

# Comparative Study of Soft Drink Satisfaction of Male and Female Consumers & Buying Behavior in the Context of Bangladesh

Md. Tanvir Hassan

M. Phil. Fellow

Department of Mathematics

Chittagong University of Engineering & Technology, Chattogram - 4339, Bangladesh

E-mail: tanvirh71@gmail.com

Mohammad Ali

Professor

Department of Mathematics

Chittagong University of Engineering & Technology, Chattogram - 4339, Bangladesh

E-mail: ali.mehidi93@gmail.com

Rehena Nasrin

Professor

Department of Mathematics

Bangladesh University of Engineering & Technology, Dhaka - 1000, Bangladesh

rehena@math.buet.ac.bd

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## Abstract

The present work investigates the factors that influence buying behavior and attitudes toward carbonated soft drinks among high school and college students. The data have been collected from a total of 414 respondents from Dhaka and Chattogram district, Bangladesh through structured questionnaires. Among the responses, about 50.5% are male participants and

49.5% are female participants. The socio-demographic characteristics, attitudes, and consumption patterns of high school and college students between the ages of 10 and 21 were examined. A five-point Likert scale was employed in the data collection process. The data was examined using statistical methods such as one-way ANOVA, independent-sample t-test, percentage analysis, and descriptive statistics. This study found that the important influencing factors are flavor, test, brand, advertisement, color, and price, respectively in their buying behavior and attitudes towards carbonated soft drinks. However, they were less satisfied with the mechanism of container design and availability of the soft drinks. Regarding brand, advertising, price, test, and container design, it is also found that male and female consumers do not significantly differ in their purchasing behavior or attitudes toward carbonated soft drinks; however, there is a notable difference in terms of color, flavor, and availability at 5% levels of significance. If soft drink manufacturers want to remain competitive, they must pay more attention to important elements, including flavor, testing, brand, advertising, color, and price. This study attempts to close the gap by measuring consumers' attitudes regarding soft drink items using both intrinsic and extrinsic soft drink features. Soft drink companies may be able to identify their weaknesses using this study and then take the appropriate action to enhance the features and services of their products.

**Keywords:** carbonated beverages, Consumers, buying behavior, Consumers' preference Consumers' satisfaction

## 1. Introduction

Soft drinks can be divided into two groups according to their composition: carbonated drinks and non-carbonated drinks. A nonalcoholic beverage made with water, sweetener, and flavoring is called a carbonated soft drink. The sweetener could be anything from sugar to high fructose corn syrup. Nectar and juices are two more categories of non-carbonated beverages. Nectar is a fruit or vegetable product that typically has added sugar and contains 25% to 99% juice. People of all ages and all fields have a fascination with soft drinks as a matter of refreshment in Bangladesh. Although soft drinks first appeared in the Bangladeshi market in the late 1980s and became popular among people of all ages. Among them, youngsters, particularly those in the age range of 15-30 years cannot think of a life where soft drinks are absent. After the 1980s, people preferred Western foods over indigenous foods. As a result of globalization, several foreign food and beverage companies have set up shop in Bangladesh. Beverages include carbonated drinks, yogurt, soup, and lacchi, among other things. Thirsty people seek refreshments and entertainment from beverages.

In modern culture, soft drinks have become a popular choice for individuals who are adapting to new lifestyles, changing their habits, and experiencing substantial modifications in their way of everyday life. The global carbonated soft drink market has undergone significant transformations in recent decades because of shifting consumer preferences, socio-economic challenges, and cultural factors. Bangladesh, a rapidly developing country in South Asia, is witnessing a rise in the production of carbonated beverages, driven by the growing demand among the younger generation.

In Bangladesh, the market for carbonated soft drinks was valued at approximately 2.4 billion

taka. This figure was accompanied by an annual growth rate of 20% (Harry and Mark, 2024). In this context, both researchers and industry stakeholders must comprehend the complexities of customer preference and purchasing behavior among younger generations (Mohammad and Farha, 2014). Moreover, the abundance of carbonated beverage companies looking for market dominance highlights the necessity of a thorough comprehension of the elements that impact consumer preferences (Razia *et al.*, 2024). Since independence, Bangladeshi food preferences have substantially changed. Starting in 1980, Bangladeshi people started adopting Western foods along with their traditional foods (Rahman, 2021). Due to the phenomenon of globalization and the rapid process of urbanization, there has been a significant transformation in both lifestyle and dietary patterns. This transformation has not escaped the younger generation, as children have also been affected by these changes.

The consumption of soft drinks among Bangladeshi school children may be attributed to several factors, including an increasing number of restaurants offering fast food, the affordability of these beverages, their widespread availability within educational institutions, and the various social occasions that prompt their consumption. The motive for prioritizing the younger generation is that they play a crucial role in establishing trends and influencing consumer opinions. Consumption habits not only represent personal preferences but also capture more significant societal trends and cultural changes. Bangladesh has an enormous youth population; therefore, understanding their carbonated beverage preferences is necessary (Shahjahan and Hossain, 2019).

Therefore, the present study proposes to examine the influencing factors that influence the purchasing behavior of carbonated soft drink consumers. The results of this study can help soft drink companies, especially those looking to enter the market, better understand the factors that influence consumers' willingness to purchase soft drinks. This is because not much research has been done on the variables that influence consumers' willingness to purchase soft drinks. It is necessary to identify the factors that influence consumers' decisions to purchase soft.

### *1.1 Problem Statement*

The consumption of soft drinks among Bangladeshi school children may be attributed to several factors, including an increasing number of restaurants offering fast food, the affordability of these beverages, their widespread availability within educational institutions, and the various social occasions that prompt their consumption. The motive for prioritizing the younger generation is that they play a crucial role in establishing trends and influencing consumer opinions. Furthermore, the marketing of carbonated beverages is very prevalent in Bangladesh, effectively capturing the attention of young people. Due to the current hot weather conditions, Bangladesh is experiencing a highly competitive market for beverages, particularly soft drinks. As a result, it is noteworthy to mention that a considerable number of foreign food and beverage companies have strategically positioned themselves in the Bangladeshi market. Presently, a multitude of soft drink companies, both domestic and global, are engaged in conducting their business activities within the geographical boundaries of Bangladesh. Researchers and manufacturers are interested in the behavior of youths'

carbonated soft drink consumption since it affects lifestyle and market dynamics. Therefore, it can be stated that the research has two main objectives: "to study the consumer's preference for soft drinks" in general and "to study the consumer's buying behavior."

