



CAFFEINE CONSUMPTION AMONG COLLEGE STUDENTS

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Background Information

Caffeine's reported "addictive" consequences due to repeated consumption continue to be a controversial issue among health experts. Research shows that 94% of college students consume caffeinated beverages, including sources from coffee, tea, soda, and energy drinks. Coffee, at 88.2%, is the most commonly consumed caffeinated beverage among college students (Larson, 2009).

Compared to the national average, college students consume over five times the amount of caffeine from caffeinated beverages, yet the majority of students also do not believe caffeine is associated with negative health outcomes. Studies show that the top three reasons for consuming caffeine among college students include, academic purposes (62.6%), social consumption (70%), and preference for the taste (72.4%) (Larson, 2009).

Regularly ingesting as little as 100 mg/day of caffeine can produce dependence and induce withdrawal symptoms when ingestion ceases, such as headache, fatigue, decreased alertness, difficulty concentrating, and drowsiness (Griffiths, Juliano, & Chausmer, 2005). Continuous caffeine use is reported to contribute negatively to physiological and psychological well-being following cessation.

Study Objective

❖ To determine dietary intake patterns of caffeine consumption among college-age students and identify possible health-related consequences due to caffeine withdrawal.

Study Design

- **Subjects:** 229 adult subjects (≥ 18 years of age) were randomly selected from Texas Christian University. The sample population included 18% male and 82% female interdisciplinary students (mean age=21 years).
- **Methods:** After approval by Nutritional Sciences Department Review Board and obtaining participant consent, the study population of students completed a Caffeine Consumption Questionnaire. The Questionnaire consisted of asking the student to identify possible caffeine-containing beverages consumed, amount of beverage consumed, time of day in relation to consumption, potential reasons for consuming caffeine, possible withdrawal symptoms, and if the student felt he/she was addicted to caffeine.

