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A Study on the Awareness Level and Consumption Pattern of Energy Drinks Amongst Mumbai's Youth

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Abstract: *A lot of researches and scientific studies are conducted on the pros and cons of Energy drinks and most of them highlight more of cons. Yet, we notice the growth of this particular beverage sector over the period of years starting with Red Bull and the new brands emerging consistently. This study aims to find out whether the youth that is consuming these drinks are even aware of the merits and demerits of Energy Drinks. Surprisingly, the findings states that most of the consumers were adolescent and young adults who were well aware of the harmful effects of Energy Drinks and yet chose to consume.*

Keywords: Energy Drinks, Red Bull, Youth, Caffeine, Sugar, effects.

I. INTRODUCTION

Energy is defined as "*the power and ability to be physically and mentally active*" and this particular definition is perhaps the reason why Energy drinks are called so. After going through various research work and articles all emphasizing the ill effects of the excess Caffeine and Sugar present in the energy drink and the effect that caffeine has on our brain one would wonder whether this drinks are even eligible to be called energy drinks, but the exponential sales and the consumption amongst youth is the major issue of concern that prompted me to conduct this study.

1.1 Objectives

- To understand the benefits and side effects of Energy Drink.
- To analyse the awareness levels amongst youth who consumed Energy Drinks in Mumbai.

II. REVIEW OF LITERATURE

(Lile, 2013) in her work states that people have used a variety of drinks throughout history to increase their energy levels, including tea, coffee, soft drinks, and pre-Columbian holly brews, which were high in caffeine. Energy drinks have been around since the early days of soda fountains, despite their current popularity. Between 2008 and 2012, the energy drink market grew significantly, with US sales reaching $12.5 billion by that year.

(Ahmed, 2015) This article suggests Energy drinks are linked to potential health risks, particularly for children and adolescents, but they may have some beneficial effects on exercise performance. These drinks have the potential to negatively impact several body parts. In particular, marketing and health claims made by young people should be restricted until independent research verifies their safety.

(Sara M. Seifert, Judith L. Schaechter, Eugene R. Hershorin and Steven E. Lipshultz, 2011) According to this survey, due to their high and uncontrolled caffeine content, energy drinks, which are popular among teenagers and young adults, can be harmful, especially for those who have certain medical conditions. Concern exists regarding caffeine overdoses, a large portion of which involve people under the age of 19. These beverages have no medicinal value and are not well studied or regulated. Improved toxicity monitoring along with suitable research and safety considerations should form the basis of regulations governing their sales and consumption. Pediatricians should inform families about the risks, but long-term research is necessary for populations that are at-risk.

(João Joaquim Breda, Stephen Hugh Whiting, Ricardo Encarnação, Stina Norberg, Rebecca Jones, Marge Reinap, Jo Jewell, 2014) the report expresses that the caffeine content of energy drinks that varies and are frequently very high, there are legitimate concerns about potential negative health effects associated with increased consumption,

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particularly acute caffeine toxicity. The problem is exacerbated by aggressive marketing to young consumers. The health hazards associated with excessive consumption have received little attention. There are few laws governing the sale of energy drinks based on an individual's age, and there may be a future public health issue, particularly with regard to youth and young adults. To reduce the risks associated with long-term energy drink consumption, more research and legislative action are required.

(Vivi, Ben) Since its inception, the energy drink market has changed from being intended for factory workers and long-haul truck drivers. Now provides a vast array of goods with different components. On the other hand, there is a rising market for natural energy drinks without artificial additives. Businesses such as GO BIG are committed to offering superior, all-natural energy drinks as a healthier choice.

(Dossantos, 2015) Energy drinks have a high caffeine and sugar content that causes energy crashes, which can have a negative impact on the body even though they may give you a quick energy boost. In addition, they may result in high blood pressure, jitteriness, headaches, insomnia, dehydration, addiction, and possible adverse effects from niacin and other ingredients, such as lightheadedness and fast heartbeat.

