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## Stressors, Caffeine Consumption, and Mental Health Concerns among College Students

Stacey Trejo

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STRESSORS, CAFFEINE CONSUMPTION, AND  
MENTAL HEALTH CONCERNS AMONG COLLEGE STUDENTS

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A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Social Work

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by  
Stacey Trejo  
May 2024

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## ABSTRACT

The purpose of this study was to understand the relationship between mental health challenges, life balance concerns and caffeine consumption among college students. As caffeine is considered a psychoactive and cognitive enhancer that enhances physical performance, consuming an excess of caffeine can result in caffeine intoxication, which may include experiencing negative side effects. Utilizing quantitative methods and availability sampling, 61 college students completed a self-administered online survey via Instagram and, with the assistance of professors, in classrooms. The self-administered Depression, Anxiety, Stress Scale 21 (DASS-21) reveals that college students are experiencing high levels of depression, anxiety, and stress. A majority of participants reported that they spend their free time working on coursework and do not see their family, friends, and loved ones as much as they would like to. The self-administered Caffeine Consumption Questionnaire-R (CCQ-R) reveals that college students are consuming caffeinated beverages, and coffee is shown to be the most consumed. Although there was no correlation between caffeine consumption and mental health, college students experienced negative side effects when consuming caffeine.

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# CHAPTER ONE

## PROBLEM FORMULATION

### Introduction

In the last decade, student mental health concerns have increased on college campuses (Lipson et al., 2019). Mental health concerns have increased due to academic expectations and balancing a personal life, all while attending college (Eubank & DeVita, 2021). Such demands include passing courses to meet major requirements, attending class, completing assignments, working part or full-time, and balancing family and relationships. The demands students experience result in stress, a feeling that occurs when an individual perceives or feels demands are overwhelming, too much to handle, or out of their ability to meet (Pitt et al., 2018).

As college students experience various demands, they are experiencing mental health challenges. More than 60% of students from Healthy Minds data reported meeting the criteria for having one or more mental health concerns (Lipson et al., 2022). Many of the mental health concerns include anxiety, depression, suicidal ideation, and others. In a study involving undergraduate and graduate students, 30% reported having one mental health concern and 38% reported having two or more mental health concerns (Lipson & Eisenberg, 2018). Mental health challenges in college students are primarily driven by the demands students face.

Students are responsible for their academic expectations and balancing their personal life. Academic expectations include intensive coursework, studying for

exams, and time management within coursework and homework (Barbayannis et al., 2022). Depending on the degree of focus and course, students can expect to spend hours working on a single course to complete readings and assignments. Additionally, many students may be working full or part-time while attending school. Students working immense hours per week, 20 hours or more, are likely to experience poor quality of sleep and mental health concerns (Peltz et al., 2021). The more demands students experience, the more likely they are to experience a mental health challenge.

The demands of a college student contribute to mental health concerns, particularly stress. Stress impacts the body in two forms such as physical and mental well-being, where one can experience headaches, tense muscles, and anxiety (Acharya et al., 2018). However, when excessive stress is present, it impacts an individual's ability to function, including meeting their professional and personal demands (Pitt et al., 2018). Among U.S. college campuses, 87% of college students reported stress derived from school (Barbayannis et al., 2022). It is likely that as students experience stress, they utilize coping mechanisms to meet their demands.

College students consume caffeinated beverages to cope with the stress they are experiencing, such as coffee, energy drinks, or any of the numerous beverages that contain caffeine (AlAteeq et al., 2021). Caffeinated beverages contain different amounts of caffeine ranging from 50mg to 300mg per drink. Students who drink more than the maximum amount of caffeine in a day, 400mg, may experience mental health challenges or negative side effects. However, consumption of caffeine

is primarily used to assist students in staying awake and increasing energy and functional ability. A survey completed by students indicated that approximately one-third of students consume high levels of caffeinated beverages, over 400mg per day (Kharaba et al., 2022). In the survey, students indicated their caffeine consumption was to promote studying for exams or homework completion.

### Ramifications of the Problem

The mental health concerns of students can lead to various ramifications. In the micro practice of social work, stressors lead to additional mental health concerns, including dependency on coping mechanisms (Trunzo et al., 2014). Stressors are unavoidable and exist in students' everyday lives, which affects their mental health because they are actively present. In the micro practice of social work, stressors can lead to poor academic performance and success. In the policy practice of social work, stressors can lead to students' decision to unenroll or take a leave of absence from school (Kivlighan et al., 2021). Social work practice is dedicated to assisting students in any form to promote overall well-being, mental health, and their academic goals and career endeavors.

Current literature focuses on the mental health concerns that have risen among college students within the last decade. College students are experiencing various demands within academic expectations and balancing a personal life, resulting in stress. Approximately 48% of college students in a study reported experiencing stress levels that were more than average or tremendous (Kent et al.,

2022). As students experience stress, they resort to coping mechanisms such as the consumption of caffeinated beverages to increase energy levels and the ability to stay awake (Kharaba et al., 2022). Despite current literature, studies have not addressed the relationship between caffeine consumption and the potential development of additional mental health concerns.

### Significance of Findings to Social Work

The importance of conducting this study emerged from the need to understand how academic expectations and balancing a personal life affect the mental health of college students. Understanding the stressors will validate students' coping mechanisms and assist college campuses in developing and creating support groups or resources focused on managing stress and alternative coping mechanisms. Students who experience ongoing stress may develop ongoing mental health concerns and decide to drop out or take a leave of absence from school. Most students who take a leave of absence from college do so based on their mental health (Kivlighan et al., 2021). Addressing and understanding students' mental health due to stressors can encourage colleges to enforce policies that allow and encourage students to return to school when ready.

### Purpose of the Study

The study aims to understand the mental health concerns of college students, including stress, as a result of academic expectations and balancing a personal life.

