

Original Research Article

## **A Study on Attitude and Practice Regarding the Consumption of Carbonated Drinks among Students in Selected Colleges of Mangalore**

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### **ABSTRACT**

**Introduction:** Young children are often influenced by media and often do things under its influence. The consumption of carbonated drinks in youngsters is increasing in alarming proportions. They are often not aware of the health hazards of the excess consumption. <sup>(1)</sup> Many academic studies have shown that there is nothing healthy about carbonated soft drinks or soda. <sup>(2)</sup> Scientific studies have shown that one or two soft drinks a day can increase one's risk for numerous health problems. Some of these health problems are obesity, diabetes, tooth decay, osteoporosis, nutritional deficiencies, sleep disturbance and many neurological disorders. <sup>(3)</sup>

#### **Objectives of the study**

1. To assess the attitude regarding consumption of carbonated drinks among students.
2. To identify the practice regarding consumption of carbonated drinks among students.
3. To find the association of attitude of students regarding consumption of carbonated drinks with selected baseline variables.

**Methodology:** A non experimental descriptive survey design was adopted for the present study. The study was conducted in the Father Muller College of Nursing, Mangalore. The sample consisted of 100 nursing students selected by purposive sampling technique. An attitude scale and a practice questionnaire were used to collect data. The data was analyzed using descriptive and inferential statistics.

**Results:** The major findings of the study revealed the following

- ✓ The majority (81%) of the students had a neutral attitude, 18% had favourable attitude and very few (1%) had an unfavourable attitude regarding the consumption of carbonated drinks.
- ✓ The majority (52%) of students preferred to drink sprite and 66% of students consume it monthly. The 47% students consume less than 200 ml of carbonated drinks at a time and for majority of students (65%), taste was the influence for choice of drink, most preferred flavour was orange, 47% of students preferred to drink these drinks while travelling and majority of the students (69%) consume these drinks with friends.
- ✓ There was a significant association of attitude of students on carbonated drinks consumption with selected baseline variables such as year of study ( $p=0.014$ ) and source of information regarding carbonated drinks ( $p=0.036$ ).

**Conclusion:** The results show that majority have neutral attitude and they consume it monthly. So the health education and primordial prevention would be the best way to adopt healthy lifestyle and combat problem associated with the consumption of carbonated drinks.

**Key words:** carbonated drinks, soft drinks, health problems, Mangalore.

## INTRODUCTION

Carbonated drinks are also called as soft drinks or aerated drinks. It is made up of carbonated water, a sweetener and a natural or artificial flavouring. <sup>(4)</sup>

Consumption of carbonated drinks is increasing among adolescents. Adolescence is a transitional phase of growth and development between childhood and adulthood. The WHO defines an adolescent as any person between ages 10 and 19. This age range falls within WHO's definition of young people, which refers to individuals between age 10 and 24. <sup>(5)</sup>

In India per capita consumption of carbonated drinks is around 13 litres which is less compared to China (62Liters). Average Indian consumption levels rose by a CAGR of 25% over 2014-19 and the sale of carbonated drinks around 3 billion litres in 2015. <sup>(6)</sup>

Soft drink consumption in the adolescence is mostly influenced by various factors such as media advertisements, taste preferences, convenience, peer pressure and parental modelling. <sup>(4)</sup> This leads to decreased consumption of milk and other nutritious food. So, this may cause various health problems such as obesity, calcium deficiency, dental problems and tooth decay as it is rich in sugar, fat and calories. <sup>(7)</sup>

In order to develop effective interventions to reduce intake of soft drink, a better understanding regarding attitude and practices of adolescents on consumption of carbonated drinks is needed. Hence with this purpose aim of this paper was to assess attitude and practices of adolescents on consumption of carbonated drinks.

The objectives of the study were

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## MATERIALS AND METHODS

- **Research approach:** Quantitative research approach.
- **Research Design:** A non experimental descriptive survey design
- **Variables under study**  
**Key variable:** attitude and practice of students regarding the consumption of carbonated drinks.
- **Setting:** Father Muller College of Nursing, Kankanady, Mangalore.
- **Sample and Sample size:** 100 students who are pursuing their nursing degree at Father Muller College of Nursing, Mangalore.
- **Sampling Technique:** Purposive Sampling technique
- **Data collection instruments**
  - i. Demographic Proforma
  - ii. Attitude scale to assess the attitude of the students towards consumption of carbonated drinks.
  - iii. Self reported practice questionnaire
- **Data collection process:**

A formal written permission was obtained from the concerned authorities to conduct the research study in Father Muller College of Nursing, Mangalore. The purpose of the study, the method of data collection and time duration were explained to the subjects for getting free and true responses. The participants were given assurance regarding the confidentiality of the information and informed consent was obtained from them indicating their willingness to participate in the study. The subject who fulfilled the sampling criteria was selected from Father Muller College of Nursing by purposive sampling technique .The base line proforma, attitude scale and self reported practice questionnaire was administered to 100 nursing students pursuing nursing course in selected nursing college, Mangalore. The data was collected from 2<sup>nd</sup> -4<sup>th</sup> march 2017 and the data was compiled for analysis.
- **Plan for data analysis**

All descriptive and analytical statistics were performed using SPSS24th version. A p-

value <0.05 was considered significant for all statistical tests.