(Ruth Adeyami, 2020) Youths and teenagers frequently drink energy drinks, which can be dangerous if taken in excess due to caffeine overdose. Increased heart rate, panic attacks, anxiety, jitters, symptoms of caffeine withdrawal, increased urination, type-2 diabetes, and even pregnancy-related problems are some of the overdose effects that can occur. Energy drinks don't have any hard age restrictions, but health organizations discourage kids and teenagers from using them. Parents must make sure their children stay away from these highly caffeinated drinks because too much caffeine can stunt a child's growth. Moderation and public awareness are essential when it comes to energy drink consumption.

(Keith Pearson, 2017) Findings state that the amount of caffeine differs from product to product. This table shows the caffeine content of some popular energy drinks:

	Product Size	Caffeine Content
Red Bull	8.4 oz (250 ml)	80 mg
AMP	16 oz (473 ml)	142 mg
Monster	16 oz (473 ml)	160 mg
Rockstar	16 oz (473 ml)	160 mg
NOS	16 oz (473 ml)	160 mg
Full Throttle	16 oz (473 ml)	160 mg
5-Hour Energy	1.93 oz (57 ml)	200 mg

All caffeine information in this table was obtained from the manufacturer's website or from Caffeine Informer, if the manufacturer did not list caffeine content.

The benefits and side effects of Energy Drinks

Given that it contained both cocaine and caffeine when it was first introduced in 1886, Coca-Cola can be regarded as the first "energy" drink. The coca plant, which yields cocaine, and the kola nut, which yields caffeine, are the sources of the name "Coca-Cola". At first, a gallon of syrup required five ounces of coca leaf; however, this was subsequently lowered. In 1903, cocaine was taken out of Coca-Cola.

Glycoside was developed in 1927 by chemist William Owen as a source of energy for people with the flu and colds. Later on, in 1929, it changed its name to Lucozade, and in 1983, it experienced a successful rebranding. Today's GlaxoSmithKline-owned Lucozade Energy has substantial sugar content along with caffeine.

One of the first energy drinks was Dr. Enuf, created in 1949 by William Mark Swarz and containing cane sugar, caffeine, and B vitamins. It was made in collaboration with Tri-Cities Beverage as a healthier substitute for sugar-filled sodas.

Produced in Japan since 1962, Lipovitan is an energy drink that is intended to fight fatigue. Though some bottles contain a high amount of taurine, it's popular in East Asia and comes with a warning not to consume too much.

Krating Daeng, also referred to as "Thai Red Bull," is a well-liked energy drink that was first introduced in Thailand in 1976 and is currently sold throughout the globe. Though Krating Daeng first achieved success in Asia, it served as the model for Red Bull and contains caffeine, taurine, and B vitamins.

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Dietrich Mateschitz and Chaleo Yoovidhya created Red Bull in 1987 as a response to their experience with the Thai energy drink Krating Daeng, which helped Mateschitz recover from his jet lag. Despite coming from a poor family, Chaleo Yoovidhya went on to become a billionaire.

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Teenagers and young adults in Mumbai are big fans of the energy drink brands STING, XS, RIO, MONSTER ENERGY DRINK, REDBULL, and others. Their success is largely due to their marketing tactics and taste. In India, Red Bull is a well-known brand thanks to its catchy tagline, "Red Bull gives you wings." In 2012, XXX Energy Drinks, a JMJ group subsidiary, achieved a turnover of Rs 20 Crore and a 30% market share. Red Bull is a significant player in the Indian market, with an annual turnover of at least 5000 crores.

Key Ingredients:

Caffeine:Most energy drinks contain caffeine, a stimulant that can boost alertness but can also have unfavorable effects like headaches, dehydration, fatigue, gastrointestinal problems, dizziness, and irritability. Certain energy drinks, such as Monster and Red Bull, have more caffeine than others. A daily intake of two energy drinks is equivalent to the amount of caffeine found in twelve cans of standard soft drinks, like Pepsi or Coke.

Sugar and sugar substitutes: Energy drinks frequently have high sugar or high fructose corn syrup content, which, if consumed in excess, can cause weight gain, tooth decay, and type 2 diabetes. In an effort to provide lower-calorie options, some brands have released "diet" versions that are similar to soft drinks but contain artificial sweeteners.