## 2. Review of Literature

Due to the constant improvements in technology, globalization, and urbanization, there has been a significant change in the eating habits and beverage consumption patterns of the current day (Behera *et al.*, 2023). In the plethora of options that consumers possess, fizzy drinks have become an indispensable aspect of modern-day living, representing a cultural phenomenon in addition to being a means of refreshment (Ferris, 2021). Brands have changed from being a symbol to becoming valuable in the eyes of consumers, with advertising playing a significant role. It draws attention, educates, informs, and generates demand for goods (Hwang *et al.*, 2021). Branding entails analyzing the relationship between value (what sellers sell) and brand (what customers buy), separating the seller's and buyer's perspectives (particularly), and emphasizing how both relate to the brand (Lee *et al.*, 2024, Almaqousi *et al.*, 2021). Brand image and taste of soft drinks are independent to each other (Hadi *et al.*, 2022). The demand for juices is raising as a result of people's changing consumption habits and increased health consciousness brought on by altering lifestyles and economic levels (Silpa *et al.*, 2017). For consumer goods firms to stand out from the competition and produce well-liked goods and services and therefore branding is essential. Skilled branding improves the creation and upkeep of unique qualities and values, giving them consumer appeal and legal protection (Alenazi *et al.*, 2021). Since customers are people who make purchases of products and services, brands have a big influence on their purchasing decisions (Jarquin *et al.*, 2021). According to (Payini *et al.*, 2022,) the carbonated drink sector has experienced a substantial expansion in recent times. Therefore, manufacturers and marketers must grasp how customers perceive the many features related to this beverage. The purpose of this review of the literature is to summarize the research that has been done on consumers' perceptions of carbonated drink characteristics.

A multitude of factors, such as taste, flavor diversity, packaging, brand image, nutritional value, and cost, are associated with carbonated drinks and impact consumer choices (Ridwan, 2022). Taken as a whole, these characteristics influence how customers view products and make judgments. The taste and range of flavors offered in carbonated drinks have been identified as the main determinants of customer perception and selection (McBey and Nadathur, 2024). Customers' consumption patterns are impacted by their tendency to link particular flavors with particular situations (Sharif, *et al.*, 2023). Different demographic groups may have different taste preferences, which highlight the necessity for customized marketing tactics (Smith *et al.*, 2017). The way a brand is packaged and perceived by consumers is very important. Appealing packaging can increase product exposure and provide a feeling of novelty (Johnson and Sivakumar, 2019, Khairunnisa *et al.* 2024). Consumer opinions are increasingly shaped by nutritional labeling and open discussion about substances (Harker and Kelt, 2017). Cost is still a key factor affecting what customers choose (Garcia and Proffitt 2022). Customers tend to equate higher costs with superior quality or distinctive features, which has resulted in the adoption of premiumization methods by several

carbonated drink companies (Sikalidis et al., 2020). Customers' perceptions of carbonated drinks are influenced by cultural and geographical influences (Adewuyi, 2023). Tastes in flavors, sweetness, and packaging can fluctuate significantly among cultures and geographic regions (Petit et al., 2023).

Maintaining a customer's loyalty to a company's products is essential in today's market, which calls for the creation of powerful advertising strategies like brand equity to prevent disloyalty. Typically, businesses use digital ads to draw customers to their fizzy drink goods. Display advertising is the most popular digital advertising strategy employed by the company to draw customers to Pepsi goods. According to Daniel and Viswanadham, digital marketing has a significant role in influencing consumers' purchasing decisions (Daniel and Viswanadham, 2022). It is evident that Bangladesh's market for carbonated drinks and sports drinks has grown over time, and obtaining a larger market share in this industry can be achieved through influencer and celebrity endorsements (Meher et al., 2017). However, for the strategy to be implemented successfully, the brand has to be aware of the consumer-influencing variables. Perceived advertising effort, awareness, and brand connection are positively correlated (Niloy, 2022).

After looking through a few relevant publications, it is evident that every piece covered various branded soft drinks and their focus on beverage products. Although enough research has been done to evaluate consumer attitudes and pinpoint the factors influencing them by nation or continent, there is not any direct or solitary research because this study is based on the viewpoint of Bangladeshi consumers. Again, they only observed the factors affecting attitudes toward soft drinks in Bangladesh and other countries, as well as the reasons behind consumer reactions. Consequently, this study attempts to close the gap by measuring consumers' attitudes regarding soft drink items using both intrinsic and extrinsic soft drink features. Soft drink companies may be able to identify their weaknesses with the use of this study and then take the appropriate action to enhance the features and services of their products.

### **3. Objectives of the Present Study**

The current work is to examine the customer preference and buying behaviour of carbonated soft drinks as well as to determine which factors have the most impact on consumer preference and purchasing behavior of Bangladeshi students.

The specific aims of this work are as follows:

- ❖ To explore the consumer preference factors towards soft drinks.
- ❖ To compare the level of soft drink satisfaction between genders.
- ❖ To develop a multiple regression model and correlation between influencing factors and customer satisfaction.
- ❖ To investigate the differences between the preferences of male and female consumers concerning the promotion of carbonated soft drinks.

#### 4. Hypotheses of this Study

To perform the present study the following hypotheses have been established:

- ❖ H01: There is no discernible difference between male and female students' consumption of soft.
- ❖ H02: The amount of soft drinks consumed by students of different ages does not differ significantly.
- ❖ H03: The amount of soft drinks consumed by students of different locations does not differ significantly.
- ❖ H04: There is no discernible difference between college and high school students' consumption of soft drinks.
- ❖ H05: The consumption of soft drinks by male and female students does not differ significantly based on brand name or advertising.
- ❖ H06: The consumption of soft drinks by male and female students does not differ significantly based on price and color.
- ❖ H07: The consumption of soft drinks by male and female students does not differ significantly based on flavor and availability.
- ❖ H08: The consumption of soft drinks by male and female students does not differ significantly based on container design and test.
- ❖ H09: The consumption of soft drinks by male and female students does not differ significantly based on brand name and advertisement.
- ❖ H010: There is no significant difference in soft drinks consumption between High School and College students regarding flavor and availability.
- ❖ H011: The consumption of soft drinks by male and female students does not differ significantly based on container design and test.
- ❖ H012: The consumption of soft drinks by male and female students does not differ significantly based on flavor and availability.

#### 5. Research Methodology

The participants in this study consisted of students who were currently enrolled in different schools and colleges situated in Dhaka and Chattogram, two major cities in Bangladesh. These cities were chosen as they are known to have a diverse population in terms of demographics and preferences, which makes them suitable for capturing a wide range of perspectives from the young population of Bangladesh. This allows us to acquire valuable insights into consumer preferences and behaviors regarding soft drink consumption. The primary objective is to analyze the numerous variables that impact customers' overall satisfaction with consuming soft drinks. Factors such as brand familiarity, advertisement, pricing, color, flavour, availability, container design, and flavor contribute to the



psychological appeal of a product. A cross-sectional survey design is utilized to collect data at a particular point in time, allowing for the examination of the relationships between various factors and overall satisfaction. For this reason, a multiple regression has been developed between consumer's satisfaction level and purchase influencing factors.

### 5.1 Research design

The present analysis is descriptive research in nature with special focus on the soft drink consumption satisfaction of High School and College students. The self-structured Questionnaire was conducted through survey method and the collected primary data were analyzed using IBM SPSS 26.

### 5.2 Sampling Plan and Percentage Analysis

The target population of the study is High School and College students in Dhaka and Chattogram district, Bangladesh. A convenient non-probability sampling technique was used to select samples from the target population. A total of 414 questionnaires were distributed to various High School and College students in Dhaka and Chattogram district personally. The profile of the respondents and their percentage analysis is shown in Table 1.

