



A STUDY OF CHANGE IN CONSUMER PREFERENCES FROM THE CONVENTIONAL HOT BEVERAGES TO GREEN TEA

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ABSTRACT

Consumers are becoming more conscious and desirous of purchasing environment friendly products i.e. green tea. The present study is an attempt on consumer perception on green tea. The data has been collected from 300 people of different areas. The study is helpful to find out the reasons of drinking Traditional Hot Beverages and the reasons of sudden inclination towards Green Tea.

The study shows how many people have completely moved to Green Tea and who consume both traditional hot beverages & Green Tea. The study attempts to find the main source of information about Green tea among the respondents. Their purchasing behavior and their behavior towards price increase in future. Their frequency of consuming Green Tea in a day. It also gives a broader view of their opinion on effects of Green Tea on blood sugar level and reduction of body weight. The study also reveals the most preferred brand among the few top brands available in India and also the most preferred flavor.

KEYWORDS: Green tea, Traditional Hot Beverages, Brand Preference.

INTRODUCTION

Tea consumption has its legendary origins in India dating back to more than 3000 years ago. According to a legend green tea was first brewed in 2737 B.C. during the reign of Emperor Shennong.

A book written by Lu Yu in 600-900 AD "Tea classic" is considered important in green tea history. The Kissa Yojoki written by Zen priest Eisai in 1191, describes how

drinking green tea may affect five vital organs, the shapes of tea plants, flowers and leaves and how to grow and process tea leaves.

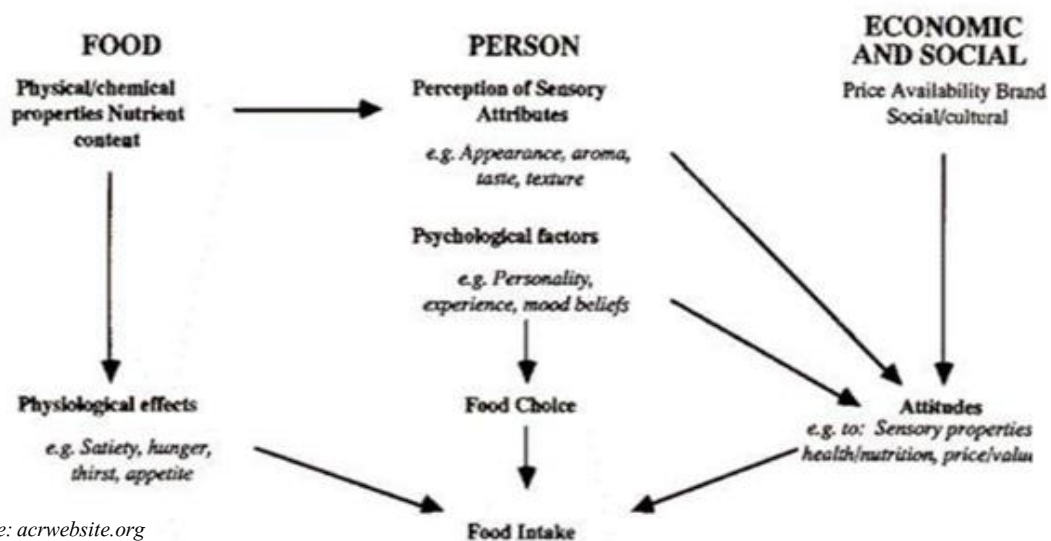
According to the legend emperor of China Shen Nung. "A scientist and arts patron-dictated that all drinking water be boiled as a hygienic importance. One summer day while visiting a distance province, his servants

began boiling the water. Dried leaves from the nearby bush fell into the pot, and a brown liquid was induced. As a scientist, Shen Nung was intrigued. He drank some of the strange liquid and found it refreshing. Legend says the drinking of tea was therefore born.

