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### Assessing Caffeine Consumption Changes from High School to College among College Freshmen

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# Assessing Caffeine Consumption Changes from High School to College Among College Freshmen



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## Abstract

**Background:** Many studies show an increase in caffeine consumption among college students.  
**Objective:** To determine caffeine consumption changes from high school to college among college freshmen.  
**Design:** After Institutional Review Board (IRB) approval, a thirteen-question Google form survey was sent via campus-wide email. Informed consent was obtained and kept separate from survey responses.  
**Participants/Setting:** First year college students ages 18 to 22 at Ouachita Baptist University.  
**Results:** Among the 48 respondents, the majority indicated an increase or no change in caffeine consumption from high school to college (n=20, n=15 respectively). The top reported adverse health effects experienced by most participants difficulty falling asleep and restlessness or shakiness (n=21, 43.8% for both). Rapid heart rate was experienced by 19 participants (39.6%).  
**Conclusion:** It was determined that caffeine consumption increased for most participants from high school to their first year of college. The adverse health effects reported by students indicates a need for further safe caffeine consumption education.

## Objective

The objective of the study is to determine caffeine consumption changes from high school to college among college freshman.

## Introduction

The presence of caffeine sources available to high school and college ages students is ever present in today's market. While most consumers drink caffeinated beverages to provide them with more energy, for the taste, or to improve their image among their peers, the side effects that can be experienced may outweigh the benefits.<sup>1</sup> Caffeine is the most consumed central nervous system stimulant worldwide.<sup>2</sup> Moderate caffeine consumption can increase energy, improve focus and concentration, alleviate stress, and improve mood.<sup>1</sup> Excess caffeine consumption can cause negative side effects such as anxiety and depression, trouble falling asleep, and rapid heart rate. Despite negative side effects, the consumption of caffeine among students continues to rise.<sup>3</sup> Previous research has focused on either high school students or college students but has neglected to evaluate the change in consumption between high school seniors to college freshmen. Opportunities could exist to educate college freshmen on the benefit versus risk of caffeine consumption.

## Methodology

Approval for the study was obtained by the Ouachita Baptist University (OBU) IRB as an expedited review. Informed consent was obtained from each participant. To collect data, a thirteen-question Google form survey was sent in a campus-wide email. Questions aimed to assess the caffeine consumption changes among college freshman as they transitioned from high school to college. Participants were college freshman on OBU's campus who were at least 18 years of age.

## Results

A majority of the respondents identified as female (77.1%) while the remaining number of participants were male (22.9%). Twenty-one (43.8%) and twenty-three (47.9%) participants were 18 and 19 years old, respectively, while 3 (6.3%) were 20 years old. Only one (2.1%) was 22 years old. All first-year college students were included in the study regardless of age.

Various caffeinated beverages were consumed by the participants. Most participants indicated they drink coffee as their preferred source of caffeine (n=32, 66.7%). Energy drinks were a close runner-up with 27 participants indicating regular consumption (56.3%). Twenty-five participants (52.1%) report consumption of soda. Tea was the least common reported caffeinated beverage consumed (n=17, 35.4%). Eight participants (16.7%) report no caffeine consumption.

