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*Full Length Research Paper*

# Prevalence of the usage of soft drink among children in the south western region of KSA

**Mohammad Huneif**

Department of Pediatrics, College of Medicine, Najran University, Saudi Arabia.  
E-mail: [muhammadabidkhan@gmail.com](mailto:muhammadabidkhan@gmail.com); Phone: 00966591223443

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The core objective of this study is to find out the prevalence of soft drink usage among children in the south western region of KSA. The energy drinks market will double its income in Saudi Arabia. Youngsters consume carbonated drinks in breathtaking quantities and are often unaware of the health hazards of the excess consumption. Carbonation occurs when carbon dioxide is dissolved in water or an aqueous solution. A soft drink is a beverage, often carbonated, that does not contain alcohol. This cross sectional Study was a sectional study conducted at college of medicine Najran city, Saudi Arabia during the period of October 2015 to January 2016. 35.94% of the respondents were girls while 64.06% were boys. out of 38 ice tea drinkers, 7.89% were in the age group of 1-3, 26.32% were in the age group of 4-5, 39.47% were in the age group of 8-12 and 26.32% were in the age group of 13-18. In energy drinkers total are 33 in which 30.3% in 1-3 age group, 24.24 were in 4-5 age group, 21.21 were in the 8-12 age group and 24.24% were in the 13-18 age group. Energy drink prevalence is increasing in KSA which will produce harm effects on the youth.

**Keywords:** Prevalence, soft drink

## INTRODUCTION

Youngsters consume carbonated drinks in breathtaking quantities and are often unaware of the health hazards of the excess consumption. Carbonation occurs when carbon dioxide is dissolved in water or an aqueous solution (Wyshak, 2000; Jacobson, 1998). A soft drink is a beverage, often carbonated, that does not contain alcohol. The name "soft drink" specifies a lack of alcohol by way of contrast to the term "hard drink" Beverages like colas, sparkling water, iced tea, lemonade, squash, and fruit punch are among the most common types of soft drinks, while hot chocolate, hot tea, coffee, milk, tap water, and milkshakes do not fall into this classification.

Adults' consumption of regular soft drinks drops sharply at older ages. Relatively few adults reported drinking diet soft drinks. The highest proportion was around 10% at ages 31 to 70. However, those who had diet soft drinks tended to drink just as much as those who reported consuming regular soft drinks (Jacobson, 1998).

While close to half of men (47%) and over a quarter of women (27%) aged 19 to 30 reported having consumed regular soft drinks the previous day, by age 71 or older, the figure were around 10% for both sexes. Also, the quantity consumed fell in successively older age groups. For instance, boys soft drink consumers aged 19 to 30

averaged 649 grams, about twice the intake of those aged 71 or older (321 grams) (Didier, 2004).

Energy drink consumption has grown very rapidly since they were first introduced in Saudi Arabia at the beginning of 2000; and with a society consisting of more than 50% children and young adults; it is more than likely that this growth will continue. It has been estimated that the energy drinks market will double its income in Saudi Arabia between 2012 and 2016 (Musaiger and Zagzoog, 2014). The frequency of energy drinks consumption by Saudi adolescents is relatively high, especially among boys, with 22% of boys consuming five cans or more each week. This percentage is higher than that reported among young adults in Western countries (Viell et al., 1996; Malinauskas et al., 2007).

Children are often considered as sensitive individuals because of their size and developing central nervous system. This is concerning because many children and adolescents are frequent caffeine consumers (for instance, a recent US study found 73% of children to consume caffeine on a given day. It is important, therefore, to identify thresholds above which negative effects might occur. In the context of the current study, the thresholds in question relate to the group as a whole, with potential sensitivity to caffeine being defined by the participants being children (Branum et al., 2014).

One study was conducted in Riyadh KSA stated that, out of the 68 studied children, 51 (75%) were using canned soft drink and packed fruit juices (Wyne and Khan, 1995).

### Objective of the study

The core objective of this study is to find out the prevalence of soft drink usage in the south western region of KSA

### METHODS

The Study was a sectional study conducted at college of medicine Najran city, Saudi Arabia during the period of October 2015 to January 2016.

In this questionnaire the cronbach Alpha coefficient is 95.5%, parents of the children were requested to fill the questionnaire and we assure them that these information will be kept confidential. Questionnaire was composed of open ended, dichotomous and multiple choice questions. The data were analyzed using SPSS 20, statistical analyses were conducted descriptive (mean, S.D percentages and frequencies) were obtained. Chi square test, were applied to measure the significance difference and degree of associations among the variables. P-value less than 0.05 would be considered as a significant.