College students are experiencing various stressors, including attending class, completing assignments, working full or part-time, and managing family and relationships. The stressors may result in caffeine consumption as a coping mechanism to increase ability to work for longer hours. In order to address the mental health concerns of students, research must be conducted to understand how students are affected and how they are managing their stress. Once students' mental health concerns are addressed, college campuses may offer their students support and resources to address mental health and alternative coping mechanisms.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This chapter examines the mental health concerns among college students experiencing stress due to academic and personal stressors, resulting in caffeine consumption as a coping mechanism. The following sections will discuss concerns related to stressors students face, stress, caffeinated beverages, and the mental health of students. The final section will examine a theory that guides the issue presented.

#### Stressors of College Students

##### Academic Expectations

Many of the stressors experienced by college students are academic expectations and the balance of a personal life. Academic expectations include attending classes, coursework overload, completing assignments, passing courses, and time management within various classes (Slimmen et al., 2022). Part-time students take approximately 2-3 courses per semester, while full-time students take 3-6 courses. Each course may require a set amount of time, both inside and outside of class to complete course work and prepare for upcoming exams. Such academic expectations are excessive requirements that students must achieve to meet college and course expectations. Slimmen and colleagues (2022) suggest that many

expectations burden students to the extent that poor academic performance and an increase in dropout rates can occur.

### Balancing a Personal Life

Aside from academic expectations, students balance a personal life outside of college, such as working full or part-time. The National Center for Education Statistics presented that 81% of part-time undergraduates and 43% of full-time undergraduates worked while attending college (Wan et al., 2022). In addition, more than half of the students worked 20 hours or more per week. The decision to work while attending school may be to gain valuable work experience or to meet financial needs (Wan et al., 2022). Working while going to school creates complications for students to have sufficient time for academic expectations, thus leading to poor academic performance and increased stress (Peltz et al., 2021).

### Stress among College Students

In this study, stress is defined as a negative feeling when an individual feels that their demands are overwhelming and out of their ability to meet (Pitt et al., 2018). The American College Health Association presents that 49% of college students felt moderately stressed compared to 28% who felt excessively stressed (Eubank & DeVita, 2021). Some students experiencing excessive stress may begin to develop low academic performance and make the decision to drop out of school (Lee & Jang, 2015). However, the number of students who dropout of college due to stress is unspecified in research. Much of the stress students experience derives

from the pressure to do well in school and succeed academically. While other college campuses report that 87% of students experience stress due to academic expectations (Barbayannis et al., 2022). College students on campuses in the U.S. are experiencing significant differences in stress and impacts.

### Caffeinated Beverages

Numerous beverages contain caffeine, such as coffee, energy drinks, soda, and tea. Caffeine is considered a psychoactive and cognitive enhancer substance because it can improve physical performance, such as staying awake or alert (Kharaba et al., 2022). The Mayo Clinic suggests a consumption of up to 400mg of caffeine per day for healthy adults (2022). However, consuming an excess of caffeine can cause caffeine intoxication, which results in fidgeting, insomnia, frequent urination, and severe health issues (AlAteeq et al., 2021). Caffeine intoxication can occur at any milligram dose, depending on the individual's body, whether an individual consumes 57mg or more (Pina Cabral et al., 2022). College students consume excessive caffeine, specified by an average consumption of up to 850mg daily, exceeding the suggested consumption (Looby et al., 2022).

In a study involving college students, 469 students reported consuming 100mg to 399mg per day, while 121 students reported consuming 400mg or more per day (Mahoney et al., 2019). Students often consume caffeinated beverages to improve both their cognitive and physical functioning. Caffeinated beverages increase students' ability to stay awake, energy levels, and alertness (Looby et al.,

2022). The chosen caffeinated beverage varies by student, but most students have the similarity of utilizing caffeinated beverages to cope with stress and stress while attending college.

### Mental Health among College Students

Mental health concerns among U.S. college campuses have increased within the last decade (Lipson et al., 2019). Data from the American College Health Assessment reports that 39% of students felt depressed, and 62% felt anxious (Story et al., 2019). It is essential to know that depression and anxiety are common and actively present across college campuses due to stress. Stress among students exists due to academic expectations and balancing a personal life, which may present until academic expectations for themselves are met.

Most mental health concerns arise due to the stressors that students undergo, such as academic expectations and balancing a personal life. Per students, stress, anxiety, and depression are the main concerns regarding their academic performance and outcomes (Woodhead et al., 2021). Students who experienced any mental health concerns were identified to have poor academic performance and the likelihood of dropping out of college (Woodhead et al., 2021). As students experience challenges to their mental health, they will be unlikely to discuss their mental health with others, such as faculty. In a study of college students, 55% reported feeling embarrassed to disclose to faculty they had mental health challenges, while 56% perceived they would be stigmatized for discussing

their challenges (Woodhead et al., 2021). Mental health in college students has been a growing concern as it ties together with stressors students face and how it impacts their decision-making and performance.

Slimmen and colleagues (2022) specified that academic expectations include course work overload and the need to complete all of the assignments. Additionally, students may be working full or part-time while attending college, indicating increased stress because of the multiple expectations from each one. Students enrolled in school, while working, creates a complication in managing their time to meet demands (Peltz et al., 2021). This is where stress arises because students may be overwhelmed or unable to meet all expectations, resulting in low academic performance and the decision to drop out of college (Slimmen et al., 2022).

Approximately 77% of students report moderately or excessively experiencing stress (Eubank & DeVita, 2021). As a result, students use caffeinated beverages to improve their physical and cognitive functions, such as staying awake or increasing energy to meet the demands and cope with stress (Looby et al., 2022). As numerous students experience stress, they are finding ways to persevere. As a result caffeine as a tool can cause caffeine toxicity and contribute to mental health concerns.

Academic expectations and balancing a personal life are causing stress to college students, leading to caffeinated beverages to cope. Woodhead and colleagues (2021) suggest these factors contribute to students' health concerns, including depression, anxiety, and stress. Students are utilizing coping mechanisms to reduce their stress in and outside of school, but this also contributes to their

overall mental health. As a result, the mental health concerns of college students have significantly risen within the last decade.