Table 1. Respondents' Demographic information

Class	Classification	Number of respondents	Percentage
Gender	Male	209	50.5%
	Female	205	49.5%
	Total	414	100.0%
Location	Dhaka	206	49.8%
	Chattogram	208	50.2%
	Total	414	100.0%
Age	10-16	220	59.7%
	17-21	194	40.3%
	Total	414	100.0%
Educational qualification	High School	220	53.1%
	College	194	46.9%
	Total	414	100.0%
Income	Below 1,000,00	308	74.4%
	Above 1,000,00	106	25.6%
	Total	414	100.0%

#### Illustration:

Table 1 depicts that out of the total 414 respondents, 50.5% are male and 49.5% are female, 49.8% are in Dhaka district 50.2 are from Chattogram district, 59.7% of respondents fall within the age group 10 - 16 and the remaining 40.3% fall within the age group 17 - 21, 53.1% are from High School and 46.9% are from College, 74.4% respondents fall within the

income level below one lakh and the remaining 25.6% fall within the income level above one lakh.

### 5.3 Measurement Scale of Soft Drinks Satisfaction

This study measures respondents' demographic data and eight statements about soft drink satisfaction factors using a five-point Likert scale: strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. The demographic information has been discussed through phi -chart as follows:

### 5.4 Health Conscious about Soft Drinks

Table 2. Soft drink consumption has positive health

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	26	6.3	6.3	6.3
	May be	79	19.1	19.1	25.4
	No	309	74.6	74.6	100.0
	Total	414	100.0	100.0	

Source: Survey Data

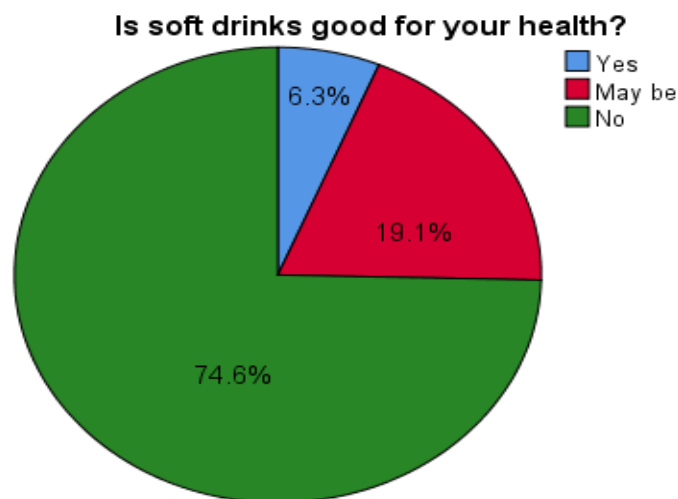


Figure 1. Respondents' health conscious about soft drink consumption

Based on the survey conducted, Figure1 shows that out of the total 414 respondents, approximately 6.3% of individuals expressed that the consumption of soft drinks is beneficial for one's health. Additionally, around 19.1% of participants indicated that they may consider soft drinks to have potential health benefits. While conducting our study, it is found that a significant majority of individuals, specifically 74.6%, expressed their recommendation against the consumption of soft drinks due to their negative impact on health.



### 5.5 Frequency of consumption

Table 3. Frequency of Consuming Soft Drinks

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Daily	24	5.8	5.8	5.8
	Weekly	153	37.0	37.0	42.8
	Monthly	57	13.8	13.8	56.5
	Occasionally	180	43.5	43.5	100.0
	Total	414	100.0	100.0	

Source: Survey Data

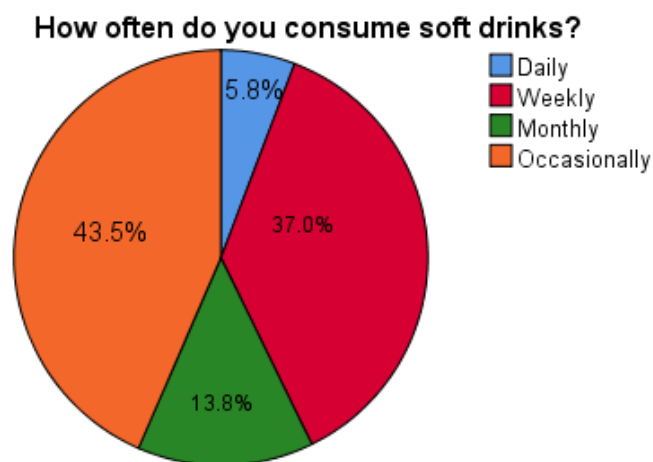


Figure 2. How often do respondents consume soft drinks?

According to the poll, Figure 2 indicates that 5.8% of the 414 respondents overall drank soft drinks daily. Furthermore, about 13.8% of participants said they drink soft drinks monthly, and about 37.0% of participants said they drink soft drinks weekly. We discovered throughout our research that a sizable portion of people, precisely 43.5%, report occasionally consuming soft drinks.

### 5.6 Effective advertisement in soft drinks products

Table 4. Memorable advertisement in soft drink products

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Face book	228	55.1	55.1	55.1
	Twitter	9	2.2	2.2	57.2
	Instagram	98	23.7	23.7	80.9
	Tiktok	3	.7	.7	81.6
	Others	76	18.4	18.4	100.0
	Total	414	100.0	100.0	

Source: Survey Data

**Which social media influences you most for buying drinks?**

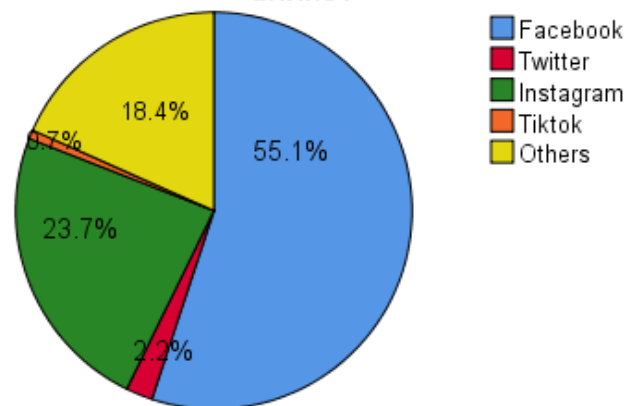


Figure 3. The effect of social media on soft drink consumption

According to the poll, Figure 3 indicates that a majority of the respondents, specifically 55.1%, reported that Facebook has the most influence on their purchasing decisions regarding drinks. A small percentage of respondents, namely 2.2%, mentioned Twitter as the platform that influences their drink purchases. Instagram was identified as the primary influencer by 23.7% of the respondents. Tiktok, on the other hand, was reported to have a minimal impact on drink purchases, with only 0.7% of the respondents attributing their decisions to this platform. Lastly, a notable proportion of 18.4% of the respondents mentioned other platforms as the main influencers for their drink purchases.