In India, chai (Tea) is more than just a cup of tea to start the day. It is an integral part of the rhythm of life. In addition tea also includes herbs, flavors and types. There are numerous types of tea such as green tea, black tea, tapal tea, mint tea, white tea etc. Many health benefits are said to be gained due to tea. One such is green tea with strong anti-oxidants properties. It also contains other health benefits such as weight loss, better digestion problem, concentration, relaxation and many more, depending upon the type the health benefits also varies.

THEORETICAL FRAMEWORK SHEPHERD MODEL:

There are numerous factors which influences the consumer behavior on food purchase. Shepherd model is one of the model which describes about the factors such as sensory attributes where the person will perceive the chemical and physical properties of food. The sensory attributes also includes taste, quality or flavor. It is not essential that sensory attributes only plays a major role in the food purchase, even the liking or the perception towards the product influences the choice of food. Hence according to the shepherd model following are the factors influencing the food intake.

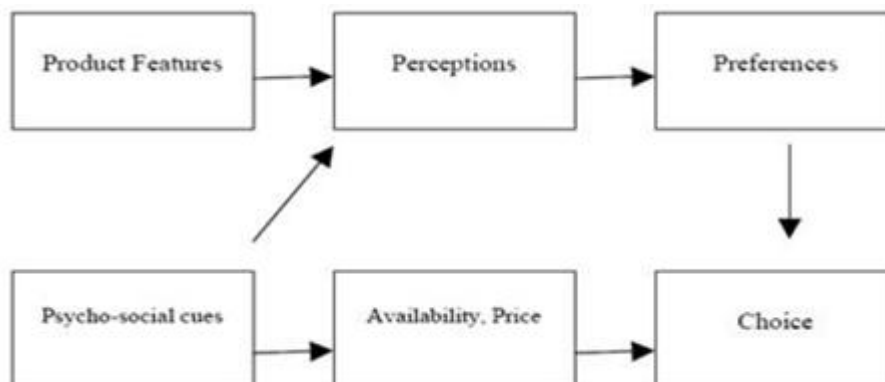


Source: acrwebsite.org

LENS MODEL

According to the lens model the consumer perception and product features are inter dependent. The choice of food depends on the quality of the product and the product features. The product features influences

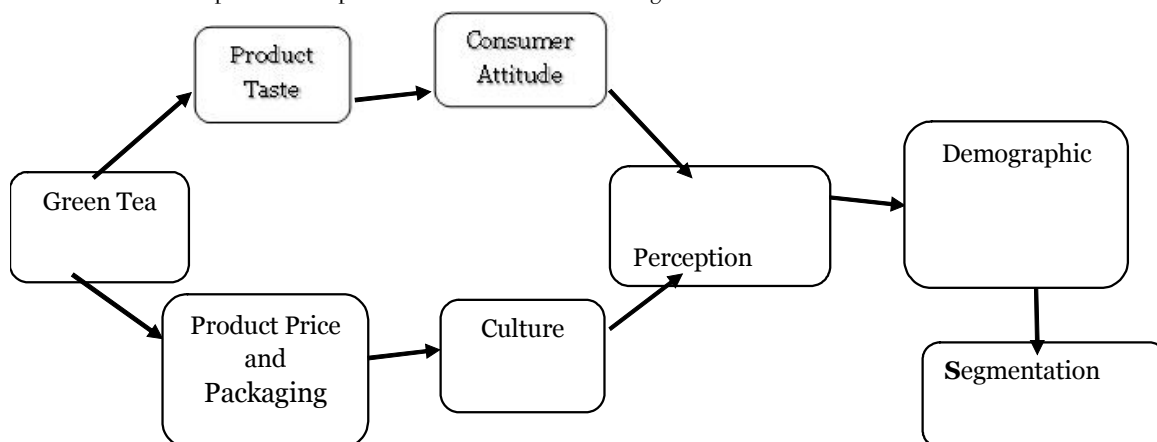
the perception about the product and then consumer changes his choice or preferences. Based on psycho-social cues, availability and price.



Source: dspace.hhse/dspace/handle/2082/1083

CONCEPTUAL MODEL

This model is mainly based on the difference as product taste, consumer attributes, perception, product reference models discussed above. It describes that the price and purchase, culture, demographic and consumer choice of purchase depends on the factors such segmentation.