The data analysis consists of 4 sections:

- I. **Section 1:** Demographic variables were analyzed using frequency and percentage.
- II. **Section 2:** Attitude of students on carbonated drinks was analyzed using frequency percentage, mean, standard deviation and mean percentage
- III. **Section 3:** Self reported practice questionnaire on carbonated drink was analyzed using frequency and percentage
- IV. **Section 4:** Chi square test was used to find out the association of attitude regarding carbonated drink consumption with the selected demographic variable.

## RESULTS

### Section I: Baseline characteristics of nursing students

Table 1: Frequency and percentage distribution of subjects according to demographic characteristics n=100

Sl No.	Variables	Frequency (f)	Percentage (%)
1.	<b>Age (in years)</b>		
	a) 17-19	22	22
	b) 20-22	77	77
	c) 23-25	1	1
2.	<b>Course and Year of study</b>		
	a) 2 <sup>nd</sup> year B.Sc(N)	25	25
	b) 3 <sup>rd</sup> year B.Sc(N)	45	45
	c) 4 <sup>th</sup> year B.Sc(N)	30	30
3.	<b>Religion</b>		
	a) Christianity	98	98
	b) Hinduism	02	02
	c) Islam	00	00
4.	<b>Weight (in Kgs)</b>		
	a) 35-55kg	76	76
	b) 56-75	22	22
	c) 76-95	01	01
	d) 96-115	01	01
5.	<b>Type of Family</b>		
	a) Nuclear	92	92
	b) Joint	05	05
	c) Extended	03	03
6.	<b>Area of Living</b>		
	a) Rural	51	51
	b) Urban	49	49
7.	<b>Source of information</b>		
	a) Media advertisement	80	80
	b) Family and friends	20	20
	c) Other sources	0	0
8.	<b>Duration of consumption of carbonated drinks</b>		
	a) <1 year	7	7
	b) 2-5 years	17	17
	c) 5-10years	35	35
	d) >10 years	41	41

### Section II: Attitude of students regarding consumption of carbonated drinks.

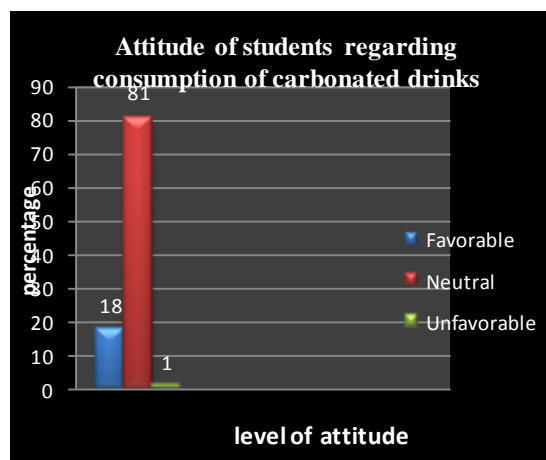


Figure 1: Frequency and percentage distribution of students according to their attitude towards consumption of carbonated drinks

The data presented in the figure 1 shows that majority (81%) of the students had a neutral attitude, (18%) had favourable attitude and very few (1%) had an unfavourable attitude on consumption of carbonated drinks.

Table 2A Overall mean, standard deviation and mean percentage of samples according to attitude on consumption of carbonated drinks n=100

Variable	Range of score	Mean + SD	Mean%
Attitude towards consumption of carbonated drinks	25-61	44.12 + 6.7	58.8
Maximum score=75			

Table 2 shows that the total mean percentage of the attitude of students towards the consumption of carbonated drinks is 58.8%. So the majority of the sample had neutral attitude towards consumption of carbonated drink.

The data presented in the table 2 B shows that mean percentage of attitude score in the area of consumer needs and drinking drives was 66.6%. Consumer believes 52.94% and ill-effects was 52.5% in-turn it shows that students had neutral attitude in these areas.

**Table 2 B: Domain wise range of score, mean,SD and mean percentage of attitude on carbonated drinks**

n=100

Sl No.	Domain	Range of score	Max score	Mean + SD	Mean%
1.	Consumer needs and drinking drives	14-28	30	20.34 ± 5.31	66.6%
2.	Consumer beliefs	12-28	35	18.53 ± 3.81	52.94
3.	Ill-effects	2-9	10	5.25 ± 3.53	52.5

### Section III: Practice of consumption of carbonated drinks among students:

**Table 3: Frequency and percentage distribution of students according to their practice of consumption of carbonated drinks n=100**

