Consumer Preference for Soft Drinks: *An Analysis of Ingredients, Quality, and Flavor*

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ABSTRACT: *The rising demand for soft drinks in Nepal has prompted a keen focus on product features that cater to consumers' expectations. The objective of the study is to examine the impact of ingredients, quality, and flavor on consumers' preference for soft drinks. The study adopted descriptive and analytical research design. Primary data was collected through a five-point Likert scale questionnaire survey administered to 315 respondents within the Kathmandu Valley using a convenience sampling technique. The study employed various statistical tools, including cross tab, standard deviation, independent sample t-test, correlation, and regression, to analyze the gathered data. The results revealed that quality exhibited the highest positive correlation with consumers' preference for soft drinks, while flavor demonstrated the lowest correlation. Furthermore, it was found that both ingredients and quality significantly influenced consumer preference, whereas flavor did not have a significant impact. Gender also played a role in influencing consumer preference, affecting flavor but not ingredients and quality. The study emphasized the pivotal role of quality in ensuring customer satisfaction, while ingredients contributed to the creation of value for soft drinks. As such, companies need to uphold high-quality standards to meet consumer expectations effectively. The findings of this research provide valuable insights into consumer preferences for soft drinks and underscore the importance of product quality. Future researchers are encouraged to explore consumer preferences with larger sample sizes and robust methodologies, incorporating additional independent variables to gain a more comprehensive understanding of the soft drink market in Nepal.*

Keywords: Consumer perception, ingredients, quality flavor, and soft drinks.

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I. INTRODUCTION

The soft drink sector, which includes a large variety of carbonated and non-carbonated beverages, makes up a sizeable portion of the worldwide beverage market. Generally speaking, soft drinks are non-alcoholic beverages (Barbara, 2006). Soft drinks are a global favorite among consumers of all ages and are now an essential component of contemporary living. Thus, according to Lazim and Hasliza (2011), soft drinks are currently in high demand. According to Sartor et al. (2011), firms hoping to draw in and keep consumers need to have a solid grasp of the selection criteria. Soft drinks are becoming more and more popular all across the world, including in Nepal.

According to Ubeja and Patel (2014), various commercially available fruit and vegetable juices, including Tropicana juice, are classified as 100% fruit juices. It is generally assumed that milk or other dairy products are not present (Ramana & Mallaiah, 2018). The positioning of product features is important in determining brands that consumers consider and pay close attention to purchase decisions. Consumers are heavily influenced by the attributes and qualities of a product (Mowen, 2004). The satisfaction of consumers is greatly influenced by the attributes of a product, which encompass various evaluation factors (Akpoyomare et al., 2012).

Several studies in the corpus of literature already in existence emphasize how crucial certain product features are, such as retail availability, pricing, attractiveness, and innovation. Ahmed (2006). Health-conscious consumers have become more cautious about ingredient labels after Malik et al. (2010) highlighted the risks of consuming sugary beverages, which can lead to health issues such as type 2 diabetes and obesity. On the other hand, sugar-free or low-calorie substitutes have been researched for their possible impact on glycemic control and weight management (Tate et al., 2019). Over the past ten years, the soft drink market has grown steadily due to several causes including urbanization, shifting consumer preferences, and the rise of convenience stores and vending machines. The Kathmandu Valley's market landscape is shaped in large part by local soft drink firms, which add to the industry's diversity and vibrancy despite the presence of global corporations. To understand customer preferences and the cognitive processes involved in decision-making, a great deal of study has been done to look at the basic features of products (Oslan et al., 1979).

The product feature plays a significant role in influencing consumer preference. Certain individuals may choose to acquire a particular item solely based on its reduced cost. Consumer's perception of a soft drink brand can be affected either by personal factors or factors in the brand. Organizations hoping to draw in and keep consumers must have a solid understanding of selection factors, according to Evbayiro et al., (2017). Some consumers may not be deterred by the higher price of one brand compared to another, as they perceive it as an indication of superior product quality (Gwin & Gwin, 2003). Dube (2004) conducted research that revealed a disparity in the number of studies conducted on customer preferences versus consumer preferences specifically about soft drinks.

However, despite the extensive research conducted on the topics of product features and consumer preferences for soft drinks, the existing findings have not adequately established a clear connection between product features and consumer purchase decisions. Existing research lacks an in-depth study of the relationship and the influence of product features on soft drink preferences. Thus, the study is conducted to examine the impact of ingredients, quality, and flavor on the consumers' preference for soft drinks.

II. LITERATURE REVIEW

The consumer behavior model was formulated by San and Yazdanifard in 2014. The model emphasizes that the process of making purchasing decisions is carried out by individuals, households, spouses, and occasionally committees within business organizations. The consumer decision-making process consists of multiple stages, and purchasing decisions exhibit variations across different generations. The model underscores the importance of understanding the fundamental components of consumer brand choice during the decision-making process.

