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The Influence of Nutritional Labels and Health Awareness on Frozen Food Purchase Decisions

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Abstract

The increase in frozen food consumption along with modern lifestyles emphasizes the need to understand the factors influencing purchasing decisions. This study aims to analyze the influence of nutritional labels and health awareness on purchasing decisions for frozen food products among the people of Mataram City. Using a quantitative associative-causal approach, data were collected through an online questionnaire from 100 purposive sampling respondents with multiple linear regression analysis in SPSS 27. The results showed that nutritional labels (t=2.316, p=0.023) and health awareness (t=7.664, p=0.000) had a significant effect both partially and simultaneously (F=49.856, p=0.000), explaining 50.7% of the variation (R^2=0.507). The conclusion states that clear nutritional information and high health awareness encourage selective purchasing among young female students, so manufacturers are advised to improve label quality and the government to promote nutritional literacy for healthier consumption.

INTRODUCTION

In today's modern era, public demand for convenient foods such as frozen food products continues to increase due to their ease of storage, quick preparation, and preservation of taste and nutrition. Globally, the frozen food market reached USD 261.9 billion in 2024 and is projected to grow at a CAGR of 3.6% until 2033, while in Indonesia, its value reached USD 3.4 billion in 2024 with a projection of USD 5.9 billion in 2033 and a CAGR of 6.3% (IMARC Group, 2024a; IMARC Group, 2024b). Changes in urban lifestyles, including increased urbanization and dual-income households in cities like Mataram as the economic center of West Nusa Tenggara, are driving the preference for these ready-to-eat foods (Mordor Intelligence, 2025; Sharma, 2024).

Despite this, nutrition label literacy in Indonesia remains low, with approximately 70% of consumers reading packaging labels, but only 37.5% actually paying attention to nutritional information before purchasing (Mauludyani et al., 2021). This level of understanding reflects a gap between access to information and its application in purchasing decisions, which is exacerbated by low knowledge about the nutritional value of processed products (Mauludyani, 2021; Salsabila, 2024).

Furthermore, health awareness, as a psychological factor, influences consumer behavior, with individuals with a high health concern tending to be more selective in their food choices (Mohammed, 2022; Anastasia, 2025). However, amid the growth of frozen food, consumers in

developing regions like Mataram often face challenges in understanding nutrition labels due to limited literacy and the influence of urban lifestyles (Osei et al., 2024; Gunawan & Kunto, 2022).

This study aims to analyze the influence of nutritional labels and health awareness on frozen food purchasing decisions in Mataram City using multiple linear regression. Its importance lies in its contribution to health-based marketing strategies, improving nutritional literacy, and consumer protection policies in Indonesia. This study's novelty fills a research gap with a simultaneous empirical analysis of both variables in a developing country context, particularly Mataram, which was previously limited to perceptions or purchase intentions in developed countries (Cahaya Panji et al., 2024; Pebrianti & Rosalin, 2024).

METHODS

Types and Methods of Research

This quantitative study uses an associative-causal approach, aiming to examine the causal relationship between independent variables (nutritional labels and health awareness) and the dependent variable (frozen food purchasing decisions) among residents of Mataram City (Sugiyono, 2012). This approach was chosen because it allows for empirical measurement of influence through numerical data, consistent with the multiple linear regression design for analyzing factors influencing consumer behavior in the context of modern lifestyles as outlined in the introduction (Creswell & Creswell, 2023). This quantitative method also aligns with similar research that emphasizes statistical hypothesis testing to uncover patterns of variable influence, as applied in studies on nutritional literacy and health awareness (Emzir, 2021). Furthermore, this design supports the generalizability of the findings to a broader population, focusing on the local context of Mataram City where urbanization drives frozen food consumption (Sudaryono, 2022).

Data Analysis Instruments and Techniques

The main research instrument was a questionnaire designed based on variable indicators from the literature, covering nutritional labels (completeness of nutritional information, label clarity, consumer trust, and understanding; Mauludyani, 2021), health awareness (self-awareness, involvement, and health responsibility; Wardani et al., 2023), and purchasing decisions (product selection, distributor, timing, quantity, and payment method; Kotler & Keller, 2012). The questionnaire was distributed online to reach respondents efficiently, complemented by validity testing (measuring the suitability of the instrument to the concept; Ghozali, 2016) and reliability (consistency of answers over time; Ghozali, 2018). Data analysis techniques included classical assumption tests (normality, multicollinearity, heteroscedasticity), partial t-tests, simultaneous F-tests, and coefficient of determination (R^2) using SPSS version 27, with a regression model: where α is the purchasing decision, α is the nutritional label, and α is the health awareness (Sugiyono, 2012; Emzir, 2021). This approach ensures robust analysis, as recommended for studies of the influence of psychological variables on consumer behavior (Creswell & Creswell, 2023; Sudaryono, 2022).$Y = a + b_1X_1 + b_2X_2 + eYX_1X_2$

Population and Sample

The study population included all residents of Mataram City who had purchased and consumed frozen food products, reflecting a group of urban consumers with busy lifestyles as described in the introduction (Sugiyono, 2012). A purposive non-probability sampling technique was used to select 100 respondents who met specific criteria, namely active adult frozen food

consumers (21-50 years old predominantly based on initial demographics), because this method is efficient for targeting subjects with relevant characteristics without equal opportunity for each member of the population (Sugiyono, 2012; Sudaryono, 2022). The sample size of 100 respondents was chosen to support the statistical power of the regression with sufficient degrees of freedom, in line with standard practices in associative quantitative research in Indonesia (Emzir, 2021; Creswell & Creswell, 2023).