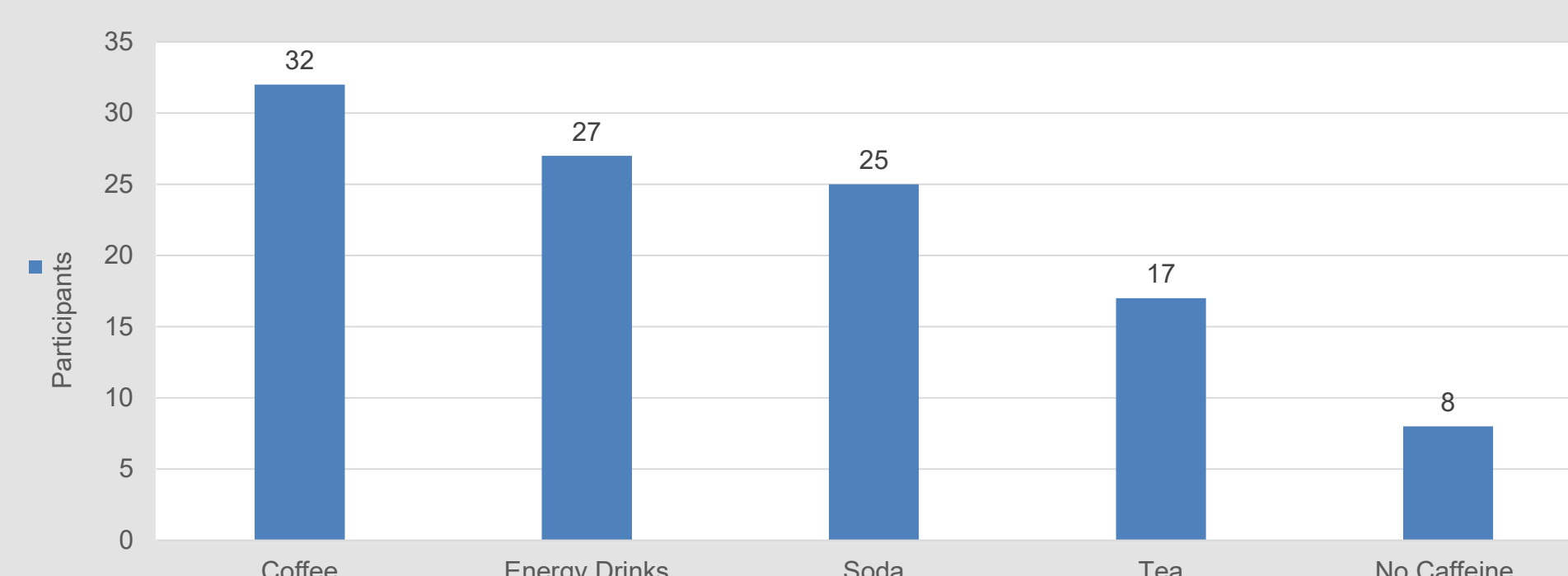


Figure 1. Caffeinated drinks consumed by college freshmen

The most popular energy drinks were Celsius (eighteen, 37.5%) and Alani (13, 27%). Compared to the previous question, some individuals were more likely to choose coffee over high-caffeine beverages like energy drinks.

The survey included a question to investigate the reasons why participants consume caffeinated beverages. The top two reasons for consuming caffeinated drinks were the taste of the drink (n=33, 68.8%) and the need to boost energy levels (n=32, 66.7%)

## Results

Respondents were also asked to report their caffeine consumption changes from high school to college. Nearly half (n=20, 41.7%) of respondents indicate an increase in caffeine consumption. Figure 2 below illustrates how caffeine consumption has changed for participants since they began attending college.

