

# Effect If Coffee and Tea Consumption among Dental School Students

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## Abstract:

**Aim and Objective :** To asses the effect of coffee and tea consumption on health of students in a dental school.

**Background:** Coffee and tea has become common among the present generation students

They become dependent on coffee and tea products because it gives energy and freshness (alertness). This study is done to assess the effect of coffee and tea consumption among dental school students. A questionnaire based on coffee and tea consumption is prepared and administered to students through survey planet.

**Reason:** This study is to identify the positive and negative associations of consumption of coffee and tea in the health of the students.

**Result** to evaluate the effect of coffee and tea on the health of dental students.

**Key words:** dental students, coffee and tea, energy, freshness.

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## INTRODUCTION :

Caffeine constitutes about 3% of tea's dry weight, translating to between 30 mg and 90 mg per 8-oz (250-ml) cup depending on type, brand,[1] and brewing method[2]. Tea also contains small amount of theobromine and theophylline which are stimulants and xanthines similar to caffeine[3]. Because of environmental pollution fluoride and aluminium is also present in small amount[4]. Drinking coffee has been associated with a variety of harmful and beneficial health effects. Coffee contains huge numbers of compounds, including antioxidant chlorogenic acids. Recent evidence suggests coffee could help prevent type 2 diabetes [5] and neurodegenerative diseases like Alzheimer's. Both coffee and tea contains caffeine as their major components. Caffeine is one of the world's most commonly used drugs. It is a bitter, naturally occurring substance found in coffee, cocoa beans, tea leaves, kola nuts, and other plants.[6] Caffeine is a natural chemical which activates central nervous system. It is identified that regular coffee and tea consumption increases short term focus, alertness and long term memory. Although it is good in some people, caffeine contained product like coffee and tea are sensitive to some people and causes illness and such people are instructed not to consume such products. These may trigger migraine headache in some people. Tea may block the vitamin B1 inactivation. There is some evidence of carcinogenic effects due to tea consumption. Some statistical evident says that consumption of tea in some pregnant mother causes congenital disorders in their offspring. Coffee affects HCL, a stomach secretions. They might demineralises the tissues. Tea has an inhibitory function of absorption of nonheme iron, but studies says that even coffee absorbs iron [7]. Caffeine is addictive. If

you feel like you cannot get going in the morning, feel overtired during the day from not having caffeine, or get headaches when you try to stop taking caffeine regularly, these are signs of dependence[8]. Intake of four to seven cups of coffee or seven to nine cups of tea leads to caffeineism which is a syndrome characterised by a range of adverse reactions such as restlessness, anxiety, irritability, agitation, muscle tremor, insomnia, head-ache, diuresis, sensory disturbances (e.g. tinnitus), cardiovascular symptoms (e.g. tachycardia, arrhythmia) and gastrointestinal complaints (e.g. nausea, vomiting, diarrhoea). Excessive caffeine intake may lead to detrusor instability (unstable bladder) development in women[9]. Medicinal products also often contain significant amounts of caffeine. Over-the-counter stimulant medications such as NoDoz and Vivarin contain between 100-200 milligrams per tablet, while caffeine-containing analgesics such as Anacin, Excedrin, and Midol deliver 64 to 130 milligrams per two tablet dose. This study is done to determine the effect of coffee and tea consumption in dental school students.

## MATERIALS AND METHODS:

This study was conducted among dental students of Saveetha university. 82 students were included in this study. Students under the age group of 17- 25 are included. A self administered questionnaire was made using survey planet to assess the consumption of coffee or tea among dental school students. Questions such as whether consumption of coffee or tea alters their stress level or whether it causes headache or whether it improves the memory, were included. The statistics for the questionnaire is followed;

STATISTICAL ANALYSIS

**Approximately how many years have you been a coffee or tea drinker**

|         |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------------|-----------|---------|---------------|--------------------|
| Valid   | < 4          | 33        | 40.2    | 47.1          | 47.1               |
|         | 4 - 8        | 11        | 13.4    | 15.7          | 62.9               |
|         | 8 - 10       | 12        | 14.6    | 17.1          | 80.0               |
|         | More than 10 | 14        | 17.1    | 20.0          | 100.0              |
|         | Total        | 70        | 85.4    | 100.0         |                    |
| Missing | System       | 12        | 14.6    |               |                    |
| Total   |              | 82        | 100.0   |               |                    |

