MILK LABELS AND MINDSETS: ANALYZING CONSUMER REACTIONS TO HEALTH AND QUALITY CLAIMS

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ABSTRACT

This study investigates how label claims influence consumer perceptions of health and quality in Milk. It examines consumer preferences, the impact of product attributes on health perceptions, and the role of label claims in building trust. Data was collected from 399 consumers using a structured questionnaire and analysed with SPSS. Regression analysis was applied to assess the relationship between consumer satisfaction and influencing factors. The results indicate that geographic location significantly affects consumption patterns, while age and gender have minimal influence on purchasing behaviour. Nutritional content, particularly protein and calcium, plays a key role in shaping health perceptions, whereas packaging has a lesser impact. Transparent product information, third-party certifications, and recyclable labels strengthen consumer trust and confidence in Milk's health claims.

Keywords: Milk, Label, Nutrition, Packaging, Consumer Trust, Consumption.

INTRODUCTION

Milk is one of the most widely consumed dairy products, recognized for its rich nutritional profile and essential role in daily diets. As consumer awareness of health and wellness grows, people are paying closer attention to the information presented on product labels. Label claims, such as nutritional content (protein, calcium and fat percentage), safety certifications, and packaging details, play a vital role in influencing consumer perceptions of a product's health benefits and quality. These claims act as a guide for consumers, helping them make informed choices based on their dietary needs and lifestyle preferences.

In today's market, food safety, quality assurance, and transparency are major concerns. Consumers expect clear, reliable, and verifiable information on the products they purchase. Regulatory authorities such as the Food Safety and Standards Authority of India (FSSAI) mandate proper labelling to ensure that consumers receive accurate details regarding a product's nutritional value, processing methods (pasteurization and homogenization), and expiration dates. Additionally, third-party certifications and eco-friendly packaging claims influence consumer trust, as they reflect a brand's commitment to health, safety, and environmental sustainability.

Despite the availability of detailed product information, consumer trust and purchasing behaviour vary based on several factors, including geographic location, age, and lifestyle. Some consumers prioritize protein and calcium content when selecting milk, while others focus on safety certifications or eco-friendly packaging. Understanding how these label claims influence

buying decisions is crucial for dairy brands, as it enables them to align their labelling strategies with consumer expectations and market trends.

This study aims to evaluate the impact of label claims on consumer perceptions of milk's health benefits and quality. It explores how different labelling elements—nutritional claims, third-party certifications, and packaging features—affect consumer trust and purchasing patterns. By analysing consumer responses, the research provides insights into how dairy manufacturers can enhance transparency, build brand credibility, and effectively communicate product benefits. The findings will also be valuable for policymakers in refining labelling regulations to promote informed consumer choices and foster greater trust in dairy products.

LITERATURE REVIEW

Research has shown that food labels play a significant role in shaping consumer satisfaction by providing transparency, reliability, and comprehensive details about product quality. Proper labelling not only influences consumer perceptions but also enhances their trust in the product's authenticity and safety, which ultimately boosts their satisfaction (Abu Sayed Md. Shahiduzzaman, 2023). Further research suggests that psychological traits and packaging elements are crucial factors in influencing consumer purchase intentions. For example, consumers' body image attitudes and their trust in health claims strongly affect their perceptions of nutritional labels. The study emphasizes the importance of effective label design in promoting consumer engagement and influencing purchasing behaviour (Hernandez-Fernandez, 2022). A study examining the influence of Front-of-Pack (FOP) labelling on consumer choices found that FOP labels, in particular, can positively alter consumer perceptions of healthfulness. The study concluded that these labels are especially effective in encouraging healthier choices, highlighting the power of visual information in shaping food-related decisions (Beatriz Franco-Arellano, 2020). An experiment on minimal-information labels shows that even labels containing basic or repetitive information can significantly impact consumer perceptions of a product. In the study, such labels increased consumers' perceived value of the product, which also influenced their willingness to pay more (John C. Bernard, 2019). In a study focused on the effects of nutritional and health claims on consumer behaviour, it was found that such labels positively influenced consumer expectations and shaped both pre-tasting and post-tasting evaluations. These findings suggest that label claims directly affect how consumers perceive the product's health benefits (Benson T, 2018). A national survey conducted to assess how health and nutrition claims influence portion size choices revealed that these claims shape consumers' perceptions of healthiness and satiety. The study also found that familiarity with these claims plays a crucial role in guiding consumers' behaviour when choosing food products (Hoquw, 2018). Research on the impact of milk labels indicated that nutritional claims significantly influence consumer purchase decisions. Consumers tend to trust products with clear, easily accessible labelling, which enhances their confidence in the product's quality and health benefits (Johye Hwang, 2016). A study focused on the impact of ingredient labelling and health claims on food preferences found that health claims, especially those related to fibre, significantly impacted consumer behaviour, often leading to a greater willingness to purchase the product (Svetlana Bialkova, 2016). Research on the relationship between nutrition and advertising claims emphasized how these claims influence food choices, particularly in terms of balancing health and pleasure. The study found that claims promoting health benefits were more likely to be perceived positively by consumers motivated by health-consciousness (Judith Labiner-Wolfe, 2010). The impact of low-carbohydrate claims on food choices was examined, with findings