Research suggests many students consume caffeinated beverages to increase their cognitive and physical functioning but also as a result of sensation seeking (Mahoney et al., 2019). Sensation seeking may indicate a desire to feel the increase in energy for personal benefit but not because students need it to cope with demands. Slimmen and colleagues (2022) suggest that stress experienced by college students may not be a definite explanation if mental health concerns arise. It is inconclusive if one causes the other, even when symptoms are present. However, this proposed study will measure students' perception of academic expectations and balancing a life outside of college. Students will be asked to assess their feelings of stress and indicate their caffeine consumption. Lastly, students will self-report if they are experiencing or have symptoms of mental health concerns. The significance of the proposed study is that it will examine the relationship between caffeine consumption as a coping mechanism and its relation to mental health.

### Theory Guiding Conceptualization

The Theory of Planned Behavior (TPB), outlined by Icek Ajzen (1991) focuses on understanding the consumption behavior of a consumer. Ajzen seeks to understand the reason for the consumption in relation to the intention of obtaining or reaching a particular behavior (Samoggia & Rezzaghi, 2021). Ajzen assumes that when an individual intention is present to obtain a particular behavior, then the

motivation to participate in the behavior occurs. In using TPB in the proposed study, it will assist in understanding why college students consume caffeinated beverages. Students consume caffeinated beverages for various reasons such as to meet academic expectations and the balance of a personal life, but it is essential students have the opportunity to self-report their consumption. This will include understanding if students utilize caffeine consumption as a coping mechanism to cope with the role of a student as well as outside of school.

### Conclusion

Previous research has shown that college students' mental health has deteriorated due to stressors that result in moderate to severe stress. To cope and manage, students consume caffeinated beverages to enhance their ability to meet demands, which also affects mental health concerns. There is limited research if caffeine consumption is causing additional mental health concerns or adding to the stress. This study intends to address this gap by surveying students to examine present stress, caffeine consumption, and mental health concerns. Understanding the mental health concerns of students based on stressors and caffeine consumption is important because students are deciding to drop out of college or develop poor academic performance.

## CHAPTER THREE

### METHODS

#### Introduction

This study seeks to understand college students' mental health concerns due to academic expectations and balancing a personal life, as well as the coping mechanisms used to cope with stress. This chapter includes how this study was carried out, such as the study design, sampling, data collection and instruments, procedures, protection of human subjects, and data analysis.

#### Study Design

This study aims to address the mental health concerns, including stress, of college students and its relationship to caffeine consumption. This study is explanatory research as it will explain how a college student's stressors contribute to mental health concerns as well as coping mechanisms that result from stress. As the study focuses on college students, it will take a quantitative approach to obtain self-report to collect data through online surveys.

In using an explanatory, quantitative approach, the study has strengths and limitations. A strength of the study is that participants were able to take the online survey at their convenience, reducing the requirement to travel or set a day and time to administer the survey. Another strength of using an online survey is the ability to reach a larger number of participants to increase the data collection and results of

the study. In contrast, electronic surveys are limited by the need for more detailed information from participants, such as explanations or reasons for their self-report. Similarly, as participants are self-reporting, the self-report may not be accurate. Participants may underreport or exaggerate information which can cause inaccurate results.

Using an explanatory, quantitative approach, the study will address the mental health concerns among college students, including stress that arises from stressors. This study additionally seeks to understand the frequency and quantity of caffeine consumption among students and the reason for utilizing it as a coping mechanism. Lastly, the study seeks to understand the added mental health concerns that arise from caffeine consumption as a coping mechanism.

### Sampling

This study used a non-probability, availability sampling of college students currently enrolled in colleges around California, including community college, undergraduate studies, graduate school, and Ph.D. programs. In using a non-probability, availability sampling enables students who are available to participate in the study and assists in obtaining data from students at different levels of education to understand the experiences of college students overall. The study seeks to obtain 100 college students as participants.

Eligible participants for this study must have met the following requirements to participate. Participants were to be 18 years old or over and currently enrolled in

college or university such as community college, undergraduate study, graduate school, or a doctoral program. The participant must be enrolled in school either part-time or full-time. Participants who were eligible and available to participate were recruited from various colleges in California. To recruit participants, two professors from a university shared the study with their courses and that participation was voluntary. Recruitment was also done via social media, particularly Instagram, in which an electronic flier was posted on numerous occasions to reach various available participants.

### Data Collection and Instruments

Quantitative data was collected via self-administered surveys in the 2023 fall semester by available participants. The initial portion of the survey included an introduction, description, and reason for the study being presented. Participants will be asked about their demographic information, including age, gender identification, ethnicity, current college education level and additional questions created by the co-principal.

Participants were asked to identify and self-report their mental health concerns, including depression, anxiety, and stress, using the Depression, Anxiety, and Stress Scale-21, DASS-21, developed by Lovibond (1995). The scale included 21 statements, in which the participant ranked each statement individually from 0 to 3. Ranking the statement 0 indicated the statement did not apply to them, a 1 indicated the statement applied to some degree or some of the time, a 2 indicated

the statement applied to a considerable amount or a good part of the time, and 3 indicated it applied most of the time (Ronk et al., 2013). At the end of the self-report, the total scale of the statements was calculated to determine mental health concerns among the participants. The scale has demonstrated to have excellent internal consistency and its interpretation demonstrates validity (Ronk et al., 2013). Although the DASS-21 assists in measuring the levels of depression, anxiety, and stress, it is not intended for diagnosis (Osman et al., 2012). The level of depression, anxiety, and stress will allow for an understanding of students' mental health concerns.

Caffeine consumption was obtained by utilizing the Caffeine Consumption Questionnaire-R, developed by Dr. Irons, in which participants were to self-report their consumption of caffeine per week (Irons et al., 2016). Students were asked whether they consumed the following beverages: coffee, tea, soda, and energy drinks. Students who reported consuming any of the caffeinated beverages were asked to self-report the servings they consume of each beverage per week. To assist students with self-reporting their consumption, pictures of the beverages and ounces were included. For reporting coffee and tea consumption, the following was included to assist students: 8oz (short), 12oz (tall), 16oz (grande), and 20oz (venti). When reporting soda consumption, the following was used: 12oz, 16.9oz, 20oz, and 32oz. To report consumption of energy drinks, the following was used: 2oz energy shot, 8.4oz, 12 oz, and 16oz energy drink.