Product features refer to the diverse attributes that an object can possess. Marketers use product characteristics to create new products, and how they arrange these attributes affects which brands consumers will consider when making purchasing decisions (Mowen, 2004). Product features are important in marketing from the perspective of both the sellers and the buyers (Manandhar, 2021). Oyatoye (2011) stated that product features significantly impact consumer preference. Consumer preferences have broadened to include a wide array of factors like quantity, style, value, price, brand name, appearance, advantage, and quality in recent times (Jamal & Goode, 2006). Previous studies have been employed to develop a theoretical framework that delineates the relationship between pricing, perceived quality, and perceived value as perceived by consumers (Valarie & Zeithaml, 1988). Esaimani (2019) found that price and promotion have a notable influence on the purchasing behavior of soft drinks among the youth.

Altintzoglou and Heide (2023) revealed that the ingredients were identified as the most significant characteristic of accepting food items. Consumers often prioritize beverages with clean-label ingredients, free from artificial additives and preservatives, reflecting a preference for transparency and naturalness (Smith & Fox, 2017). Consequently, the market for soft drinks has seen an increase in demand for low-calorie, sugar-free, and natural ingredient substitutes (Tate et al., 2019).

According to Pettigrew et al. (2020), several factors affect consumer purchasing decisions, including packaging material, design, size, quality, and convenience. Azzam (2012) states that consumer preference is significantly impacted by factors such as brand awareness, image, quality, and loyalty. Sultan et al., (2016) found that consumers make decisions regarding laptop purchases by considering various factors, including price, quality, business image, and endorsements. To set items apart from the competition and pique consumers' interests, marketing techniques frequently highlight taste experiments and innovations (Pettigrew et al., 2020).

Consumers are aware of soft drink flavors, thus before making any purchases, they always examine and compare the flavors (Manandhar, 2021). Flavor plays a crucial role in shaping consumer preferences within the soft drink industry, with innovative and varied flavors to draw customers, especially younger ones (Smith & Jones, 2018). Consumer preferences for particular flavors are also influenced by regional and cultural norms; fruity, citrus and herbal flavors are popular in various markets (Mintel, 2022). Ubeja and Patel (2014) emphasized increasing consumer consciousness about the taste and flavor attributes of carbonated beverages to create awareness among customers regarding their soft drink preferences. They also revealed that there are disparities in soft drink preference based on gender.

(Reddy et al., 2015) concluded that several factors such as flavor, availability, packaging, promotion, brand, and aesthetics, affect consumer preferences. Consumer preferences for soft drinks are influenced by a variety of factors, including ingredients, qualities, and flavor profiles taste, price, packaging, brand reputation, and availability. As has been reviewed literature, existing research lacks an in-depth study of the impact of product features on soft drinks preferences. Thus, there is a gap in understanding how to shape consumer preferences for soft drinks.
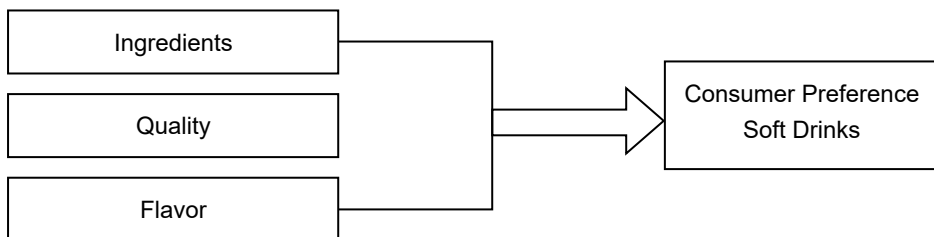
Conceptual Framework

Figure 1. *Conceptual framework*

Research Hypotheses

The following are some alternative hypotheses:

H1: There is an effect of ingredients on consumers' preference for soft drinks.

H2: There is an effect of quality on consumers' preference for soft drinks.

H3: There is an effect of flavor on consumers' preference for soft drinks.

Consumer preference: It refers to the cognitive process by which individuals make choices regarding the selection of goods and services. This decision-making process is influenced by various factors, including subjective factors such as taste, personal preference, and individual choice. Consumer preferences are shaped by a range of factors, such as brand awareness, brand image, brand quality, and brand loyalty (Azzam 2012).

Ingredient: It is common practice for beverage manufacturers to incorporate a confidential ingredient in the production of their beverages. Soft drinks commonly consist

of carbonated water, sugar, and flavoring agents. Soft beverages often contain caffeine, colorants, preservatives, and various other additives.

Quality: The concept of quality pertains to the degree of excellence or greatness exhibited by something. Consumer satisfaction is a method used to assess the extent to which a product, service, or experience meets or exceeds consumer expectations and fulfills its intended purpose.