Sl	Variable	Frequency (f)	Percentage (%)
1.	<b>Most Preferred Drink</b>		
	a) Coca-cola	16	16
	b) Sprite	52	52
	c) Appy fizza	16	16
	d) Fanta	10	10
	e) Others	6	6
2.	<b>Frequency Of consumption</b>		
	a) Daily	0	0
	b) Every alterate days	2	2
	c) Weekly	32	32
	d) Monthly	66	66
2.1	<b>Frequency if weekly or monthly</b>	54	54
	a) Once	28	28
	b) Twice	11	11
	c) Thrice	02	02
	d) Four times	05	05
	e) 5 and More than 5 times		
3.	<b>Amount of consumption in ML</b>	47	47
	a) Less than 200ml	41	41
	b) 200-300ml	10	10
	c) 301ml-500ml	02	02
	d) Above 500ml		
4.	<b>Influence for choice of Drink</b>	16	16
	a) Media advertisement	13	13
	b) Easy availability in market	01	01
	c) Colour	05	05
	d) Family and friends	65	65
	e) Taste		
5.	<b>Preferred Flavour</b>		
	a) Cola	27	27
	b) Orange	29	29
	c) Apple	15	15
	d) Lime	28	28
	e) Others	01	01
6.	<b>Most preferred Place</b>		
	a) In parties	28	28
	b) Hangouts	19	19
	c) Travel	47	47
	d) At home after heavy lunch	06	06
7.	<b>Companions for consumption</b>	14	14
	a) Alone	17	17
	b) With family	69	69
	c) With friends		

Table 3 gives the following inference:

#### Most preferred drink

Half of students (52%) preferred sprite, 16% for coco cola, 16% for appy fizz, 10% for fanta and rest (6%) for other drinks.

#### Frequency of consumption

Majority of students (66%) consumed monthly, 32% consumes weekly and the rest (2%) consumed carbonated drinks every alternate days.

#### Frequency if it is weekly or monthly

Among 98% of weekly or monthly consumers of carbonated drinks, 54% consume once, 28% consume twice, 11% consume thrice and the rest (5%) consume more than 5 times.

#### Amount of consumption

47% of students consumed less than 200 ml, 41% of them consume 200-300ml, 10% of them consume 350-500 ml and the rest 2% consume more than 500 ml.

#### Influence for choice of drink

Majority of students (65%) accounts for taste, 16% for media, 13% for easy availability in the market, 5% for family and friends and the rest 1% for colour.

#### Most preferred flavour:

Among 100 students, 29% preferred orange, 28% for lime, 27% for cola, 15% for apple and the rest 1% for other flavours.

#### Most preferred place for carbonated drink consumption:

47% of students consume carbonated drinks while travelling, 28% in parties, 19% in hangouts and 6% at home after a heavy meal.

#### Companions for consumption:

Majority of students (69%) consume carbonated drinks with friends, (17%) with family and (14%) consume alone.

#### Section 4: Association of attitude of students regarding consumption of carbonated drinks with baseline variables.

H<sub>01</sub>: There will be no significant association between attitude towards consumption of carbonated drinks and selected baseline variables.

p value was computed between attitude on consumption of carbonated drinks and selected baseline variables in which association was seen for year of study ( $p=0.014$ ) and source of information regarding carbonated drinks ( $p=0.036$ ) among the selected baseline variables. Hence null hypothesis is rejected and research hypothesis is accepted.

## DISCUSSION

The present study shows that a majority 81% of the participants had a neutral attitude, 18% had favourable attitude and very few 1% had an unfavourable attitude. The total mean percentage of the attitude of samples towards the consumption of carbonated drinks is 58.8% which shows that majority of them had neutral attitude towards consumption of carbonated drinks which is seen congruent to a study conducted at Western Maharashtra to assess the knowledge, attitude and practice regarding carbonated drinks among students, which gives 5.5% of the participants were having a favourable attitude on consumption of carbonated drinks. <sup>(8)</sup>

The present study findings shows that 65% of the students selected taste as the influencing factor for their choice of carbonated drink, 16% for media and 13% for easy availability in the market, which is found congruent with the study conducted in Western Maharashtra to assess the knowledge, attitude and practice regarding carbonated drinks which shows that 30% of students considered taste as the main influencing factor followed by media advertisement (19%) and easy access (18%). <sup>(8)</sup>

The present study findings shows that majority (52%) preferred sprite which is found to be contradictory to the results given by the study conducted at Himalayan institute, Dehradun to assess the knowledge, attitude and practice regarding carbonated drinks which shows that 61.7% of the nursing students consume mostly coke. <sup>(9)</sup>

The present study findings shows that 47% of samples consumed less than 200 ml at a time which is contradicting to the result given by the study conducted at Himalayan institute, Dehradun to assess the knowledge, attitude and practice regarding carbonated drinks in which 32.7% of the nursing students consume 200-350 ml of carbonated drinks at a time. <sup>(9)</sup>

## CONCLUSION

This study was done to assess attitude and practice of students regarding consumption of carbonated drinks. The outcome of the study shows that majority of students has neutral attitude and consume monthly along with friends. Hence, effective interventions should be taken to reduce intake of carbonated drinks.

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