, which affects their purchasing behavior (Afolabi *et al.,* 2020).

The occupational distribution reveals that 42.5% were traders or business owners, 29.38% were artisans, 23.13% had salary jobs, and 5% fell into other categories. This suggests that informal sector participation is high, consistent with Nigeria's employment structure (National Bureau of Statistics [NBS], 2023). Occupational type often affects income stability and spending capacity, which in turn shapes shopping frequency and product preference (Ogunbameru, 2019).

The data show that 66.25% of respondents were married, 32.5% were single, and 1.25% were in other categories (divorced or widowed). This indicates that most shoppers are family-oriented, which may influence their consumption of family-related goods such as food, toiletries, and children's items. According to Belch and Willis (2002), married individuals often make joint purchase decisions, reflecting collective household needs and preferences.

The mean household size of 3 persons indicates predominantly small to medium-sized households, with 52.5% having 1–2 members. Smaller households tend to buy in smaller quantities and prioritize convenience and quality over bulk purchases (NBS, 2023). In contrast,

larger households may focus on cost-effective and bulk purchasing, influencing price sensitivity and brand choice.

The majority (46.25%) of shoppers earned between ₦31,000 and ₦50,000, while 35% earned below ₦30,000 and 18.75% earned above ₦51,000. This shows that most respondents fall within the low- to middle-income category, which significantly affects purchasing power. Income level has been found to influence consumer preferences, shopping frequency, and brand loyalty (Akanbi, 2020). Lower-income consumers are often price-sensitive and more likely to respond to discounts and promotional offers (Ogunleye *et al.*, 2022).

A large proportion (48.13%) of respondents shop with family and kids, 36.25% shop alone, while 15.62% shop with family but without kids. This suggests that family-based shopping is more common and that children and spouses influence shopping decisions. Belch and Willis (2002) observed that family dynamics play a significant role in purchase behavior, particularly in the selection of household items and food products.

The socioeconomic characteristics reveal that the typical shopper is a young, educated, married female with moderate income and a small household size, who often shops with family members. These features have important implications for marketers and retailers in designing promotional campaigns, store layouts, and product offerings that appeal to this dominant consumer segment.

Table 1: Socioeconomic characteristics of the shoppers

Characteristics	Frequency	Percent	Mean
Sex			
Male	42	26.25	
Female	118	73.75	
Age (years)			
>30	111	69.38	26 years
31-40	33	20.63	
41-50	10	6.25	
<50	6	3.75	
Level of education			
None	0		
SSCE and below	24.38	24.38	
ND/NCE	10	6.25	
HND/BSC	100	62.50	
MSc/PhD	11	6.88	
Occupation			
Salary jobs	37	23.13	
Artisan	47	29.38	
Business/Trading	68	42.50	
Others	8	5.00	

Marital status			
Single	52	32.50	
Married	106	66.25	
Others	2	1.25	
Household size			
1-2	74	52.50	3
3-4	55	34.38	
5 and above	21	13.13	
Monthly income			
<30000	56	35.00	
31000-50000	74	46.25	
51000 and above	30	18.75	
Shopping method			
Shopping Single	58	36.25	
Shopping with Family with kids	77	48.13	
Shopping with Family without kids	25	15.62	

Source: Field survey, 2025.

Consumers' awareness of food labelling information

Table 2 presents the awareness and use of food labelling information among consumers. The results reveal that a majority of respondents (65.63%) sometimes read food labels, while 31.88% always do**,** and only 2.5% never read labels. This indicates that most consumers demonstrate a moderate level of engagement with food labels, aligning with studies by Grunert *et al.* (2010) and Campos *et al.* (2011), which found that although consumers often claim to value nutrition information, actual label-reading behaviour tends to be occasional rather than consistent.

In terms of knowledge of reading food labels, 67.92% reported that they understand labels "fairly well," while only 3.14% claimed to "understand well." This suggests that although exposure to labels is relatively high, comprehension remains limited. Similar findings were reported by Mandal *et al.* (2017) and Drichoutis *et al.* (2006)**,** who observed that consumer education and nutrition literacy strongly influence label comprehension and effective use.