Flavor: The flavor of soft drinks is a critical factor that has a direct impact on consumer preference. Individuals possess diverse preferences; thus, it is imperative to offer a broad range of flavors while ensuring a consistent and captivating taste to attract a broader demographic.

III. METHODOLOGY

The research methodology comprises a systematic approach designed to attain the research objectives. This encompasses various components such as research design, population and sampling techniques, sources of data, procedures for data collection, and tools for data analysis. This study utilized a research design that combined descriptive and analytical approaches to examine the demographic distribution of participants, investigate the relationship between different factors, and assess their impact on consumer preferences. The collection of primary data was conducted through direct engagement with participants to address the research objectives. The study selected 400 individuals who consumed soft drinks by using a convenience sampling method. The data were collected using a well-structured questionnaire with a five-point Likert scale in August 2022. Out of 400 distributed questionnaires, 354 have been returned, out of which 315 were valid which is near about 79 percent. A range of statistical techniques, such as cross-tabulation, mean, standard deviation, independent t-test, correlation, and regression, were utilized to analyze and interpret the gathered data.

The researchers performed Cronbach's Alpha analysis to evaluate the reliability and validity of each question within the dataset, as recommended by Manandhar (2022), and Gliem and Gliem (2003). The presentation of the reliability of the items is provided below.

Table 1
Reliability results

S.N.	Variables	Cronbach's Alpha Coefficient
1	Ingredients	.751
2	Quality	.704
3	Flavor	.826
4	Consumers' preferences	.763

Source: Field Survey, 2023

The Cronbach's Alpha values for each variable in the study are presented in Table 1. The variable ingredients demonstrate a Cronbach's Alpha coefficient of 0.751, which suggests a satisfactory level of internal consistency. The quality variable exhibits a Cronbach's Alpha coefficient of 0.704, which falls slightly below the desired threshold of 0.75. In contrast, the flavor variable exhibits a notable Cronbach's Alpha coefficient of 0.826, indicating robust internal consistency. The variable representing consumer preference exhibits a Cronbach's Alpha coefficient of 0.763, which suggests a satisfactory level of reliability. In general, it can be observed that all variables, except quality, demonstrate acceptable levels of internal consistency and reliability.

Results

Table 2
Profile of gender

Gender	Frequency	Percent
Male	205	65.08
Female	110	34.92
Total	**315**	**100**

Source: Field Survey, 2023

Table 2 observed that female participation is the highest, with a count of 205, whereas male participation is comparatively lower, with a count of 110. According to the data presented in the table, a significant proportion of the respondents, specifically 65.08 percent, identify as female, while 34.92 percent of the respondents identify as male.

Table 3
Opinion on the flavor of the soft drink

	Frequency	Percent	Cumulative Percent
Cola drink	145	46.0	46.0
Mango drink	80	25.4	71.4
Orange drink	35	11.1	82.5
lemon drink	55	17.5	100.0
Total	**315**	**100.0**	

Source: Field Survey, 2023

Table 3 presents the respondents' preferences regarding flavor in soft drinks. Based on the data, it can be inferred that the majority of respondents, specifically 46 percent, expressed a preference for cola drinks in soft drinks. Conversely, the minority of respondents, specifically 11.1 percent, indicated a preference for orange flavor. A total of 25.4 percent of the participants indicated a preference for mango flavor, while 17.5 percent expressed a preference for lemon flavor in soft drinks.

Table 4
Descriptive statistics

Description	Mean	Standard Deviation
Ingredients	3.71	1.39
Quality	4.32	1.27
Flavor	2.93	2.02
Consumer preference	3.55	1.48

Source: Field Survey, 2023

Table 4 shows the values of ingredients (Mean = 3.71, Standard Deviation = 1.39), Quality (Mean = 4.32, Standard Deviation = 1.27), Flavor (Mean = 2.93, Standard Deviation = 2.02), and Consumer Preference (Mean = 3.55, Standard Deviation = 1.48). Quality received the highest rating, followed by consumer preference and ingredients. However, perceptions of flavor showed greater variability. The data suggests that the opinions of the participants generally align with the given statements. This output indicates that respondents' views have tended to agree with the statements.

Table 5
Independent Sample t-test

Variables	Group	N	Mean	p-value
Consumer Preference	Male	205	3.01	
	Female	110	3.36	0.012
Ingredients	Male	205	3.56	
	Female	110	3.64	0.059
Quality	Male	205	3.03	
	Female	110	2.95	0.072
Flavor	Male	205	3.43	
	Female	110	3.04	0.035

Source: Field Survey, 2023

Table 5 displays the results of an independent sample t-test conducted to examine the variables of interest. The analysis includes a P-value-based comparison of the mean difference between male and female students. The mean difference of the studied variable was compared using an independent sample t-test analysis. The p-values of 0.012 and 0.035, both below the significance level of 0.05, indicate statistically significant differences between males and females in terms of customers' preferences and brand image. However, given that the p-values are 0.059 and 0.072, respectively, which are both greater than the conventional significance level of 0.05, it can be concluded that there is no statistically significant difference in terms of price and advertising between males and females.