## Procedures

Participants were recruited through a flier that describes the study's purpose and the understanding the study seeks to obtain. The flier included the following information: how the study will be administered, time length of participation, and the significance of participation. A critical aspect included in the flier is that participants can take the electronic survey in a quiet, safe environment and free of distractions. Eligible participants scanned the QR code on the flier to begin participating in the study or used a link that directed them to the electronic survey. The data that participants self-report was available via Qualtrics for the researcher to review and analyze.

#### Protection of Human Subjects

The identity of the participants remained confidential from all other participants in the research study. Participants were presented with an electronic informed consent form that they were to read and acknowledge prior to completing the survey. In addition, all data collected was stored in the co-principals personal computer with a password for protection. The principal investigator and co-principal were the only individuals who had access to the data collected. All responses were stored in protected files and no identifiable information such as name or IP address were collected.

Participation in the study was voluntary, and participants had the right to refuse to participate or forfeit their participation. Participants were informed that there was no penalty or consequence for refusing or forfeiting participation in the

study. There were no anticipated risks; however, there may have been discomfort as participants identify and self-report within the survey. Participants were not required to answer each question to move through the survey; therefore, skipping questions was possible if needed. In addition, there were no direct benefits to the participants. However, participants' self-report and data was essential to the study as the findings contributed to the study's purpose and future research.

### Data Analysis

All data was retrieved from Qualtrics, which then was saved and imported into SPSS to analyze the data. SPSS was used to examine participants' demographics and their self-report data. SPSS was essential in analyzing the Mental Health Checklist, DASS-21 data, and CCQ-R data while following the Theory of Planned Behavior. Each instrument was analyzed in SPSS by separating the measured variables, including mental health concerns, stress, and caffeine consumption.

### Summary

This study will understand the mental health concerns, including the stress of college students that arise due to multiple stressors. Additionally, coping mechanisms such as caffeine consumption arise due to stress and stressors, which may further cause additional mental health concerns. Participants were invited to share and self-report their experiences as college students to understand the area of

study further. Quantitative data was used in this study to facilitate the study's purpose and goal.

## CHAPTER FOUR

### RESULTS

#### Introduction

This study proposed that mental health challenges among college students are a result of academic expectations and balancing life, as well as mental health challenges contributing to the consumption of caffeine among this population. Individuals enrolled in community college or college were only eligible to participate in the study, as the emphasis of the study was the college student population. Eligible college students self-administered an online survey that captured demographic information, mental health challenges that students experienced within the last week, and students' caffeine consumption within the last week. Students' self-report of mental health challenges and caffeine consumption served as a significant piece in this study as it was intended to capture student experiences in the present time.

Eligible students were recruited via Instagram and with the assistance of professors at California State University San Bernardino (CSUSB) between the beginning of October and through November in 2023. Students recruited via social media were informed via Instagram stories about the purpose of the study and the eligibility criteria to participate. Those who met the eligibility requirements used the provided survey link and self-administered the online survey. Two professors from the School of Social Work at CSUSB assisted in distributing the survey link and QR

code for their courses. As the professors were sharing the study with their courses, the requirement of being a college student was automatically met by those participants.

At the end of data collection, a total of 104 surveys were initially collected. Data analysis followed and included the removal of 39 incomplete and four duplicate surveys. The incomplete surveys were removed as they only contained demographic information, and most questions were unanswered. Duplicate surveys were considered those that contained the same IP address and, therefore, were removed to prevent duplicate data and participation in the study. After data analysis, there were 61 surveys (N=61). The following sections will discuss socio demographics, academic expectations and balancing a personal life, the Depression, Anxiety, and Stress Scale (DASS-21) results, and caffeine consumption among students.

## Sociodemographics

### Gender Identity

As shown in Table 1, gender identity was divided into four categories: women, man, non-binary, and prefer not to answer. The majority of participants identified as a woman, which was 47 participants (77%). There were 9 participants who identified as a man (14.8%), four identified as non-binary (6.6%), and one preferred not to answer (1.6%).

### Age

As shown in Table 1, age was divided into four categories: 18 to 24, 25 to 35, 36 to 45, and 46 years old and older. Half of the participants were between 18 and 24 years old, particularly 31 participants (50.8%). There were 20 participants (8.2%) who were between the ages of 25 and 35, five participants (8.25) who were between the ages of 36 and 45 years old, and five participants who were 46 years old and older (8.2%).

#### Institutions and Degrees

The institutions for this study included community college and college. There were seven participants (11.5%) enrolled in community college, while the majority of participants, 54 participants (88.5%) were enrolled in college. The degrees being pursued were categorized into four categories: Associate degree, Bachelor's degree, Master's Degree, and Ph.D. More than half of the participants, 35 participants (57.4%), were pursuing a Master's degree, 19 participants (31.1%) were pursuing a Bachelor's degree, seven participants (11.5%) were pursuing an associate's degree, and none reported pursuing a PhD.

#### Enrollment Status and Classes

Academic enrollment status was divided into two categories: part-time and full-time. Most participants, 52 students (85.2%) were enrolled in school full-time. While nine participants (14.8%) were enrolled part-time. Participants were asked how many classes they are currently enrolled in, including one to two, three to four, and five to six classes. More than half of the participants, 33 (54.1%), were enrolled

in five to six classes. Those enrolled in three to four classes were 22 participants (36.1%), and six participants (9.8%) were enrolled in one to two classes.

### Working Status

To determine employment status, participants were asked to select one of the following categories: employed part-time, employed full-time, or not currently employed. As shown in Table 1, about half of participants, particularly 30 participants (49.2%), were employed full-time. There were 19 participants (31.1%) who are not employed, and 12 participants (19.7%) who were employed full-time.