### 5.7 Preference of soft drink

Table 5. Reason for Preferring Soft Drinks

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	sweet	26	6.3	6.3	6.3
	Apple	32	7.7	7.7	14.0
	Orange	104	25.1	25.1	39.1
	Lemon	143	34.5	34.5	73.7
	mango	69	16.7	16.7	90.3
	others	40	9.7	9.7	100.0
	Total	414	100.0	100.0	

Source: Survey Data

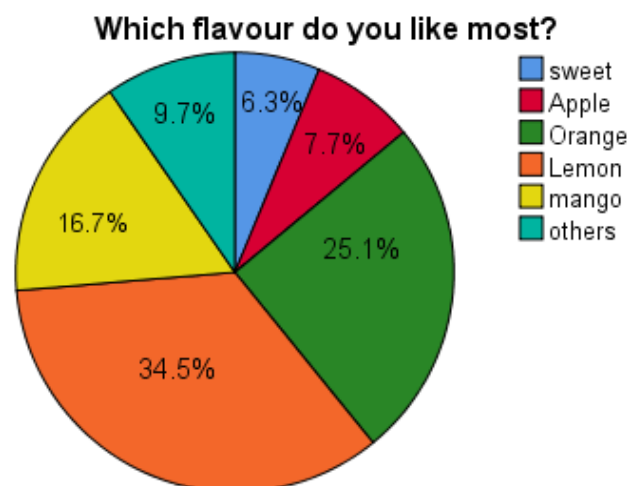


Figure 4. Impact of flavor on consumption of soft drinks

Figure 4 indicates that the majority of participants (34.5%) expressed a preference for lemon drinks, while 25.1% of respondents indicated a preference for orange drinks. Additionally, 16.7% of participants favored mango drinks, while 7.7% preferred apple drinks. The remaining 9.7% of respondents did not specify a particular preference.

### 5.8 Which Packaging of Soft Drinks You Would Prefer Most?

Table 6. Which packaging of soft drinks you would prefer most?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Glass Bottle	104	25.1	25.1	25.1
	Plastic Bottle	104	25.1	25.1	50.2
	Canned	174	42.0	42.0	92.3
	Paper packaging	32	7.7	7.7	100.0
	Total	414	100.0	100.0	

Source: Survey Data

**Which packaging of soft drinks you would prefer most?**

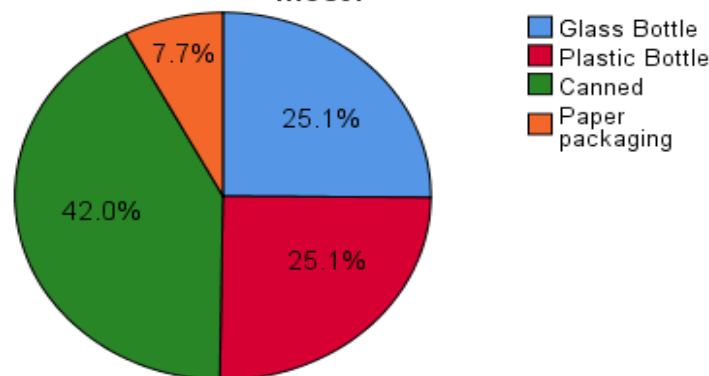


Figure 5. Impact of container design on consumption of soft drinks

From Figure 5 it is revealed that a significant proportion of the participants, specifically 42%, expressed a preference for canned packaging when it comes to soft drinks. This was followed by 25.1% of participants who favored glass bottle packaging, another 25.1% who preferred plastic packaging, and a smaller percentage of 7.7% who indicated a preference for paper packaging.

### 5.9 Reason to take soft drinks

Table 7. Reason drives you to take soft drinks

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Digestive Purpose	63	15.2	15.2	15.2
Refreshment purpose	164	39.6	39.6	54.8
Quenching/Satisfying thirsty	70	16.9	16.9	71.7
Removing tiredness	26	6.3	6.3	78.0
Party/ celebrations	91	22.0	22.0	100.0
Total	414	100.0	100.0	

Source: Survey Data

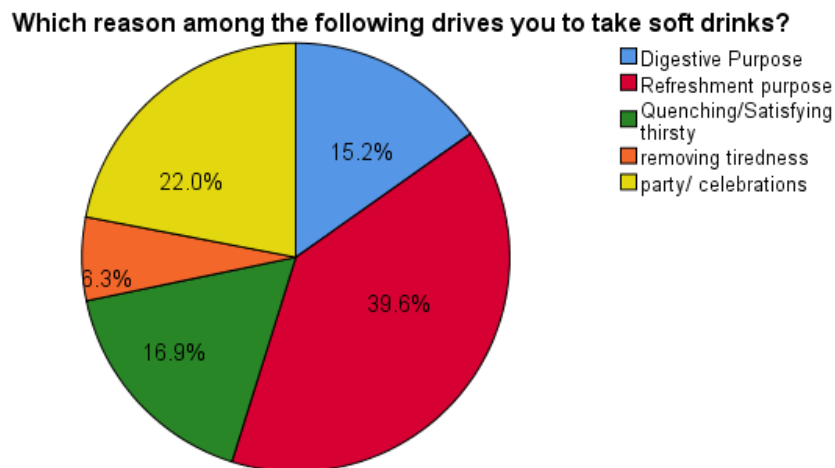


Figure 6. Respondent's reason for consumption of soft drinks

Figure 6 depicts that 39.6% of the participants consume soft drinks for refreshment, 22% for party or celebration purposes, 15.2% for digestive purposes, 16.9% for quenching or satisfying thirst, and 6.3% for alleviating exhaustion.

### 5.10 Quantity of soft drinks

Table 8. Quantity of Soft drinks often Purchase

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	100 ml	65	15.7	15.7	15.7
	150 ml	154	37.2	37.2	52.9
	300 ml	94	22.7	22.7	75.6
	500 ml	51	12.3	12.3	87.9
	1L	25	6.0	6.0	94.0
	Others	25	6.0	6.0	100.0
	Total	414	100.0	100.0	

Source: Survey Data

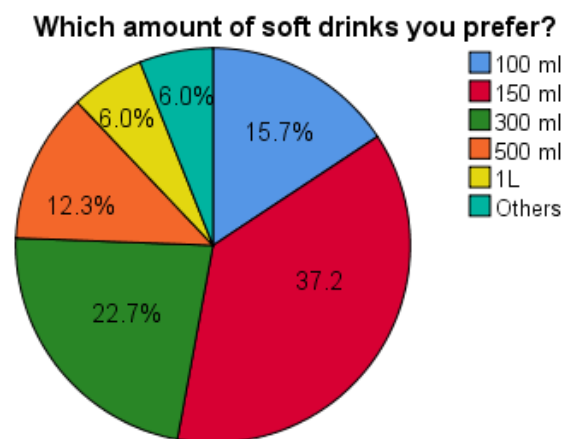


Figure 7. Amount of soft drinks preferred by the respondent

The results of the survey (Figure 7) reveal that a significant proportion of the participants, precisely 37.2%, expressed a preference for soft drinks with a volume of 150 ml. Additionally, 22.7% of the participants favored a volume of 150 ml, while 15.7% indicated a preference for a volume of 100 ml. A smaller percentage of participants, namely 12.3%, selected a volume of 300 ml, and only 6% preferred a larger volume of 1 Liter.

