

A Consumer Survey on Preferences of Soft Drinks in Different Stages of Adolescence

*Silpa Somavarapu**, *B. Mubeena*

Department of Food Technology, Vikrama Simhapuri University, S.P.S.R. Nellore, Andhra Pradesh, India

Abstract

The era of cold drinks began in 1952 but the industrialization in India marked its beginning with launching of Limca and Goldspot by Parley group of companies. Since, the beginning of cold drinks was highly profitable and luring, many multinational companies launched their brands in India like Pepsi and Coke. Cold drinks of different brands are composed of alcohol, carbohydrates, carbon dioxide, phosphate ions, etc. These soft drinks give feeling of warmth, lightness and have a tangy taste which is liked by everyone. The carbon dioxide gas is dissolved in water to form carbonic acid which is also responsible for the tangy taste. Carbohydrates are the naturally occurring organic compounds and are major source of energy to our body. Soft drinks were common preference among all the individuals, irrespective of their age groups as it had great brand value and great advertisement. The study starts with determining the major players in the soft drinks, their overall consumption pattern among the people and ends up with the conclusion as per the state of mind of the average rational human being. Version 20.0 of the SPSS Program was utilized in all the statistical analysis undertaken in this study and the Chi-square test was conducted for variables. Consumer preferences are changing towards healthier food, and thus such a trend will carry on for some time to come. In the soft drinks market of late, most recent new products launched have been focused on the health benefits of the soft drinks, like pomegranate juices, calcium-fortified bottled water and a series of reduced-sugar alternatives, with such features not previously so readily available to or heavily promoted at the target audience.

Keywords: *Consumer preference, soft drinks, healthy food, reduced sugar alternatives*

***Author for Correspondence** E-mail: silpasomavarapu1981@gmail.com

INTRODUCTION

A soft drink (also called soda, pop, coke, soda pop, fizzy drink, tonic, seltzer, mineral, sparkling water, lolly water or carbonated beverage) is a beverage that typically contains water (often, but not always carbonated water), a sweetener and usually a flavoring agent. The sweetener may be sugar, high-fructose corn syrup, fruit juice, sugar substitutes (in the case of diet drinks) or some combination of these. Soft drinks may also contain caffeine, colorings, preservatives and other ingredients. Soft drinks are called “soft” in contrast to “hard drinks” (alcoholic beverages).

Soft drinks may be served chilled or at room temperature, and some, such as Dr. Pepper, can be served warm. The first marketed soft drinks in the Western world appeared in the 17th century. They were made of water and lemon juice sweetened with honey. In 1676, the *Compagnie des Limonadiers* of Paris was granted a monopoly for the sale of lemonade

soft drinks. Vendors carried tanks of lemonade on their backs and dispensed cups of the soft drink to thirsty Parisians.

CARBONATED DRINKS

In the late 18th century, scientists made important progress in replicating naturally carbonated mineral waters. In 1767, Englishman Joseph Priestley first discovered a method of infusing water with carbon dioxide to make carbonated water when he suspended a bowl of distilled water above a beer vat at a local brewery in Leeds, England. His invention of carbonated water (also known as soda water) is the major and defining component of most soft drinks.

Priestley found that water treated in this manner had a pleasant taste, and he offered it to friends as a refreshing drink. In 1772, Priestley published a paper entitled *Impregnating Water with Fixed Air* in which he describes dripping *oil of vitriol* (or sulfuric acid as it is now called)

onto chalk to produce carbon dioxide gas, and encouraging the gas to dissolve into an agitated bowl of water. Swedish chemist Torbern Bergman invented a generating apparatus that made carbonated water from chalk by the use of sulfuric acid. Bergman's apparatus allowed imitation mineral water to be produced in large amounts. Swedish chemist Jon Jacob Berzelius started to add flavors (spices, juices, and wine) to carbonated water in the late eighteenth century.

SODA FOUNTAINS VERSUS BOTTLED SODAS

In 19th century America, the drinking of either natural or artificial mineral water was considered a healthy practice. The American pharmacists selling mineral waters began to add herbs and chemicals to unflavored mineral water. They used birch bark (see birch beer), dandelion, sarsaparilla, fruit extracts, and other substances. Flavorings were also added to improve the taste. Pharmacies with soda fountains became a popular part of American culture. In America, most soft drinks were dispensed and consumed at a soda fountain, usually in a drugstore or ice cream parlor. In the early 20th century, sales of bottled soda increased exponentially. In the second half of the 20th century, canned soft drinks became an important share of the market.

SOFT DRINK PRODUCTION:

Soft drinks are made by mixing dry ingredients and/or fresh ingredients (for example, lemons, oranges, etc.) with water. Production of soft drinks can be done at factories or at home.

Soft drinks can be made at home by mixing either syrup or dry ingredients with carbonated water. Carbonated water is made using a soda siphon or a home carbonation system or by dropping dry ice into water. Syrups are commercially sold by companies such as Soda-Club; dry ingredients are often sold in pouches, in the style of the popular U.S. drink mix Kool-Aid.

SOFT DRINKS INDUSTRY IN INDIA

The soft drinks market consists of retail sale of bottled water, carbonates, concentrates, functional drinks, juices, RTD tea and coffee, and smoothies. However, the total market volume for soft drinks market excludes the

concentrates category. The market is valued according to retail selling price (RSP) and includes any applicable taxes. The Indian soft drinks market generated total revenues of \$3.8 billion in 2012, representing a compound annual growth rate (CAGR) of 11% for the period spanning 2009–2012. The soft drink market includes,

- Appy Fizz by Parle
- Agua Blue (Natural Mineral Water By LR Beverages Pvt. Ltd.)
- Banta (lemon-flavoured soft drink)
- Bovonto (grape soda produced by Kali Mark)
- Campa Cola (popular Indian soda introduced in 1977)
- Cloud 9 (energy drink)
- Frooti (mango-flavoured drink from Parle Agro)
- Frams (Local drink from Pune)
- Gold Spot
- Grappo Fizz
- Ganga (Local drink of Haryana)
- Guptas (8 flavoured soft drinks introduced in 1947)
- Juicila (Powdered Soft Drink Concentrate available in Orange, Mango, Lemon, Cola, Masala, Jaljira)
- Limca (lemon-lime soda)
- LMN (lemon drink produced by Parle Agro)
- Kalimark
- Duke's Mangola (mango drink from Dukes bought by PepsiCo)
- Duke's Lemonade
- Maaza (mango drink from Parle bought by Coca-Cola)
- Rasna (powdered soft drink)
- Real (fruit juice from Dabur)
- Red Bull (energy drink)
- Thums Up (Cola drink from parleagro then bought by coca cola)
- 777 (soft drink) (Panner, Cola, Orange, Lemon, Clear Lemon Lime, Mango)

CONCEPTUAL DEFINITION

Consumer Behavior

Consumer behavior is defined as the behavior that consumer display in searching for purchasing, using, evaluating and disposing of product and services that they expect will satisfy their needs. Consumer behavior focuses

on how individuals make decisions to spend their available resources (time, money, effort) on consumption related items. Thus, communication with consumers and receiving feedback for them is a crucial part of consumer behavior which is of great interest to marketers [1].

Customers and Consumers

The term “customer” is typically used to refer to someone who regularly purchases from a particular store or company. This position holds that consumers are potential purchasers of products and services offered for sale [2].

Marketing Strategy

Marketing strategy is conceptually very simple. It begins with an *analysis of the target market* which includes company, conditions, competitors, and consumers. The final stage *Outcomes* involves analysis of firm’s product position and customer satisfaction resulting from implementation of the strategy [3].

Brand Preference

Brand preferences represent a fundamental step in understanding consumer choices. Despite the existence of some studies investigating how brand preference is built and changed, most of them focus on examining factors from consumer behavior perspective or advertising perspective [4].