Taurine:Some energy drinks contain taurine, which promotes the body's fluid balance and neurological growth. But consuming too much taurine can be dangerous and cause dangerously low blood pressure, especially when combined with other ingredients. Typically, 8 ounces of popular energy drinks like Red Bull and Monster contain 1 gram of taurine.

Ginseng, Gingko Biloba and Guarana:

Ginseng

Gingko Biloba

Guarana

While guarana, ginseng, and gingko biloba are generally safe when taken alone, combining them with energy drinks' added sugar and caffeine can cause health problems like headaches, heart palpitations, fatigue, dehydration, and even kidney failure. Furthermore, there's a chance that these herbs will conflict with drugs that affect blood sugar regulation.

Vitamins B: Although B vitamins are essential for good health, some energy drinks have high amounts of B3 (niacin) and B6 that can cause toxicity to the liver and nerve damage. In just one serving, some popular energy drinks can supply over 200% of the daily recommended limit of niacin, which is a substantial amount.

L-Carnitine:Although taking too much of an amino acid like carnitine can cause upset stomach and even seizures, it can also increase fat burning and endurance. Less than three grams per day are usually regarded as safe.

Glucuronolactone: This is a naturally occurring substance that the body produces in trace amounts. D-glucarates, which include glucuronolactone, are supplements that may support the body's natural defense system against the removal of carcinogens, tumor promoters, and their byproducts.

Antioxidants:Antioxidants are chemicals that shield cells from the harm that free radicals can cause. Antioxidants can aid in the body's recovery and lessen oxidative stress-related damage to muscle cells during exercise. Sources of antioxidants can be artificial or natural.

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III. DATA ANALYSIS AND INTERPRETATION

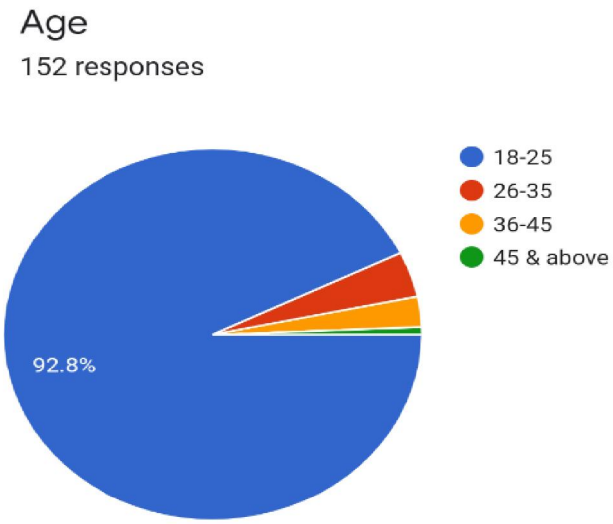
The primary data was collected through a survey with the help of questionnaire. Secondary data was through the previous research articles and website.

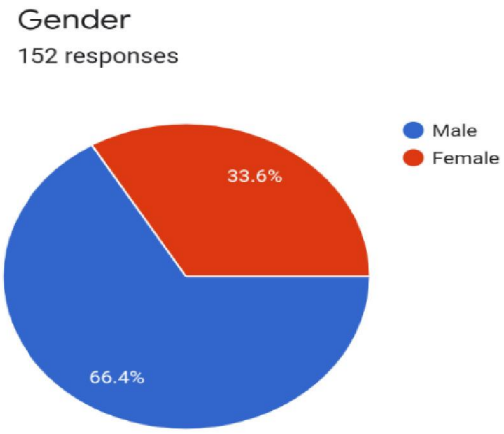
The questionnaire circulated had 152 respondents from different parts of Mumbai. The target population of this research was people who preferred to consume energy drink.

The responses of questionnaire are as follows:

92.8% (141) respondents are in the age group of 18-25.

3.9% (6) respondents are in the age group of 26-35.





2.6% (4) respondents are in the age group of 36-45.

0.7% (1) respondentsare in the age group of 45 & above.

There are 66.4% (101) respondents are male.

There are 33.6% (51) respondents are female.

