



Many students use caffeine to mitigate the stress of school. Additionally, there are conflicting research results about the effects of habitual intake for college students. A key outcome of this research was to clarify contradictory results from previous studies on the topic of caffeine consumption. This study aims to determine the level of caffeine consumption among TCU students, and to determine perceived caffeine effects that users experience related to sleep, stress, and withdrawal. We used a survey to gather information about the TCU student population and performed basic quantitative analysis and frequency statistics to report the results of the survey.

# DETERMINATION OF CAFFEINE USE AND ITS EFFECTS ON UNIVERSITY STUDENTS

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# Purpose Statement

A key outcome of this research was to clarify contradictory results from previous studies on the topic of caffeine consumption, specifically among the TCU student population.



# Study Aims

Among TCU students, to determine:

1. How caffeine use effects sleep,
2. How caffeine use effects perceived stress,
3. Modalities of caffeine consumption,
4. Quantity of caffeinated beverages consumed, and
5. Perceived effects of caffeine withdrawal.



# Research Methods

- Design: Cross-Sectional Observational Study
- SurveyMonkey®
  - 17 questions
  - Written Consent Obtained
    - Multiple Choice
    - Select All That Apply
    - Likert-type Scales
    - Agree or Disagree
- Submitted to TCU Institutional Review Board (IRB)
- Distributed via Email
- Data Analysis:
  - Basic Quantitative Analysis
  - Frequency Statistics

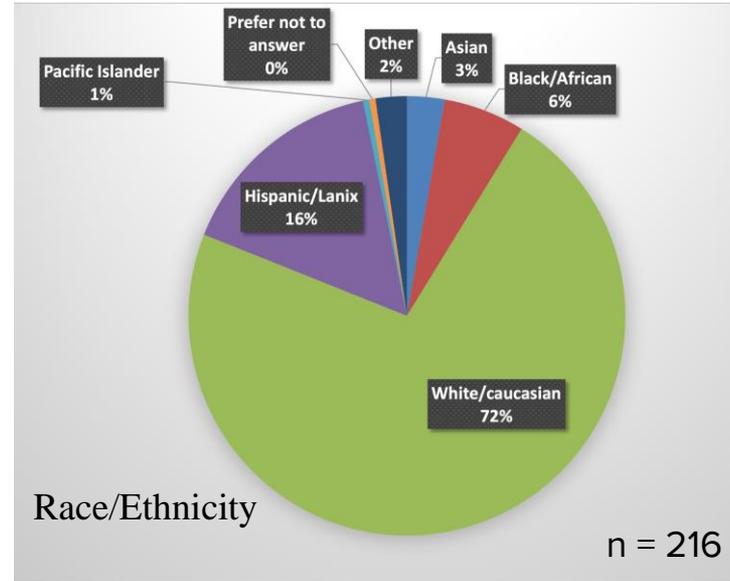
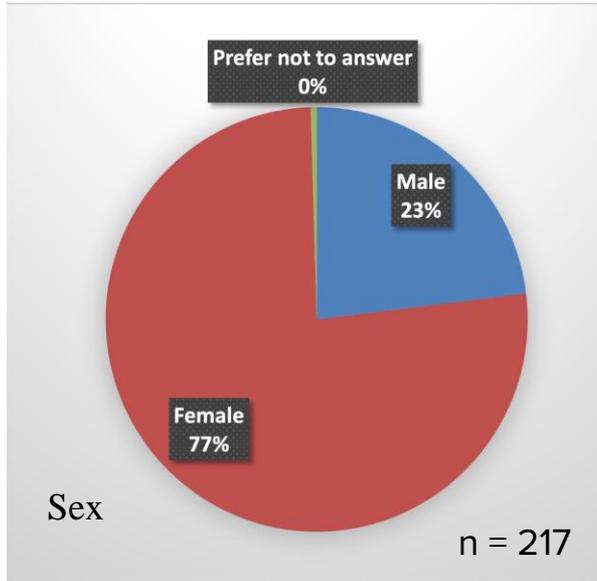