Table 1  
*Sociodemographic Characteristics of Participants*

Variables	<i>n</i>	%
Gender Identity		
Woman	47	77
Man	9	14.8
Non-Binary	4	6.6
Prefer not to answer	1	1.6
Age		
18-24	31	50.8
25-35	20	8.2
36-45	5	8.2
46+	5	8.2
Institution enrolled in		
Community College	7	11.5
College	54	88.5
Degree Obtaining		

Associates	7	11.5
Bachelor's Degree	19	31.1
Master's Degree	35	57.4
PhD	0	0
Academic Enrollment Status		
Part-time	9	14.8
Full-time	52	85.5
Classes Enrolled in		
1 to 2 classes	6	9.8
3 to 4 classes	22	36.1
5 to 6 classes	33	54.1
Working Status		
Part-time	30	49.2
Full-time	12	19.7
Currently Employed	19	31.1

---

*Note. N=61*

### Academic Expectation and Balancing Life Outside of School

To understand the academic expectations and perception of balancing a personal life while attending school, participants were asked to read a statement and rate how much they agreed or disagreed with the statement. Participants were to use the following for the statements: strongly disagree, disagree, agree, and strongly disagree.

Table 2 highlights whether participants agree or disagree with the following statement, "I spend my free time working on homework or coursework for class". There were two participants (3.3%) who strongly disagreed and seven participants (11.5%) who disagreed with the statement. In contrast, there were 33 participants

(54.1%) who agreed and 19 participants (31.1%) who strongly agreed with the statement.

**Table 2**

*"I Spend My Free Time Working on Homework or Coursework for Class"*

Variables	<i>n</i>	%
Strongly disagree	2	3.3
Disagree	7	11.5
Agree	33	54.1
Strongly agree	19	31.1

*Note. Over 85% of participants agreed or strongly agreed they spend their free time working on homework or coursework for classes*

*N=61*

Table 3 highlights whether participants agree or disagree with the following statement, "I see my family, friends, and loved ones as much as I want.". There were 16 participants (26.2%) who strongly disagreed and 30 participants (49.2%) who disagreed with the statement. Those who agreed with the statement were 14 participants (23.0%) and 1 participant (1.65) who strongly disagreed with the statement.

**Table 3**

*"I See My Family, Friends, and Loved Ones as Much as I Want"*

Variables	<i>n</i>	%
Strongly disagree	16	26.2

Disagree	30	49.2
Agree	14	23
Strongly disagree	1	1.6

---

*Note. Over 45% of participants disagreed or strongly disagreed they see family, friends, and loved ones as much as they want.*

*N=61*

### Depression, Anxiety, and Stress Scale (DASS-21)

The DASS-21 scale was intended to assess students' mental health challenges by reading a given statement and determining how much the statement applied to them within the last week. This tool included 21 statements that individually assessed for depression, anxiety, and stress. Precisely, seven questions assessed for depression, seven questions that assessed for anxiety, and seven questions that assessed for stress. To determine how much the statements applied to the participants, the following scaling was used: 0 - did not apply to me at all, 1 - applied to me to some degree or some of the time, 2- applied to me to a considerable degree or a good part of time, and 3 - applied to me very much or most of the time. To obtain the scores of each category, a new variable was created for each category including: depressiontot, anxietytot, and stresstot. As the tool required the results for each category to be multiplied by two, each category was multiplied by two and given a new: depressiontot2, anxietytot2, and stresstot2. The new variables allowed for results to indicate the level or severity of the categories, as shown in Table 4.

### Depression Results

The DASS-21 tool provided how the level or severity of depression among participants would be categorized and it included the following: normal, mild, moderate, severe, and extremely severe. As shown in Table 4, zero participants experienced typical or mild symptoms of depression within the last week. There were 10 participants (41%) who experienced moderate symptoms and 10 participants (16.4%) who experienced severe symptoms of depression. The majority of participants, 41 participants (42.2%) experienced extremely severe symptoms of depression within the last week.

#### Anxiety Results

Similarly to the level and severity of depression, the level and severity of anxiety was categorized as the following: normal, mild, moderate, severe, and extremely severe. As demonstrated in Table 4, zero participants experienced normal and mild symptoms of anxiety within the last week. There were four participants (6.6%) who experienced moderate symptoms and nine participants (14.7%) who experienced severe symptoms of anxiety. Those who experienced extremely severe symptoms of anxiety included 48 participants (78.75%).

#### Stress Results

The level and severity of stress were as well categorized as the following: normal, mild, moderate, severe, and extremely severe. As demonstrated in Table 4, one participant (1.6%) experienced normal symptoms, and seven participants (11.5%) experienced mild symptoms of stress within the last week. There were seven participants (11.5%) who experienced moderate symptoms and 20

participants (32.9%) who experienced severe symptoms of stress within the last week. The remaining 26 participants (42.5%) experienced extremely severe symptoms of stress within the last week.

**Table 4**

*Overall Prevalence of Depression, Anxiety, and Stress Among College Students*

Variables	<i>n</i>	%
Depression level		
Normal	0	0
Mild	0	0
Moderate	10	41
Severe	10	16.4
Extremely Severe	41	42.4
Anxiety level		
Normal	0	0
Mild	0	0
Moderate	4	6.6
Severe	9	14.7
Extremely Severe	48	78.7
Stress level		
Normal	1	1.6
Mild	7	11.5
Moderate	7	11.5
Severe	20	32.9
Extremely Severe	26	42.4

*N*=61

## Caffeine Consumption

Table 5 shows the participants who reported whether or not they consumed coffee, caffeinated tea, soda, and energy drinks within the last week. For coffee consumption, 43 participants (70.5%) reported consuming coffee, and 26 participants (42.6%) reported consuming caffeinated tea within the last week. There were 28 participants (45.9%) who reported consuming soda and 17 (27.9%) who reported consuming energy drinks within the last week. Participants were asked to self-report their consumption of caffeinated beverages based on the ounces they consumed within the last week. To obtain the sum of all the ounces consumed within all caffeinated beverages, a new variable was created: *alloz*. The minimum for *alloz* was four, maximum was 1,448, and mean was 185.34.