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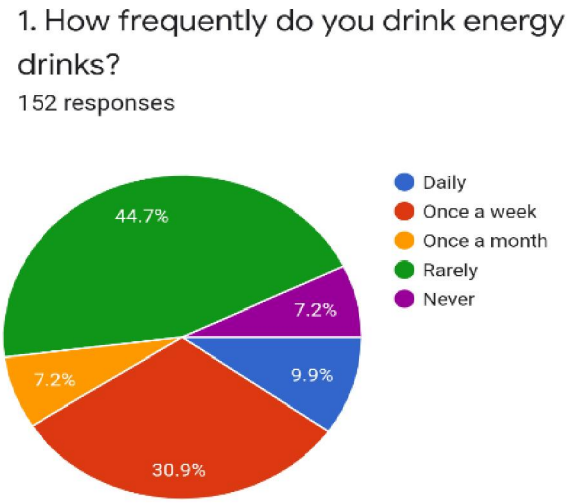
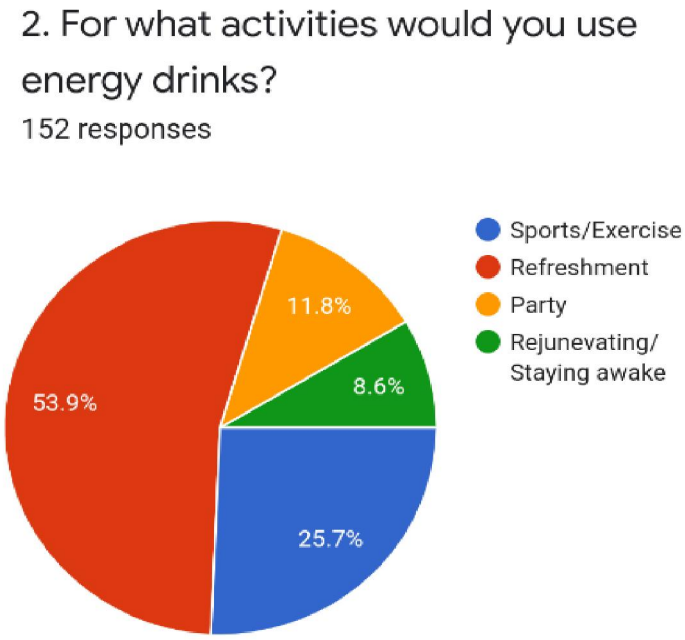


- 9.9% respondents said they drank energy drinks frequently.
- There are 30.9% who drink energy drinks at least once a week.
- 7.2% reported consuming energy drinks at least once a month.
- 44.7% said they only occasionally drank energy drinks.
- 7.2% never drank energy drinks.



25.7% respondents consumed energy drink for sports/exercise.
53.9% respondents consumed energy drink for refreshment.
11.8% respondents consumed energy drink in party.
8.6% respondents consumed energy drink for rejuvenating/staying awake.