Customer Satisfaction

Customers are always aiming to get maximum satisfaction from the products or services that they buy. Whether an organization provides quality services or not will depend on the customers’ feedback on the satisfaction they get from consuming the products, since higher levels of quality lead to higher levels of customer satisfaction [5].

Advertisement Effectiveness

Advertising effectiveness pertains to how well a company’s advertising accomplishes the intended. Small companies use many different statistics or metrics to measure their advertising effectiveness. But certain advertising objectives can be realized almost immediately [6].

Brand Awareness

Brand awareness is an extent to which a brand is recognized by potential customers, and is

correctly associated with a particular product. Expressed usually as a percentage of target market, brand awareness is the primary goal of advertising in the early months or years of a product’s introduction [7, 8].

Celebrity Endorsement

Last but not least, celebrities act as spokespeople in advertising to promote products and services [9].

Sense of Consumers

Jackson (2005) said intensity of colour and the flavours are the key drivers behind consumer acceptance of soft drinks [10]. Stephen Daniells (2008) said these four factors were identified for the formulation: four colour intensities), three flavourings, two label types (soft versus hard), and two pack sizes (standard versus oversize) [11]. By using both quantitative (hedonic testing) and qualitative (focus groups) approaches, the researchers found that “the main factors which drive consumer preference for this concept are colour intensity and flavouring”. Indeed, colour intensity accounted for 43% and flavour 32% of the consumers’ overall liking. “Pack size and label type are taken into account by the consumer to a lesser extent,” they added. “This methodology of a qualitative screening associated to a conjoint analysis on relevant sensory attributes has shown good performances to fit consumers’ expectation: it has now to be reproduced, as every brand, concept and product is a unique combination designed for a specific consumer group,” concluded the researchers. Beverly J. Tepper (1998) examined the relative contributions of taste and health considerations on consumer liking and purchase intent of cola drinks [12].

Consumer Awareness and Consumption Pattern of Soft Drink Product

Mckenzie (2000) aimed to investigate the degree of brand awareness of various soft drink products in relation to background and education of the household, the consumption pattern of various soft drink products consumed by respondents in the light of their areas, income levels and education [13]. A sample of 200 respondents comprising 100 from rural area and 100 from urban area was taken. Data are analyzed with the help of mean [14]. The finding of this study reveals that there is low

degree of brand awareness in rural areas, whereas there is a moderate degree of brand awareness in urban area. The highly educated rural and urban respondents have high degree of brand awareness for soft drink products, and the less educated rural and urban respondents have low degree of brand awareness for soft drink products.

Gopi and Arasu (2012) focused on factor analysis model and its application to identify consumer preferences for a popular soft drink product in Dharmapuri [15].

OBJECTIVES

- To study the preferences of the people for soft drinks.
- To find out the factors that influences the consumer's consumption of soft drinks.
- To determine the consumers' perception on the taste, price, advertisements and celebrity endorsements related to soft drinks products and brands.
- To find whether the consumers are aware regarding the adverse effect of soft drinks concerning their health

Research Methodology

Research Design: The research design is the blueprint for the fulfillment of objectives and answering questions. It is a master plan specifying the method and procedures for collecting and analyzing needed information.

Descriptive Research is used in this study as the main aim is to describe characteristics of the phenomenon or a situation.

Descriptive Research Design

Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. The importance of descriptive research is:

- To describe characteristics of a population or a phenomenon.
- To determine the answers to who, what, when, where and how questions.
- To analyze the segment and target markets.

Sampling technique used: This research has used convenience sampling technique.

Convenience sampling technique: Convenience sampling is used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth. As the name implies, the sample is selected because they are convenient.

Sources of Data Collection

Research will be based on two sources:

Primary Data

Questionnaire: Primary data was collected by preparing questionnaire and the people were randomly being requested to fill them.

Secondary Data

Secondary data will consist of different literatures like books which are published, articles, internet and websites.

In order to reach relevant conclusion, research work needed to be designed in a proper way.

Study Area

Data has been collected from adolescent group at the different areas of Nellore district during the period 02nd February to 30th March 2016. The responses were recorded and the data file is prepared. 100 respondents were questioned at different colleges of Nellore district.

1. 20 samples near, Krishna Chaitanya Degree College.
2. 20 Samples near, Jagans Degree College.
3. 20 Samples near, Aditya Degree College.
4. 20 Samples near, Ratnam High School.
5. 20 Samples near, Narayana High School.

Selection of Sample Size

For the study, a sample size of 100 has been taken into consideration including_adolescent girls and boys.

Statistical Tools Used

The main statistical tools used for the analyses of data in this project are: (1) Pie Charts, (2) Bar Diagrams.

Analysis and Interpretation

Analysis

Analysis means a critical examination of the assembled and grouped data for studying the characteristics of the object under study and it refers to methodical classification of the data give in the Tables 1–22.

Interpretation

The term interpretation means explaining the meaning and significance of the arranged data. It is the study of relationship between the various factors. It is being considered as a basic component of research process because of the following reasons.

Q1. Gender of the respondent?

Table 1: Gender of the respondent.

Gender of the respondent	Frequencies
Male	40
Female	60
Total	100

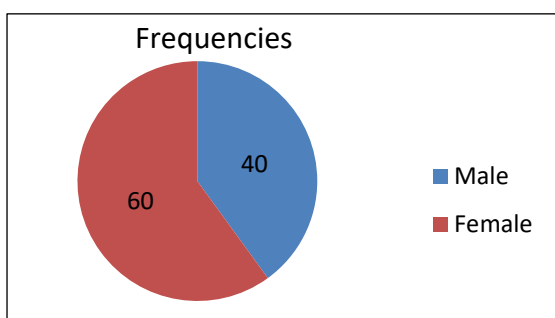


Fig. 1: Gender of the respondent.

Analysis: Figure 1 and table 1 show that amongst 100 respondents 40% on whom survey was conducted 40% are male and 60% are female.

Q2. Do you like soft drinks?

Table 2: Preference of soft drinks.

Do You like Soft drinks	Frequencies
Yes	81
No	19
Total	100

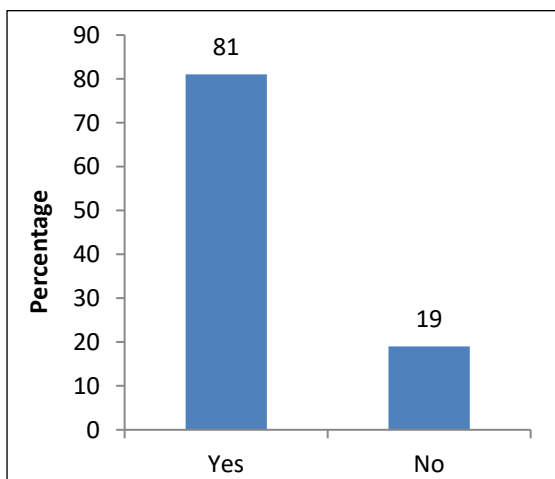


Fig. 2: Preference of soft drinks.

Analysis: From the survey, it was found that amongst 100 respondents 81% of the people like soft drinks and 19% of the people do not like soft drinks. Table 2 and figure 2 shows how soft drinks are attracting the people by their taste, flavours, colours etc.

Q3. Frequency of consumption of soft drink in a week?

Table 3: Frequency of consumption of soft drink.

