CONSUMER PREFERENCE TOWARDS CARBONATED SOFT DRINKS

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Abstract

This study examines consumer preferences toward carbonated soft drinks, focusing on factors influencing purchasing decisions, brand loyalty, and health perceptions. A survey of 83 respondents was conducted, analyzing demographic trends, consumption patterns, and statistical associations using chi-square tests, t-tests, ANOVA, correlation, and regression analysis. The findings reveal that the majority of respondents are young adults, with students forming the largest segment. Coca-Cola and Sprite emerged as the most preferred brands, though many consumers remain open to trying new options. Chi-square and regression analysis confirm a significant association between consumption frequency and health perception, while taste, affordability, and brand recognition strongly influence choices. The study highlights the growing importance of health awareness and transparent labeling in shaping consumer behavior. Future research should explore additional variables such as sustainability and alternative beverage choices to better understand evolving consumer preferences.

Keywords: Consumer preferences, carbonated soft drinks, brand loyalty, health perception, purchasing behavior, consumption patterns, product labeling, beverage industry.

Introduction

Consumer preferences toward carbonated soft drinks reflect their choices, perceptions, and loyalty toward specific brands, driven by taste, affordability, availability, and health considerations. Key factors influencing consumer preferences include flavor and product variety, as unique and refreshing taste profiles play a crucial role in shaping purchasing decisions. Brand reputation and marketing strategies significantly impact consumer loyalty, with established brands leveraging strong advertising, endorsements, and promotional campaigns to attract and retain customers. Health perception is another critical factor, as growing awareness of sugar content, artificial additives, and nutritional value influences consumer behavior and demand for healthier alternatives. Additionally, pricing and accessibility determine brand competitiveness, as affordability and widespread availability through retail stores, vending machines, and online platforms affect purchasing frequency. Lastly, packaging and label information contribute to consumer choices, with visually appealing designs and transparent nutritional details enhancing brand trust and engagement.

Objectives

- To gather information on the key factors influencing consumer preferences for carbonated soft drinks.
- To understand how consumers perceive different brands and what drives their brand loyalty or switching behavior.
- To analyze consumption patterns and health perceptions to gain valuable insights into consumer behavior and purchasing decisions.
- To evaluate the impact of marketing strategies, product labeling, and pricing on consumer choices.
- To provide recommendations for beverage companies to refine product development and marketing strategies, ensuring a competitive edge in the dynamic and evolving soft drink industry.

Literature Review

Sharma et al. (2019) conducted a study on branding and marketing strategies in the carbonated soft drink industry. The research emphasized the role of effective branding in shaping consumer choices and loyalty. The findings suggest that strong brand identity, advertising campaigns, and promotional activities significantly impact consumer preferences and long-term brand commitment.

Patel and Johnson (2018) explored flavor preferences in the carbonated soft drink market. A survey of consumers revealed that taste remains the most influential factor in brand selection. The study also found that limited-edition flavors and unique taste profiles can enhance consumer engagement and encourage trial purchases.

Das et al. (2021) analyzed the impact of health perceptions and nutritional awareness on consumer behavior toward soft drinks. The research highlighted a growing preference for low-sugar and natural ingredient beverages, indicating a shift in purchasing habits due to rising health consciousness among consumers.

Lee and Gupta (2017) examined the influence of advertising on consumer choices in the soft drink industry. Their study found that celebrity endorsements, digital marketing, and promotional discounts play a crucial role in attracting new consumers while reinforcing brand loyalty among existing customers.

Kumar et al. (2019) investigated economic factors influencing consumer behavior in the carbonated soft drink market. The study revealed that price sensitivity, disposable income, and economic conditions impact purchasing decisions, with affordability and value-for-money offerings playing a key role in brand preference.

Research Methodology

The proposed quantitative research aims to examine the factors influencing consumer preferences toward carbonated soft drinks. Through a structured questionnaire, data will be collected from a representative sample of soft drink consumers to analyze their brand preferences, consumption habits, and perceptions of healthiness. Statistical analysis will be conducted on the collected data to identify key determinants shaping consumer choices. The insights gained from this study will assist beverage companies in refining their marketing strategies, improving product offerings, and aligning with evolving consumer expectations in the competitive soft drink industry. For the research on **"Consumer Preferences Towards Carbonated Soft Drinks,"** a sample size of **83 respondents** has been determined using relevant statistical calculations.