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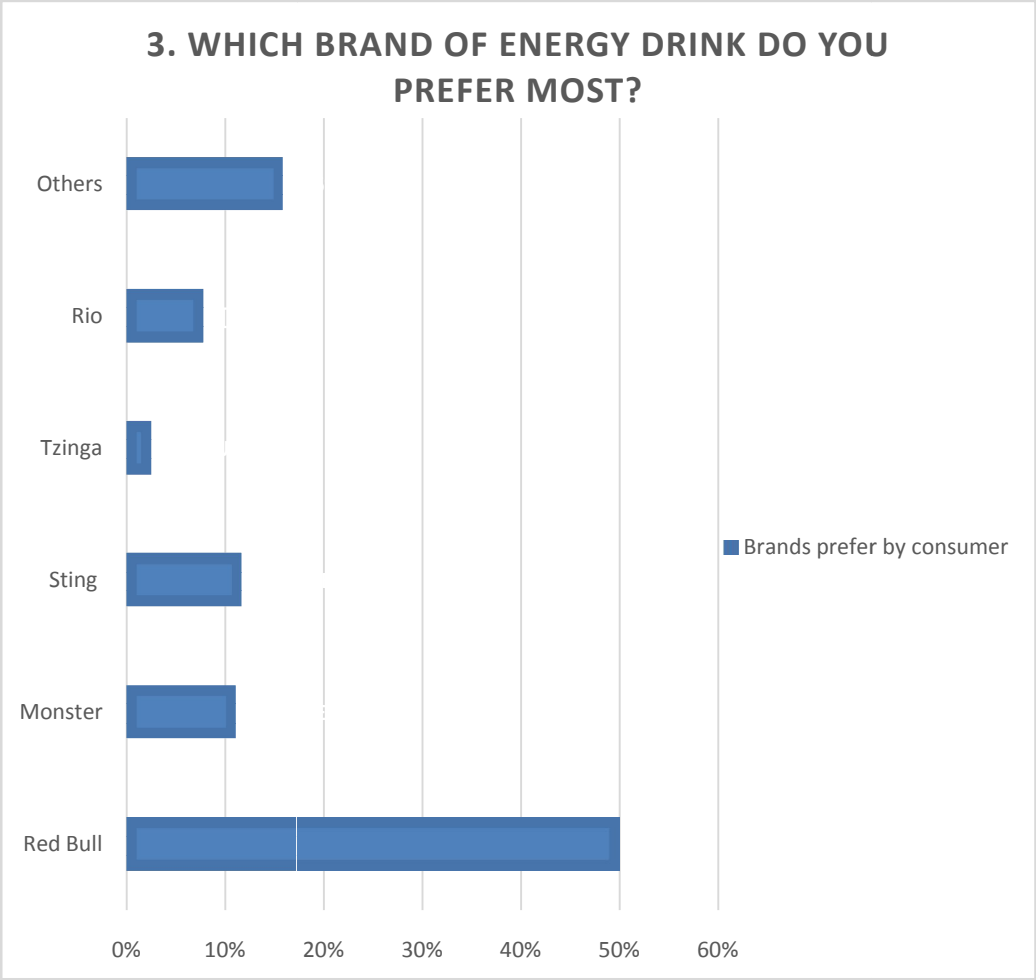
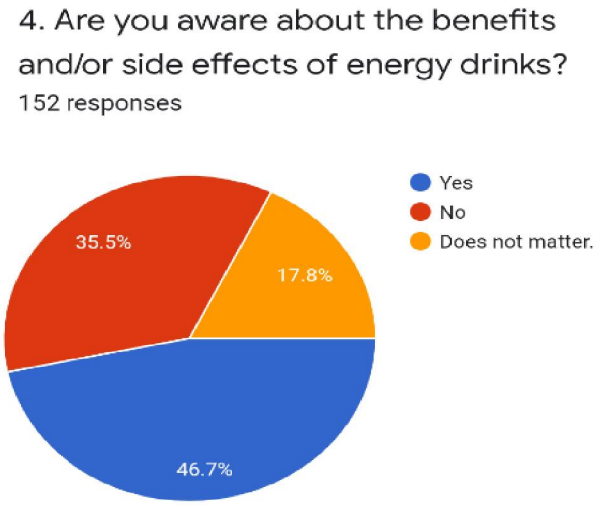


50% Red Bull.
11.2% Monster.
11.8% Sting.
2.6% Tzinga.
7.9% Rio.
16.5% respondents consumed other brands of energy drink.