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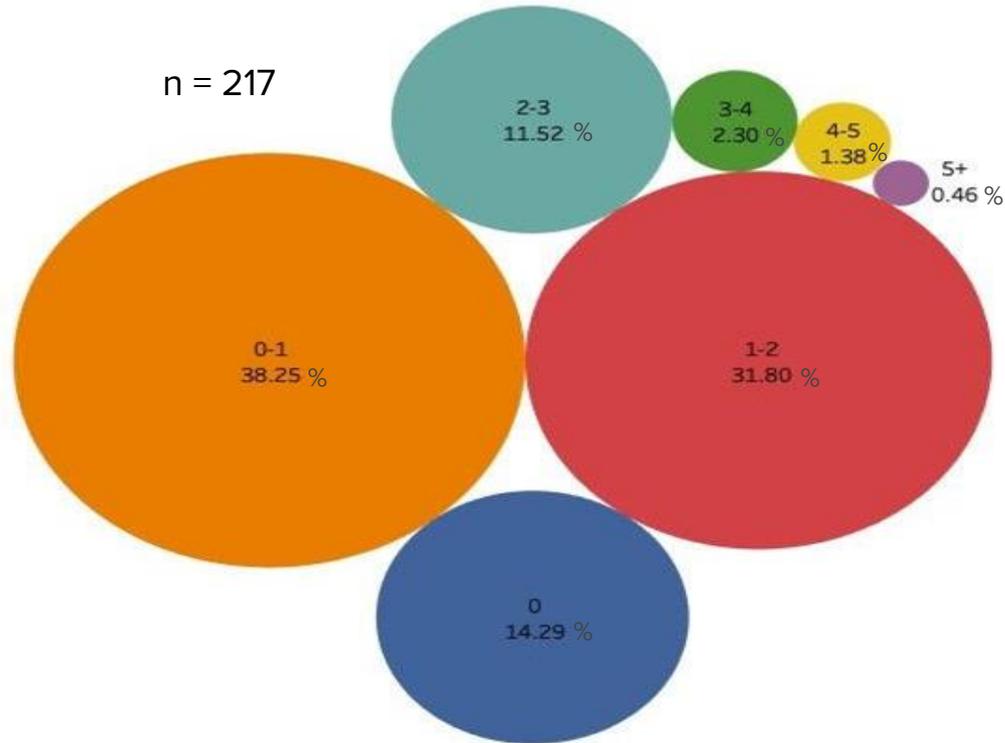


# Study Participants

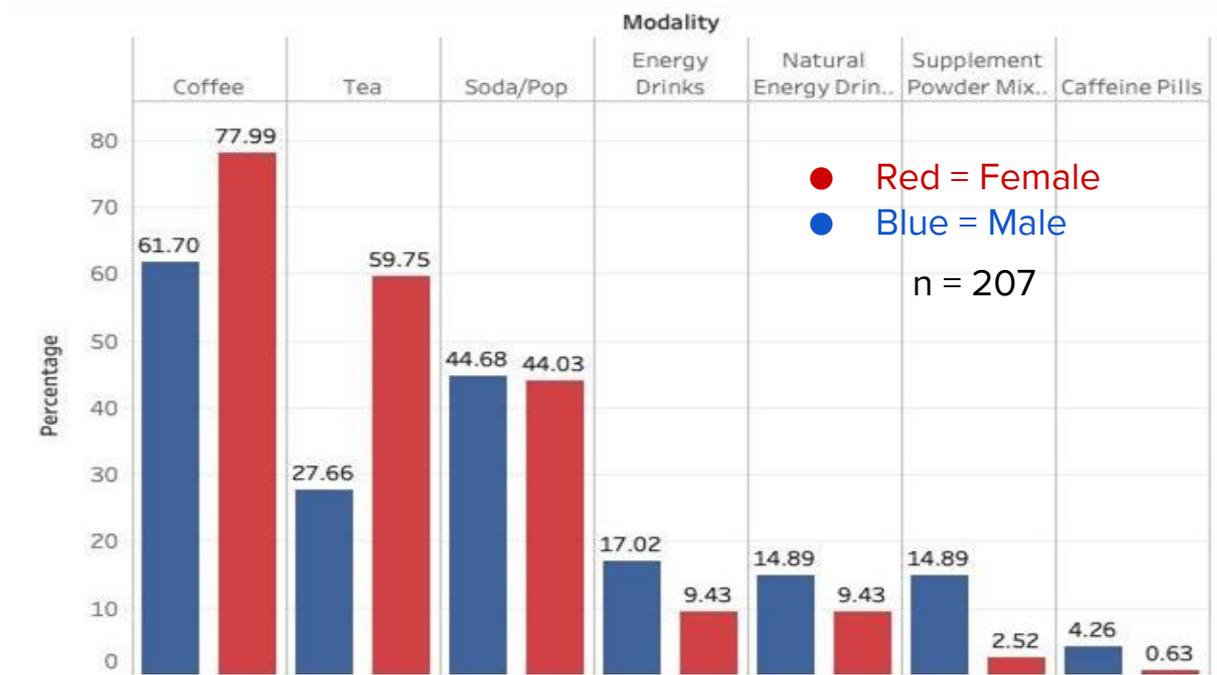
- 217 Respondents (with 94.9% answering all questions)
- 3 respondents excluded