**Table 1.** Age groups of respondents in years

C.I	Frequency	%
1- 3	98	25.52%
4-5	84	21.88%
8- 12	132	34.38%
13-18	70	18.23%
Total	384	100.00%

Mean Age = 3.17 S.D =1.17

### RESULTS

Table 1 depicts the age distribution of the respondents mean age was 3.17 years with 1.17 S.D.

Figure 1 depicts that 35.94% of the respondents were girls while 64.06% were boys.

Table 2 depicts that out of 38 ice tea drinkers, 7.89% were in the age group of 1-3, 26.32% were in the age group of 4-5, 39.47% were in the age group of 8-12 and 26.32% were in the age group of 13-18. In energy drinkers total are 33 in which 30.3% in 1-3 age group, 24.24 were in 4-5 age group, 21.21 were in the 8-12 age group and 24.24% were in the 13-18 age group. In other drinks total are 149 in which 23.49% in the 1-3 age group, 24.16% in the 4-5 age group, 34.9 in the 8-12 age group and 17.45 in the 13-18 age group. In cola drinkers total are 164 in which 25.52 in the age group of 1-3, 21.88% in the age group of 4-5, 18.29% in the age group of 8-12, and 15.85% in the age group of 13-18. P- value is less than 0.05 , which means there is a significant difference between age and choice of soft drinks.

Table 3 depicts that 52.08% from the users of the soft drinks, drink once in a day, 28.65% take soft drink twice in a day, 11.46% takes soft drink thrice in a day, 7.81 and more than thrice.

Table 4 depicts the comparison between education level and types of soft drink out of 38 ice tea takers 13.16 are not school going , 10.53% are in Montessori, 26.32% are in primary , 36.84% are in middle and 13.16% are in secondary. In 33 energy drinkers , 7.89 are not school going, 24.24 are in Montessori , 30.30 are in primary , 15.15% are in middle and 21.21% are in secondary. Out of 149 respondents drinking other drinks 39.47% are not school going, 12.75% are in Montessori, 46.98% are in primary, 16.78% are in middle and 13.42% are in secondary. Out of 164 cola drinkers 13.16% are not school going, 14.63% are in Montessori, 36.59% are in primary, 25.0% are in middle and 20.73% are in secondary. P-value with education level and types of soft drink is less than 0.05 which shows the significant between them.

Table 5 depicts that majority of the respondents (48.2%) use the soft drink after dinner.

Table 2.

Types of soft drink	Age groups								Total
	1-3		4-5		8- 12		13-18		
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Ice tea	3	7.89%	10	26.32%	15	39.47%	10	26.32%	38
Energy Drinks	10	30.30%	8	24.24%	7	21.21%	8	24.24%	33
Other drinks	35	23.49%	36	24.16%	52	34.90%	26	17.45%	149
Cola drinks	50	30.49%	30	18.29%	58	35.37%	26	15.85%	164
Total	98	25.52%	84	21.88%	132	34.38%	70	18.23%	384

p-value &lt; 0.005

Table 3. Daily usage of the soft drink

number of times	frequency	%
1	200	52.08%
2	110	28.65%
3	44	11.46%
more than 3	30	7.81%
total	384	100.00%

Table 4.

Types of soft drink	Not school going		Montessori		Primary		Middle		Secondary		Total
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Ice tea	5	13.16%	4	10.53%	10	26.32%	14	36.84%	5	13.16%	38
Energy Drinks	3	7.89%	8	24.24%	10	30.30%	5	15.15%	7	21.21%	33
Other drinks	15	39.47%	19	12.75%	70	46.98%	25	16.78%	20	13.42%	149
Cola drinks	5	13.16%	24	14.63%	60	36.59%	41	25.00%	34	20.73%	164
Total	28	73.68%	55	14.32%	150	39.06%	85	22.14%	66	17.19%	384

p-value &lt;0.05

## DISCUSSION

Desire to drink in children is related to a liking for consuming sweetened drinks, and does not appear to simply denote greater thirst or hunger (Carnell and Wardle, 2007). Grimm GC et al found that preference for the taste of soft drinks was the strongest predictor in the analysis, with those who reported the strongest taste preference 4.50 times more likely to consume soft drinks five or more times per week than those with a lower taste preference (Grimm et al., 2004). The same pattern was observed in our study