Frequency of consumption of soft drink	Frequencies
Daily	33
2 to 4 times	10
More than 4 times	20
Once in a week	37
Very rare	0
Total	100

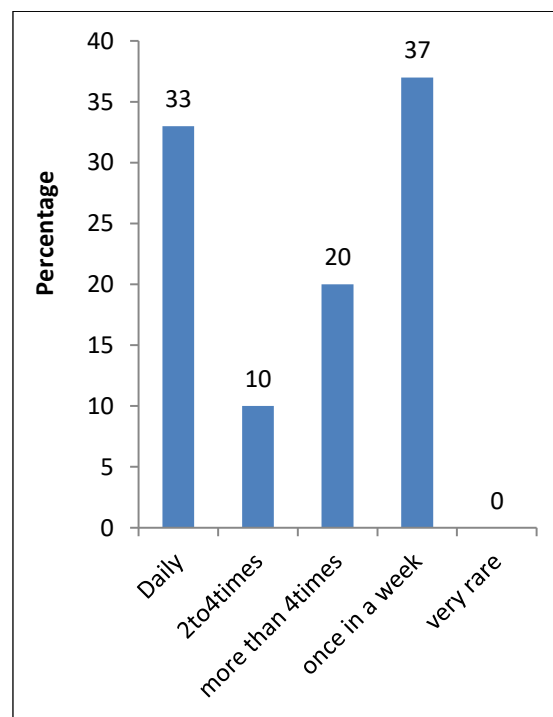


Fig. 3: Frequency of consumption of soft drink

Analysis: When the frequency of consumption of soft drink was studied among 100 respondents, the results showed that 37% of the people consumed soft drinks once in a week, 33% consumed soft drinks daily, 20% consumed drinks more than four times a week, 10% consumed them two to four times a week (figure 3, table 3). It is surprising to know that nobody is there among the 100 respondents who do not like soft drinks.

Q4. On what occasions do you often consume the soft drink?

Table 4: Occasions where soft drinks are consumed.

Occasions where soft drinks are consumed	Frequencies
Feeling thirsty	29
Without any reason	46
Parties or celebrations	24
Others, please specify	1
Total	100

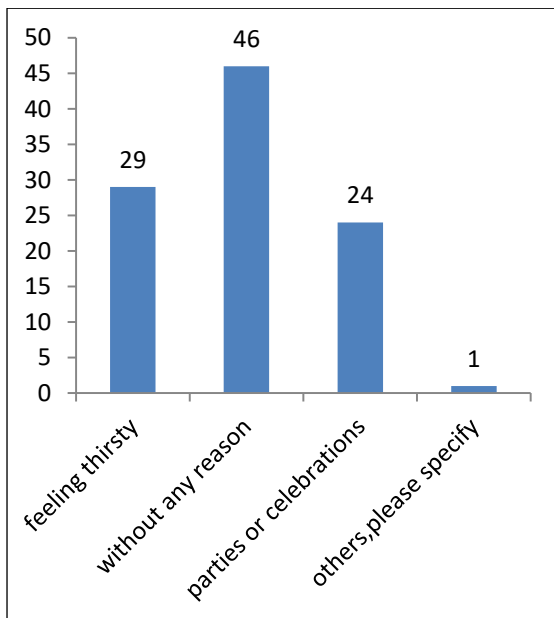


Fig. 4: Occasions where soft drinks are consumed.

Analysis: The results of the survey show that among the 100 respondents, 46% consume soft drinks without any reason. Figure 4 and table 4 shows 29% consume soft drinks depending on season to fulfill their thirst. 24% of the people consume them on parties and occasions.

Q5. What induces you to buy soft drinks?

Table 5: Factors inducing soft drink purchase.

Factors inducing soft drink purchase	Frequencies
Price with quantity	23
Health drink	19
Status symbol	27
Taste	21
Variety	7
Advertisement	3
Total	100

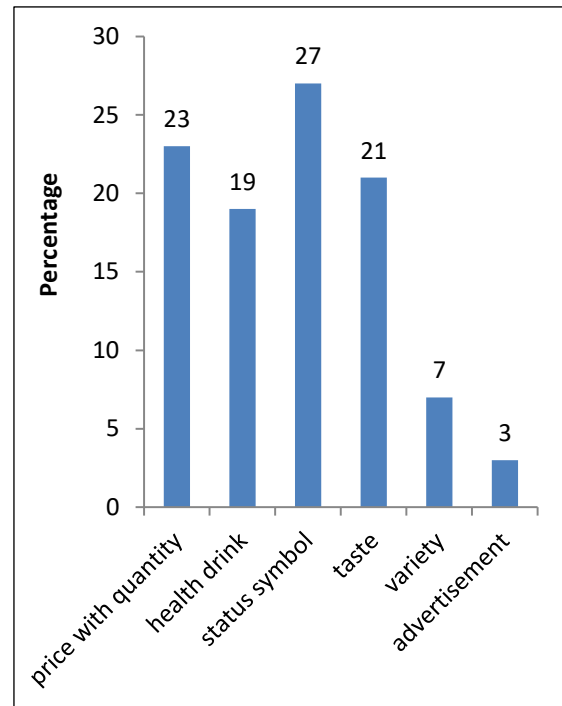


Fig. 5: Factors inducing soft drink purchase.

Analysis: Factors inducing soft drink purchase were depicted in figure 5 and table 5 which are as follows.

27% of the people consider offering to or receiving from guests soft drinks on an occasion stands as their status symbol.

- 23% are attracted by the low cost for good taste.
- 21% of the people are carried away by the taste.
- 19% of the people are under the imagination that a soft drink is equal to a fruit drink.
- 7% of the people like the variety and 3% of the respondents are influenced by advertisements.

Q6. Do advertisements affect your purchases?

Table 6: To what extent advertisements affect your purchases?

To what extent advertisements affect your purchases?	Frequencies
To greater extend	37
To great extend	30
Neutral	11
To less extend	15
To lesser extend	7
Total	100

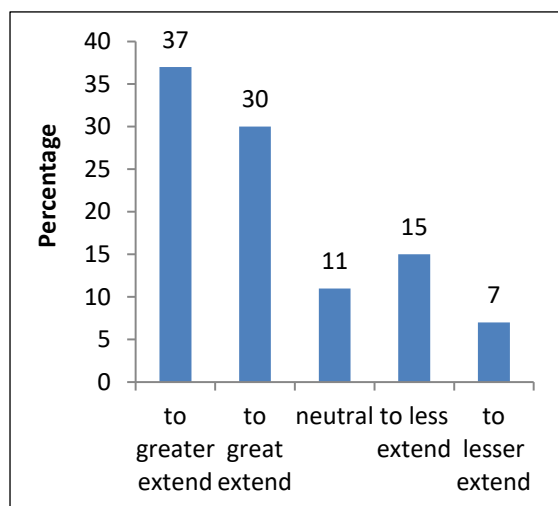


Fig. 6: To what extent advertisements affect your purchases?

Analysis: The results of analysis presented in table 6 and figure 6 show that most of the people (67%) are influenced by advertisements with regard to the consumption of soft drinks.

Q7. Which soft drink do you like more?

Table 7: Preference of soft drinks

Preference of soft drinks	Frequencies
Coca cola	24
Pepsi	34
Miranda	15
Limca	11
Maaza	11
Others specify	5
Total	100

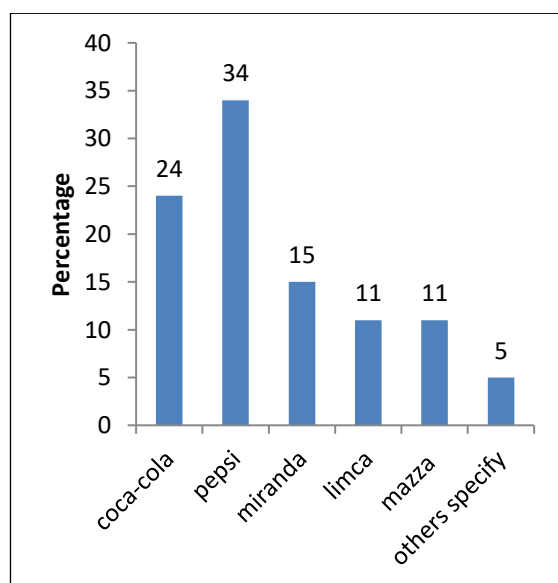


Fig. 7: Preference of soft drinks.