LITERATURE REVIEW

Reference	Aim of study	Summary of Results	Important findings
(Adan et al 2010)	Perception of Swedish Consumers towards Tapal Tea.	Preference of tea taste over price & brand	This shows that market has potential for tea products with good taste.
(Cabrera C, et al 2006)	Beneficial effects of green tea	The significant effects on human health have been observed with the consumption of green tea.	The benefits of green tea in reduction of body weight and reduction in calorie.
(Hara Y 1990)	Advances in Food Science and Technology.	The catechism, calculated on the basis of an average tea consumption of three cups of tea	200 mL cup, 1% tea leaves w/v), were 61.5, 92.7, and 405.5 mg/day from fruit teas, black teas, and green teas, respectively
(Blumberg JB 2002)	The role of tea in human health: an update	Green tea consumption has also been associated with increased bone mineral density	An independent factor protecting against the risk of hip fractures
(Sato T2006)	The nutraceutical benefit	Green tea is fermented to Oolong and then to black tea	The green tea are dimerized to form a variety of the aflavins, such that these teas may have different biological activities
(Weinberger JH. Am J Clin Nutr. 2000)	Approaches for chronic disease prevention based on current understanding of underlying mechanisms.	The proliferation of hepatic stellate cells is closely related to the progression of liver fibrosis in chronic liver diseases	Green tea strengthens the immune system action because it protects it against oxidants and radicals
(Vanessa C, Gary W. J Nutr. 2004)	A Review of the Health Effects of Green Tea Catechism in In Vivo Animal Models	Green tea has an ant proliferative activity on hematoma cells and a hypolipidemic activity in hepatoma-treated rats.	It is preventive agent against mammary cancer post-initiation.
(Tsuneki H, et al 2004)	Effect of green tea on blood glucose levels and serum proteomic patterns in diabetic mice and on glucose metabolism in healthy humans.	Coronary heart disease is reduced by the blood glucose levels and body weight	It is attributed to the presence of high amounts of polyphenols, which are potent antioxidants

OBJECTIVES OF THE STUDY

- ❖ To determine the reasons for consuming traditional beverages.
- ❖ To analyze the reasons for green tea consumption.
- ❖ To find out the popular brand preference in green tea.

NEED FOR STUDY

Management needs to know the reasons for customer preference from traditional hot beverages to Green Tea. Surveys on customer preference can produce favorable and unfavorable results. This kind of surveys helps in understanding consumer behavior and customer expectations there by the management can find possible ways to fulfill the consumers' expectations and attract new customers.

METHODOLOGY

Sources of Data

Both primary data and secondary data are used for the study. The primary data have been collected with

the help of well-structured questionnaire. Secondary data was collected from various books, magazines, websites etc.

Sample Size

Sample size refers to the number of items to be selected from the universe to constitute a sample. Three Hundred respondents are taken for this study.

Sample Technique

Convenience sampling method was applied for choosing 300 respondents.

ANALYSIS AND INTERPRETATIONS

a) Percentage Analysis

Gender, Marital Status, Age, Occupation, Consumption of Green Tea, Frequency of consumption in a day, Knowledge about Green Tea, Consumption Green Tea alone, Frequency of Purchasing Green Tea, Period of Usage, Preferred way of consumption, Buying Behavior in Increasing Prices, Opinion about Reduction of Blood Sugar Level and Opinion about Reduction of Body Weight are presented using percentage analysis.

TABLE.1 GENDER OF THE RESPONDENTS

S.NO	GENDER	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Male	163	54
2.	Female	137	46
	Total	300	100

The above table shows that majority (54%) of respondents are male.

TABLE.2 MARITAL STATUS OF THE RESPONDENTS

S.NO	MARITAL STATUS	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Single	154	51
2.	Married	144	48
3.	Others	2	1
	Total	300	100

The above table shows that majority (51%) of respondents are Single.