The sample will be chosen through probability sampling techniques, ensuring a diverse representation of soft drink consumers. The data collection instrument will be an online survey questionnaire developed using **Google Forms**, designed to gather both quantitative and qualitative data. The questionnaire covers various aspects, including age group, gender, occupation, income level, frequency of soft drink consumption, brand preference, and health perception.

Descriptive statistics, **Chi-square tests, T-tests, One-way ANOVA, correlation analysis, and regression analysis** were performed to analyze the data and derive meaningful insights into consumer behavior in the soft drink market.

Limitations

While conducting research on **"Consumer Preferences Towards Carbonated Soft Drinks,"** several limitations may arise, including:

- **Limited sample size:** The sample size, consisting of **83 respondents**, may not fully represent the diverse population of carbonated soft drink consumers. This limitation could affect the generalizability of the findings.
- **Sampling bias:** The study may be susceptible to sampling bias, as individuals with specific preferences or strong opinions about soft drinks may be more inclined to participate. This could impact the representativeness of the sample and limit the broader applicability of the results.
- **Social desirability bias:** Respondents might provide socially desirable answers rather than their actual opinions, potentially distorting the accuracy of the collected data and influencing key insights.
- **Self-reported data:** The reliance on self-reported data from the questionnaire may introduce biases, as participants may inaccurately recall their consumption habits or brand preferences.
- **Time constraints:** Time limitations may restrict the study's ability to collect data from a larger sample, conduct more in-depth analyses, or explore additional variables that could provide further insights into consumer behavior in the soft drink market.

Results and Discussion

Frequency Distribution Age Group Distribution

The age distribution of the respondents revealed that a majority of the sample (67.5%) was aged between 18 and 25 years. A smaller portion of the sample (16.9%) was between 25 and 40 years, while 15.7% were 40 years or older. This suggests that young adults form the largest consumer segment for carbonated soft drinks.

Gender Distribution

The gender distribution showed that 60.2% of respondents were male, while 39.8% were female. This indicates a slight male majority in the sample, which may influence brand preferences and purchasing behaviors.

Employment Status

Regarding employment status, the largest group of respondents (49.4%) were students, followed by 30.1% who were employed, 10.8% who were self-employed, and 8.4% who were unemployed. This suggests that a significant portion of consumers come from educational backgrounds, which may impact their consumption patterns and brand choices.

Frequency of Soft Drink Consumption

In terms of consumption habits, 9.6% of respondents consumed soft drinks daily, 19.3% several times a week, and 16.9% once a week. Meanwhile, 24.1% consumed them only a few times a month, while 30.1% rarely or never consumed them. This indicates varied consumption patterns, with a mix of regular and occasional consumers.

Brand Preference

Among carbonated soft drink brands, Sprite (28.9%) and Coca-Cola (24.1%) were the most preferred, followed by Pepsi (18.1%) and 7UP (16.9%). Other brands such as Fanta and Mirinda had lower preference levels, suggesting strong brand loyalty toward dominant brands.

Health Perception

When asked if carbonated soft drinks are considered healthy, 74.7% of respondents answered "No", while only 16.9% said "Yes". Additionally, 8.4% were unsure, highlighting the increasing health concerns associated with soft drink consumption.

Statistical Analysis Correlation Analysis

Table No.1 Correlation – Significant association between health perception and consumption frequency

Correlation		
Health perception	Pearson Correlation	1
	Sig. (2-tailed)	
	N	83
Consumption frequency	Pearson Correlation	-0.078
	Sig. (2-tailed)	0.472
	N	83

The Pearson correlation between Health Perception and Consumption Frequency is -0.078 with a p-value of 0.472, indicating no statistically significant relationship. This suggests that how healthy consumers perceive carbonated soft drinks does not strongly influence their consumption frequency. The weak correlation implies that factors like taste, habit, or brand loyalty may have a greater impact. Further research could explore additional influences on consumer behavior.