Regarding the nutritional information before purchase, 64.38% of respondents sometimes do so, while only 25.63% always check before purchase. This demonstrates that purchase decisions are only partially informed by label content. Consistent with this, Miller and Cassady (2015) noted that while nutritional labeling can influence healthier choices, habitual or convenience-driven purchasing behavior often overrides careful label use.

Most respondents (68.13%) read food labels to identify nutrient content sometimes**,** and 26.88% do so always. This suggests a general but not systematic use of labels as a nutritional guide. Similarly, Kavle *et al.* (2020) found that consumers' use of nutrition labels often depends on situational factors such as time, brand loyalty, or product familiarity.

Interestingly, a significant 70.63% use ingredient lists to avoid certain ingredients, showing some level of informed health consciousness, possibly due to food allergies or dietary restrictions. Moreover, 91.25% of consumers agree that information on food labels can improve health**,** confirming that they perceive labels as a tool for making informed and health-oriented decisions. This is in line with the findings of Nørgaard and Brunsø (2009) and Marian *et al.* (2014)**,** who emphasized that positive perceptions of labels enhance consumer trust and health-related choices.

When asked about the importance of food labels, 40% cited distinguishing between different products as the main reason, followed by comparing nutrient content (22.5%) and selecting foods with needed nutrients (20.63%). This highlights that consumers primarily view labels as a product differentiation tool, consistent with Cowburn and Stockley (2005)**,** who found that product comparison and differentiation are among the key motivators for label use.

Finally, the overall level of awareness indicates that 63.74% of respondents have a *moderate* level of awareness, 28.13% a *low* level, and only 8.13% a *high* level. This suggests that although most consumers are somewhat aware of food labels, more targeted nutrition education is needed to enhance full understanding and utilization. As Kapsak *et al.* (2011) and Campos *et al.* (2011) argue, consumer-friendly formats and continuous public sensitization are crucial for translating awareness into informed consumption behaviour.

Table 2: Consumers' awareness of food labelling information

Awareness indicators	Frequency	Percent
How often do you read the labels on packages?		
Always	51	31.88
Sometimes	105	65.63
Never	4	2.50
Knowledge of reading food label?		
Understand well	5	3.14
Fairly	108	67.92
Never	46	28.93
Do you consciously search for nutritional information before I purchase a food product?		
Always	41	25.63
Sometimes	103	64.38
Never	16	10.00
Read food label to identify nutrient content of a specific food		
Always	43	26.88
Sometimes	109	68.13
Never	8	5.00

Do you use the information in the ingredient list to avoid certain ingredients?		
Yes	113	70.63
No	47	29.38
The information on food label can improve health		
Yes	146	91.25
No	4	2.50
Not sure	10	6.25
Important of food labels		
To distinguish between different products	64	40.00
To help avoid some nutrients	27	16.88
To select foods which contain nutrients they need	33	20.63
To compare the nutrient content of different products	36	22.50
Level of awareness of food label		
Low	45	28.13
Moderate	102	63.74
High	13	8.13

Source: Field survey, 2025.

Level of food label perception of shoppers

Table 3 presents the perception, comprehension, and utilization of food labelling information among shoppers. The results indicate a generally high level of awareness and positive perception, although challenges persist regarding understanding technical label details and label clarity.

A large majority of respondents (98.75%) reported that they can read food labels, while 91.25% understand the information presented. This high level of literacy suggests that consumers are becoming increasingly familiar with food labelling, possibly due to higher education levels, improved nutrition awareness campaigns, and media exposure. These findings are consistent with Campos *et al.* (2011), who observed that label literacy has increased globally, but comprehension depth varies with demographic and educational factors. Similarly, Drichoutis *et al.* (2006) emphasized that label use and understanding are strongly influenced by nutrition knowledge and prior exposure to health education.

However, while 78.13% indicated they have label reading skills, only 55.63% understand the % Daily Value (%DV) concept. This indicates a gap between basic label reading ability and deeper nutritional interpretation. Cowburn and Stockley (2005) and Grunert *et al.* (2010) similarly reported that many consumers find quantitative nutrition information, such as %DV is confusing, thereby limiting its usefulness in making healthier food choices.