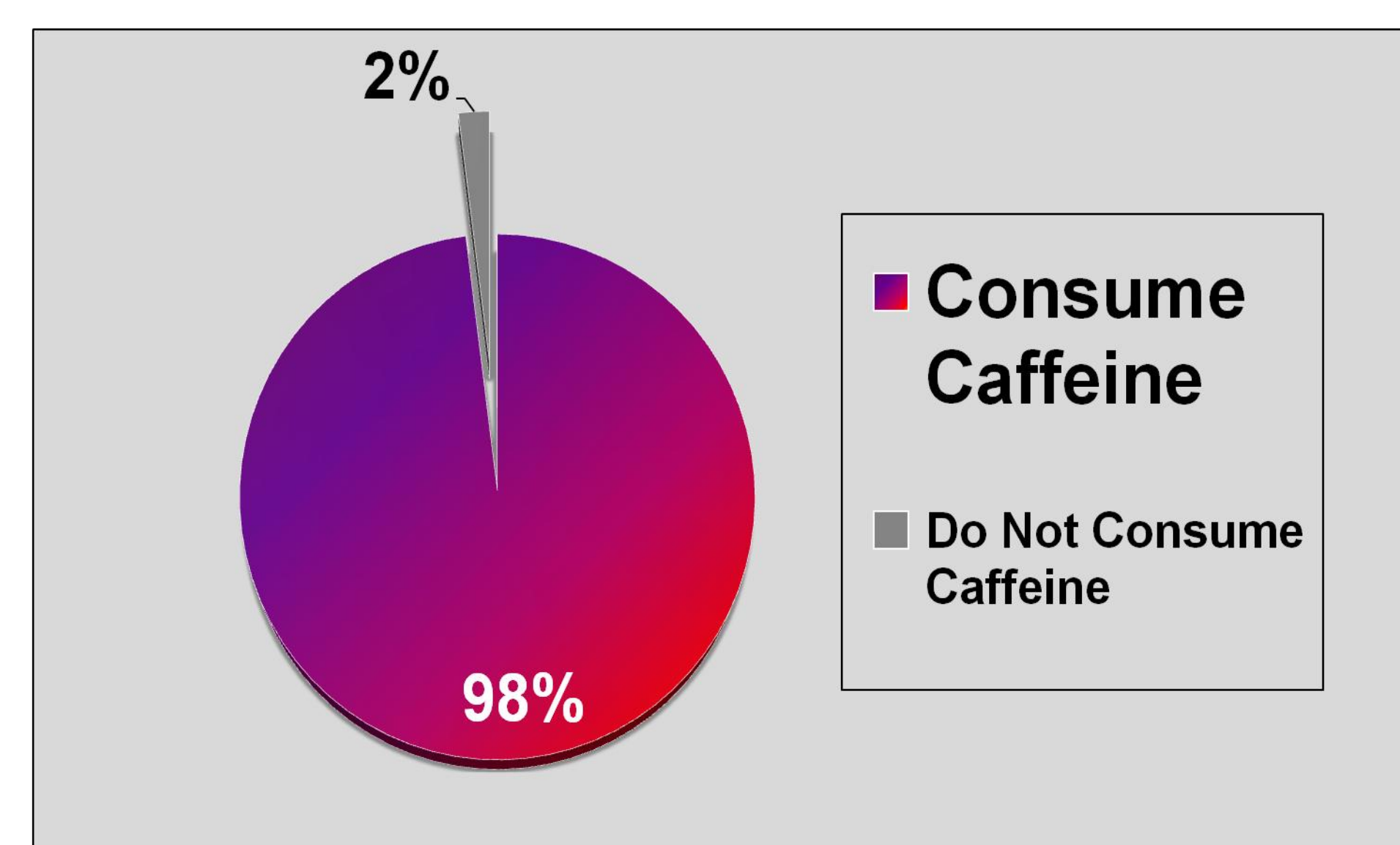
Caffeine Content in Beverages

Brewed Coffee (8 oz)	130-200 mg
Instant Coffee (8 oz.)	127-173 mg
Espresso (1 oz.)	30-90 mg
Tea (8 oz)	40-120 mg
Soda (12 oz.)	35-72 mg
Energy Drink (8 oz.)	74-300 mg

Data Analyses

• **Data Analyses:** Caffeine consumption among students were compared with the use of SPSS. Data was collected from the Caffeine Consumption Survey, and was analyzed using SPSS-XIV. ANOVAs ($p \leq 0.05$), frequency distributions, descriptive statistics, and correlations were calculated to meet study objectives.