showing that such claims significantly enhanced perceptions of healthfulness. However, when consumers also considered the Nutrition Facts label, the influence of these claims on their purchase decisions was reduced (Zaiem, 2010). Studies investigating the role of certification and labelling found that certification labels play a critical role in shaping consumer confidence in food quality. Such labels help alleviate concerns about the product's origin and safety, influencing their purchasing choices (Borgmeier, 2009). A study evaluating various front-of-pack labels concluded that labels such as traffic light systems were particularly effective in guiding consumers toward healthier food options. Finally, research examining nutrition and health claims in different countries highlighted the variations in how consumers interpret and react to food labelling. The study stressed the importance of considering cultural differences when designing and marketing food products with health-related claims (Klaus G Grunert, 2000)

OBJECTIVES OF THE STUDY

1. To study consumer preferences and consumption habits for Milk.
2. To evaluate the impact of Milk features on consumer perceptions of health and wellness.
3. To assess how label claims on Milk enhance consumer trust in its health and wellness attributes.

RESEARCH METHODOLOGY

This study has a descriptive approach. This study is to know about the impact of label claims on consumers perception. Sample size equals to 399. Primary and Secondary data are the types of data used. The primary data could be obtained by structured questionnaire.

HYPOTHESES

H1   *Location significantly influences consumer preferences and consumption habits for Milk, while age and gender do not.*

H2   *Nutritional content, particularly protein and calcium, plays a significant role in consumer perceptions of the health and wellness benefits of Milk, while packaging features do not.*

H₃   *Clear and accurate label claims, including third-party certifications and recyclable logos, enhance consumer trust in Milk's health and wellness attributes.*

ANALYSIS AND INTERPRETATION

Association between the Demographics and Consumer Preferences, Habits

Chi Square test is used to show the association between the demographics and consumer preferences, habits Table 1.

Table 1 ASSOCIATION BETWEEN AGE AND THE FREQUENTLY BUYING MILK				
S. No	**Demographic Factors**	**Asymptotic Significance**	**Null Hypothesis**	**Interpretation**
1.	Age	0.713	Accepted	There is no association between Age and the frequently buying milk variety.

The statistical test results indicate an Asymptotic Significance value of 0.713. Since this

value exceeds the 0.05 threshold, we fail to reject the null hypothesis. This suggests that there is no statistically significant relationship between age and the milk variety that is most frequently purchased Tables 2 & 3.

Table 2 ASSOCIATION BETWEEN GENDER AND THE RARELY BUYING MILK VARIETY				
S. No	Demographic Factors	Asymptotic Significance	Null Hypothesis	Interpretation
2.	Gender	0.114	Accepted	There is no association between Gender and the rarely buying milk variety

The p-value of 0.114 for the relationship between gender and the rare purchase of a specific milk variety is higher than the 0.05 significance level. As a result, we fail to reject the null hypothesis. This implies that there is no significant association between gender and the likelihood of rarely purchasing a particular milk variety. In other words, a consumer's gender does not significantly affect their tendency to avoid or infrequently purchase a specific milk brand.

Table 3 ASSOCIATION BETWEEN LOCATION AND THE FREQUENTLY BUYING MILK				
S. No	Demographic Factors	Asymptotic Significance	Null Hypothesis	Interpretation
3.	Location	0.000	Rejected	There is association between Location and frequently buying milk.

The asymptotic significance of 0.000 for the relationship between location and frequently buying milk variety is less than 0.05, so the null hypothesis is rejected. This indicates a significant connection between location and milk choice, likely influenced by factors like availability, pricing, or regional preferences.

Table 4 CROSS TAB FOR LOCATION							
		Which milk do you buy most frequently					
		Full Cream	Standard	Toned	Double Toned	Cow Milk	Total
Location	Urban	50	211	20	0	18	299
	Sub Urban	1	7	1	1	2	12
	Rural	27	54	1	0	6	88
Total		78	272	22	1	26	399

The table 4 reveals that Standard Milk is the most favoured variety across all regions, especially in urban areas, where it is preferred by 71% of people. Full Cream Milk is particularly popular in rural areas, with about 31% of consumers choosing it. Toned Milk and Cow Milk have relatively low popularity across all locations. In general, urban areas show a clear preference for Standard Milk, while rural areas exhibit more diverse choices, with a notable preference for Full Cream Milk. Sub-urban areas, with a smaller sample size, mostly prefer Standard Milk.

Table 5
ASSOCIATION BETWEEN LOCATION AND DAILY CONSUMPTION LEVEL

S. No	Demographic Factors	Asymptotic Significance	Null Hypothesis	Interpretation
4.	Location	0.000	Rejected	There is association between Location and the daily consumption level.