The majority of shoppers frequently checked expiry dates (100%), ingredient lists (92.5%), amount of protein (80%), manufacturer and distributor information (78.75%), and calorie content (78.13%). These findings reflect consumers' concern for product safety, quality assurance, and

nutritional content, which are key determinants of trust and purchase intention. According to Miller and Cassady (2015), consumers often prioritize easily understood cues such as expiry dates and brand names over complex nutrition panels. Similarly, Marian *et al.* (2014) found that ingredient lists and expiry dates are the most frequently used parts of food labels among health-conscious consumers.

Interestingly, 86.88% of respondents checked for the NAFDAC number, indicating awareness of food safety certification and regulatory compliance as an important factor in developing markets like Nigeria, where food fraud and counterfeit products pose major risks. This finding aligns with Anuonye *et al.* (2020), who highlighted that regulatory symbols and certifications significantly influence consumers' perception of food safety and trustworthiness in West African contexts.

Perceptions of the efficacy of food labels show some skepticism, as 40% agreed that most food products' labels are not clear enough to influence purchase decisions, while 48.12% admitted that technical proficiency is needed to understand label information. This aligns with the findings of Grunert and Wills (2007) and Mandal *et al.* (2017), who reported that consumers often find labels too complex, crowded, or filled with technical jargon. Moreover, 15.63% indicated they do not trust crowded labels, suggesting a potential information overload effect, which can discourage active label reading (Campos *et al.,* 2011).

Despite these challenges, 43.13% emphasised that easy-to-read label information is essential for making the right nutritional choices. This perception underscores the importance of clear, legible, and consumer-friendly labelling, a principle supported by Hieke and Taylor (2012), who advocate for simplified front-of-pack labelling systems to improve consumer decision-making.

The overall level of perception reveals that 60% of respondents have a moderate level, while 32.5% have a high perception level, and only 7.5% have a low perception. This pattern implies that although most consumers are familiar with food labels and acknowledge their importance, more education is needed to deepen comprehension and promote consistent, informed use. Nørgaard and Brunsø (2009) also found that while awareness of nutritional information is growing, comprehension gaps and label skepticism still limit effective utilization.

Table 3: Level of food label perception of shoppers

Perception indicators	Frequency	Percent
Can you read food labels?		
Yes	158	98.75
No	2	1.25
Do you understand the information on the food label?		
Yes	146	91.25
No	14	8.75
Can you read a food label?		
Yes	44	

No	112	
Do you have label-reading skills?		
Yes	125	78.13
No	35	21.88
Do you understand % Daily value (%DV)?		
Yes	89	55.63
No	71	44.38
What information do you check out for?		
Calorie Count	125	78.13
Reduced Fat Claims	87	54.38
Type of fat and how much	107	66.88
Naturally occurring sugars	111	69.38
Beware of salts	85	53.13
Ingredient list	148	92.50
Common name of food	117	73.13
Serving size	76	47.50
Amount of protein	128	80.00
Name of manufacturer, packer, and distributor	126	78.75
Place of business	112	70.00
Ingredient declaration	109	68.13
Net quantity of content	98	61.25
Expiring date	160	100.00
NAFDAC number	139	86.88
Efficacy of food labels		
Most food products' labels are not clear, so I cannot purchase them	64	40.00
Easy to read label information is necessary for the right choice of nutritional food.	96	43.13
It is compulsory to provide information which explain ethical dimension of packaged food	42	26.25
It is difficult to identify food products that have complex labels	33	20.63
I do not trust on the crowded food product labels.	25	15.63
To read label information I need technical proficiency.	77	48.12
Level of perception		
Low	12	7.50
Moderate	96	60.00
High	52	32.50

Source: Field survey, 2025.

Factors influencing consumers' level of perception of food labels

Table 4 presents the regression results showing the factors influencing shoppers' perception of food labels. The model is statistically significant (LR Chi² = 783.66, $p < 0.01$**),** with a Pseudo R^2 of 0.773**,** indicating that approximately 77.3% of the variation in food label perception is explained by the independent variables included in the model. This suggests a strong explanatory power and reliability of the regression model in predicting perception levels among consumers.