38 participants reported their consumption of hot coffee ounces, while 43 respondents reported that they consumed coffee. Participants self-reported consuming anywhere from 8 ounces to 448 ounces of caffeine within the last week of taking the survey. The most commonly consumed ounces of hot coffee were from seven participants (11.5%) who reported consuming 80 ounces within the last week. At the same time, one participant reported consuming 448 ounces of hot coffee within the last week. Regarding iced coffee, 35 participants out of 61 self-reported their consumption within the last week. The ounces from these participants ranged from eight to 200 ounces. The most common reported consumption of iced coffee was 80 ounces which six participants (9.8%) reported consuming within the last week.

25 participants reported their self-reported consumption of caffeinated tea, while 26 reported consuming tea within the last week. Participants reported consuming four to 476 ounces of caffeinated tea within the last week, with the most common consumption was 16 ounces, which was reported by seven participants (11.5%). There was one participant who reported consuming 476 ounces of caffeinated tea within the last week. There were 28 participants out of 61 who self-reported their soda consumption within the last week, and the range of ounces was from 12 to 544 ounces. Participants' most common reported consumption was 12, 24, and 36 ounces of soda. In regard to the consumption of energy drinks, 17 out of 61 participants self-reported their consumption, and the ounces ranged from 8.40 to 192 ounces within the last week. The most common consumption was 36 ounces, which 4 participants (6.6%) reported consuming.

**Table 5**

*Do You Drink Coffee, Caffeinated Tea, Soda, or Energy Drinks at Least Once a Week?*

Variables	n	%
Coffee		
Yes	43	70.5
No	18	29.5
Caffeinated Tea		
Yes	26	42.6
No	35	57.4
Soda		
Yes	28	45.9
No	33	54.1
Energy Drinks		

Yes	17	27.9
No	44	72.1

---

*N=61*

### Symptoms after Consuming Caffeine

Participants who reported consuming caffeinated beverages were asked to identify the symptoms they experienced after coffee, tea, soda, and energy drinks. The symptoms included fidgeting, irritability, anxiety, insomnia, dehydration, headaches, dizziness, shakiness, and a rapid heartbeat. Experiencing a rapid heartbeat was the most common and reported among 32 participants (41%), and 19 participants (23%) reported experiencing fidgeting after consuming caffeinated beverages. 16 participants (21.3%) reported experiencing shakiness, 16 participants (21.3%) reported experiencing headaches, and 13 participants (19.7%) reported experiencing anxiety after consuming caffeinated beverages. 10 participants (13.1%) reported experiencing irritability, 10 participants (13.1%) reported insomnia, and 10 participants (13.1%) reported experiencing shakiness after consuming caffeinated beverages. Lastly, five participants (8.2%) reported experiencing dizziness after consuming caffeinated beverages.

### Mental Health and Caffeine Consumption

There were no significant findings or relationships in running the correlations between caffeine consumption and mental health. The total ounces for hot coffee, iced coffee, tea, soda, and energy drinks demonstrated no correlation with the

results for depression, anxiety, and stress. Therefore, there was no relationship between the consumption of caffeine among college students and the mental health challenges they are currently experiencing.

## CHAPTER FIVE

### DISCUSSION

#### Introduction

Mental health challenges among college students have increased in the United States. Many of these challenges can be attributed to the stressful environment of meeting academic expectations while balancing a personal life outside academia. Caffeine may play a significant factor that interplays with students' daily lives. Due to this, this study was conducted to understand the relationship between mental health and caffeine consumption among college students. This chapter will discuss the study's results and address the research's limitations and implications for social work.

#### Discussion

The findings of the study revealed that college students spent most of their free time working on course work and do not see their family, friends, and loved ones as much as they would like to. The majority of the students in the study agreed and strongly agreed that they spent their free time working on homework or coursework for class. These findings confirm that many of these academic expectations are assumed to be excessive and burden students because they are juggling multiple factors simultaneously (Slimmen et al., 2022). Similarly, more than half of students disagreed and strongly disagreed that they see their family, friends,

and loved ones as much as they want. This could result from the demand to meet excessive academic expectations and because students are employed while attending college. College students are managing multiple aspects of their academic and personal lives, and it can be a lot for someone to handle.

Within this study, more than half of the participants are employed part-time or full-time. Students employed during their academic year are likely to be unable to meet academic obligations (Peltz et al., 2021). Students are likely to be experiencing stressors in their daily lives, which appears to impact their mental health.

This study found that most college students consume caffeine regularly such as coffee, tea, soda and energy drinks. The most commonly consumed beverage was coffee, which more than half of the participants reported consuming. Students who reported consuming coffee consumed between eight and 448 ounces within the last week. Only one participant reported consuming 448 ounces of coffee in a week. However, it remains uncertain how many ounces were consumed within one given day as the CCQ-R tool measured a week's consumption. However, it is imperative to note that the recommended caffeine consumption per day is 400mg or less. Again, as it remains unclear how many ounces the student consumed in a day and the average caffeine within his coffee, there may or may not be a possibility they consumed over the recommended amount.

This also applies to other students who consumed caffeine because without knowing how many ounces they consumed in a given day and the amount of caffeine per beverage, it will remain unknown whether or not they consumed more

than the suggested recommendation. However, what is known about caffeine is that it is considered a psychoactive and cognitive enhancer that improves physical performance (Kharaba et al., 2022). Therefore, there is a possibility coffee is being consumed to enhance performance, such as to remain awake, whether it is to meet expectations or to manage multiple personal obligations.

Regarding the consumption of caffeinated tea and soda, less than half of the participants reported consuming these beverages. Tea consumption ranged from four to 476 ounces a week, while soda consumption ranged from 12 to 544 ounces a week. The students consuming 476 and 544 ounces of each beverage may be consuming excessive caffeine, given that the daily recommended suggestion is 400mg. It remains unclear whether they utilized caffeine as a performance enhancer; however, in previous studies, students have reported consuming over the recommended amount of caffeine daily (Mahoney et al., 2019). Similar to coffee consumption, it remains unknown whether students consumed excessive caffeine within a given day without knowing how many ounces they consumed, as well as the caffeine mg per beverage.