TABLE.3 AGE OF THE RESPONDENTS

S.NO	AGE	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Below 20 years	12	4
2.	21- 30 years	168	56
3.	31- 40 years	42	14
4.	41-50 years	35	12
5.	Above 50 years	43	14
	Total	300	100

The above table shows that majority (56%) of respondents are between 21- 30 years of age.

TABLE.4 OCCUPATION OF THE RESPONDENTS

S.NO	OCCUPATION	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Business	15	5
2.	Employed	142	48
3.	Student	93	31
4.	Home- Maker	37	12
5.	Others	13	4
	Total	300	100

The above table shows that majority (48%) of respondents are Employed.

TABLE.5 CONSUMPTION OF GREEN TEA OF THE RESPONDENTS

S.NO	OCCUPATION	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Yes	230	77
2.	No	70	23
	Total	300	100

The above table shows that majority (77%) of respondents consume Green Tea.

TABLE.6 FREQUENCY OF CONSUMPTION IN A DAY

S.NO	No. of TIMES	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Never	73	24
2.	Once	163	54
3.	Twice	61	20
4.	Thrice	1	0
5.	More than Thrice	2	1
	Total	300	100

The above table shows that majority (54%) consume once in a day.

TABLE.7 CONSUMPTION OF GREEN TEA ALONE

S.NO	CONSUMPTION	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Yes	51	17
2.	No	249	83
	Total	300	100

The above table shows that majority (83%) do not consume Green Tea alone.

TABLE.8 PREFERENCE OF GREEN TEA OVER TRADITIONAL HOT BEVERAGES

S.NO	PREFERENCE	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Yes	163	54
2.	No	137	46
	Total	300	100

The above table shows that majority (54%) prefer Green Tea over traditional beverages.

TABLE.9 PERIOD OF USAGE

S.NO	USAGE PERIOD	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	One Year	143	48
2.	Two Years	65	22
3.	Three Years	19	6
4.	More than 3 Years	33	11
5.	Not Applicable	40	13
	Total	300	100

The above table shows majority (48%) have been consuming for a period of One Year.

TABLE.10 SOURCE OF KNOWLEDGE

S.NO	SOURCE	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Media	70	23
2.	Friends	136	45
3.	Relatives	66	22
4.	Neighbours	5	2
5.	Others	23	8
	Total	300	100

The above table shows the majority (45%) that source of knowledge is from Friends.

TABLE.11 PREFERRED WAY OF CONSUMPTION OF GREEN TEA

S.NO	USAGE PERIOD	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Tea Bags	148	49
2.	Loose Tea Leaves	124	41
3.	Not Applicable	28	9
	Total	300	100

The above table shows majority (49%) prefer Tea Bags for consumption.

TABLE.12 PREFERRED FLAVOURS IN GREEN TEA

S.NO	FLAVOUR	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Original	56	19
2.	Lemon	102	34
3.	Aloe Vera	16	5
4.	Ginger	33	11
5.	Mint	30	10
6.	Honey	57	19
7.	Unanswered	6	2
	Total	300	100

The above table shows majority (34%) prefer Lemon Flavour.

TABLE.13 PREFERRED BRANDS IN GREEN TEA

S.NO	BRANDS	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Lipton	96	32
2.	Twinings	21	7
3.	Organic India	22	7
4.	Taj Mahal	33	11
5.	Tetley	74	25
6.	La Plant	8	3
7.	Happy Valley	6	2
8.	Gaia Organics	7	2
9.	Chamong	4	1
10.	Himalaya	29	10
	Total	300	100

The above table shows majority (32%) for Lipton brand.

TABLE.14 FREQUENCY OF PURCHASING GREEN TEA

S.NO	No. of Times	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Weekly	22	7
2.	Fortnightly	48	16
3.	Monthly	127	42
4.	Once in 6 months	42	14
5.	Yearly	27	9
6.	Not Applicable	34	11
	Total	300	100

The above table shows majority (42%) for Monthly.