Age: The coefficient for age is positive and statistically significant at the 1% level, implying that as consumers grow older, their perception and understanding of food labels tend to improve. This finding may reflect the likelihood that older shoppers are more health-conscious and pay closer attention to the nutritional and safety aspects of food products. Campos *et al.* (2011) and Grunert and Wills (2007) similarly reported that age positively influences food label use because older consumers often prioritize health maintenance and disease prevention in their dietary decisions.

Education: Education also exerts a positive and significant influence ($\beta = 5.265$, $p < 0.05$) on food label perception. This suggests that higher educational attainment enhances consumers' ability to read, interpret, and utilize label information effectively. Education is a key determinant of nutrition literacy, as educated individuals are more capable of understanding technical label elements such as nutrient content, ingredient composition, and health claims. These findings align with Drichoutis *et al.* (2006)**,** who emphasized that education increases the likelihood of using nutrition labels. Likewise, Miller and Cassady (2015) found that consumers with higher education levels are more likely to apply label information in making healthy food choices.

Household Size: The coefficient for household size ($\beta = 0.536$) is also significant at the 1% level**,** indicating that larger households have a higher perception of food labels. This may be attributed to greater purchasing responsibilities and exposure to a variety of food products, which encourage more label use to ensure food quality and safety for all members. Grunert *et al.* (2010) and Nørgaard and Brunsø (2009) noted that consumers managing family food needs often rely more on labels to compare nutritional benefits and avoid undesirable ingredients for children or elderly members.

Health Concerns: The variable health concerns ($\beta = 0.082$, $p < 0.01$) is significant and positively related to food label perception, confirming that individuals with stronger health awareness or specific dietary needs (e.g., managing cholesterol, diabetes, or weight) are more attentive to label information. This finding supports the conclusions of Mandal *et al.* (2017) and Marian *et al.* (2014)**,** who observed that health consciousness significantly drives food label use, as consumers with higher health involvement perceive labels as vital for preventing diet-related illnesses.

Variables such as sex**,** income**,** marital status**,** and purchase pattern show positive but statistically insignificant coefficients. This indicates that although these factors may influence label perception, their effects are not strong enough to be conclusive for this study. Cowburn and Stockley (2005) similarly reported that gender differences in label use are often inconsistent, while income level does not necessarily predict label engagement once education and health

consciousness are accounted for. Marital status and purchase patterns may have indirect effects through family decision-making or product familiarity rather than direct influence on label perception.

The regression analysis demonstrates that age, education, household size, and health concerns are the primary determinants of food label perception among shoppers. These factors jointly shape consumers' ability, motivation, and opportunity to engage with nutritional information. The strong significance of the model (Prob > Chi^2 = 0.0001) and high Pseudo R^2 value indicate that demographic and health-related characteristics substantially explain variations in food label perception.

The results underscore the need for targeted nutrition education campaigns that focus on improving food label comprehension among younger, less-educated, and smaller household consumers. Furthermore, policymakers and food manufacturers should simplify label formats and provide health-oriented label designs that can be easily interpreted by diverse consumer groups.

Table 4: Factors influencing the level of perception of food labels of shoppers

	Coefficient	**t-values**
Age	6.242***	2.802
Sex	5.001	0.572
Education	5.265**	2.097
Marital Status	0.002	0.500
Household size	0.536***	4.661
Income	5.001	1.111
Purchase pattern of household members	0.212	1.054
Health concerns	0.082***	2.529
Number of observations = 160		
LR *Chi*2 (24) = 783.66		
Prob>*Chi*2 = 0.0001		
Pseudo R2 = 0.773		
Log likelihood = -834.22		

Note ***, **, and * implies significant at 1%, 5%, and 10% respectively.

Distribution of Shoppers' purchase decisions of food with/without labels

Table 5 presents respondents' attitudes and behaviors regarding the use of food labels in their purchase decisions. The data reveal significant insights into how consumers in the study area

interact with food labeling information, particularly when nutritional information is missing or unclear.

A majority (79.38%) of respondents reported that they look at food labels before making a purchase, while 20.63% do not. This suggests that most consumers recognize the importance of food labeling in making informed choices. Similar findings were reported by Grunert and Wills (2007)**,** who found that European consumers frequently consult food labels to assess nutritional value and safety before purchase. Likewise, Campos *et al.* (2011) observed that label reading is a common behavior among health-conscious consumers, especially those concerned with diet-related diseases.