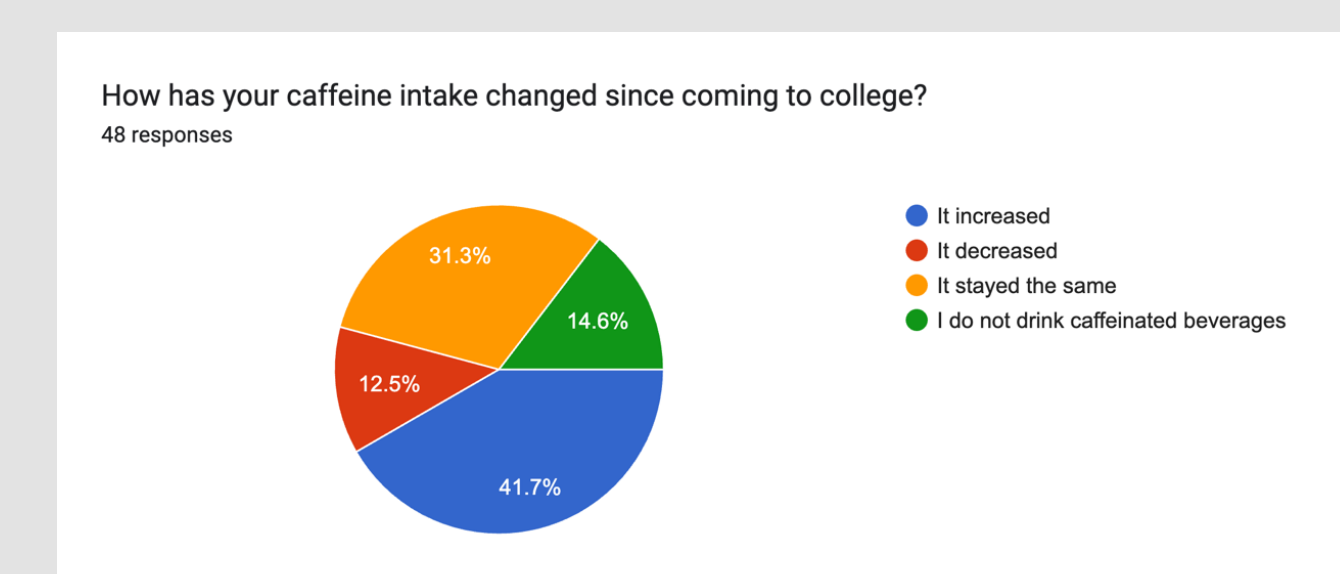


Figure 2. Caffeine consumption changed in college

Figure 3 illustrates frequency of caffeinated beverages consumed by participants while they were in high school. The majority of participants (n=34, 70.8%) drank one to two caffeinated beverages per day. Only one participant indicated consuming three to four caffeinated beverages per day and more than five per day, for each category. Twenty-five percent of respondents (n=12) reported no caffeine consumption while in high school.

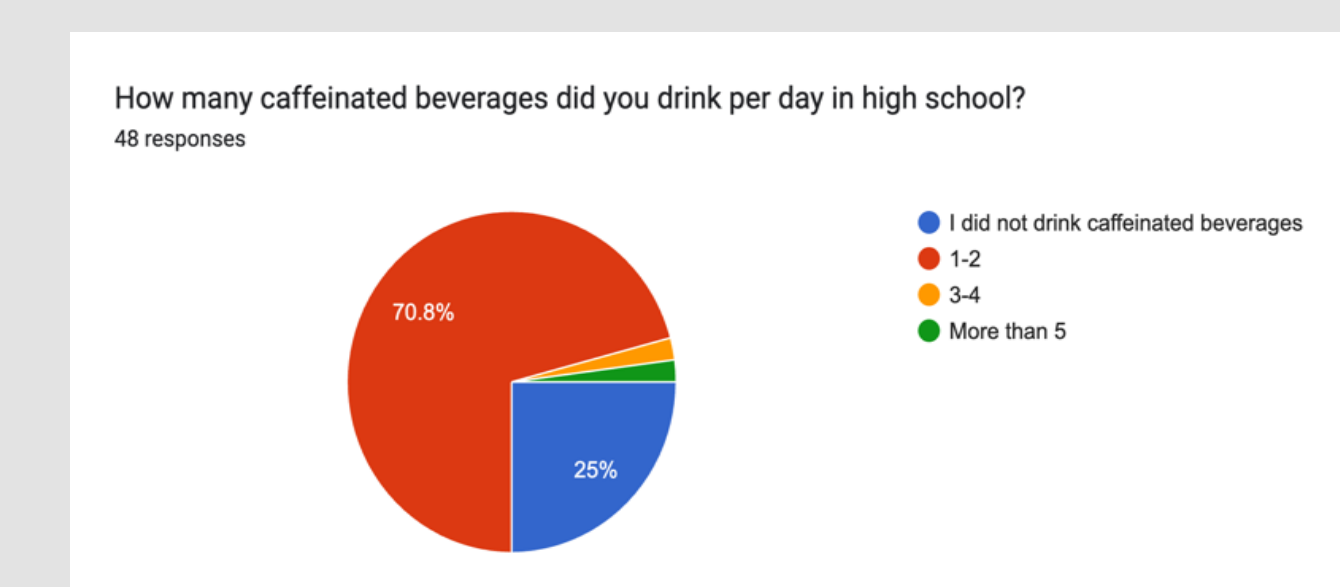


Figure 3. Caffeine consumption in high school

Currently, two-thirds of participants indicate they consume 1-2 caffeinated beverages per day (n=32). Seven participants indicate they consume three to four caffeinated beverages per day (14.6%). Nine participants (18.8%) still consume no caffeinated beverages currently. No respondents indicated that they consume five or more caffeinated beverages currently. Figure 4 illustrates current caffeine consumption of respondents.