Research Procedures

The procedure began with the development of a questionnaire instrument based on a literature review, followed by validity and reliability testing to ensure data quality (Ghozali, 2016, 2018). Primary data were collected through online surveys and questionnaires during the collection period in Mataram City, supported by secondary documentation such as the IMARC Group market report (2024). Subsequently, the data were analyzed in stages: respondent descriptions, classical assumption tests, and hypothesis testing (t-test, F-test, R^2) using SPSS 27 (Sugiyono, 2012). This process was carried out systematically to avoid bias, with research ethics guaranteeing respondent confidentiality, as is standard protocol in consumer studies (Emzir, 2021; Sudaryono, 2022; Creswell & Creswell, 2023).

RESULTS

The following is a description of the 100 respondents in the study as presented in Table 1.

Table 1. Respondent Description

Statement	All over	Percentage (%)
Gender		
Bitter melon	30.5%	27
Woman	69.5%	73
Age		
21 - 30	94%	94
31 - 40	1.7%	2
41 – 50	2.5%	3
>50	0.8%	1
Expenses in a Month		
< Rp. 1,000,000	52.5%	53
Rp. 1,000,000 – Rp. 2,500,000	36.4%	36
Rp. 3,000,000 – Rp. 5,000,000	8.5%	9
>Rp. 5,000,000	2.5%	3
Work		
Student	75.5%	75
Self-employed	5.9%	6
Civil servants	5.9%	6
And Others	12.7%	13

Source: Processed data (2025)

Based on respondent characteristics data, it appears that women constituted 69.5% of the respondents in this study, while men comprised 30.5%. This suggests that women are more active in frozen food purchasing decisions, likely related to their role in managing household consumption and personal needs.

In terms of age, the majority of respondents were between 21 and 30 years old, accounting for 94%. The age group above 31–40 years old (1.7%), 41–50 years old (2.5%), and those over 50 years old (0.8%) were represented in smaller numbers. This dominance of young adults reflects the consumer character, which tends to favor practical and fast-food products, in line with high mobility and busy daily activities.

Based on monthly expenditures, respondents with expenditures of less than Rp1,000,000 constituted the largest group, at 52.5%. Those with expenditures of Rp1,000,000–Rp2,500,000 followed at 36.4%, while those with expenditures of Rp3,000,000–Rp5,000,000 and above accounted for 8.5% and 2.5%, respectively. This distribution indicates that the majority of respondents come from the lower-middle economic class, so price and efficiency are likely to influence frozen food purchasing decisions.

In terms of occupation, the majority of respondents were students (75.5%). Meanwhile, self-employed individuals and civil servants each accounted for 5.9%, and other occupations accounted for 12.7%. The predominance of students indicates that frozen food consumers in this study are largely from groups that require practical and quick-to-prepare meals due to time constraints.

Overall, these demographic characteristics suggest that frozen food consumers in this study are predominantly young, active individuals who tend to consider practicality and price when making purchasing decisions. This is relevant to the research focus on the role of nutrition labels and health awareness in influencing their purchasing behavior.

Table 2. Results of Multiple Linear Regression Analysis

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6,521	3,480		1,874	.064
	Nutritional Label	.240	.104	.184	2,316	.023
	Health Awareness	.814	.106	.610	7,664	.000

a. Dependent Variable: Purchasing Decision

Based on the results of the multiple linear regression test, the influence of nutrition labels (X1) and health awareness variables (X2) simultaneously on purchasing decisions (Y) using SPSS 27 produces the following linear regression equation:

$$Y = a + b_1 X_1 + + e b_2 X_2$$

$$Y = 6.521 + 0.240x_1 + 0.814x_2$$

The explanation of the multiple linear regression analysis above is:

1. If the independent variables, namely nutrition label and health awareness, have a value of 0, then the value of the purchasing decision is 6.521 units.

2. If the independent variable nutrition label increases by 1 unit, then the purchasing decision value increases by 0.240 units, while other variables remain constant.
3. If the independent variable of health awareness increases by 1 unit, then the value of the purchasing decision increases by 0.814 units, while the other variables remain constant.

Table 3. Results of t-Test Analysis (Partial Test)

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6,521	3,480		1,874	.064
	Nutritional Label	.240	.104	.184	2,316	.023
	Health Awareness	.814	.106	.610	7,664	.000

a. Dependent Variable: Purchasing Decision

The results of partial hypothesis testing for the nutrition label variable obtained a calculated t value (2.316) > t table (1.984) with a significance level of 0.023 < 0.05 so that it can be concluded that nutrition labels have a positive and significant effect on purchasing decisions for frozen food products in the city of Mataram.