About 70.63% indicated that they would avoid purchasing foods without labels, whereas 29.38% would not. This finding implies that labeling is a key determinant of perceived food safety and quality. Drichoutis *et al.* (2006) emphasized that the absence of labeling often signals uncertainty and mistrust, prompting avoidance behavior. Moreover, Verbeke (2008) noted that consumers associate unlabeled foods with poor quality control and limited transparency.

The Table shows that 71.25% of consumers' buying decisions are influenced by nutritional information on products. This aligns with findings by Campos *et al.* (2011) and van der Merwe *et al.* (2014), who reported that consumers use nutritional labels to compare products and make healthier choices. This trend reflects a growing public interest in health and wellness, particularly among urban consumers.

A very high percentage (91.25%) of respondents claimed they understand the information on the back of food packages. This is consistent with Miller and Cassady (2015)**,** who found that educational level and label familiarity improve comprehension of nutritional labels. However, Lobstein and Davies (2009) cautioned that self-reported understanding may not always correspond to an accurate interpretation of label information, as many consumers misinterpret portion sizes and nutrient values.

An overwhelming 97.5% of respondents agreed that nutritional information offers useful information about the product, confirming its perceived value. This echoes Hawkes *et al.* (2015)**,** who argued that nutritional labeling is one of the most cost-effective strategies for promoting healthy dietary behavior.

About 80.63% of respondents reported that they read nutritional information and ingredients, while 19.38% admitted they do not. These findings reinforce the conclusions of Drichoutis *et al.* (2006) that habitual label reading is positively associated with higher education and health awareness.

A striking 91.88% of respondents perceived their diets as healthy. This self-assessment may reflect optimism bias, as discussed by Keller *et al.* (1997)**,** where consumers often overestimate the healthiness of their eating habits due to selective information processing.

Consumers exhibited stronger confidence and trust in familiar food labels. For example, 69.38% agreed that familiar labels are important for selecting healthy processed foods, while 66.88% found unfamiliar labels difficult to interpret. Grunert *et al.* (2010) similarly observed that

familiarity enhances trust and reduces cognitive effort in decision-making. On the other hand, Röhr *et al.* (2005) noted that unfamiliar or foreign labels often lead to confusion, skepticism, and reliance on brand recognition rather than nutritional facts. The findings suggest that food labeling has a significant impact on consumer decisions, but comprehension and trust depend heavily on familiarity, clarity, and prior knowledge. This suggests the need for standardized, clear, and culturally relevant labeling systems to improve understanding and influence healthier food choices.

Table 5: Consumers' purchase decision of food without labels

Decisions	Frequency	Percent
I look at the food label table before making a purchase		
Yes	127	79.38
No	33	20.63
Will you avoid buying the food if there's no food label?		
Yes	113	70.63
No	47	29.38
My buying decisions are influenced by nutritional information on products		
Yes	114	71.25
No	46	28.75
I understand the information provided on the back of the food package		
Yes	146	91.25
No	2	8.75
The nutritional information on the back of the package does not influence my purchasing decisions		
Yes	80	50.00
No	80	50.00
The nutrition information offers useful information about the product		
Yes	156	97.50
No	4	2.50
I never read the nutritional information and ingredients on the food package		
Yes	31	19.38
No	129	80.63
How healthy would you say your diet is?		
Yes	147	91.88
No	13	8.13

Attitude towards familiar food labels		
The available information on familiar labels is appropriate for the selection of healthy processed food, and for me, it is important.	42	26.25
A familiar label is an appropriate source for healthy processed food selection, and for me, it is important.	111	69.38
A familiar food label is easy to understand and supportive of healthy packaged food selection.	69	43.13
Attitude towards unfamiliar food labels		
The unfamiliar label is not useful for nutritional food selection.	88	55.00
The available information on unfamiliar labels is difficult to understand	39	24.38
An unfamiliar food label makes individuals find it difficult to search for relevant information for the selection of healthy packaged food.	107	66.88
An unfamiliar food label is difficult to understand and provides support for healthy package food selection.	98	61.25

Source: Field survey, 2025.