TABLE.15 OPINION ON REDUCTION OF BODY WEIGHT

S.NO	No. of Times	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Strongly Disagree	4	1
2.	Disagree	22	7
3.	Neutral	92	31
4.	Agree	133	44
5.	Strongly Agree	46	15
6.	Unanswered	3	1
	Total	300	100

The above table shows that majority (44%) agree to the statement that Green Tea reduces body weight.

TABLE.16 OPINION ON REDUCTION OF BLOOD SUGAR LEVEL

S.NO	No. of Times	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Strongly Disagree	12	4
2.	Disagree	37	12
3.	Neutral	122	41
4.	Agree	104	35
5.	Strongly Agree	25	8
	Total	300	100

The above table shows that majority (41%) have a neutral opinion to the statement that Green Tea reduces blood sugar level.

TABLE.17 BUYING BEHAVIOUR DURING PRICE INCREASE

S.NO	OPINION	NO.OF RESPONDENTS	PERCENTAGE (%)
1.	Yes	177	59
2.	No	108	36
3.	Unanswered	15	5
	Total	300	100

The above table shows that majority (59%) would continue to buy even during price increase.

b) RELIABILITY TEST

Reliability Statistics	
Cronbach's Alpha	N of Items
.926	41

Interpretation:

- ✧ The Reliability Analysis checks the reliability and consistency of the data collected.
- ✧ If the Cronbach's Alpha value is above 0.6, it indicates the data is consistent and reliable in which the value obtained is 0.926 in our case.

c) CHI SQUARE TEST ON GENDER AND PURCHASE FREQUENCY:

Hypotheses:

- H_0 - There is no significant relationship between Gender and Purchase Frequency.
- H_1 - There is significant relationship between Gender and Purchase Frequency.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.985 ^a	5	.010
Likelihood Ratio	15.373	5	.009
Linear-by-Linear Association	5.525	1	.019
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.05.

Interpretation:

- ✧ The significance value obtained is 0.010 hence the null hypothesis is rejected and alternative hypothesis is accepted.
- ✧ Thus, there is significant relation between gender and purchase frequency.

d) CHI SQUARE TEST BETWEEN AWARENESS AND BRAND:

Hypotheses:

- H_0 - There is no significant relationship between awareness and brand.
- H_1 - There is significant relationship between awareness and brand.



Lipton

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.116 ^a	30	.019
Likelihood Ratio	40.023	30	.104
Linear-by-Linear Association	.105	1	.746
N of Valid Cases	300		

a. 26 cells (61.9%) have expected count less than 5. The minimum expected count is .07.

Taj Mahal

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	54.586 ^a	30	.004
Likelihood Ratio	47.052	30	.025
Linear-by-Linear Association	.003	1	.953
N of Valid Cases	300		

a. 24 cells (57.1%) have expected count less than 5. The minimum expected count is .08.

Tetley

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.516 ^a	30	.001
Likelihood Ratio	43.118	30	.057
Linear-by-Linear Association	.392	1	.531
N of Valid Cases	300		

a. 27 cells (64.3%) have expected count less than 5. The minimum expected count is .07.

Himalaya

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.072 ^a	30	.031
Likelihood Ratio	43.555	30	.052
Linear-by-Linear Association	.034	1	.853
N of Valid Cases	300		

a. 24 cells (57.1%) have expected count less than 5. The minimum expected count is .10.

Interpretation:-

- The Significance value obtained for all the brands is less than 0.05 the brand is significant with the awareness. Lipton is very significant.

e) DISCRIMINANT TEST BETWEEN PREFERENCE AND REASONS FOR OPTING GREEN TEA:

Hypotheses:-

H₀ - There is no discrimination between Preference and Reasons of opting Green Tea.

H₁ - There is discrimination between Preference and Reasons of opting Green Tea.

