

## CARBONATED COLD DRINKS AND THEIR INFLUENCE ON COLLEGE GOING STUDENTS WITH SPECIAL REFERENCE TO BHOPAL, MADHYA PRADESH

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Date of Received

07 February, 2020



Date of Revised

18 February, 2020



Date of Acceptance

12 March, 2020



Date of Publication

24 March, 2020

DOI Link: <https://doi.org/10.51514/JSTR.2.1.2020.1-3>

To link to this article: <http://jstr.org.in/downloads/pub/v2/i1/1.pdf>



# JSTR

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I-3 Vikas Nagar, Housing Board Colony, Berasia Road, Karond Bhopal-462038

Domain: www.jstr.org.in, Email: editor@jstr.org.in, Contact: 09713990647

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## ABSTRACT

Presently youth become the main point of focus for the food industries, as far as youth are concern they always want a new and interesting form of food to be served. In this series carbonated beverages has made a distinct place among their celebrations and for this celebration there is no distinction of gender. Both are consuming such beverages at the same level. The carbonated beverages have taken over the traditional drinks like lassi, pana, Jal jeera and many more. Youth drinks all these beverages to satisfy their mental desires and all these drinks are easily available as well as are affordable to their pockets. While being aware of adverse effects as tooth decay, osteoporosis, acidity etc. of carbonated drinks on health youth keep on consuming these carbonated beverages. So to clarify this man made fact a study has been conducted on the group of college going youth from college of Bhopal city. The outcome of the study is that the youth is consuming the carbonated beverages for fun, satiety, while knowing that all these drinks provide a favorable environment for the development of above mentioned disorders.

**Keywords:** Carbonated Beverages, Youth, and Traditional Drinks.

## INTRODUCTION

Now a day in everyday life, soft drinks has been an anchor in Indian culture whether it is party or any other traditional celebration. Soft drinks always welcome the guest as host [1, 3, 4]. Long years ago these drinks are generally homemade like pana, lassi, jaljeera etc. but now these traditional drinks have been replaced by the ready made soft drinks.

Today there are hundreds of varieties of flavored soft drinks. Generally consumed soft drinks in today's life are carbonated drinks. Some of the world's largest corporations (including Coca-Cola Co. and PepsiCo) founded their businesses on soft-drink manufacturing [6, 7].

Carbonated drinks or fizzy drinks are beverages that contain dissolved carbon dioxide. The dissolution of CO<sub>2</sub> in a liquid, gives rise to fizz or effervescence. So, the carbonation refers to the dissolving of carbon dioxide in an aqueous solution. The process usually involves high pressures of carbon dioxide by lowering of this pressure; the carbon dioxide is released from the solution as bubbles. This effect is observed in carbonated beverages. Either carbonated water or soda water are acting as base of carbonated beverages – which are considered Carbonated Beverages in their own right. Usually, flavour

and sweetener are added. Such beverages are mostly water, 90% and up (diet ones can be 99% water) Natural carbonation is the build up of natural gases during fermentation. Forced carbonation is when carbon dioxide is added to the substance under pressure. Usually carbonated, consisting of water (soda water), flavoring, and a sweet syrup or artificial sweetener.

Water often has a trace amount of carbon dioxide in it anyway, but carbonated water is water that has been super-saturated with it, to create the pleasant bubbly sensation. When carbon dioxide mixes with water, it forms carbonic acid:



It's this acid that creates the tingling on your tongue.

The quality of carbonated beverages including soft drinks, seltzer, and beer is affected by the dissolved CO<sub>2</sub> (the gas that causes carbonation) and the amount of carbonic acid in the drink [4, 8, 9].

### Why carbonated soft drinks are concern for health?

1. Excessive use of carbonated beverages, sports drinks and fruit drinks can lead to obesity in young people. The high calorie content of pop may

2. add to the increasing rate of obesity in youth. Overweight adolescents are more likely to become overweight adults [9].
3. The typical 12-ounce can of non-diet pop provides approximately 150 calories, nine teaspoons of sugar, and no minerals or vitamins [1, 4].
4. Sports drinks and fruit drinks have similar amounts of sugar and calories but often have some vitamins and minerals [5].
5. Most of the carbonated soft drinks are high in caffeine; they are also mildly addictive, leading to increased consumption. One can of cola contain 40 to 45 mg of caffeine [5].
6. The high acid and sugar content of pop provides a rich environment for dental decay. Below a pH of 5.2, the enamel of teeth is dissolved [8, 9].
7. People who drink a lot of carbonated drinks are increasing the risk of osteoporosis, as the acidic ingestion of carbonated water can lead to the leaching of Calcium from bones, and its deficiency finally causes osteoporosis. The phosphoric acid contained in some soft drinks (colas) displaces calcium from the bones, lowering bone density of the skeleton and leading to conditions such as osteoporosis and very weak bones.

### METHODOLOGY

- Selection of colleges so that target group i.e. youth can be selected as sample for the study.
- A simple questionnaire is prepared which will be the main tool for study. This questionnaire is to be filled by the randomly selected sample of each faculty without any discussion
- By the help of filled questionnaire, statistical analysis was done to obtain the final results

### RESULT AND DISCUSSION

For the study we have selected 186 samples (college students) from different colleges of Bhopal city, no student was previously counselled by the researcher for the questionnaire. The data obtained from the questionnaire was analyzed statistically, and from the data following result is obtained:

- 52% youth is well aware of the harmful effect of such drinks and then to, they consume it for satisfying their appetite and consider it as status symbol.

- 37% of youth generally consume them while they are in party and these are also aware of the harmful effects of such drinks.
- 11% of youth generally don't prefer to have carbonated drinks as they are aware of their ill effects.

Histogram shows the youth % ratio of well aware of harmful effect, aware of the harmful effects and aware of their ill effects.

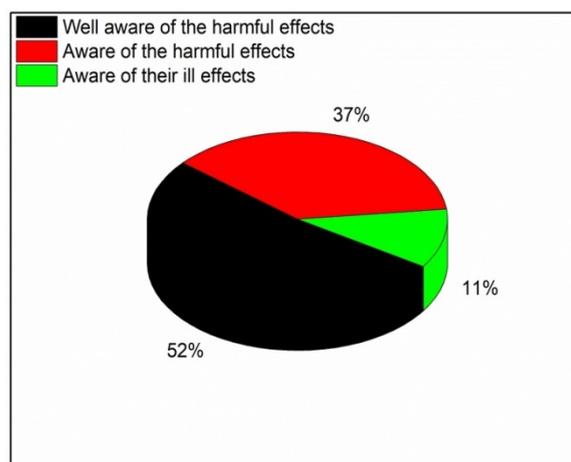


Figure: Histogram of youth awareness drinks and effects.

### CONCLUSION

This present study is to know the awareness in youth for the consumption of carbonated beverages. The carbonated beverages are not good for health and causes severe ill effects to the body if consuming in large amount from long time. The result confirms that the youth is well aware of all these facts but then to, most of them are consuming such drinks in huge amount, just for fun or for some prestigious issues in their peer group.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### REFERENCES

- [1]. Ashurst, P. Soft drink and fruit juice problems solved. Wood head Publishing Limited. ISBN 9781845693268 2009.
- [2]. Amato, D., et al., Soft-drinks and health Rev Invest Clin, 49(5) p. 387-95 1997.
- [3]. Bangor Daily News, April 8, 2010 <http://www.bangordailynews.com/detail/126224.html>.
- [4]. Chris Milliken British Soft Drinks since 1960. University of Cambridge 2007.