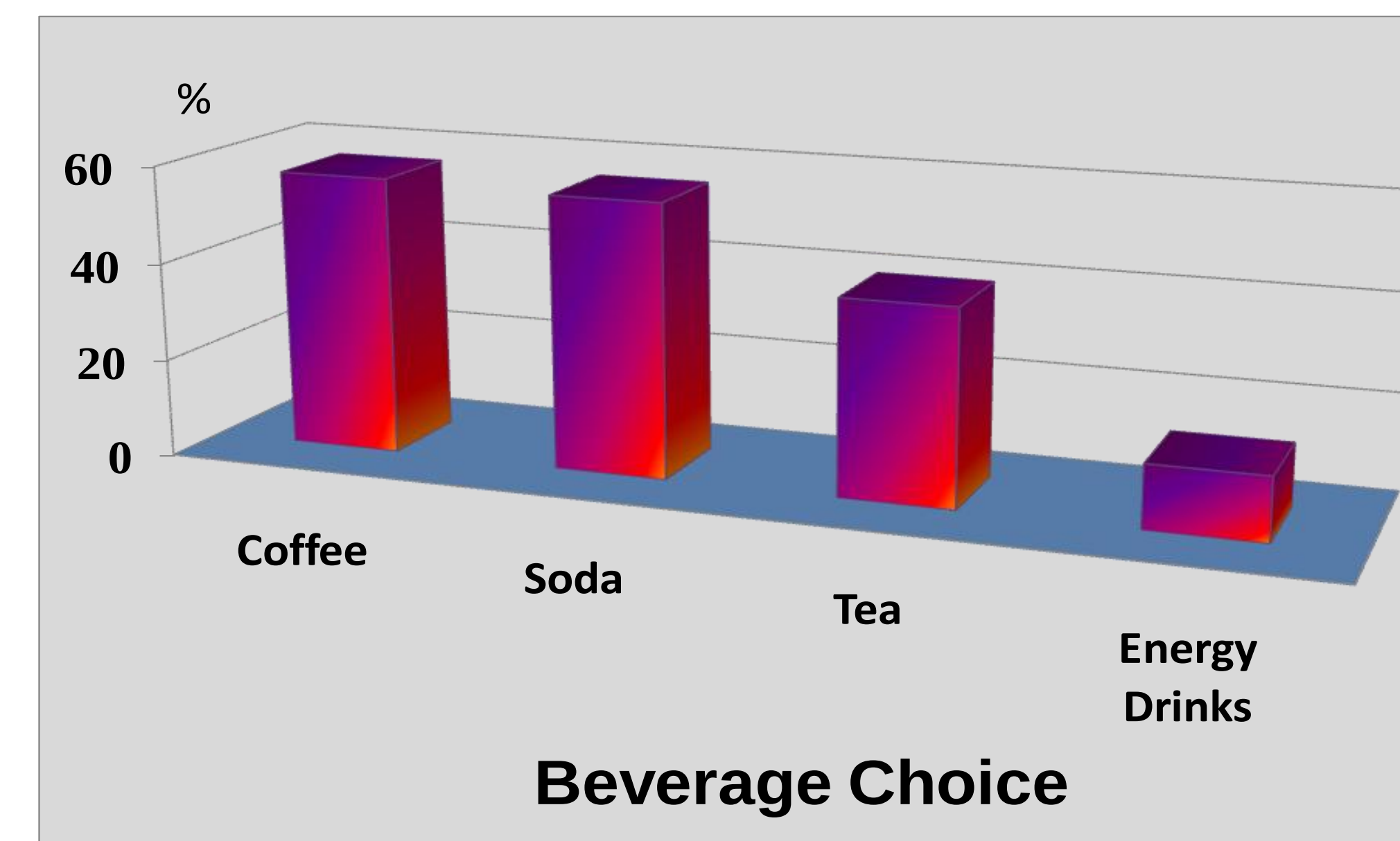
Consume Caffeine



98% of students surveyed consume caffeinated beverages

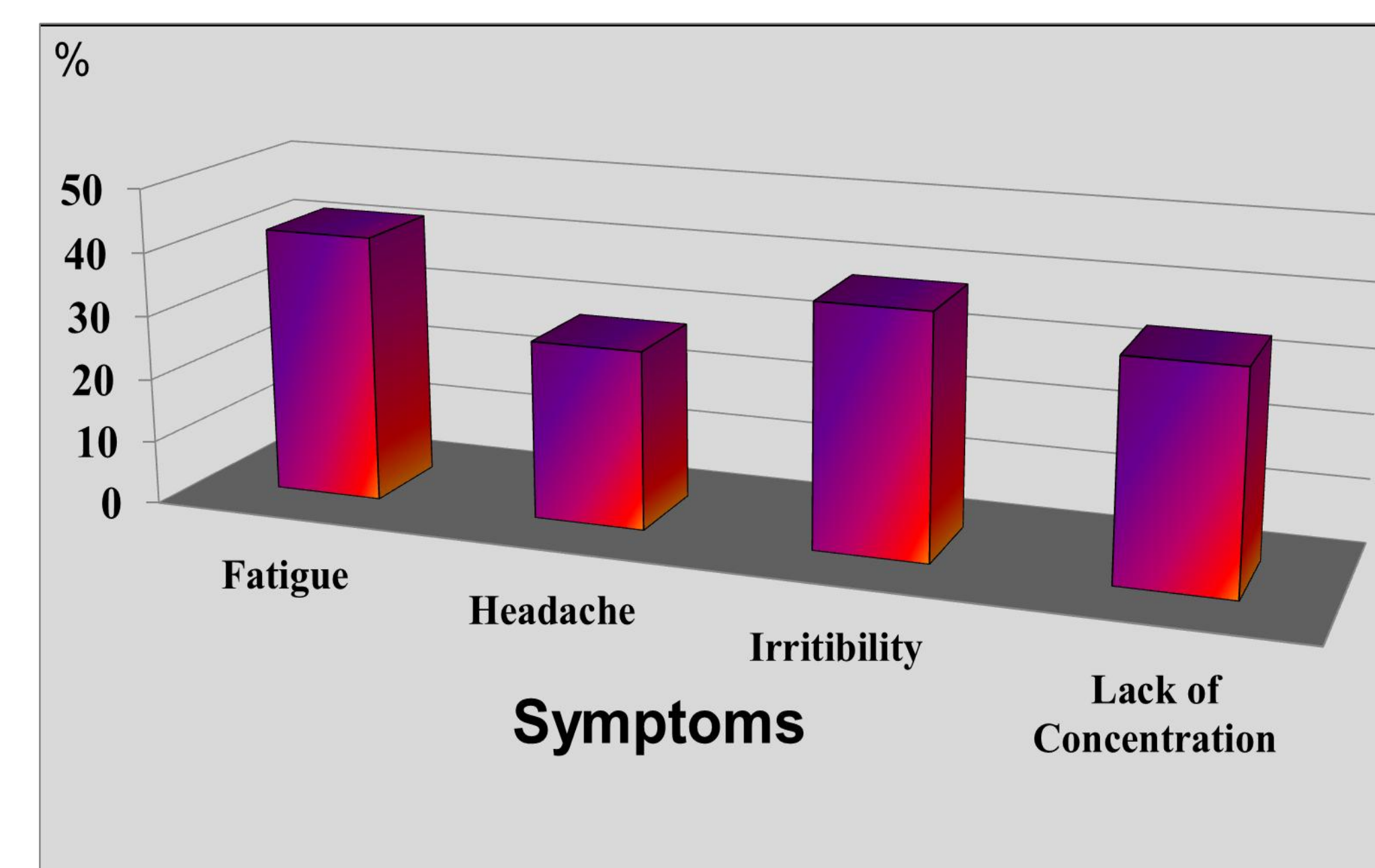


Caffeinated Beverages Consumed



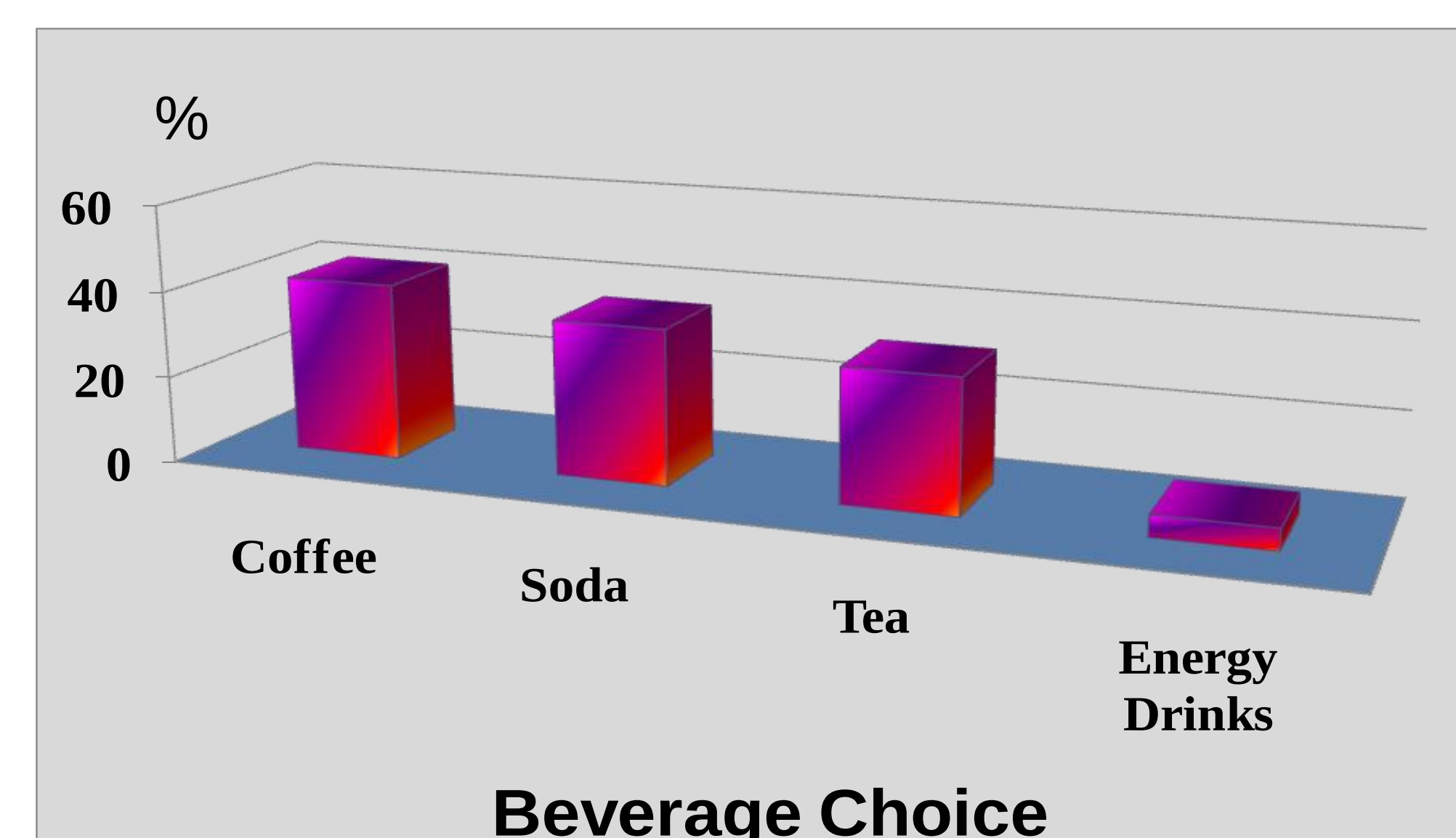
Frequency of coffee (57%), soda (56%), tea (40%) and energy drinks (13%) consumption per day.

Symptoms During Caffeine Withdrawal



Withdrawal symptoms: fatigue/drowsiness (42%), irritability (38%), headaches (28%), and lack of concentration (34%)

Most Difficult Source of Caffeine to Give Up



Coffee (41%), soda (36%), and tea (31%) were similar when compared to energy drinks (5%)

Students' Results

Reported moderate to extreme stress	60%
Caffeine consumption Increased from previous year	28%
Experience strong caffeine cravings	31%
Difficult to concentrate with cessation of caffeine	40%
Consider themselves addicted to caffeine	31%
Consume caffeine to prevent drowsiness	77%
Most likely to drink caffeine during evening or nighttime	65%
Coffee as most difficult source to give up	41%

Discussion and Conclusions

- The vast majority of college students consume caffeine, for both academic and personal reasons, with coffee and soda being the most common sources.
- Though nearly half of the students surveyed reported behavioral or physiological symptoms related to caffeine withdrawal, only 15% believed they were "addicted to caffeine."
- Results from this study validate reports of increased frequency of caffeine consumption in college-age students and the related positive correlation between cessation of caffeinated beverages and adverse health-related withdrawal symptoms.

Recommendations

- College students need to be aware of the amount of caffeine consumed, in order to avoid adverse physiological symptoms.
- The patterns of caffeine intake among college-age students suggest the need for greater education about the health-related risks and consequences of caffeine consumption and withdrawal in this age group.