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Health Factor	.854	50.937	1	297	.000
Taste	.939	19.391	1	297	.000
Low Calorie	.910	29.217	1	297	.000
Refreshment	.932	21.791	1	297	.000
Fashion Statement	.976	7.356	1	297	.007



Standardized Canonical Discriminant Function Coefficients	
	Function
	1
Health Factor	1.053
Taste	.182
Low Calorie	.193
Refreshment	.078
Fashion Statement	-.339

Eigenvalues				
Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.183 ^a	100.0	100.0	.393

a. First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	.845	49.495	5	.000

Interpretation:

- ✧ In the test of equality of grouped means the significance level is less than 0.05 hence the variables have significant relationship.
- ✧ The Wilks' Lambda shows the discrimination if the Wilks Lambda is low it means the factor has more significant relationship.
- ✧ The factors are listed according to the significance health factor, low calorie, taste, refreshment, fashion statement.

f) DISCRIMINANT ANALYSIS BETWEEN THE REASONS OF CONSUMING OTHER BEVERAGE WITH THE SAMPLE.

Hypotheses:-

H_0 - There is no discrimination between the reasons of consuming other beverage with the sample.

H_1 - There is discrimination between the reasons of consuming other beverage with the sample.

Tests of Equality of Group Means					
	Wilks' Lambda	F	df1	df2	Sig.
Tradition	.916	27.170	1	297	.000
Taste	.897	34.023	1	297	.000
Habit	.867	45.620	1	297	.000
Nutrition Value	.941	18.552	1	297	.000

Standardized Canonical Discriminant Function Coefficients	
	Function
	1
Tradition	.310
Taste	.354
Habit	.627
Nutrition Value	.005

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.182 ^a	100.0	100.0	.393

a. First 1 canonical discriminant functions were used in the analysis.

Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	.846	49.421	4	.000

Interpretation:-

- ⇒ In the test of equality of grouped means the significance level is less than 0.05 hence the variables have significant relationship.
- ⇒ The Wilks' Lambda shows the discrimination if the Wilks Lambda is low it means the factor has more significant relationship.
- ⇒ The factors are listed according to the significance habit, taste, tradition, nutrition value.

LIMITATIONS OF THE STUDY

- ◇ The sample group is restricted to the city of Chennai alone.
- ◇ The time frame allotted for the study is limited. Thus the sample size was restricted to 300.
- ◇ Some of the respondents did not respond well thus the study may vary to the opinions of the respondents.

FINDINGS

- ⇒ The reasons for consuming traditional beverages- Tradition, Taste, Habit, Nutrition value. Habit is the major reason
- ⇒ The reasons for green tea consumption- Health, Low Calorie, Refreshment.
- ⇒ Health Factor is the major reason
- ⇒ The popular brand preference in green tea- Lipton the most preferred brand.
- ⇒ It is a great supplement for weight loss and this is one of the reasons why it's gaining so much of popularity among the youth as well as old age people
- ⇒ It helps relieve stress and anxiety

SUGGESTIONS

- ☆ The companies should improve the promotional measures, because 45% of the respondents know about green tea through friends.
- ☆ The companies should spread awareness among people about benefits of green tea, since it is proven to be used for weight reduction and reduce blood sugar level and target more health conscious people.
- ☆ The companies should try to satisfy all the customers by producing green tea varieties depending on age and body weight.
- ☆ The companies should introduce more flavours of green tea according to the local geographical flavours.

CONCLUSION

The present research was concentrated on change in consumer preference towards green tea. From the study it can be concluded that Green tea has been gaining its popularity due to its high concentration of health benefits.

It is found that there are several other factors consumers look while consuming green tea, one of the most important factor is flavor and the method of drinking. By the percentage analysis it is found that 56 % of the sample prefer drinking green tea in which the percentage of male consuming green tea is high.

Further, from the study it is concluded that drinking tea can be a relaxing and calming practice to help reduce stress. It is a great supplement for weight loss and this is one of the reasons why it's gaining so much of popularity among the youth as well as old age people. Green tea helps destroy bacteria and viruses that may cause dental diseases, it helps relieve stress and anxiety and also helps in fighting allergies.

Studies suggest that the change in consumer preference is due to increase in health awareness and the brand which is popular in the market and preferred is Lipton

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