**What is your preferred beverage**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | Coffee | 34        | 41.5    | 48.6          | 48.6               |
|         | Tea    | 36        | 43.9    | 51.4          | 100.0              |
|         | Total  | 70        | 85.4    | 100.0         |                    |
| Missing | System | 12        | 14.6    |               |                    |
| Total   |        | 82        | 100.0   |               |                    |

**Do you consume coffee / tea daily**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | Yes    | 41        | 50.0    | 58.6          | 58.6               |
|         | No     | 29        | 35.4    | 41.4          | 100.0              |
|         | Total  | 70        | 85.4    | 100.0         |                    |
| Missing | System | 12        | 14.6    |               |                    |
| Total   |        | 82        | 100.0   |               |                    |

**How many times will you consume coffee/ tea a day**

|         |             | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-------------|-----------|---------|---------------|--------------------|
| Valid   | One         | 43        | 52.4    | 61.4          | 61.4               |
|         | Two         | 18        | 22.0    | 25.7          | 87.1               |
|         | Three       | 7         | 8.5     | 10.0          | 97.1               |
|         | More than 3 | 2         | 2.4     | 2.9           | 100.0              |
|         | Total       | 70        | 85.4    | 100.0         |                    |
| Missing | System      | 12        | 14.6    |               |                    |
| Total   |             | 82        | 100.0   |               |                    |

**When do you have the most consumption of tea / coffee?**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Morning   | 30        | 36.6    | 42.9          | 42.9               |
|         | Afternoon | 3         | 3.7     | 4.3           | 47.1               |
|         | Evening   | 32        | 39.0    | 45.7          | 92.9               |
|         | Night     | 5         | 6.1     | 7.1           | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**You consume coffee / tea for**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Taste     | 19        | 23.2    | 27.1          | 27.1               |
|         | Freshness | 51        | 62.2    | 72.9          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Do you consume coffee/ tea before studying**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 16        | 19.5    | 22.9          | 22.9               |
|         | No        | 18        | 22.0    | 25.7          | 48.6               |
|         | Sometimes | 36        | 43.9    | 51.4          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Have you ever felt tiredness after few minutes of drinking coffee/ tea**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 7         | 8.5     | 10.0          | 10.0               |
|         | No        | 53        | 64.6    | 75.7          | 85.7               |
|         | Sometimes | 10        | 12.2    | 14.3          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Have you ever felt that your stress level decreases after consuming coffee/ tea**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 39        | 47.6    | 55.7          | 55.7               |
|         | No        | 9         | 11.0    | 12.9          | 68.6               |
|         | Sometimes | 22        | 26.8    | 31.4          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Do you feel more alert after consuming coffee/ tea**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 43        | 52.4    | 61.4          | 61.4               |
|         | No        | 10        | 12.2    | 14.3          | 75.7               |
|         | Sometimes | 17        | 20.7    | 24.3          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Do you feel your memory is improved when you drink coffee/ tea**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 19        | 23.2    | 27.1          | 27.1               |
|         | No        | 21        | 25.6    | 30.0          | 57.1               |
|         | Sometimes | 30        | 36.6    | 42.9          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Do you feel head ache after few minutes of consuming coffee / tea**

|         |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------|-----------|---------|---------------|--------------------|
| Valid   | Yes       | 7         | 8.5     | 10.0          | 10.0               |
|         | No        | 52        | 63.4    | 74.3          | 84.3               |
|         | Sometimes | 11        | 13.4    | 15.7          | 100.0              |
|         | Total     | 70        | 85.4    | 100.0         |                    |
| Missing | System    | 12        | 14.6    |               |                    |
| Total   |           | 82        | 100.0   |               |                    |

**Could you go two days without having coffee / tea**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | Yes    | 45        | 54.9    | 64.3          | 64.3               |
|         | No     | 25        | 30.5    | 35.7          | 100.0              |
|         | Total  | 70        | 85.4    | 100.0         |                    |
| Missing | System | 12        | 14.6    |               |                    |
| Total   |        | 82        | 100.0   |               |                    |

**How much do you spend for coffee/ tea per week**

|         |                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------------|-----------|---------|---------------|--------------------|
| Valid   | Less than Rs 100 | 52        | 63.4    | 74.3          | 74.3               |
|         | Rs 100 - 250     | 14        | 17.1    | 20.0          | 94.3               |
|         | Rs 250 - 500     | 4         | 4.9     | 5.7           | 100.0              |
|         | Total            | 70        | 85.4    | 100.0         |                    |
| Missing | System           | 12        | 14.6    |               |                    |
| Total   |                  | 82        | 100.0   |               |                    |