The caffeine consumption among college students may be explained by the theory of Planned Behavior, which indicates that consumer consumption of any item may be related to the intention of seeking or obtaining a particular behavior (Samoggia & Rezzaghi, 2021). With this theory and this study, college students may consume caffeinated beverages to obtain a particular behavior, which, in this case, caffeine is known to be a psychoactive and cognitive enhancer. Therefore, students

may consume caffeine to enhance their performance; again, this may be to meet academic expectations and to manage the multiple obligations in their life.

The study's findings regarding mental health revealed that college students are experiencing severe and extremely severe challenges with depression, anxiety, and stress. About half of the participants are experiencing extremely severe concerns with depression, and more than half are experiencing extremely severe concerns with anxiety. Additionally, more than half of the participants are experiencing severe and extremely severe concerns with stress. An explanation for the heightened levels of mental health could be due to academic expectations and students' priority to perform well in school regardless of the excessive expectations. Students may have had an influx of academic expectations at the time of participation, such as coursework and studying for exams. However, this would indicate that students were possibly not experiencing mental health concerns prior to the school year, but instead, concerns arose because of school. Another explanation for the heightened concerns is that students could have experienced mental health challenges prior to the school year, and the academic expectations and difficulty balancing a life further heightened and increased their mental health challenges. It's significant to note that within previous studies, students reported that their concerns about their mental health, such as depression, anxiety, and stress, derived from academic expectations (Woodhead et al., 2021). These findings contribute to and validate that the mental health of college students within the U.S. has become more significant and a concern (Lipson et al., 2019).

Although there was no statistically significant relationship between depression, anxiety, stress and caffeine consumption, students reported experiencing a variety of symptoms after consuming caffeine. The results revealed that the most common symptoms included experiencing a rapid heartbeat, fidgeting, shakiness, and headaches. These symptoms are a result of caffeine intoxication, which occurs when an excess of caffeine is consumed (AlAteeq et al., 2021). Depending on an individual's body, caffeine intoxication can occur with as little as consuming 57mg of caffeine (Pina Cabral et al., 2022). This indicates that students who are experiencing a variety of symptoms that are considered to be symptoms of caffeine intoxication, then it is likely students are consuming an excessive amount of caffeine within a given day.

### Limitations

A significant limitation of the study was the self-report of caffeine consumption among different beverages. Some students reported having consumed a caffeinated beverage within the last week; however, they did not report their consumption. However, this could be for many reasons, such as the difficulty or time-consuming of the tool used to measure caffeine intake. The tool required students to report their consumption of beverages by referring to pictures of beverages in ounces but reporting their consumption in servings. This may have made it difficult for students to convert their consumption into serving sizes, leading to their lack of self-reporting. Another reason why students may not have reported their caffeine consumption was due to minimal awareness of how much caffeine they were consuming. Students

may consume these beverages without being aware of how many ounces they consume, therefore unable to recall how much they consumed. A last reason for minimal caffeine consumption self-report could be that students consume caffeine in other modalities that are not beverages; therefore, they could not report their consumption.

A similar limitation regarding caffeine consumption is that the tool used to measure caffeine intake, CCQ-R, focused on caffeine consumption in ounces. The tool does not explicitly measure the amount of caffeine in mg, which is required to understand whether students consume excessive caffeine daily. Similarly, the tool measured consumption within a week, meaning students had to recall what they consumed. It is possible that students were unable to recall their consumption therefore their self-report may not reflect their actual consumption.

### Practice, Policy and Research

A recommendation focused on practice and policy is for college campuses to require mandatory annual mental health screening for students. Mental health among students is a significant concern and requires emphasis in schools to promote the well-being of students. College campuses should conduct mental health screenings at the beginning of every school year and utilize the results to make suggestions to students. These suggestions can include information on where to receive mental health support, groups, and additional resources offered by the school. Additionally, the results can assist schools in understanding mental health

needs, such as where students may benefit from support or what is a common factor among the students. Annual mental health screenings not only offer support and resources to students but also help schools become aware of the challenges students may be facing.

Another recommendation is for schools to implement caffeine education courses and informative sessions. Caffeine consumption on college campuses is common, and students need to be aware of what they are consuming and how much they are consuming. Caffeine education courses can offer information regarding what caffeine is, the purpose of caffeine, and how it impacts the body. These courses can additionally provide students with ways to promote a healthy consumption of caffeine or alternative beverages. In the instance education courses cannot be offered at campuses, it may be beneficial to provide informative sessions. Informative sessions can provide similar information about caffeine to students who choose to attend, similar to what would be provided in a course. These sessions can be optional and provided at different times throughout the semester to give students the flexibility to attend. College students must be provided with education to promote their well-being while also encouraging them to make choices that are best for themselves.

An opportunity to further research regarding caffeine consumption and college students is to conduct a one-day research study. This potential study can include a selected number of college students who consume caffeine regularly or daily to further understand their daily consumption. The students who consume

caffeine can be asked to log their caffeine intake for the day such as the type of beverage, name of beverage if as specific brand, mg of caffeine in the beverage, and side effects they experienced. Participants' caffeine logs can then be returned to researchers in which participants will be asked to share insight about their consumption and any impact it had on their day in an interview. This may include researchers exploring why participants chose those specific caffeinated beverages and how they perceived their performance, mood and well-being throughout or at the end of the day. In exploring college students' daily caffeine consumption with caffeine logs may be beneficial to compare the consumption across different students. However, for this study to obtain a wide range of results, it will be necessary to include the participation from students pursuing different degrees such as associates, bachelors, masters, and PhD. There are numerous significant components of this study such as understanding the common caffeinated beverage among college students, how much mg of caffeine is being consumed, why they chose particular beverages, and their perception of how caffeine impacted them positively or negatively throughout the day.

The potential research study may offer further insight on the overall understanding of caffeine and psychological behavior. As mentioned, caffeine is considered to be a psychoactive and cognitive enhancer substance because it can improve physical performance. The potential findings in the potential research study above may offer significant findings to why students consume caffeinated beverages in relation to the performance enhancer of caffeine. These findings and analysis may

additionally lead to further exploration of the theory of planned behavior, in which it is expected that consumption from a consumer is related to obtaining a specific behavior. This includes exploring students' intended consumption of caffeine to reach a specific behavior, specifically to enhance performance in whichever area that may be. However, these findings may contribute to further expansion of caffeine disorders or dependence in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR).