Effects of food label perception on the purchase decisions of shoppers

Table 6 presents the regression results showing the influence of food label perception and other socioeconomic and behavioral variables on the purchase decision of shoppers in the Abeokuta Metropolis. The model yielded a Likelihood Ratio chi-square (LR χ^2) of 69.362, which is statistically significant at $p < 0.01$, and a Pseudo R^2 value of 0.417, indicating that approximately 41.7% of the variation in shoppers' purchase decisions is explained by the variables included in the model. This implies that the model has a good explanatory power for understanding consumer purchasing behavior in relation to food labeling.

Food Label Perception: The coefficient of food label perception ($\beta = 0.014$, $t = 2.121$) was positive and statistically significant at $p < 0.05$. This suggests that shoppers with a positive perception of food labels are more likely to make informed purchase decisions. The result supports findings by Grunert and Wills (2007) and Campos *et al.* (2011), who reported that positive consumer attitudes toward nutritional labeling enhance product choice and health-conscious purchasing behavior. This indicates that improving label comprehension and trust can directly increase consumers' tendency to use labels in decision-making.

Price Sensitivity: Price sensitivity had a positive and significant effect ($\beta = 0.012$, $t = 1.982$) on purchase decision, implying that consumers consider product prices alongside label information when deciding what to buy. This is consistent with Afolabi *et al.* (2020), who found that price remains a key determinant of consumer choice in developing economies, where disposable income is relatively low. Thus, while label information influences purchases, price considerations remain a crucial moderating factor.

Perceived Product Quality: Perceived product quality was highly significant (β = 0.043, t = 4.512), indicating that consumers who perceive labeled products as high quality are more likely to purchase them. This aligns with Drichoutis *et al.* (2006), who noted that product quality perception—often reinforced through labeling and branding plays a central role in purchase behavior. It implies that food labels not only inform but also signal product quality and safety, thereby boosting consumer confidence.

Brand Perception: Brand perception showed a positive and significant influence (β = 0.119, t = 2.071), suggesting that consumers' trust and familiarity with a brand encourage purchase decisions. This finding aligns with Kotler and Keller (2016), who stated that strong brand equity enhances product credibility and increases purchase likelihood, particularly when labeling reinforces brand reputation.

Perceived Store Environment: The coefficient for perceived store environment was positive and significant (β = 0.024, t = 3.049), implying that shoppers in clean, organized, and well-lit stores are more likely to use label information and make confident purchases. As supported by Adebayo and Ojo (2022), store aesthetics and environmental quality can enhance consumer trust and satisfaction, indirectly promoting rational buying decisions.

Marketing Communication and Promotion: Marketing communication and promotion had a strong positive effect (β = 0.301, t = 2.596), indicating that advertising and in-store promotions significantly shape consumer perception of labeled products. This supports findings by Grunert et al. (2010), who emphasized that promotional efforts and clear communication enhance label visibility and consumers' motivation to read and use nutritional information.

Proximity, Convenience, and Accessibility: The coefficient for proximity and convenience was positive and significant (β = 0.182, t = 3.465), meaning that consumers tend to shop in locations that are easily accessible and convenient, which influences their purchasing decisions. This result is consistent with Ogunbameru (2019), who observed that accessibility and location significantly affect consumer store choice and frequency of purchases.

Demographic Characteristics: Age was negative and significant (β = -0.016, t = -3.997), implying that younger shoppers are more responsive to food labels than older ones, possibly due to greater exposure to health information and social media awareness (Rahman & Azhar, 2018). Sex had a negative and significant coefficient (β = -0.373, t = -2.091), suggesting that female shoppers are more likely than males to consider food labels when making purchases, consistent with Olayemi and Lawal (2020), who found that women are typically more involved in household food choices. Education was positive and highly significant (β = 0.198, t = 4.832), implying that the more educated a shopper is, the more likely they are to understand and use nutritional labels, corroborating Ajzen's (1991) theory of planned behavior, which links knowledge and attitude to rational decision-making. Income also had a positive and significant effect (β = 0.182, t = 4.477), indicating that higher-income earners are more likely to buy labeled products, possibly due to greater purchasing power and concern for product quality and health (Akanbi, 2020). Employment status was positive and significant (β = 1.492, t = 3.002), showing that employed

individuals have higher purchasing tendencies, reflecting their economic stability. Household size had a positive but marginally significant effect (β = 0.325, t = 1.898), suggesting that larger households may prioritize bulk purchases but still rely on label information for safety and nutrition. Marital status was not significant, indicating that being married or single has no direct influence on label-based purchase decisions.