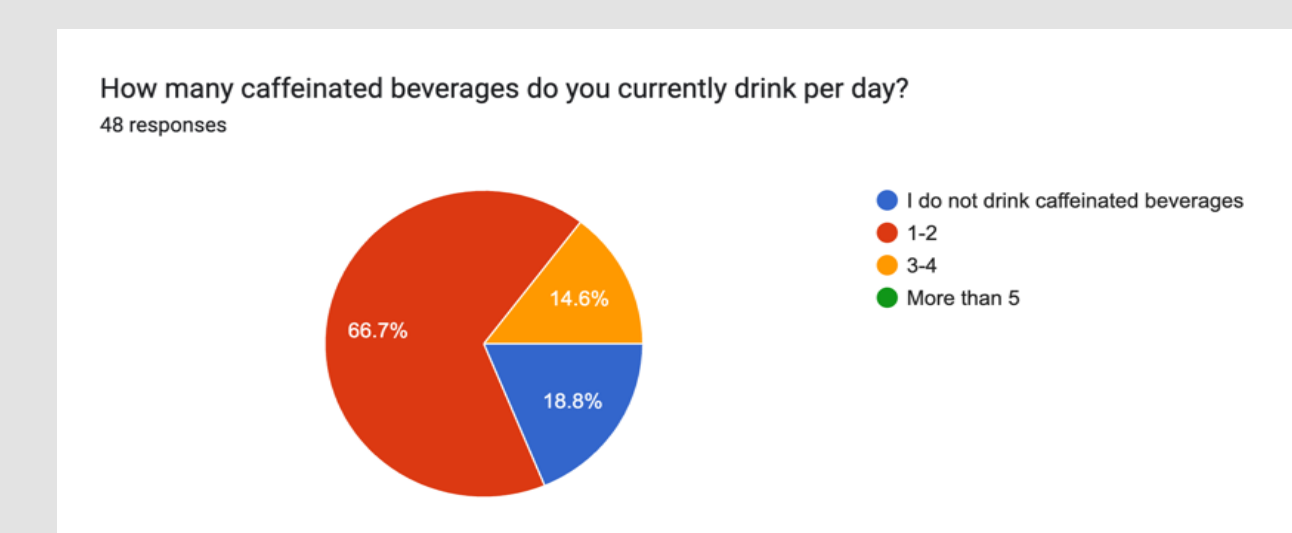


Figure 4. Caffeine consumption in college

The results of the study indicated that caffeine consumption changes by participants from high school to college is significant.

## Results

The top two negative side effects experienced by participants are difficulty falling asleep and restlessness or shakiness (n=21, 43.8% for both). Rapid heart rate was experienced by 19 participants (39.6%). Anxiety (n=16, 33.3%), loss of appetite (n=14, 29.2%), and headaches (n=12, 25%) were also commonly reported side effects. Dizziness was experienced by six respondents (12.5%). The side effects experienced by participants is consistent with the research regarding excessive caffeine consumption among high school and college age students. Figure 5 illustrates the top seven negative side effects experienced by the participants.



Figure 5. Reported side effects

## Conclusion

Fewer college freshmen drink no caffeine compared to when they were in high school. Furthermore, more respondents are drinking three to four caffeinated beverages per day since starting college. College students report experiencing significant and potentially harmful side effects of caffeine consumption. Since students are consuming more caffeine and experiencing adverse side effects, the need for education on safe caffeine consumption is vital. By providing education, college students will be able to make more informed decisions regarding caffeine consumption.

## Sources

1. Mahoney CR, Giles GE, Marriott BP, et al. Intake of caffeine from all sources and reasons for use by college students. *J Science Direct*. 2019;38(2):668-675. doi: 10.1016/j.clnu.2018.04.004
2. Bertasi RAO, Humeda Y, Bertasi TGO, Zins Z, Kimsey J, Pujalte G. Caffeine intake and mental health in college students. *Cureus*. 2021;13(4):e1413. doi:10.7759/cureus.14313.
3. Tran NL, Barraj LM, Bi X, Jack MM. Trends and patterns of caffeine consumption among US teenagers and young adults, NHANES 2003-20012. *Food Chem Tox*. 2016;94:227-42. doi:10.1016/j.fct.2016.06.007.