Analysis: The results of the survey showed that 34% of the respondents among 100 preferred Pepsi drink, 24% preferred Coca Cola, 15% preferred Miranda, 11% preferred Limca, 11% preferred Maaza and up to 5% of the population preferred other drinks (table 7 and figure 7).

Q8. Do you drink the same soft drink every time?

Table 8: Preference of same soft drink every time

Preference of same soft drink every time	Frequencies
Yes	40
No	60
Total	100

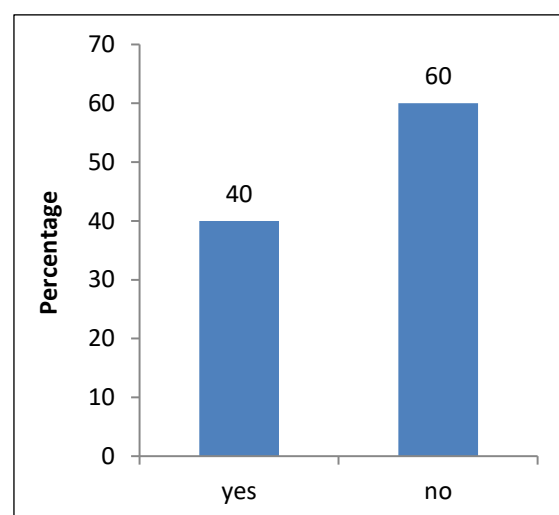


Fig. 8: Preference of same soft drink every time

Analysis: The results depicted in figure 8 and table 8 showed that 60% of the total respondents preferred variety, i.e., they wanted to taste different drinks with different flavours. Only 40% of the respondents stuck on to same drink which they tried and liked once.

Q9. Which flavoured drinks do you like most?

Table 9: Preferable flavoured drink

Preferable flavoured drink	Frequencies
Mango	41
Orange	33
Lemon	20
Apple	6
Others specify	0
Total	100

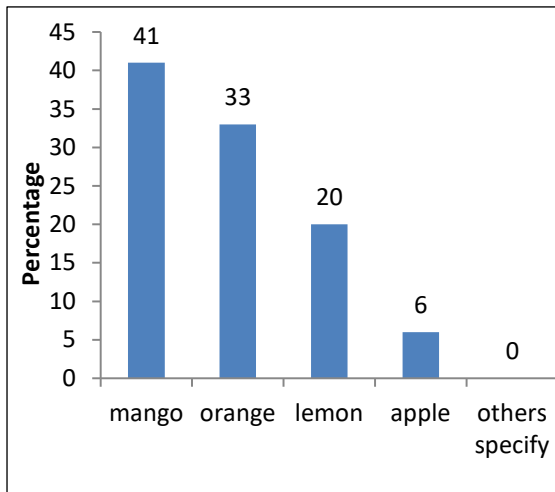


Fig. 9: Preferable flavoured drink

Analysis: Among the different soft drinks, the results of the survey presented in figure 9 and table 9 showed that people mostly (41%) preferred mango drink, 33% of the respondents preferred orange juice, 20% of the people preferred lemon drink, 6% of the people preferred apple drinks.

Q10. How do you rate canned juices as compare to fresh juices?

Table 10: Are canned juices equal to fresh juices

Are canned juices equal to fresh juices	Frequencies
Equivalent to fresh juices	9
Have artificial added flavor	49
Healthy with preservatives	21
Not as healthy	21
Total	100

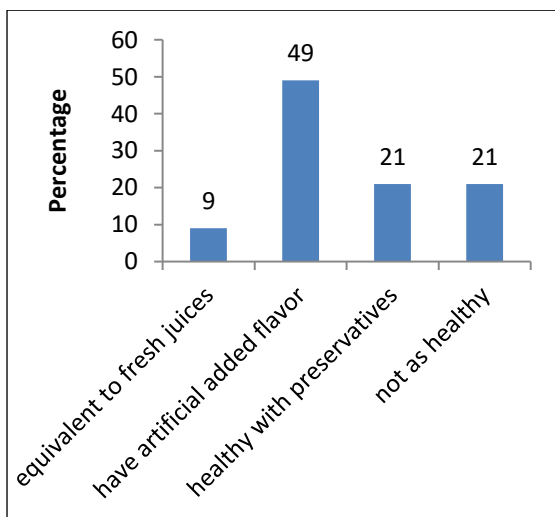


Fig. 10: Are canned juices equal to fresh juices

Analysis: The results of the survey presented in the figure 10 and table 10 showed that 49% of the respondents considered canned juice as juice with added artificial flavour, only very few (9%) considered it equivalent to fresh juices. 21% of the people consider it healthy and the 21% consider these canned juices unhealthy.

Q11. Do you think taking too much soft drink would cause health problems?

Table 11: Does soft drinks cause health problems

Does soft drinks cause health problems	Frequencies
Yes	58
No	28
No comment	14
Total	100

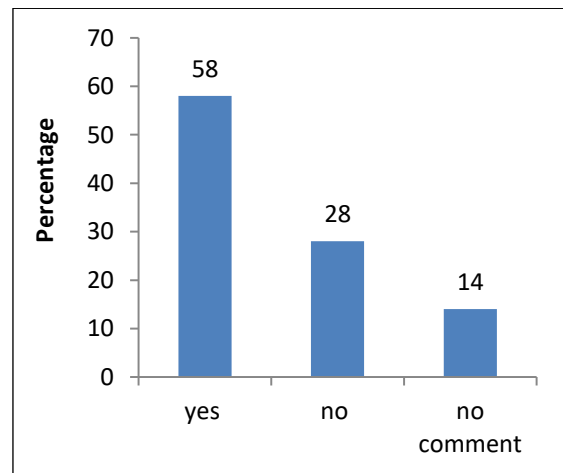


Fig. 11: Does soft drinks cause health problems

Analysis: The results of the survey presented in figure 11 and table 11 showed that 58% of the respondents are wellaware of the health problems caused by soft drinks; only 28% of the respondents are unaware of the health issues caused by soft drinks. 14% of the respondents remained neutral regarding this issue.

Q12. Have these drinks cause any health problems for you before?

Table 12: Did any soft drink effect your health?

Did any soft drink affect your health?	Frequency
No	100
Yes	0
Total	100

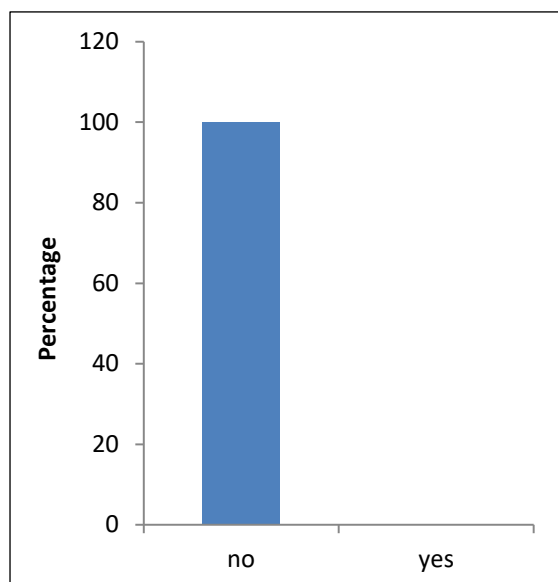


Fig. 12: Did any soft drink effect your health?

Analysis: The results of the survey presented in figure 12 and table 12 showed that nobody in the survey suffered from any health ailments due to consumption of soft drinks.

Q13. Are you aware that you are being priced more than 10 times than that of real price of the drink?

Table 13: Do you know you are being charged more on soft drinks?