## 6 Research Model

The current study was performed based on primary data from the standardized questionnaires of 414 randomly selected high school and college students in Bangladesh's Dhaka and Chattogram districts. The eight dimensions of the standardized questionnaire have been used to collect the data required for multiple linear regression analysis. Thus, the researcher analyzed the dataset collected from 414 students using the SPSS-26 version of the software, ensuring that it was linear, normal, independent, and multicollinear by using correlation, skewness, and Kurtosis. Thus, the required multiple regression model (1) may be estimated as

follows to determine the purchase behavior of customer for soft drinks in Dhaka and Chattogram district of Bangladesh.

$$\text{Purchase}(P) = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 x_4 + \alpha_5 x_5 + \alpha_6 x_6 + \alpha_7 x_7 + \alpha_8 x_8 \quad , \dots (1)$$

where P is the dependent variable,  $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \dots, \alpha_8$  are constants,

$x_1$  = Brand Name,  $x_2$  = Advertisements,  $x_3$  = Colour,  $x_4$  = Price,  $x_5$  = Availability,  $x_6$  = Container Design,  $x_7$  = Taste,  $x_8$  = Flavour

## 7. Statistical Techniques Used in the Study

According to the present study's objectives and hypotheses, the entire data has been statistically analyzed strictly following the requirements. The nature of the sample was described using descriptive statistics such as frequency, percentage mean, and standard deviation, and the significance of mean differences was tested using inferential statistics such as the t-test and ANOVA test and to compare consumption of soft drinks satisfaction of High school and College going students concerning their demographic variables. All statistical analyses have been conducted using IBM SPSS, the statistical package for social sciences, version 26.0.

## 8. Delimitation of the Study

- The study was limited to 220 high school students in Bangladesh's Chattogram and Dhaka districts.
- Study confined to the 194 College students of Dhaka and Chattogram districts, Bangladesh.
- The study was delimited to 209 male and 205 female students from high school and college.
- Study delimited to Dhaka and Chattogram districts, Bangladesh only.

## 9. Data Analysis and Interpretation

Several statistical techniques have been used in the quantitative approach to compare the information gathered from the respondents. Among these techniques was (1) descriptive statistics, which entailed gathering, compiling, and displaying data: the dispersion, central tendency, and frequency distribution provided information on the data in this analysis. (2) Inferential statistics is the process of concluding a population based only on a sample of data. Multiple regression analysis and correlation were incorporated. The effect of customer choice on the purchasing behavior of consumers for soft drinks was determined using multiple regression analysis. In Dhaka and Chattogram districts of Bangladesh, correlation analysis has been employed to determine the association between customer preference and purchasing behavior for soft drinks.



## 10. Reliability Analysis

The internal consistency of variables in the current study has been measured using Cronbach's alpha, a frequently used scale reliability index. All eight factors of students' soft drink satisfaction were fairly reliable and had good internal consistency, as shown in Table 9 below.

Table 9. Internal Consistency (Reliability) of eight factors of soft drink Satisfaction

Factors	No. of Items	Cronbach's Alpha if Item Deleted
Brand Name influences my purchase	1	0.737
Advertisements influence my purchase	1	0.655
Price influences my purchase	1	0.740
Color influences my purchase	1	0.770
Flavor influences my purchase	1	0.760
Availability influences my purchase	1	0.657
Container design influences my purchase	1	0.604
Taste influences my purchase	1	0.718
Total	8	0.887

Source. Computed from Primary Data.

## 11. Results and Discussion

The present study focuses on soft drink satisfaction among the students of High Schools and Colleges in Chattogram and Dhaka district, Bangladesh, and its relationship to their level of satisfaction. The findings have been discussed in the comparison on the basis of gender, age, level of education, level of income, and location.

### 11.1 Soft drink satisfaction of students by Gender

H<sub>01</sub>: There is no significant difference in soft drink consumption between male and female students.

Table 10. Mean, P-value, t-test, and standard deviation for gender

Factor	Gender	N	Mean	Std. Deviation (SD)	Std. Error Mean	t-value	df	Sig. (2-tailed)
Overall satisfaction on soft drinks consumption	Male	209	3.995	0.9682	0.066	-2.08	412	0.038
	female	205	4.190	0.9330	0.065			

(The critical value at the 5% level of significance is  $\pm 1.962$ )

Table 10 depicts that the mean and SD for male and female students are 3.9952, 0.968, and

4.1902, 0.933, respectively, with a mean difference of 0.195. At the 5% level of significance, it is also evident that the computed t-value (-2.08 at 412 degrees of freedom) is below the critical value of -1.96. As a result, the consumption of soft drinks by male and female students differs significantly in terms of their level of satisfaction. Therefore, it is necessary to reject the null hypothesis. Hence, it can be concluded that there is a significant difference between the mean scores of soft drink satisfaction for male and female students.

### 11.2 Soft Drink Satisfaction of Students by Level Of Education

H<sub>02</sub>: There is no discernible difference between college and high school students' consumption of soft drinks.

Table 11. Mean, Standard Deviation, t-test, and P-value for Level of Education

Factor	Level of Education	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
Overall satisfaction with soft drink consumption	High School	220	4.08	0.921	0.062	0.186	412	0.852
	College	194	4.10	0.994	0.072			

Note. The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 11, the mean and standard deviation for college and high school students are 4.08; 0.994, 0.921, and 4.10, respectively, with a mean difference of 0.02. It is also evident that, at a 5% significance level, the computed t-value (0.186 at 412 degrees of freedom) is below the crucial value of 1.96. Hence, there is no significant difference in soft drink consumption between high school and college students on their satisfaction. Consequently, it is necessary to accept the null hypothesis. Accordingly, it can be concluded that the mean soft drink satisfaction scores of high school and college students do not differ significantly ( $t = 0.186$ ,  $df = 412$ ,  $p > 0.05$ ).

### 11.3 Soft drink satisfaction of students by Age Group

H<sub>03</sub>: The students' consumption of soft drinks does not significantly differ based on their age.

Table 12. Mean, Standard Deviation, t-test, and P-value for Level of Age Group

Factor	Age Group	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
Overall satisfaction on soft drinks consumption	10-16	220	4.054	0.9777	0.0659	-0.845	412	0.399
	17-22	194	4.134	0.9288	0.0667			

Note. The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 12, the mean and standard deviation for college and high school students are 4.054, 0.9777, and 4.134; 0.9288, respectively, with a mean difference of 0.08. It is also evident that, at a 5% significance level, the computed t-value (-0.845 at 412 degrees of freedom) is greater than the critical value of -1.962. Hence, there is no significant difference in soft drink consumption between high school and college students ages on their satisfaction. Consequently, it is necessary to accept the null hypothesis. Accordingly, it can be concluded that the mean soft drink satisfaction scores of high school and college students do not differ significantly ( $t = -0.845$ ,  $df = 412$ ,  $p > 0.05$ ).

#### 11.4 Soft Drink Satisfaction of Students by Location

H04: There is no significant difference in soft drinks consumption between locations of the students.

Table 13. Mean, Standard Deviation, t-test, and P-value for the Location of the Respondents

Factor	Location	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
Overall satisfaction on consumption of the purchased soft drinks	Dhaka	206	4.063	1.0174	0.0708			
	Chattogram	208	4.120	0.8901	0.0617	-0.608	412	0.544

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 13, the mean and standard deviation for the location of the students are 4.063, 1.0173, and 4.1202, .89008, respectively, with a mean difference of 0.057. It is also evident that, at a 5% significance level, the computed t-value (-0.608 at 412 degrees of freedom) is greater than the critical value -1.962. Hence, there is no significant difference in soft drink consumption between locations of the students on their satisfaction. Consequently, it is necessary to accept the null hypothesis. Accordingly, it can be concluded that the mean soft drink satisfaction scores of high school and college students do not differ significantly ( $t = -0.608$ ,  $df = 412$ ,  $p > 0.05$ ).

#### 11.5 Soft drink satisfaction of students by income level

H05: There is no significant difference in soft drinks consumption between income levels of the students.