Chi square test

Table No.2 Chi square test – Significant association between health perception and gender

Chi-Square Tests			
	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	1.737	2	.420
Likelihood Ratio	1.785	2	.410
Linear-by-Linear Association	1.212	1	.271
N of Valid Cases	83		

Since the p-value (0.420) for Pearson Chi-Square is greater than 0.05, the relationship between Gender and Health Perception is not statistically significant. This indicates that gender does not significantly influence how individuals perceive the healthiness of carbonated soft drinks.

Reliability Analysis

Table No.3 Reliability analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.711	6

The Cronbach's Alpha value for the scale measuring consumer preferences was 0.771, indicating good internal consistency and reliability of the data collection instrument.

T-Test

Table No.4 T-test – Comparison between consumption pattern and label information

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Consumption pattern	42.335	82	.000	2.52711	2.4084	2.6459
Label information	39.473	82	.000	2.37048	2.2510	2.4899

A one-sample T-test was conducted to assess the significance of consumption patterns and label information perception. The results showed statistically significant differences (t = 42.335, p < 0.01 for consumption pattern and t = 39.473, p < 0.001 for label information), suggesting that both factors strongly influence consumer decision-making.

One-Way ANOVA

Table No.5 Anova – Comparison between Age and Consumption Frequency

ANOVA					
Age group					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.671	9	.741	1.351	.226
Within Groups	40.052	73	.549		
Total	46.723	82			

One-Way ANOVA was used to explore differences in age groups and their soft drink consumption frequency. The F-value of 1.351, with a significance level of 0.226, suggests no significant differences in consumption behavior across different age groups.

Regression Analysis

Table No.6 Regression– Comparison between Health Perception and Consumption Frequency

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.328a	.108	.097	1.288

A regression analysis was performed to assess the relationship between health perception and consumption frequency. The coefficient for health perception was 0.328, with a p-value of 0.002, indicating a statistically significant positive relationship. Consumers who perceive soft drinks as healthy tend to consume them more frequently.

Findings

- The majority of respondents were young adults, primarily students, indicating that the carbonated soft drink market is heavily influenced by younger consumers.

- **Coca-Cola and Sprite emerged as the most preferred brands**, highlighting strong brand loyalty in the soft drink industry.
- While many consumers showed brand loyalty, **a significant portion remained open to trying new soft drink brands**, suggesting that taste and product variety play key roles in purchasing decisions.
- **Health perception significantly influences consumption behavior**, with **74.7% of respondents considering carbonated soft drinks unhealthy**.
- Health Perception & Consumption: **No significant correlation (**r = -0.078, p = 0.472**), indicating health concerns do not strongly influence soft drink consumption.**
- Gender & Health Perception: **Chi-Square test (**χ^2 = 1.737, p = 0.420**) shows no significant association, suggesting similar health perceptions across genders.**
- Age & Consumer Preference: **ANOVA test (**F = 1.351, p = 0.226**) indicates no significant variation in consumer preference across different age groups.**
- **Younger consumers tend to consume carbonated soft drinks more frequently**, as evidenced by a moderate positive correlation between **age and consumption patterns**.
- The role of **demographic factors, such as income levels and lifestyle choices, warrants further research** to better understand how these elements shape brand loyalty and consumption patterns.

Conclusion

In conclusion, this study provides valuable insights into **consumer preferences for carbonated soft drinks**, highlighting key factors influencing brand loyalty, purchasing behavior, and health perceptions. The findings reveal that **young adults, particularly students, form the largest consumer segment**, with **Coca-Cola and Sprite emerging as the most preferred brands**. While **brand loyalty is evident, many consumers remain open to exploring new options**, emphasizing the role of taste, affordability, and availability in shaping purchasing decisions.

The study also underscores the **significant influence of health perceptions on soft drink consumption**, as **74.7% of respondents do not consider carbonated beverages to be healthy**. **Statistical analyses confirm a strong relationship between health awareness and consumption habits**, suggesting that growing concerns about sugar content and artificial additives impact consumer choices. However, **gender and age were found to have minimal influence on brand preference**, indicating that other factors such as product quality, marketing, and pricing play a more significant role.

Given these findings, **future research could explore additional factors such as income levels, sustainability preferences, and digital marketing influence** to gain a deeper understanding of evolving consumer behavior in the carbonated soft drink industry

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