Do you know you are being charged more on soft drinks?	Frequencies
Yes	54
No	46
Total	100

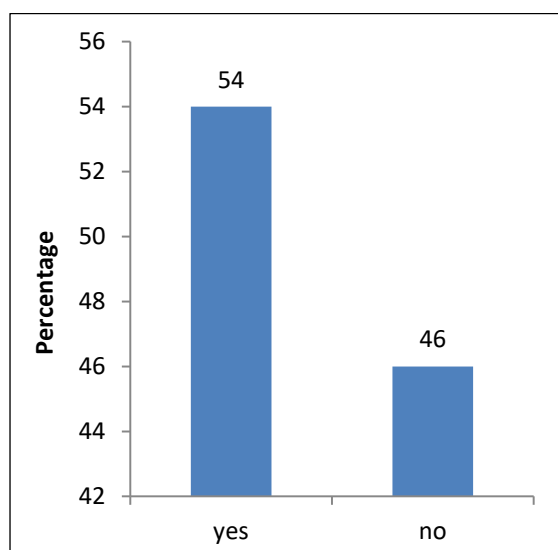


Fig. 13: Do you know you are being charged more on soft drinks?

Analysis: From the results of the survey (table 13 and figure 13), it is found that 54% of the respondents are aware of being charged more on soft drinks and 46% of the respondents are unaware of this fact.

Q14. Considering the TV ad which soft drink do you like more?

Table 14: Considering the TV ad which soft drink do you like more?

Depending on TV ad preferable drink is	Frequencies
Coca-Cola	18
Pepsi	20
Miranda	16
Thums Up	20
Maaza	24
Others specify	3
Total	100

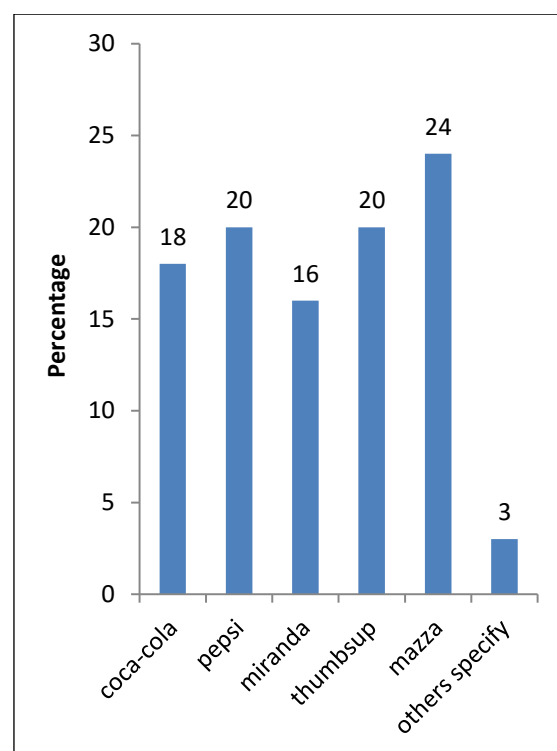


Fig. 14: Considering the TV ad which soft drink do you like more?

Analysis: Being influenced by the television advertisements, according to the results of the survey (Table 14 and figure 14) 24% of the respondents chosen Maaza, 20% of the respondents preferred Pepsi, 20% Thums Up, 18% chosen Coca-Cola, 16% preferred Miranda and 3% of the respondents preferred other drinks.

Q15. After seeing the ad do you like to switch on to that one?

Table 15: Do you switch to a different soft drink on seeing an advertisement?

Do you switch to a different soft drink on seeing an advertisement?	Frequencies
Yes	52
No	48
Total	100

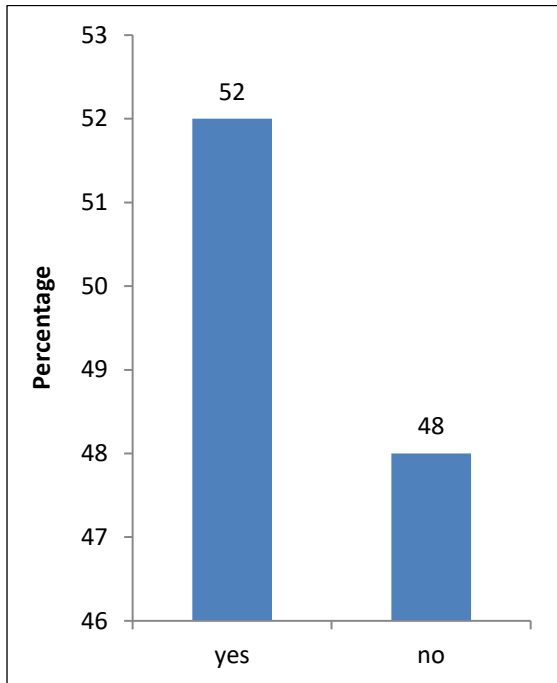


Fig. 15: Do you switch to a different soft drink on seeing an advertisement?

Analysis: Being greatly influenced by television advertisement, 52% of the respondents according to the survey are shifting to different drinks and enjoying varieties of soft drinks available in the market and 48% of the respondents are fixed to specific soft drink depending on its taste or flavour which they liked (figure 15, table 15).

Q16. After the Plachimada incident have you reduced consumption of soft drinks?

Table 16: Is there any reduction in consumption of soft drinks after plachimada incident?

Is there any reduction in consumption of soft drinks after Plachimada incident?	Frequencies
Yes	64
No	36
Total	100

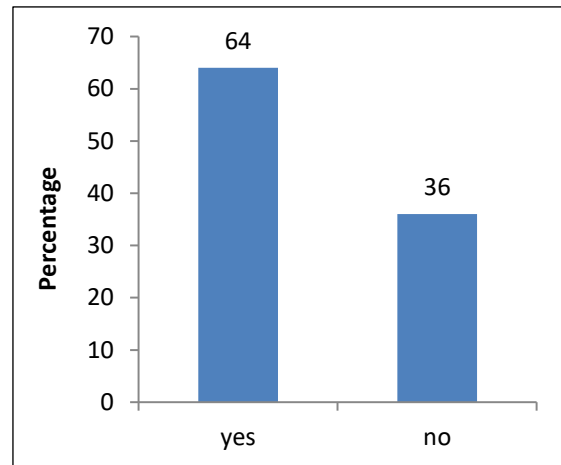


Fig. 16: Is there any reduction in consumption of soft drinks after plachimada incident?

Analysis: Influenced by the Plachimada incident as seen in table 16 and figure 16, 64% of the respondents showed a reduction in consumption of soft drinks, but 36% of the respondents were not influenced by the incident.

Q17. Do you think the superstars should stop promoting unhealthy soft drinks?

Table 17: Should superstars stop promoting unhealthy soft drinks?

Should superstars stop promoting unhealthy soft drinks?	Frequencies
Yes	36
No	23
No comments	41
Total	100

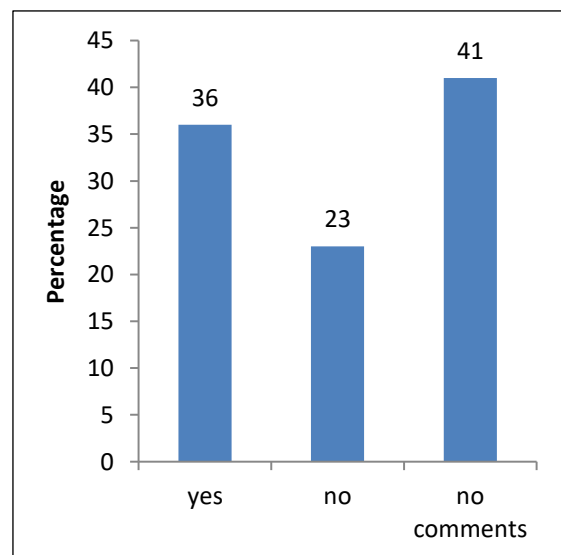


Fig. 17: Should superstars stop promoting unhealthy soft drinks?