**What do you consume as an alternate for coffee / tea**

|         |                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------------|-----------|---------|---------------|--------------------|
| Valid   | Energy drink     | 47        | 57.3    | 67.1          | 67.1               |
|         | Vitamin drink    | 1         | 1.2     | 1.4           | 68.6               |
|         | Protein drink    | 8         | 9.8     | 11.4          | 80.0               |
|         | Supplement drink | 14        | 17.1    | 20.0          | 100.0              |
|         | Total            | 70        | 85.4    | 100.0         |                    |
| Missing | System           | 12        | 14.6    |               |                    |
| Total   |                  | 82        | 100.0   |               |                    |

**Your opinion about coffee/ tea**

|         |                 | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-----------------|-----------|---------|---------------|--------------------|
| Valid   | Good for health | 9         | 11.0    | 12.9          | 12.9               |
|         | Gives freshness | 44        | 53.7    | 62.9          | 75.7               |
|         | Improves memory | 5         | 6.1     | 7.1           | 82.9               |
|         | None            | 12        | 14.6    | 17.1          | 100.0              |
|         | Total           | 70        | 85.4    | 100.0         |                    |
| Missing | System          | 12        | 14.6    |               |                    |
| Total   |                 | 82        | 100.0   |               |                    |

**RESULT:**

28% of the students were male and the remaining 72% were female. Of the whole, 61% of the students consume coffee/ tea while 14% were not coffee or tea drinkers. 24.4% students rarely consume coffee or tea. Around 40% students were coffee / tea consumers for less than 4 years and 17% were consuming coffee or tea for more than 10 years.

Of the total population, 41.5% were coffee consumers and 43.8% were tea consumers . 50% students consume coffee/ tea daily while 35% won't. 52.4% students consume coffee/ tea only once a day and only 2% students consume more than thrice a day. 36.6 % consume coffee/ tea in the morning and 39% consume during evening while 3.7 % and 6.1% consume coffee or tea in afternoon and night respectively. 23.2% students consume coffee for taste while 62.2% students consume coffee or tea for freshness. From this it is concluded that coffee and tea gives freshness.

19.5% students consume coffee/ tea before studying while 22% doesn't. 43.9% students sometimes consume coffee/ tea before studying.64.6% students doesn't felt tired after drinking coffee or tea while 12.2% and 8.5% felt tiredness. 47.6% says that they felt that their stress level gets reduced while consuming coffee/ tea While 11% doesn't and 26.8% sometimes. 52.4% students felt more alert while consuming coffee or tea 12.2% doesn't and 20.7% students sometimes feel the alertness.23.2% students had felt that their memory power increased after the consumption of coffee or tea. 25.6% felt that their memory power is not altered by consumption of coffee or tea. While 36.6% students sometimes feel that their memory power had increased. 63.4% students said that coffee or tea consumption didn't lead them to headache.

54.9% were not addictive to coffee or tea consumption because they were been able to go two days without coffee or tea. Only 4.9 % students had spent an amount of 250-300□ for this coffee or tea. 63.4% had spent below 100□. 57.3% students prefer consuming energy drink as an alternate for coffee or tea. 53.7% students were consuming coffee or tea only for freshness .

**DISCUSSION:**

A study says that caffeinated drinks like coffee and tea reduces fatigue. It relieves pain, migraine head ache and reduce asthma. Caffein which is present in coffee and tea increases alertness.[11]. A study says that caffeine is a

central nervous system stimulant and is one of the popular drugs all over the world. Caffeine is a diuretic, it makes the person feel jittery and restless and it causes insomnia and head ache if it is consumed in high dose[11,12,13]. Coffee and tea acts as reinforcer. [13]. A study says that tea is thought to influence iron absorption. Recent study says that coffee may inhibit iron absorption by chemical mechanism[7]. A study says that Caffeine presents in coffee and tea prevents memory disturbance[14]. This study states that the consumption of coffee and tea increases alertness, reduces tiredness, reduces the stress level which the positive association. Consumption of coffee and tea does not alter much on memory, headache . Coffee and tea also gives freshness.

**CONCLUSION:**

Thus, from this study, we find that Consumption of coffee and tea gives freshness, alertness, it reduces the tiredness and reduces the stress level. It mostly gives the positive energy to the individual.

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