# Average Number of Caffeinated Drinks Consumed per Day by TCU Students (1 drink = ~ 95 mg caffeine)



# Modalities of Caffeine Consumption by TCU Students

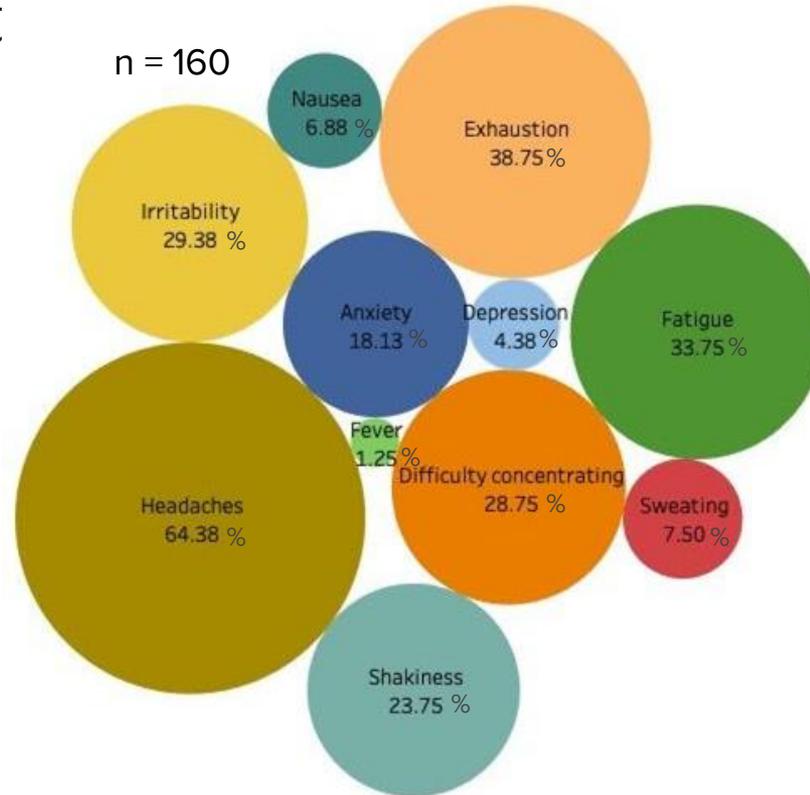


# Relationships between Caffeine, Sleep, and Stress among TCU Students

- Stress
  - Effects of caffeine consumption on stress
    - n = 216
    - 65.7% neutral
  - Stress as a trigger for caffeine consumption
    - n = 216
    - 49.5% rarely felt stress triggered intake
- Sleep
  - Perceived impact on sleep quality
    - n = 217
    - 65.9% neutral
  - Contribution to prolonged wakefulness
    - n = 216
    - 50.9% often felt prolonged wakefulness

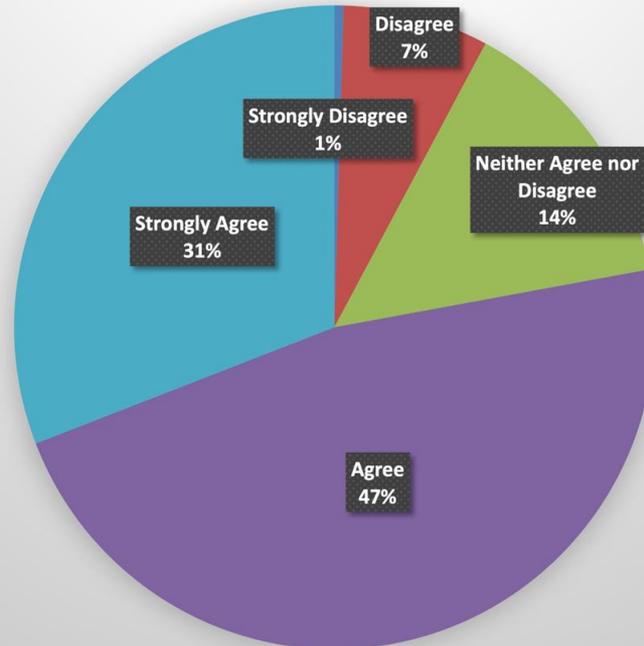


# Caffeine Withdrawal Symptoms Experienced by TCU Student



# Caffeine Overconsumption and Perceived Negative Impacts on Health Expressed by TCU Students

Please choose your agreement level with the following statement: "The effects of over consuming caffeine would have negative impacts on a person's overall health."



n = 217

# Discussion and Conclusions

- 95-190 mg caffeine/day for a majority (54.9%) - consistent with scientific literature
- 1.8% consumed >400 mg caffeine/day (FDA rec.) - reasons for this are unknown
- 70% stated they experienced withdrawal symptoms - uncertain if these symptoms were caused from the caffeine withdrawal or from another unrelated cause
- Further Research Needed For:
  - Giving Registered Dietitians more data for assessments
  - Patterns of Intake at Different Times in the Academic Year
  - More accurate quantities of consumption (fluid ounces)



# Study Limitations

- Small sample (n=217)
  - Would prefer >500 participants
- Non-diverse sample (77% female, 72% white)
- Limited answer choices/phrasing of questions
- More accurate numerical answer choices to reflect individual responses



# Applications for Registered Dietitian Nutritionists

- Coffee and Tea are still #1
  - Rare for students to consume no caffeine
  - Ask about caffeine intake during nutrition assessment
- Tolerable Upper Limit (UL) for bioactive substances
  - Recommend to limit caffeine consumption to 400 mg per day
  - Intoxication and Withdrawal



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Thank You!



COFFEE DOESN'T  
ASK SILLY QUESTIONS,  
COFFEE UNDERSTANDS.