Correlation analysis

The study focuses on consumer preference as the dependent variable, with the independent variables being ingredient, quality, and flavor. The utilization of Karl Pearson's correlation coefficient unveiled the association between consumer preference in ingredients, quality, and flavor.

Table 6

Relation between variables for all samples

	Ingredient	Quality	Flavor	CP
Ingredient	1			
Quality	.131*	1		
Flavor	.176*	.191*	1	
CP	.360*	.432**	.192**	1

Source: Field Survey, 2023

Table 6 presents the correlation coefficient of 0.360, which signifies the relationship between ingredients and consumer preference. The findings suggest a positive association between consumer preference and the presence of ingredients. The correlation coefficient between consumer preference and quality is 0.432, while the correlation coefficient between consumer preference and flavor is 0.192. These coefficients suggest a positive association between both quality and flavor with consumer preference.

Regression Analysis

The regression equation presented herein is employed to ascertain the impact of ingredients, quality, and flavor on customers' preferences.

Table 7

Model Summary of Regression

	Coefficient	Sig
(Constant)	1.0436	0.000
Ingredients	0.541	0.025
Quality	0.476	0.012
Flavor	0.396	0.084
R2	0.358	
F value	68.35	
p-value	0.000	

Source: Field Survey, 2023

Table 7 shows the R^2 value of 0.358, the F statistic value of 68.35, and the p-value of 0.000 are reported. Based on the statistical analysis conducted at a significance level of 5%, the findings suggest that the model exhibits a significant level of effectiveness.

The result shows that ingredients and quality exhibit statistical significance, as indicated by their respective p-values of 0.025 and 0.012. In contrast, the p-value for flavor is 0.084, which indicates insignificant. Hence, the impact of flavor on consumer preference is minimal, whereas ingredients and quality play a significant role.

Table 8
Summary of Hypothesis Testing

	Effect	Result
H1	Ingredient - Consumer preference	Supported
H2	Quality – Consumer preference	Supported
H3	Flavor - Consumer preference	Not Supported

According to the findings presented in Table 8, the results about H1 indicate a significant impact of ingredients on consumer preference. Likewise, H2 also asserts a significant impact of quality on consumer preference. Ultimately, the findings of study H3 indicate that flavor does not have a significant impact on consumer preference.

IV. RESULT AND DISCUSSIONS

The research findings indicate that particular ingredients significantly influence the consumer's preference for soft drinks. The result is almost similar to Altintzoglou and Heide (2023), which stated that the ingredients are identified as the most significant characteristic of accepting food items. The result is also in line with (Smith & Fox (2017), and (Tate et al., 2019) showed that consumers often prioritize beverages with clean-label ingredients, free from artificial additives and preservatives, reflecting a preference for transparency and naturalness.

The research findings revealed that the quality of soft drinks significantly influences consumers' preferences. The finding aligned with Sultan et al., (2016), Pettigrew et al., (2020), and Azzam (2012) posited that consumer preference is significantly impacted by factors such as brand awareness, image, quality, and loyalty. The findings also align with those of Gwin and Gwin (2003), indicating that certain consumers may exhibit a preference for a lower-priced brand that provides the best and highest quality product available in the market.

The research findings indicate that the flavor of soft drinks does not significantly influence consumers' preferences. The finding is not consistent with Deja and Patel (2014), Smith and Jones (2018), and (Pettigrew et al., 2020), who asserted that consumers exhibit a high level of awareness regarding the flavor of carbonated beverages, the present study's results indicate a divergence from their earlier research. According to Ubeja and Patel (2014), customers exhibit a high level of awareness and diligence in evaluating and contrasting flavors before making purchases of beverage products.

The result is consistent with the consumer behavior model emphasizes the process of making purchasing decisions. The model assists in how consumers underscore the importance of understanding the components of brand choice during the decision-making process.

V. CONCLUSION AND IMPLICATIONS

According to the findings of the study, consumer preference is significantly influenced by two main factors, namely quality, and ingredients. Nevertheless, the flavor of soft drinks is a relatively insignificant determinant of consumer preferences. However, ingredients, qualities, and flavor profiles play integral roles in shaping consumer preferences in the soft drink industry High-quality ingredients are required for soft drinks to assure customers. Therefore, Beverage companies must sell quality products that adhere to fulfill customer expectations. In a competitive market, the company must carefully consider the established flavors to maintain its brand image and promote the soft drinks business. Beverage companies must consider these factors when developing products and marketing strategies to meet consumer expectations effectively.

Conflict of Interest

The author declared having no conflict of interest in the research work.

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