Table 14. Mean, Standard Deviation, t-test, and P-value for the level of income

Overall satisfaction on consumption of the purchased soft drinks	Income	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
	Below one Lakh	308	4.09	0.9856	0.0562	0.086	412	0.932
	Above one Lakh	106	4.08	0.8632	0.0838			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 14, the mean and standard deviation for the income level of the respondents are 4.094, .98568, and 4.084; .86319, respectively, with a mean difference of 0.01. It is also evident that, at a 5% significance level, the computed t-value (0.086 at 412 degrees of freedom) is less than the critical value of 1.962. Hence, there is no significant difference in soft drink consumption between income level of the students on their satisfaction. Consequently, it is necessary to accept the null hypothesis. Accordingly, it can be concluded that the mean soft drink satisfaction scores of high school and college students do not differ significantly ( $t = 0.086$ ,  $df = 412$ ,  $p > 0.05$ ).

#### 11.6 Soft drink satisfaction of students by Gender regarding brand name and advertisement

$H_{06}$ : The consumption of soft drinks by male and female students does not differ significantly based on brand name or advertising.

Table 15. Mean, Standard Deviation, t-test, and P-value for male and female students regarding brand name and advertisement

Brand influences my purchase	Name	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
		Male	209	4.138	0.9276	0.06416	0.585	412	0.559
		Female	205	4.087	0.8414	0.05877			
Advertisements influence my purchase		Male	209	4.163	0.9158	0.06335	-0.318	412	0.751
		Female	205	4.190	0.8448	0.05900			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 15, there is no discernible difference between brand names and ads in terms of how they affect soft drink purchases. The calculated values of 0.585 and -0.318 are both lower than the critical value of 1.962 at a significance level of 5%, which supports this conclusion. The P -value is not significant at the 5% level (2-tailed). Thus, the null

hypothesis is accepted.

### *11.7 Students' soft drink satisfaction by gender regarding price and color*

H<sub>07</sub>: The consumption of soft drinks by male and female students does not differ significantly based on price and color.

Table 16. Mean, Standard Deviation, t-test, and P-value for male and female students regarding price and color

Price influences my purchase.	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
	Male	209	4.1435	1.08241	.07487	-1.370	412	0.171
	Female	205	4.2829	.98416	.06874			
Color influences my purchase	Male	209	3.5502	1.13452	.07848	-1.966	412	0.050
	Female	205	3.7561	.98966	.06912			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 16, there is no statistically significant difference in the impact of price on soft drink purchases between male and female students. This conclusion is supported by the computed values of -1.370 being higher than the critical value of -1.96 at a significance level of 5%. In the case of color, the calculated values of -1.966 are less than the critical value of -1.962 at a significance level of 5%, supporting the conclusion that there is a statistically significant difference between male and female students regarding color in terms of their impact on the purchase of soft drinks.

### *11.8 Students' Soft Drink Satisfaction by Gender Regarding Flavor and Availability*

H<sub>08</sub>. The consumption of soft drinks by male and female students does not differ significantly based on flavor and availability.

Table 17. Mean, Standard Deviation, t-test, and P-value for male and female students regarding flavor and availability

Flavour influences my purchase	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
	Male	209	4.2823	0.99117	0.06856	-2.576	412	0.010
	Female	205	4.5122	0.81415	0.05686			
Availability influences my purchase	Male	209	3.7799	1.00450	0.06948	-2.468	412	0.014
	Female	205	4.0098	0.88556	0.06185			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 17, there is a statistically significant difference in the impact of flavor and availability on soft drink purchases between male and female students. The calculated values of -2.576 and -2.468 are both lower than the critical value of -1.962 at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is significant. As a result, the null hypothesis is disregarded.

#### 11.9 Student's soft drink satisfaction by gender regarding container design and taste

H<sub>09</sub>: The consumption of soft drinks by male and female students does not differ significantly based on container design and taste.

Table 18. Mean, Standard Deviation, t-test, and P-value for male and female students regarding container design and taste

Container design influences my purchase	Gender	N	Mean	Std. Deviation	Std. Error Mean	T	DF	Sig. (2-tailed)
	Male	209	2.5885	0.81043	0.05606	-0.955	412	0.340
	Female	205	2.6634	0.78521	0.05484			
Taste influences my purchase	Male	209	4.3684	1.03457	0.07156	-0.906	412	0.365
	Female	205	4.4537	0.87113	0.06084			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 18, there is no statistically significant difference in the impact of design and taste on soft drink purchases between male and female students. The calculated values of

-0.955 and -0.906 are both greater than the critical value of -1.962 at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is not significant. As a result, the null hypothesis is accepted.

11.10 Students' soft drink satisfaction by the level of education regarding brand name and advertisement

H<sub>010</sub>: The consumption of soft drinks by male and female students does not differ significantly based on brand name and advertisement.

Table 19. Mean, Standard Deviation, t-test, and P-value for High School and College students regarding brand name and advertisement

Brand influences my purchase	Name	Education	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
		High School	220	4.0773	0.8539	0.0575	-0.887	412	0.376
		College	194	4.1546	0.9200	0.0660			
Advertisements influence my purchase		High School	220	4.200	0.8526	0.0574	0.582	412	0.561
		College	194	4.149	0.9124	.06551			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 19, there is no statistically significant difference in the impact of brand name and advertisement on soft drink purchases between male and female students. The calculated values of -0.887 and 0.582 are both greater and less than the critical values of -1.962 and 1.962 at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is not significant. Thus, the null hypothesis is accepted.

11.11 Student's soft drink satisfaction by the level of education regarding price and color

H<sub>011</sub>: The consumption of soft drinks by male and female students does not differ significantly based on price and color.



Table 20. Mean, Standard Deviation, t-test, and P-value for High School and College students regarding price and color

Price influences my purchase	Education	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
	High School	220	4.1682	1.07859	.07272	-0.928	412	0.354
	College	194	4.2629	.98589	.07078			
Color influences my purchase	High School	220	3.5955	1.05769	.07131	-1.150	412	0.251
	College	194	3.7165	1.08070	.07759			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 20, there is no statistically significant difference in the impact of price and color on soft drink purchases between male and female students. The calculated values of  $-0.928$  and  $-1.150$  are both greater than the critical value of  $-1.962$  at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is not significant. Thus, the null hypothesis is accepted.

#### 11.12 Students' soft drink satisfaction by the level of education regarding flavor and availability

H<sub>012</sub>: The consumption of soft drinks by male and female students does not differ significantly based on flavor and availability.

Table 21. Mean, Standard Deviation, t-test, and P-value for High School and College students regarding flavor and availability

Flavor influences my purchase	Education	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (two-tailed)
	High School	220	4.432	0.8809	0.0594	0.846	412	0.398
	College	194	4.356	0.9507	0.0683			
Availability influences my purchase	High School	220	3.881	0.91892	0.0619	-0.270	412	0.787
	College	194	3.907	0.99306	0.0713			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 21, there is no statistically significant difference in the impact of flavor and availability on soft drink purchases between male and female students. The calculated

values of 0.846 and -0.270 are both less and greater than the critical values of 1.962 and -1.962 at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is not significant. Thus, the null hypothesis is accepted.

### *11.13 Students' soft drink Satisfaction by the level of education regarding container design and taste*

H<sub>013</sub>. The consumption of soft drinks by male and female students does not differ significantly based on container design and taste.