Analysis: With regard to the aspect should superstars stop promoting unhealthy soft drinks, the survey results presented in table 17 and figure 17 showed 41% of the respondents in the survey had no comments; 36% of the respondents agreed with this aspect where as 23% of the respondents disagreed with this aspect.

Q18. What all changes do you want the manufacturer to make in it to promote sale?

Table 18: Changes you want the manufacturer to make in it to promote sale?

Changes you want the manufacturer to make in it to promote sale?	Frequencies
Quality	44
Price	2
Advertisement	16
More flavor	37
Others specify	1
Total	100

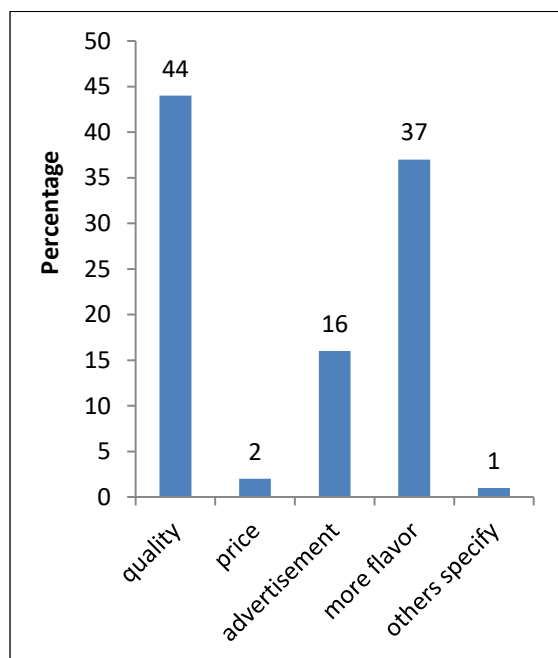


Fig. 18: Changes you want the manufacturer to make in it to promote sale?

Analysis: According to the results of the survey presented in figure 18 and table 18, 44% of the respondents are expecting changes corresponding to the quality, 37% of the respondents want manufacturer to bring change in flavour of soft drink, 2% are expecting change in price and 16% of the respondents are expecting changes in advertisements relating to soft drinks.

Q19. In your opinion which all diseases could the pesticides in the soft drink cause?

Table 19: Diseases caused by pesticides in the soft drink

Pesticides in the soft drink cause	Frequencies
Cancer	13
Paralyses	14
Tooth decaying	29
Pregnancy issues	4
Don't know	40
Others specify	0
Total	100

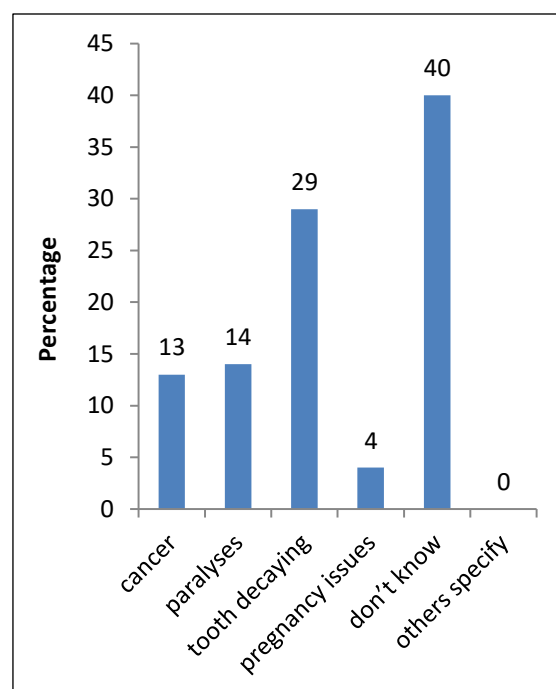


Fig. 19: Diseases caused by pesticides in the soft drink

Analysis: The results of the survey presented in table 19 and figure 19 showed that respondents are well aware of the diseases caused by over consumption of soft drinks like cancer, paralysis, tooth decay, pregnancy issues, etc.

Q20. Soft drinks such as colas contain significant quantities of?

Table 20: Ingredients in Colas

Ingredients in Colas	Frequencies
Caffeine	28
Nicotine	7
Tannin	11
Rennin	4
Don't know	40
Total	100

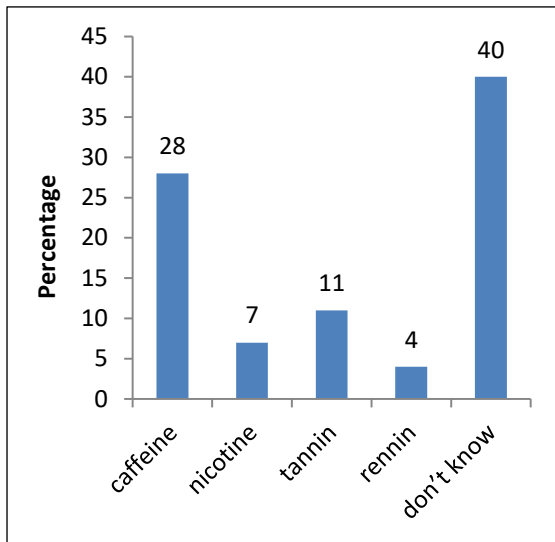


Fig. 20: Ingredients in Colas

Analysis: The results of the survey presented in table 20 and figure 20 showed that 40% of the people are unaware of the contents in cola drinks, but the drinks contain significant amounts of caffeine, nicotine, tannin, etc.

Q21. What is the thing government need to do to stop unhealthy practices carried down by soft drinks companies?

Table 21: Government policies

Government policies	Frequencies
Increase standards	26
Frequent quality checks	18
Control on advertisements	56
Total	100

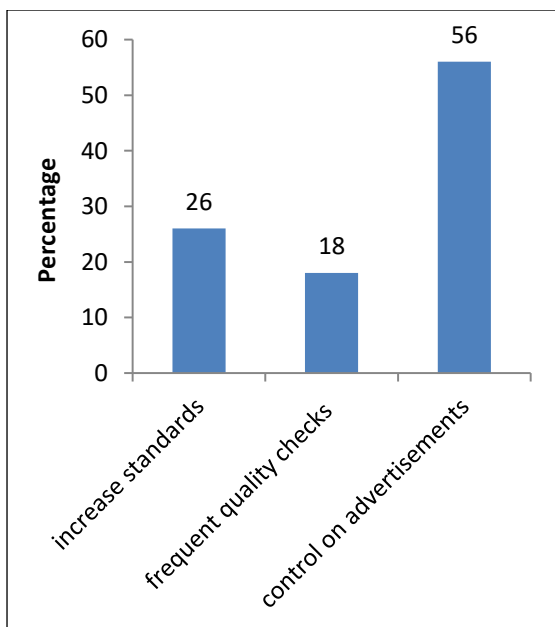


Fig. 21: Government policies

Analysis: The results of the survey show that respondents are expecting government policies with regard to soft drinks like control on advertisement policies (56%), increase in quality standards(26%) and frequent quality checks(18%) (table 21 and figure 21).

Q22. Do you prefer the after usage of plastic bottles of soft drinks?