Although the coefficient for cultural and social influences (β = 0.073, t = 1.272) was positive, it was not statistically significant. This suggests that peer and cultural influences have a weaker effect on label-based decisions compared to personal and product-related factors. This finding diverges slightly from Belch and Willis (2002), who emphasized the importance of family and cultural context in purchase behavior, possibly due to the urban and individualistic nature of shoppers in Abeokuta.

The results underscore that food label perception, product quality, education, income, and marketing communication are the most influential factors affecting purchase decisions among shoppers. Conversely, factors such as age, gender, and store accessibility also play significant but secondary roles. The findings highlight the importance of enhancing consumer education, improving label design and accuracy, and strengthening marketing communication to encourage informed and health-conscious purchasing behavior in Nigeria.

Table 6: Effects of food label perception on the purchase decisions of shoppers

Variables	Coefficients	t-values
Constant	0.153***	3.083
Perceived Price sensitivity **(**1 = Yes, 0 = Otherwise)	0.012*	1.982
Perceived product quality (1 = Good, 0 = Otherwise)	0.043***	4.512
Brand perception (1 = Good, 0 = Otherwise)	0.119**	2.071
Cultural and Social Influences (1 = Yes, 0 = Otherwise)	0.073	1.272
Perceived store environment (1 = Good, 0 = Otherwise)	0.024***	3.049
Marketing communication and promotion (1 = Yes, 0 = Otherwise)	0.301***	2.596
Food label perception (index)	0.014**	2.121
Proximity, Convenience, and Accessibility (Km)	0.182***	3.465
Demographic Characteristics		
Age (years)	-0.016***	-3.997
Sex (1 = Male, 0 = Female)	-0.373**	-2.091
Household size (Number of persons)	0.325*	1.898
Education (Years of schooling)	0.198***	4.832

Marital status (1 = Yes, 0 = Otherwise)	0.017	1.656
Employment status (1 = Yes, 0 = Otherwise)	1.492***	3.002
Income (₦/Month)	0.182***	4.477
LR $ch^2(9)$	69.362	
Prob>chi^2	0.001	
Pseudo R^2	0.417	
Log likelihood	1104.621	

Note ***, **, and * implies significant at 1%, 5%, and 10% respectively.

CONCLUSION

This study investigated the effects of food label perception on the purchase decisions of shoppers in the Abeokuta Metropolis, with particular attention to the socioeconomic, behavioral, and marketing factors that shape consumer behavior. The findings revealed that while food labeling serves as an important source of product information, its influence on consumer decision-making is mediated by perception, education, income, and product-related attributes.

The regression results demonstrated that food label perception, perceived product quality, education, income, marketing communication, and proximity significantly and positively affected shoppers' purchase decisions. This indicates that consumers who understand and trust food labels are more likely to make informed and health-conscious purchases. Similarly, the significance of education and income underscores the role of consumer literacy and economic capacity in promoting rational food choices. The positive influence of brand perception and store environment further suggests that aesthetic and trust-related factors enhance consumers' confidence in labeled products.

Conversely, age and gender had negative effects, implying that younger and female shoppers are more likely to engage with label information than their older or male counterparts. Cultural and social influences, as well as marital status, were not significant, suggesting that label use is more of an individual cognitive behavior than a socially driven one within the study context.

Overall, the study concludes that positive perception and understanding of nutritional food labels significantly enhance consumers' purchasing decisions, thereby contributing to healthier consumption patterns. It emphasises the need for consumer education campaigns on label interpretation, strict enforcement of labeling regulations by NAFDAC, and collaboration between food producers and health agencies to ensure label clarity, accuracy, and visibility. Strengthening these measures will help bridge the knowledge gap, increase consumer trust, and promote informed food choices that support public health objectives.

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