Table 22. Mean, Standard Deviation, t-test, and P-value for High School and College students regarding container design and taste

Container design influences	Education	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)
my purchase	High School	220	2.568	0.7463	0.0503	-1.562	412	0.119
	College	194	2.691	0.8500	0.0610			
Taste influences my purchase.	High School	220	4.436	0.9068	0.0611	0.582	412	0.561
	College	194	4.382	1.0123	0.0726			

*Note.* The critical value at the 5% level of significance is  $\pm 1.962$ .

According to Table 22, there is no statistically significant difference in the impact of container design and taste on soft drink purchases between male and female students. The calculated values of -1.562 and 0.582 are both greater and less than the critical values of -1.962 and 1.962 at a significance level of 5%, which supports this conclusion. At the 5% level (two-tailed), the P-value is not significant. Thus, the null hypothesis is accepted.

## **12. Pre-assumptions to Perform Multiple Linear Regression**

### *12.1 Continuity*

The dependent and independent variables in the provided data set are continuous since the mean scores are derived from the five-point Likert scale. Therefore, based on continuity multiple linear regressions may be applied for the present study.

### *12.2 The Dependent and Independent Variables have a Linear Relationship*

In the order form of multiple linear regressions, there must be a linear relationship between the dependent and each of the independent variables. A linear relationship is the most important because without this relationship the model is invalid even if all other assumptions are fulfilled. There are various methods for performing the linearity, which are correlation,

scatter plot, normal Q-Q plot, histogram, and box plots. In this study, the correlation method has been established for checking the data linear relationship, which is shown below:

Table 23. Correlations

Correlations		Brand	Add.	Price	Color	Flavor	Availability	Container design	Taste	Overall satisfaction
Brand	Pearson	1	.263**	-.103*	.183**	.187**	.109*	.122*	.228**	.412**
	Correlation									
	Sig. (2-tailed)		.000	.036	.000	.000	.027	.013	.000	.000
Add.	N	414	414	414	414	414	414	414	414	414
	Pearson	.263**	1	-.142**	.032	.172**	.144**	-.016	.316**	.384**
	Correlation									
Price	Sig. (2-tailed)	.000		.004	.511	.000	.003	.744	.000	.000
	N	414	414	414	414	414	414	414	414	414
	Pearson	-.103*	-.142**	1	.100*	.100*	.067	.047	.066	-.127**
Color	Correlation									
	Sig. (2-tailed)	.036	.004		.041	.042	.173	.340	.183	.009
	N	414	414	414	414	414	414	414	414	414
Flavor	Pearson	.183**	.032	.100*	1	.038	.220**	.121*	.061	.203**
	Correlation									
	Sig. (2-tailed)	.000	.511	.041		.437	.000	.013	.219	.000
Availability	N	414	414	414	414	414	414	414	414	414
	Pearson	.187**	.172**	.100*	.038	1	.104*	.051	.381**	.435**
	Correlation									
Container design	Sig. (2-tailed)	.000	.000	.042	.437		.034	.299	.000	.000
	N	414	414	414	414	414	414	414	414	414
	Pearson	.109*	.144**	.067	.220**	.104*	1	.075	.157**	.213**
Taste	Correlation									
	Sig. (2-tailed)	.027	.003	.173	.000	.034		.128	.001	.000
	N	414	414	414	414	414	414	414	414	414
Overall satisfaction	Pearson	.122*	-.016	-.047	.121*	.051	.075	1	-.080	.083
	Correlation									
	Sig. (2-tailed)	.013	.744	.340	.013	.299	.128		.102	.090
	N	414	414	414	414	414	414	414	414	414
	Pearson	.228**	.316**	.066	.061	.381**	.157**	-.080	1	.452**
	Correlation									
	Sig. (2-tailed)	.000	.000	.183	.219	.000	.001	.102		.000
	N	414	414	414	414	414	414	414	414	414
	Pearson	.412**	.384**	-.127**	.203**	.435**	.213**	.083	.452**	1
	Correlation									
	Sig. (2-tailed)	.000	.000	.009	.000	.000	.000	.090	.000	
	N	414	414	414	414	414	414	414	414	414

Note. \*\* The correlation is significant at the two-tailed 1% level, \* the correlation is significant at the two-tailed 5% level.

Based on Table 23, it can be seen that there is a notable relationship between each of the variables, specifically the correlations between the independent variables (brand name, price, advertisement, color, flavor, availability, container design, and test) and the dependent variable (satisfaction). A positive value of the correlation coefficient indicates a positive association between each of the independent variables and the dependent variable. Table 23 indicates that the correlation is between 0.3 and 0.7 except for the container design. As a

result, there is a linear connection between the independent and dependent variables. The variables are not linearly correlated if the correlation is not between 0.3 and 0.7 (Cheng and Jiang, 2021). Therefore, based on the data shows in Table 23 the significant relationship between the brand name, price, advertisement, color, flavor, availability, and test toward the online clothing purchase intention.

### 12.3 Independence

The data in multiple linear regressions should be uncorrelated or independent of one another for the model to fit. Stated otherwise, the model suggests that the residual values are unrelated to one another. This hypothesis can be verified using the Durbin-Watson statistic. Chatterjee and Hadi state that the test will yield results ranging from 0 to 4, where 0 to 2 indicates positive autocorrelation and 2 to 4 indicates negative autocorrelation.

A value of 2, or the midpoint, denotes the absence of autocorrelation. According to Savin and White, a higher positive autocorrelation is indicated by a result that is closer to 0, while a higher negative autocorrelation is indicated by a result that is closer to 4. Thus, before utilizing multiple linear regressions, the autocorrelation must be tested. If the data show autocorrelation, it is unable to fit the optimal model in multiple linear regressions if it goes against this concept.

Table 24. Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.665 <sup>a</sup>	.443	.432	.71978	.443	40.217	8	405	.000
									1.734

Notes. a. Predictors: (Constant), Container design, Advertisements, Color, Flavor, Price, Availability, Brand Name, Taste.

b. Dependent Variable: Overall satisfaction on consumption of soft drinks.

From Table 24, it is seen that the Durbin-Watson value of 1.734 is near to 2, which means there is no autocorrelation. Hence the observations are unrelated to one another. Therefore, the multiple linear regressions may be performed by applying the provided data to forecast soft drink satisfaction using independent variables.

### 13. Multiple Regression Analysis

#### 13.1 R Square (Determining how Well the Model Fits)

Table 25. Regression analysis's model summary table

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.765 <sup>a</sup>	.563	.532	.41978

From Table 25, R is the multiple correlation coefficients, and it can be considered to be the quality of the prediction of the dependent variable, in this case, soft drink satisfaction. A value of 0.765 in Table 25 represents a good level of prediction. Therefore, it is concluded that there is a strong positive correlation exists between soft drinks satisfaction and independent variables (Brand Name, Advertisements, Color, Price, Availability, Container design, Taste, and Flavor) of High School and College students with  $R = 0.765$ . The coefficient of determination, represented by the R Square column, indicates the extent to which the independent variables can explain the variance in the dependent variable. According to the model's R square value of 0.563, 56.3% of the variation in soft drink satisfaction among High School and College students by the independent variables, which is statistically significant for model fit. Furthermore, variables other than the predictors in this model account for 43.7% (100% - 56.3%) of the variance.