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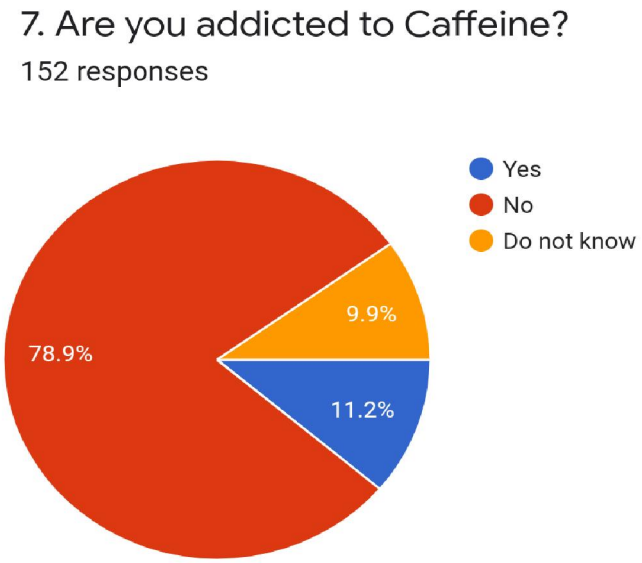
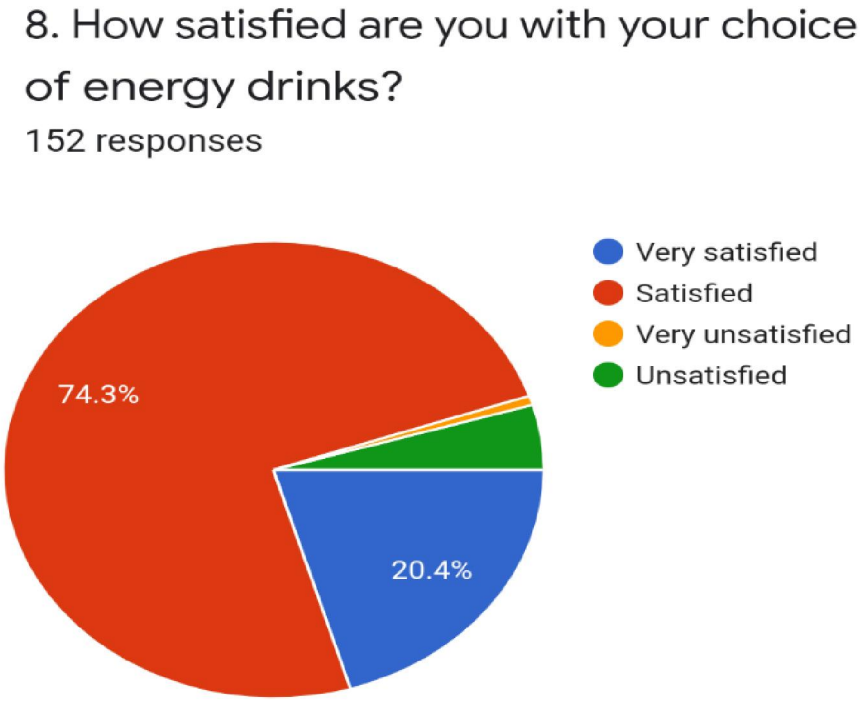
46.7% (71) respondents were aware. 35.5% (54) respondents were unaware about the benefits or side effects of energy drinks.
17.8% (27) respondents said benefits or a side effect of energy drinks does not matter for them.



11.2% (17) respondents agreed of being addicted to caffeine.
78.9% (120) respondents expressed they were not addicted to caffeine.
9.9% (15) respondents were not sure whether they were addicted or not addicted to caffeine.



20..4% (31) respondents were very satisfied and 74.3% (113) respondents were satisfied with their choice of energy drinks.
0.7% (1) respondent was very unsatisfied and 4.6% (7) respondents were unsatisfied with their choice of energy drinks with their choice of energy drinks.

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IV. CONCLUSION

We can conclude that most of the respondents in Mumbai were aware of the benefits and side effects of energy drink though most of them consumed it rarely and were satisfied with their choice of brand.Red Bull was found to be the most popular followed by Sting, Monster, Rio, Tzinga and other brands such as Urzza, Hell, Gatorade, etc.

Concerns with energy drinks:

Energy drinks are popular among teenagers, but because of their high caffeine, sugar, and herbal stimulant content, they can have harmful effects on health. Youngsters and teenagers' smaller bodies may make them more susceptible. Risk-seeking behaviors, mental health conditions, cardiovascular issues, and problems with metabolism, kidneys, or teeth are examples of potential health risks. Overindulgence in caffeine, which is frequently present in energy drinks, can cause heart problems, anxiety, insomnia, seizures, and, in rare instances, cardiac arrest. Moderation and awareness are crucial because these concerns are exacerbated by a lack of regulation and noncompliance with guidelines.

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