Table 22: Preference of after usage of plastic bottles of soft drinks

Preference of after usage of plastic bottles of soft drinks	Frequencies
Yes	61
No	39
Total	100

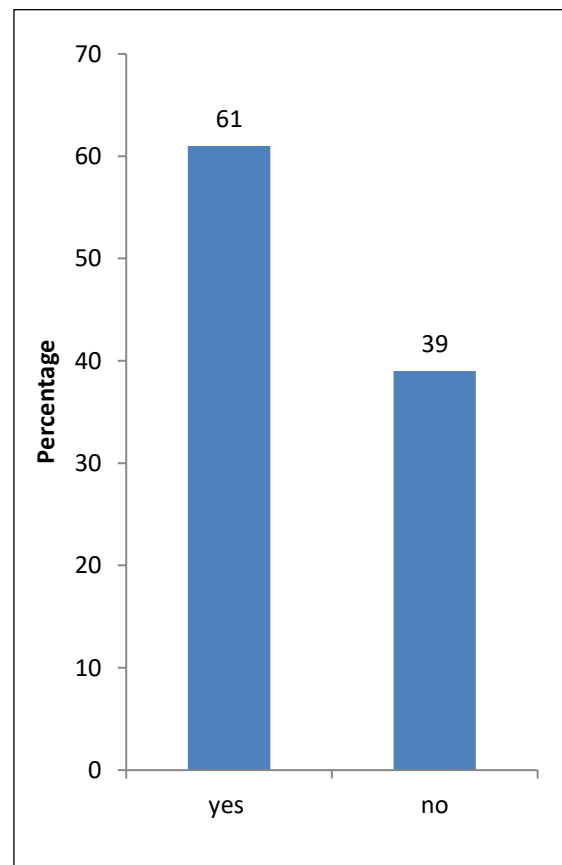


Fig. 22: Preference of after usage of plastic bottles of soft drinks

Analysis: The results of the present survey presented in table 22 and figure 22 also reveal an alarming, threatening fact that 61% of the respondents prefer the after usage of plastic bottles of soft drinks which is highly dangerous. Only 39% of aware of the danger and are away from this practice.

Table 23: Gender * Like soft drinks

Crosstab
 Count

		Like soft drinks		Total
		Yes	No	
Q1 Gender	Male	21	19	40
	Female	60	0	60
Total		81	19	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	35.185 ^a	1	.000		
Continuity Correction ^b	32.166	1	.000		
Likelihood Ratio	41.893	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	100				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.60.

b. Computed only for a 2x2 table

Note: In table 23 since p-value is 0.000 < 0.05, we conclude that there is high significant difference between gender and consumption of soft drinks.

Table 24: Family size * Like soft drinks.

Crosstab
 Count

		Like soft drinks		Total
		Yes	No	
Family size	small	53	8	61
	medium	11	8	19
	large	17	3	20
Total		81	19	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.172 ^a	2	.017
Likelihood Ratio	7.068	2	.029
N of Valid Cases	100		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.61.

Note: In table 24 since p-value is 0.017 < 0.05, we conclude that there is significant difference between family size and consumption of soft drinks.

Table 25: Occasions * consumption of soft drinks.

Crosstab
 Count

		Consumption of Soft Drinks				Total
		Daily	2 to 4 times	More than 4 times	Once in a week	
Occasions	Feeling thirsty	29	0	0	0	29
	Without any reason (Just like that)	4	10	20	12	46
	Parties or celebrations	0	0	0	24	24
	Others specify	0	0	0	1	1
Total		33	10	20	37	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	130.178 ^a	9	.000
Likelihood Ratio	141.550	9	.000
N of Valid Cases	100		

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .10.

Note: In table 25 since p-value is 0.000 < 0.05, we conclude that there is high significant difference between occasions and consumption of soft drinks.

Table 26: Inducing factor * consumption of soft drinks.

Crosstab

Count

		Consumption of soft drinks				Total
		Daily	2 to 4 times	More than 4 times	Once in a week	
Inducing factor	Price with quantity	23	0	0	0	23
	Health drink	10	9	0	0	19
	Status symbol	0	1	20	6	27
	Taste	0	0	0	21	21
	Variety	0	0	0	7	7
	Advertisement	0	0	0	3	3
Total		33	10	20	37	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.918 ^a	9	.000
Likelihood Ratio	132.564	9	.000
N of Valid Cases	100		

a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .90.

Table 27: Health issues * Consumption of soft drinks.

Crosstab

Count

		Consumption of soft drinks				Total
		Daily	2 to 4 times	More than 4 times	Once in a week	
Health issues	Cancer	13	0	0	0	13
	Paralysation	14	0	0	0	14
	Tooth decaying	6	10	13	0	29
	Pregnancy issues	0	0	4	0	4
	Do not know	0	0	3	37	40
Total		33	10	20	37	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	162.826 ^a	12	.000
Likelihood Ratio	174.803	12	.000
No. of Valid Cases	100		

a. 13 cells (65.0%) have expected count less than 5. The minimum expected count is .40.

Note: In table 27 since p -value is $0.000 < 0.05$, we conclude that there is high significant difference between health issues and consumption of soft drinks.

In table 26 since p -value is $0.000 < 0.05$ we conclude that there is high significant difference between inducing factor and consumption of soft drinks.

DISCUSSION

From the survey it was found that amongst 100 respondents 40% are male and 60% are female. Amongst 100 respondents, 81% of the people like soft drinks and 19% of the people do not like soft drinks. This shows how soft drinks are attracting the people by their taste, flavours, colours etc. When the frequency of consumption of soft drink was studied among

100 respondents, the results showed that 37% of the people consumed soft drinks once in a week, 33% consumed soft drinks daily, 20% consumed drinks more than four times a week, 10% consumed them two to four times a week. It is surprising to know that nobody is there among the 100 respondents who do not like soft drinks. Factors inducing soft drink purchase include, 27% of the people consider offering to or receiving from guests soft drinks on an occasion stands as their status symbol, 23% are attracted by the low cost for good taste, 21% of the people are carried away by the taste, 19% of the people are under the imagination that a soft

drink is equal to a fruit drink, 7% of the people like the variety and 3% of the respondents are influenced by advertisements. The results of analysis show that most of the people (67%) are influenced by advertisements with regard to the consumption of soft drinks. The results of the survey showed that 34% of the respondents among 100 preferred Pepsi drink, 24% preferred Coca-Cola, 15% preferred Miranda, 11% preferred Limca, 11% preferred Maaza and up to 5% of the population preferred other drinks. The results showed that 60% of the total respondents preferred variety i.e., they wanted to taste different drinks with different flavours. Only 40% of the respondents stuck on to same drink which they tried and liked once. Among the different soft drinks, the results of the survey showed that people mostly (41%) preferred mango drink, 33% of the respondents preferred orange juice, 20% of the people preferred lemon drink, 6% of the people preferred apple drinks. The results of the survey showed that 49% of the respondents considered canned juice as juice with added artificial flavour,. Only very few (9%) considered it equivalent to fresh juices. 21% of the people consider it healthy and the 21% consider these canned juices unhealthy. The results of the survey showed that 58% of the respondents are well aware of the health problems caused by soft drinks, only 28% of the respondents are unaware of the health issues caused by soft drinks. 14% of the respondents remained neutral regarding this issue. The respondents in the survey showed that nobody in the survey suffered from any health ailments due to consumption of soft drinks. From the results of the survey, it is found that 54% of the respondents are aware of being charged more on soft drinks and 46% of the respondents are unaware of this fact. Being influenced by the television advertisements, according to the results of the survey 24% of the respondents chosen Maaza, 20% of the respondents preferred Pepsi, 20% Thums Up, 18% chosen Coca-Cola, 16% preferred Miranda and 3% of the respondents preferred other drinks. Being greatly influenced by television advertisement, 52% of the respondents according to the survey are shifting to different drinks and enjoying varieties of soft drinks available in the market and 48% of the respondents are fixed to specific

soft drink depending on its taste or flavour which they liked. Influenced by the Plachimada incident 64% of the respondents showed a reduction in consumption of soft drinks, but 36% of the respondents were not influenced by the incident. With regard to the aspect should superstars stop promoting unhealthy soft drinks, 41% of the respondents in the survey had no comments, 36% of the respondents agreed with this aspect where as 23% of the respondents disagreed with this aspect. According to the results of the survey, 44% of the respondents are expecting changes corresponding to the quality, 37% of the respondents want manufacturer to bring change in flavour of soft drink, 2% are expecting change in price and 16% of the respondents are expecting changes in advertisements relating to soft drinks. The results of the survey showed that respondents are well aware of the diseases caused by over consumption of soft drinks like cancer, paralysis, tooth decay, pregnancy issues etc. The results of the survey showed that 40% of the people are unaware of the contents in cola drinks, but the drinks contain significant amounts of caffeine, nicotine, tannin etc. The results of the survey show that respondents are expecting government policies with regard to soft drinks like control on advertisement policies (56%), increase in quality standards (26%) and frequent quality checks (18%). The results of the present survey also reveal an alarming, threatening fact that 61% of the respondents prefer the after usage of plastic bottles of soft drinks which is highly dangerous. Only 39% of aware of the danger and are away from this practice.