Another crucial element is to appropriately disclose the "Adjusted R Square" (adj.  $R^2$ ) data interpretation. In this example, a score of .803 (coefficients table) shows that the predictors that should remain in the model account for 80.3% of the variation in the outcome variable. A large difference between the Adjusted R-squared and R-squared values points to a poorly fitted model. The adjusted R squared decreases when a pointless variable is added to a model. However, adjusted R squared will rise by adding any meaningful variable.  $R^2$  and adjusted  $R^2$  are always equal or less than each other. Thus, adjusted  $R^2$  accounts for the quantity of terms in a model.  $R^2$  may seem a better fit because it never lowers and continually grows. However, adjusted R squared will rise by adding any meaningful variable.  $R^2$  and adjusted  $R^2$  are always equal or less than each other. Thus, adjusted  $R^2$  accounts for the quantity of terms in a model. More words added to the model may seem to fit better since  $R^2$  never falls and always rises, and the modified  $R^2$  penalizes being wholly deceptive. The accuracy of the model is shown by the standard error (in this case 0.41978) of a model fit. It is the residuals' standard deviation. It illustrates how incorrect one may be if they estimated the dependent variable or variable of interest using a regression model or made forecasts. The standard error will drop as the R square rises. Given the magnitude of soft drink satisfaction, the average error in this prediction of soft drink satisfaction using this model is 0.41978, which is not insignificant. Therefore, the standard error should be as low as feasible. To obtain a confidence interval for the anticipated values, utilize the standard error.

### 13.2 Statistical Significance of the Model

Table 26. ANOVA<sup>a</sup>

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	166.686	8	20.836	40.217	.000 <sup>b</sup>
Residual	209.826	405	.518		
Total	376.512	413			

*Note.* a. Dependent Variable: Overall satisfaction on consumption of soft drinks

b. Predictors: (Constant), Brand Name, Advertisements, Color, Price, Availability, Container design, Taste, and Flavor.

The ANOVA Table 26 shows that the regression model is a good fit according to the F-ratio value. Therefore, the independent variables (Brand Name, Advertisements, Color, Price, Availability, Container design, Taste, and Flavor) are statistically significant and predict the dependent variable (soft drinks satisfaction),  $F(8, 405) = 40.205$ ,  $P(.000) < 0.05$ , that is a good fit of the data.

Table 27. Coefficients<sup>a</sup>

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.216	.333		-.649	.517
Brand Name	.227	.043	.210	5.220	.000
Advertisements	.186	.044	.172	4.218	.000
Price	-.130	.035	-.141	-3.656	.000
Color	.113	.035	.126	3.233	.001
Flavor	.288	.043	.276	6.763	.000
Availability	.079	.039	.078	2.020	.044
Taste	.236	.043	.237	5.547	.000
Container design	.045	.046	.038	.988	.324

*Note.* a. Dependent Variable: Overall satisfaction on consumption of soft drinks

The t-value and associated p-value are shown in the "t" and "Sig." columns of Table 27. The analysis indicates that, with the exception of the container design variable, all independent variables are statistically significant at a 5% significance level, as indicated by p-values less

than 0.05. This model's standard error is small, ensuring a good fit for the regression model. Unstandardized coefficients illustrate the relationship between an independent variable and the dependent variable independent variables are held constant. The regression coefficient indicates how much the dependent variable—in this case; the satisfaction of soft drinks—will change if the independent variable increases by one unit. The unstandardized coefficient for the brand name is 0.227, according to the coefficients (Table 27) above. This indicates that there is a 0.227 unit rise in soft drink satisfaction for every unit increase in brand name. According to Table 27, the regression coefficient between the brand name and soft drinks satisfaction is statistically significant. Hence, the soft drinks satisfaction of High School and College students increased by 0.227 for a one-unit increase of Brand Name. Similarly, soft drink satisfaction among High School and College students increased by 0.186 for one unit increase of advertisements, 0.113 for one unit increase of color, 0.288 for one unit increase of flavor, 0.079 for one unit increase of availability, 0.045 for one unit increase of container design, 0.236 for one unit increase of taste, and soft drinks satisfaction of High School and College students decreased by -0.130 for one unit increase of price. The regression coefficient between the container design and soft drinks satisfaction is not statistically significant because the P value (.324) is greater than 0.05 at a 5% level of significance. So the soft drinks satisfaction of High School and College students is increased by 0.045 for one unit increase of container design. Therefore, the independent variables, Brand Name, advertisements, flavor, availability, taste, and color, show a positive impact. Among them, flavor has a high impact, but the independent variable price shows a negative impact. However, independent variable container design does not impact the soft drink satisfaction of High School and College students. As a result, the standardized coefficients listed in the "beta" column are known as beta weights. The beta weight indicates, provided all other variables in the model remain constant, how much the outcome variable rises (in standard deviations) when the predictor variable increases by one standard deviation. These are helpful metrics to order the predictor variables according to how much they contribute regardless of sign to the explanation of the result.

### *13.3 Estimated Model Coefficients*

The general form of multiple regression models to predict soft drink satisfaction from Brand Name, advertisements, price, color, flavor, availability, taste, and container design, is:

Predicted soft drinks satisfaction =  $-0.216 + 0.227(\text{Brand Name}) + 0.186(\text{advertisements}) - 0.130(\text{Price}) + 0.113(\text{Color}) + 0.288(\text{Flavor}) + 0.079(\text{Availability}) + 0.236(\text{Taste}) + 0.045(\text{Container design})$ . This model has developed from the Table 27.

## **14. Conclusion**

The study revealed that the High school and College students of Chattogram and Dhaka district are satisfied with their consumption of soft drinks, but there are differences in their soft drink satisfaction levels. The following findings have been established based on the data analysis.

- ❖ Based on the comparison of mean scores of soft drink satisfaction, it is observed that



soft drink satisfaction is not influenced by Gender, age, location, level of income, and level of education.

- ❖ There is no discernible difference in soft drink satisfaction between High school and College students regarding brand name, availability, price, flavor, taste, color and container design.
- ❖ There is a discernible difference in soft drink satisfaction between males and females regarding taste, flavor, and color.
- ❖ The important influencing factors on the consumption of soft drinks are flavor (0.288), taste (0.236), and brand name (0.227), then after advertisements, price, and color. On the other hand, availability and container design are less important factors in the consumption of soft drinks among students.
- ❖ The soft drink satisfaction level of female students is higher than that of male students. The students who are studying at High school have the highest soft drinks satisfaction than the students who have studied at college. The students who have an age limit between 17 - 22 have the highest satisfaction than the age limit 10 - 16. The students who are living in Chattogram district have the highest satisfaction than the students who are living in Dhaka district.

## **15. Suggestions for Further Research**

The present study has been performed by only 414 numbers of consumers, so it can be repeated by taking a large number of samples from the students to get more reliable and valid results.

- ❖ The present work is conducted only for two districts of Bangladesh, so it is suggested to do it in the different areas of Bangladesh. The current investigation has been carried out only on High school and College students. It can be conducted in primary schools and universities.

## **Conflict of interest**

The writers do not have any conflicts of interest.

## **Ethical approval**

The publication is just plant research. There are no human or animal players in it.

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