



Caffeine Addiction- A Survey

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ABSTRACT

The aim of this review is to do a survey on the prevalence of caffeine addiction. To have a clear understanding of the prevalence of caffeine addiction so that it can be prevented. Caffeine is the most commonly consumed Central Nervous system stimulant and drug. It has stimulant like effect on mood and performance. Consumption of caffeine in adequate quantities has no adverse effects, but prolonged consumption of caffeine makes it addictive and people find it difficult to stop taking heavy doses of caffeine even though they are aware of the effects it may cause later on. This might be related to family alcoholism. Caffeine addiction leads to caffeine overdose, which is moderately associated with a wide range on psychiatric disorders. The overdose of caffeine which occurs as a result of caffeine addiction can cause adverse effects and knowledge of caffeine addiction can help reduce it.

Keywords: caffeine, common, stimulant, alertness, addiction

INTRODUCTION

Caffeine is the most commonly used Central Nervous system stimulant. Its chemical name is 1, 3, 7-Trimethylpurine- 2, 6- dione. Being aware of its effects or not, people are consuming it to a large extent. Chemically, it is a psychoactive drug of the methylxanthine class of psychoactive drugs. Coffee is the most common mode of caffeine ingestion, the other modes including coke, tea, energy drinks, chocolates, etc. Mean caffeine addiction among adults in the United States has been estimated to be 280 mg/day which is equivalent to about 6 oz cups of coffee or 5 16 oz bottles of soft cola drink.¹ The superiority of caffeine which leads to its preference over other commonly available psychoactive drugs is that it increases wakefulness, focus, general body co-ordination and thus helps to increase the overall concentration. Caffeine has the desired effect of delaying sleep, but in general, it is manifested through their different actions. In students, it prevents drowsiness and increases alertness, which is why students prefer some caffeinated food stuff during late night studies. In workers, it prevents effects which may arise due to drowsiness. In sportsmen, it can improve sprint, endurance and team sports performance. With the increasing frequency of the intake of the caffeinated food stuff, people may get addicted and feel that they cannot get through a day without the intake of that particular caffeinated food stuff. The adverse effects of the ingestion of excessive amounts of caffeine during pregnancy include decrease fecundity, spontaneous abortion and reduced fetal growth.² However, in anaemic patients, caffeine inhibits suicidal erythrocyte death and thus helps to prevent the decrease of the erythrocyte count. Though the ingestion of caffeine has benefits,

when taken in excess, it may have adverse effects. Despite the fact that we ingest caffeine multiple times a day, keeping a check on caffeine addiction might be essential to avert further physiological complications.

MATERIALS AND METHODS

The questionnaire- based study was carried out online through a survey monkey link. Individuality was ensured when the subjects filled up the survey. The participants who undertook the survey are undergraduate students of a dental college. A total of 18 questions were asked to detect if the subjects showed symptoms of caffeine addiction. The questions included are:

1. Do you have caffeinated beverages? (This includes tea, coffee, coke tec.)
2. What is your most preferred caffeinated beverage?
3. When did you start consuming this food substance?
4. How often do you consume this food?
5. When do you consume it to a higher extent?
6. Do you think that caffeine is essential for you to get through a day at work/college?
7. How long can you be without taking that particular caffeinated food?
8. Do you feel that caffeine increases your alertness and activeness during the day?
9. Do you have a strong urge to have that particular food at the thought of it?
10. Once you could not get that foodstuff, did you tell yourself to eat it as soon as possible?
11. How much hours of sleep do you get usually?



12. Do you feel sleepy during the day?
13. Is anyone in your family alcoholic?
14. Do you feel or did anyone tell you that there are certain changes in your behaviour after taking that particular caffeinated food?
15. Do you think that you are addicted to caffeine?
16. Do you find stains on your teeth?
17. Do you get tired easily?
18. Do you have an idea on caffeine addiction?

Based on the responses from the subjects, statistical analysis was performed and the results were tabulated systematically.

RESULTS AND DISCUSSION

In the data collected among dental college students, about 79.4% were found to intake caffeinated beverages, among which about 25 % intake was by coffee, 20.6% in the form of tea, 4.4% in the form of carbonated drinks like coke, and 35.3% as chocolates. Caffeine may promote the consumption of the caffeine-containing beverages by the development of flavour preferences where individuals associate unconsciously a flavour, leading to its high intake.³ Among the subjects, 57.4% of students admitted that caffeine is essential for them to get through a day at college. This implies that more than half of the student population depend on caffeine as a necessity. There have been numerous reports that caffeine is an ergogenic aid; ingestion of the drug has been shown to increase endurance.⁴ This is in accordance with the findings, that 58.8% of the subjects felt that caffeine increased their alertness and activeness during the day and helped them perform better at college. Yet, around 55% of the subjects were not driven to have that caffeinated food stuff at the very thought of it, which shows that they are not driven by the desire to have it all the time, but 41% have reported that they would try to get that food stuff as early as possible to fulfil their desire. Also, the most preferred time for taking the food stuff was found to be in the evening. About 60% of the subjects admitted to feel sleepy during the day, even though they had enough amount of sleep the previous night. This might indicate that their metabolism gets slowed down, due to the continued intake of caffeine which results in sluggishness and sleepiness. Only about 13.2% reported to have an alcoholic person in the family, which may indicate a relation between alcoholism and addiction to caffeine. Also, other studies have shown lower rates of caffeine abstinence in people with a familial trait of alcoholism.⁵ The suggestion of a genetic component to problematic caffeine use is consistent.⁶ Studies comparing human monozygotic and dizygotic twins have shown heritabilities of caffeine use, tolerance, and withdrawal ranging from 35%-77%.⁷ Interestingly, exactly 13.2% of the subjects reported that they were said that there were certain

changes in their behaviour after taking on that particular food stuff. 20.6% of the students thought that they were addicted to caffeine and could not abstain themselves from it. Only around 19.1% of the students reported to have stains on their teeth, and 47.1% reported to get tired easily. In general, it was estimated that around 40% have an idea on caffeine addiction, based on the data obtained. Some studies showed that people showed withdrawal symptoms when they stopped taking in caffeine, and stated "need coffee to wake up", "it will cause headaches", "couldn't concentrate at work" and such explanations.

Question: Do you feel that caffeine increases your alertness and activeness during the day?

	Percent	Valid Percent	Cumulative Percent
Valid Yes	58.8	58.8	58.8
No	41.2	41.2	100.0
Total	100.0	100.0	

Question: Do you think that you are addicted to caffeine?

	Percent	Valid Percent	Cumulative Percent
Valid Yes	20.6	20.6	20.6
No	79.4	79.4	100.0
Total	100.0	100.0	

CONCLUSION

The data suggests that more than half of the students believe that caffeine has increased their activeness during the day.

Also, 20.6% think that they are addicted to caffeine on their own, without proper diagnosis by a specialist. This might indicate that with proper diagnosis, more subjects are probable to be confirmed to be addicted to caffeine. The addiction to caffeine might be related to the occurrence of stains on teeth. Caffeine has been proven to increase alertness and has an advantage.

At the same time, over-intake of caffeine may cause adverse effects, which might be the need to keep a check on the intake of caffeine. More research may be required to enlighten the society on the addiction of caffeine and its adverse effects on health and disease.

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