A healthful diet may be conceptualized as one that provides recommended amounts of essential nutrients without excessive intake of energy or food components (such as fat) linked to chronic diseases. Compared with an ideal of balance, variety, and moderation, the dietary intake of US children and adolescents is currently less than optimal in several respects. Notably, the prevalence of obesity among youth has increased dramatically in recent years, suggesting that energy intake exceeds

needs. At the same time, intake of several important nutrients, such as calcium and iron, is less than recommended (Simone et al., 2003). National data indicate that while the quantity of food children consume may exceed energy needs, its nutrient content is less than optimal. Soft drink consumption has become increasingly prevalent in recent decades. Soft drink and fast food are energy dense foodstuffs that are heavily marketed to adolescents. It is generally understood that soft drinks, even though they contain a large number of calories, have little nutritional benefit and are known as "empty calories". Soft drinks are composed mostly of filtered water with diet colas containing close to a hundred percent water. Most of the calories in soft drinks are from refined sugars, and there are no other nutritionally beneficial components in soft drinks. Aim of the study to find out the prevalence of the type of soft drink in the south western region of Saudi Arabia. Align with our study on study stated that the prevalence of soft drink consumption among youth ages 6 to 17 years increased 48%, from a prevalence of 37% in 1977/1978

to 56% in 1994/1998. Mean intake of soft drinks more than doubled, from 5 fl oz to 12 fl oz per day. As in our study one more study stated that 44% students were having frequent soft drink consumption followed by some drinking and no/ less drinking. Several reports from the United States and Europe indicate increasing consumption of soft drinks among children, adolescents, and adults over the past 3 decades (French et al., 2003).

## REFERENCES

- Abdulrahman O Musaiger, Nisreen Zagzoog (2014). Knowledge, Attitudes and Practices toward Energy Drinks among Adolescents in Saudi Arabia. *Glo. J. Health Sci.* 6(2): 42–46. Published online 2013 Nov 27. doi: 10.5539/gjhs.v6n2p42
- Branum AM, Rossen LM, Schoendorf KC (2014). Trends in caffeine intake among US children and adolescents. *Pediatr.* 133: 386–393.
- Carnell S, Wardle J(2007). Measuring behavioural susceptibility to obesity: Validation of the child eating behaviour questionnaire. *Appetite.* 48:104–113. doi: 10.1016/j.appet.2006.07.075.
- Didier Garriguet (2004). Overview of Canadians' Eating Habits. Nutrition: Findings from the Canadian Community Health Survey.
- French SA, Lin BH, Guthrie (2003). National trends in soft drink consumption among children and adolescents age 6 to 17 years: prevalence, amounts, and sources, 1977/1978 to 1994/1998.
- Grimm GC, Harnack L, Story M (2004). Factors associated with soft drink consumption in school aged children. *J. Am. Diet. Assoc.* 104(8):1244-1249. [http://schools-wikipedia.org/wp/s/Soft\\_drink.htm](http://schools-wikipedia.org/wp/s/Soft_drink.htm)
- Jacobson MF (1998). Liquid Candy: How Soft Drinks Are Harming Americans' Health. Washington, DC: Center for Sciences in the Public Interest.
- Malinauskas BM, Aeby VG, Overton RF, Carpenter-Aeby T, Barber-Heidal K (2007). A survey of energy drinks consumption patterns among college students. *Nutr. J.* 6:35. <http://dx.doi.org/10.1186/1475-2891-6-35>.
- Simone A French, Biing-Hwan Lin, Joanne F Guthrie (2003). National trends in soft drink consumption among children and adolescents age 6 to 17 years: Prevalence, amounts, and sources, 1977/1978 to 1994/1998. *J. Am. Diet. Assoc.*
- Viell B, Grabner L, Fruchel G, Boczek P (1996). New caffeinated beverages: A pilot survey of familiarity and consumption by adolescents in north-Rhine Westphalia and Berlin and considerations of consumer protection [in German] *Z Ernährungswiss.* 35(4):378–386. <http://dx.doi.org/10.1007/BF01610556>.
- Wyne AH, Khan N (1995). Use of sweet snacks, soft drinks and fruit juices, tooth brushing and first dental visit in high DMFT 4-6 year olds of Riyadh region. *Indian J. Dent. Res.* 6(1):21-24.
- Wyshak G (2000). Teenaged Girls, Carbonated Beverage consumption, and Bone Fractures. *Arch. Pediatr. Adolesc. Med.* 154: 610-613