CONCLUSION

In order to be successful in the marketplace, one has to think in terms of health innovation, flavour innovation, ingredient innovation and specific age groups. These are the factors that will shape the future of the beverage industry.

“Today’s consumers are concerned with overall health and wellness. As a result, there is significant impact on food and beverage purchases. Many studies have shown that consumers are as concerned with good health as they are about maintaining a high quality of life” which is proved again in our work.

Following are the concluding points taken into consideration after the conduct of the research study:

- An important finding that emerged out of the survey was that 81% of people like to have soft drinks while 19% not like.
- Through the research it was conveyed that weekly consumption of soft drinks is more than daily consumption.
- Most of the respondents view soft drinks as an aid to put off thirst.
- A majority of the respondents consume soft drinks at the time of parties & celebrations.
- Most of the respondents consume soft drinks because of its taste.
- Most of the respondents were of the strong view that advertisements affect their purchases.
- Considering the TV ad Thums Up is liked mere but TV ad does not made most of the consumer switch on to that one.
- About half of the respondent told that taking too much of the soft drink would cause health problems but very few of them caused health problem before.
- Most of the respondents like Miranda since they like orange flavor.
- 49% of them reduced consuming soft drinks after Plachimada incidents.
- Most of them concluded while saying that the govt. to do frequent quality check in order to increase sale without causing harm to consumers.

With the changing lifestyle and income levels, people are shifting their consumption patterns and have therefore become more health conscious thus leading to increase in demand of juices.

Thus the present day Market Research is based on some underlying parameters like

- Changing consumption pattern
- Health factor
- Status consciousness
- Varying lifestyle

Acknowledgements

We thank the Head, Department of Food Technology, Vikrama Simhapuri University, Nellore, for providing the necessary facilities to conduct our research.

Conflict of interest: The authors have no conflicts of interest.

Ethical approval: The article is entirely a study on plants. It does not include any animals or human participants.

REFERENCES

1. Julie M. Donohue et al. A Decade of Direct-to-Consumer Advertising of Prescription Drugs. *The New England Journal of Medicine*. 2007; 357:673-681p.
2. Cialdini RB, Goldstein. Social Influence: Compliance and Conformity. *Annual Reviews*. 2004; 55: 591–621p.
3. Robert A. Peterson and William R. Wilson. Journal of Academy of Marketing Science. Measuring customer satisfaction: *Fact and artifact*.1992;20:61p
4. Schmitt. Brand Positioning Through Advertising in Asia, North America, and Europe: The Role of Global Consumer Culture. *Journal of Marketing*. 1999;63: 75-87p.
5. Philip Kotler, Kevin Keller. Marketing Management. 14th edition. Delhi: Pearson Education; 2012.
6. Kahneman. A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*. 2003; 58: 697–720p.
7. William R George. Consensus recommendations for the management of chronic heart failure: Introduction. *American Journal of Cardiology*.1999; 83.
8. Friedman. A new marketing paradigm: Share of customer, not market share. *Marketing Management*. 1995: 5 (3).
9. Don Peppers, Martha Rogers. A new marketing paradigm: Share of customer, notmarketshare. *Planning Review*. 1995; 23(2):14-18p.
10. Stephen Daniells. Soft drink Quality and Preference. *Prevention Research Collaboration*. 2008; 19 (8): 719–726p.
11. Liqiang Zhao and Beverly J. Tepper. Perception and acceptance of selected high-intensity sweeteners and blends in model soft drinks by propylthiouracil (PROP) non-tasters and super-tasters. *Food Quality and Preference*. 2007;18(3): 531-540p.
12. kaufmann, Hans Ruediger, Panni, Mohammad Fateh Ali khan, Orphanidou, Yianna. Factors affecting consumers green

- purchasing behavior: an integrated conceptual framework. *Amfiteatru Economic*: Bucharest. 2012;14:50-69p.
13. Kothari CR. *Research and Methodology: Methods and Techniques*. Delhi: New Age International (P) Ltd.; 2004.
14. Gopi K, Arasu R. Consumer preferences towards soft drink products in Dharmapuri—a factor analysis evidence. *Namex International Journal of Management Research*. 2012; 2(1): 38–47p.

Cite this Article

Silpa Somavarapu, B. Mubeena. A Consumer Survey on Preferences of Soft Drinks in Different Stages of Adolescence. *Research & Reviews: Journal of Dairy Science and Technology*. 2017; 6(3): 54–73p.

ANNEXURE

QUESTIONNAIRE

PERSONAL DETAILS

Name -

Age -↑ 10-21

Gender -↑ Male Female

Occupation -↑ Student Housewife Business Service

Family size: Small [] Medium [] Large []

PREFERENCE OF SOFT DRINKS

1) **Do you like soft drinks?**

Yes No

2) **Frequency of consumption of soft drink in a week?**

Daily 2-4times more than 4 times once in a week

Very rare

3) **On what occasions, do you often consume the Soft Drinks?**

Feeling Thirsty Without any reason (just like that)

Parties / Celebrations Others, please specify.....

4) What induces you to buy Soft Drinks?

Price with quantity Health drink Status symbol
Taste Variety Advertisement

5) Do advertisements affect your purchases?

To greater extend To great extend Neutral
To less extend To lesser extend

6) Which soft drink do you like more?

Coco-cola Pepsi Miranda
Limca Mazza Other (specify).....

7) Do you take the same soft drink every time?

Yes No

8) Which flavor do you like most?

Mango Orange Lemon
Apple Other(specify) _____

9) How do you rate canned juices as compared to fresh juices?

Equivalent to fresh juices Have artificial added flavor

Healthy with preservatives Not as healthy

10) Do you think taking too much soft drink would cause health problems?

Yes No No comment

11) Have these drinks caused any health problem for you before?

Yes No

12) Are aware that you are being priced more than 10 times than of the real price of the drink?

Yes No

13) Considering the TV ad.which soft drink ad do you like more?

Coco-cola Pepsi Miranda

Thumbs up Mazza Others (specify).....

14) After seeing the ad did you like to switch on to that one?

Yes No

15) After the Plachimada incident have you reduced consuming soft drinks?

Yes No

16) Do you think the super stars should stop promoting unhealthy soft drinks?

Yes No No comment

17) What all changes do you want the manufacturer to make in it to promote sale?

Quality Price Advertisement More Flavor

Others (specify).....

18) In your opinion which all diseases could the pesticides in the soft drink cause?

Cancer Paralysis Tooth decaying

Pregnancy issues Don't know Others (specify).....

19) Soft drinks such as colas contain significant quantities of

Caffeine Nicotine Tannin

Rennin Don't know

20) What are the things that govt. need to do, to stop the unhealthy practices carried down by soft drink companies?

Increase standards Frequent quality checks

Control on advertisement

21) Do you prefer the after usage of plastic bottles of soft drinks/

Yes No