The table 5 shows a significant association between location and daily milk consumption, with an Asymptotic Significance value of 0.000, which is less than 0.05. Since the null hypothesis is rejected, we can conclude that location affects daily milk consumption, with different consumption patterns in urban, suburban, and rural areas.

Table 6
CROSS TAB FOR LOCATION

		Which milk do you buy most frequently					
		Full Cream	Standard	Toned	Double Toned	Cow Milk	Total
Location	Urban	50	211	20	0	18	299
	Sub Urban	1	7	1	1	2	12
	Rural	27	54	1	0	6	88
Total		78	272	22	1	26	399

Table 6 cross-tabulation shows that urban consumers primarily prefer the 1-litre pack (172 out of 299), followed by the ½-litre pack (98) and mini packets (29), indicating higher daily consumption. Sub-urban consumers have the lowest consumption, with no strong preference for pack size. In rural areas, most consumers (74 out of 88) prefer the 1-litre pack, while mini packets (6) and ½-litre packs (8) are less popular. This suggests that urban and rural areas Favor larger packs, while sub-urban areas have more varied but lower consumption.

Analyzing the Influence of Milk's Packaging Features on Consumer Health and Wellness Perceptions using Regression Analysis

Regression test is used to show the association between Overall Information on health and wellness and other related factors of the respondents Table 7.

Table 7
RELATIONSHIP BETWEEN OVERALL INFORMATION ON HEALTH & WELLNESS AND NUTRITIONAL CONTENT, PACKAGING

Factor	Under standardized Coefficients	Sig
Constant	3.270	.000
Nutritional Content	.320	.000
Packaging	.008	.897

In this analysis the regression result is $Y=0.320X1+3.270$

Where, X1=Nutritional Content

X2=Packaging

Y=Overall Information on health and wellness

The results show that Nutritional Content and Packaging factors are statistically significant (F Change=32.868, p=0.000). This implies that at least one of the predictors has a significant impact on overall information about health and wellness. However, Packaging does not show a statistically significant relationship with overall health information ($p > 0.05$). Nutritional Content, on the other hand, has a statistically significant positive relationship with overall health and wellness information ($p = 0.046$). Given that the p-value is 0.000, which is less than 0.05, the null hypothesis is rejected, and the alternative hypothesis is accepted. This indicates a significant relationship between the independent variable (Nutritional Content) and the dependent variable (Overall Information on health and wellness).

To Assess how Label Claims on Milk Enhance Consumer Trust in its Health and Wellness Attributes using Correlation

Factor	Pearson Correlation	Two-Tail p-value	Null Hypothesis	Inference
			Table 8 ENHANCING CONSUMER TRUST USING CORRELATION	
Product Information	.233	0.000	Null Hypothesis Rejected (0.000<0.05)	There is a relationship between product information and overall information on health & wellness.
Third-party Certifications	.289	0.000	Null Hypothesis Rejected (0.000<0.005)	There is a relationship between Third-party and overall information on health & wellness.
Logos	.245	0.000	Null Hypothesis Rejected (0.000<0.005)	There is a relationship between logos & overall Information on health & wellness.

The table 8 indicates significant positive relationships between overall information on health and wellness and factors such as product information, third-party certifications, and logos. The Pearson correlation values (0.233, 0.289, and 0.245, respectively) show moderate positive correlations, while the p-values (all 0.000) confirm statistical significance, leading to the rejection of the null hypothesis. These results suggest that clear and comprehensive information fosters consumer trust, strengthens brand commitment, increases the perceived reliability of third-party certifications, and enhances the effectiveness of logos in shaping consumer perceptions.

FINDINGS

The study found that **location** has a significant influence on consumers' preferences and daily consumption of milk, with distinct patterns emerging between urban, suburban, and rural consumers. However, **age and gender** were not found to significantly affect which milk variety is purchased or how often it is bought. This indicates that the place of residence is more important than demographic factors like age or gender in shaping milk-buying habits. Additionally, **nutritional content**, particularly the levels of **protein** and **calcium**, plays a crucial role in how consumers perceive the health benefits of milk. On the other hand, **packaging features** did not significantly impact these health perceptions. Lastly, clear and informative

labelling, which includes product details, third-party certifications, and eco-friendly labels such as recyclable logos, significantly enhances **consumer trust** in the health claims of the milk. This shows that well-presented label information increases consumer confidence in the product's health-related attributes.

CONCLUSION

This study highlights the significant impact of label claims on consumer perceptions regarding the health and quality attributes of milk. It demonstrates that **location** plays a crucial role in determining consumer preferences and consumption habits, with urban, suburban, and rural consumers exhibiting distinct patterns. **Nutritional content**, particularly **protein** and **calcium**, influences how consumers assess the health benefits of milk, while **packaging features** have a relatively minor effect. Additionally, **clear labelling**, including detailed product information, third-party certifications, and eco-friendly logos, enhances consumer trust in the product's health and wellness claims. In conclusion, the research emphasizes the importance of transparent and health-oriented label claims in shaping consumer choices and perceptions of milk.

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