The results of partial hypothesis testing for the health awareness variable obtained a calculated t value (7.664) > t table (1.984) with a significance level of 0.000 < 0.05 so that it can be concluded that health awareness has a positive and significant effect on purchasing decisions for frozen food products in the city of Mataram.

Table 4. Results of F-Test Analysis (Simultaneous Test)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2278.350	2	1139.175	49,856	.000b
	Residual	2216.400	97	22,849		
	Total	4494.750	99			

a. Dependent Variable: Purchasing Decision

b. Predictors: (Constant), Health Awareness, Nutritional Label

The results of simultaneous hypothesis testing obtained a calculated F value (49.856) > F table (3.09) with a significance level of 0.00 < 0.05 so that it can be concluded that nutrition labels and health awareness have a positive and significant influence on purchasing decisions for frozen food products in the city of Mataram.

Table 5. Results of the Analysis of the Determination Coefficient Test (R2 Test)

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.712a	.507	.497	4,780

a. Predictors: (Constant), Health Awareness, Nutritional Label

Based on table 5 above, it can be seen that the coefficient of determination from the R square value of 0.507 means that nutrition labels and health awareness can explain purchasing decisions by 50.7% and the remaining 49.3% is influenced by other variables outside of this study such as taste, packaging, product innovation, brand image, product quality, promotion, and others.

DISCUSSION

The Influence of Nutritional Labels on Purchasing Decisions for Frozen Food Products in Mataram City

The partial hypothesis testing results for the nutrition label variable obtained that the calculated t value (2.316) > t table (1.984) with a significance level of 0.023 < 0.05 so it can be concluded that nutrition labels have a positive and significant effect on purchasing decisions on frozen food products in Mataram City. If seen from the questionnaire listed, there are several indicators in it, namely Completeness of Nutritional Information (Nutritional Content), Clarity and readability of labels, Trust in label information, and consumer understanding of nutrition labels by consumers can provide respondents with confidence in answering these questions. This means, the better the nutrition label will certainly influence purchasing decisions.

In this case, the more comprehensive and clear the information on a product's nutrition label, the more likely it is that consumers will be interested in purchasing that product. Clear and accurate nutritional information can help consumers make better decisions that meet their needs.

This research is in line with several studies which state that nutrition labels have a positive and significant influence on purchasing decisions, namely research conducted byNatalia & Mursalin (2024)AndRifana (2022).

The Influence of Health Awareness on Purchasing Decisions for Frozen Food Products in Mataram City

The results of partial hypothesis testing for the nutrition label variable showed that the calculated t value (7.664) > t table (1.984) with a significance level of 0.000 < 0.05, so it can be concluded that health awareness has a positive and significant effect on purchasing decisions for frozen food products in Mataram City. When viewed from the questionnaire listed, there are several indicators in it, namelyHealth Awareness, Health Engagement, and Health ResponsibilityConsumers can provide respondents with confidence in answering these questions. This means that higher health awareness will certainly influence purchasing decisions.

Consumers' concern for the food and drink they consume will lead them to be more selective when making product purchasing decisions. This means that consumers who are aware of the importance of maintaining their health tend to have a better understanding of how much food and drink they consume affects their health.

The results showed that health awareness has a positive and significant impact on purchasing decisions. Therefore, health awareness is a potential factor in shaping consumer attitudes in the purchasing decision-making process. This demonstrates that consumers are increasingly aware of the importance of maintaining good health, and that purchasing food and beverages that are safe

and beneficial for the body is crucial. One sign of a growing positive attitude toward purchasing healthy food is consumers' increased sense of responsibility for their health.

This research is in line with several studies which state that nutrition labels have a positive and significant influence on purchasing decisions, namely research conducted byPebrianti & Rosalin (2024) AndCahaya Panji et al. (2024).

CONCLUSION

This study concludes that nutritional labels and health awareness partially and simultaneously have a positive and significant influence on purchasing decisions for frozen food products in Mataram City. The calculated t-value for nutritional labels (2.316; sig. 0.023) and health awareness (7.664; sig. 0.000) exceeds the t-table (1.984), while the F-test (49.856; sig. 0.000) and R^2 (0.507) confirm that both variables explain 50.7% of the variation in purchasing decisions, with the remainder influenced by other factors such as price and taste. These findings confirm the hypothesis that complete and clear nutritional information and self-awareness of health encourage consumers, especially young women and students, to choose products more selectively. Practically, these results have implications for frozen food producers to improve the quality of nutritional labels to support health-based marketing strategies, as well as for the government in nutritional literacy campaigns to protect urban consumers in Indonesia.

However, this study has limitations such as a sample size of 100 respondents, which is limited to consumers in Mataram, requiring caution in generalizing to other regions. It also relies on self-report questionnaire data, which is prone to subjective bias. For future research, it is recommended to expand the sample to other cities, include moderating variables such as price or brand image, and use mixed-methods approaches for in-depth qualitative exploration. These implications open up opportunities for industry-government collaboration in developing national standard nutrition label policies to promote healthier frozen food consumption amidst market growth.

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