Within the DSM-5-TR, caffeine disorders include the following: caffeine intoxication, caffeine withdrawal, caffeine-induced mental disorders, and unspecified caffeine-related disorders. However, none of these discuss the implication of caffeine dependence, such as a caffeine use disorder particularly when caffeine is considered to be a physical performance enhancer. It is surprising that someone can experience caffeine intoxication and withdrawal, however the dependence aspect of caffeine is missing within these diagnoses. It can be beneficial for further research to apply what is known about caffeine, continue to conduct research about individuals' consumption, and perception of their use. Over time, this can potentially expand the understanding and diagnosis of caffeine within the DSM-5. Perhaps, a potential new disorder would be added over time if research continues to expand.

## Conclusion

This study sought to test the following hypotheses: college students are experiencing mental health concerns as a result of academic expectations and

balancing a personal life and college students' mental health concerns are correlated with use caffeinated beverages as a coping mechanism. Based on the findings of the study, college students are experiencing significant concerns regarding their mental health, which may be a result of academic expectations and balancing a personal life. In contrast, the second hypothesis was rejected as there were no significant findings or relationship between mental health and caffeine consumption.

APPENDIX A  
SURVEY MEASURES  
CREATED BY CO-PRINCIPAL

The following questions regarding sociodemographics were created by the co-principal.

Q: How old are you?

- ☐ 18-24
- ☐ 25-35
- ☐ 36-45
- ☐ 46+

Q: What is your gender identity?

- ☐ Woman
- ☐ Man
- ☐ Non-binary person
- ☐ Prefer not to answer

Q: What is the institution you are currently enrolled in?

- ☐ Community College
- ☐ College

Q: What degree are you currently obtaining?

- ☐ Associates
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ PhD

Q: Which best describes your current academic enrollment status?

- ☐ Part-time
- ☐ Full-time

Q: How many classes are you currently enrolled in?

- ☐ 1-2 classes
- ☐ 3-4 classes
- ☐ 5-6 classes

Q: Which statement best describes your current working status?

- ☐ Part-time
- ☐ Full-time
- ☐ Caregiver
- ☐ Self-employed
- ☐ Not currently employed

Q: Which of the following best describes you as a caregiver?

- ☐ Caregiver to my children
- ☐ Caregiver to my parents or loved ones

- Caregiver to my significant other
- Caregiver to \_\_\_\_\_

**Q:** Which best describes who you currently live with?

- Alone
- With family or loved ones
- With significant other
- Other \_\_\_\_\_

**The following questions intend to understand the academic expectations and perception of balancing a personal life while attending college. These questions were created by the co-principal.**

**Q: I spend my free time working on homework or coursework for class**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I could benefit from more time to complete homework and coursework.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I have time outside of school to complete coursework or homework for my classes.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: My working status interferes with the time I have for coursework and homework completion.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: My working status interferes with the time I have to spend quality time with family, friends, or loved ones. (My working status interferes with quality time that could be spent with family, friends, or loved ones).**

- Strong disagree
- Disagree

- Agree
- Strongly agree

**Q: My working status does not interfere with my time for homework and coursework.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: My working status does not interfere with my time to spend quality time with family, friends, or loved ones.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I have time outside of school for quality time with family, friends, or loved ones.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I see my family, friends, and loved ones as much as I want.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I work part-time or full-time for financial reasons.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I have bills that I am responsible for paying.**

- Strong disagree
- Disagree
- Agree
- Strongly agree

**Q: I have dependents I am responsible for financially.**

- Strong disagree

- Disagree
- Agree
- Strongly agree

**The following questions intend to assess mental health concerns. Read each statement and determine the number that best indicates how much the statement applies to you within the past week. Use the rating scale below.**

- 0 – Did not apply to me at all
- 1 – Applied to me to some degree, or some of the time
- 2 – Applied to me to a considerable degree, or a good part of time
- 3 – Applied to me very much, or most of the time

**Q: I found it hard to wind down**

- 0
- 1
- 2
- 3

**Q: I was aware of dryness of my mouth**

- 0
- 1
- 2
- 3

**Q: I couldn't seem to experience any positive feeling at all.**

- 0
- 1
- 2
- 3

**Q: I experienced breathing difficulty (eg. Excessively rapid breathing, breathlessness in the absence of physical exertion)**

- 0
- 1
- 2
- 3

**Q: I found it difficult to work up the initiative to do things**

- 0
- 1
- 2
- 3

**Q: I tend to over-react to situations**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I experience trembling (eg, in the hands)**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt that I was using a lot of nervous energy**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I was worried about situations in which I might panic and make a fool of myself**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt that I had nothing to look forward to**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I found myself getting agitated**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I found it difficult to relax**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt down-hearted and blue**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I was intolerant of anything that kept me from getting on with what I was doing**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt I was close to panic**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I was unable to become enthusiastic about anything**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt I wasn't worth much as a person**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt that I was rather touchy**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt scared without any good reason**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

**Q: I felt that life was meaningless**

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3

The following questions are intended to measure your caffeine consumption. Please answer the following questions as accurately as you can. Please indicate how many servings of each caffeinated beverage you consumed within the last week. Use the pictures to help guide your responses.

**Q: Do you drink coffee at least once a week?**

- ☐ Yes
- ☐ No

**Q: Please indicate how many servings of coffee you consume, on average, each week.**

- ☐ 8oz of coffee (short) \_\_\_\_\_
- ☐ 12 oz of coffee (tall) \_\_\_\_\_
- ☐ 16 oz of coffee (grande) \_\_\_\_\_
- ☐ 20 oz of coffee (venti) \_\_\_\_\_



**Q: Please indicate how many servings of **iced** coffee you consume, on average, each week.**

- ☐ 8oz of coffee (short) \_\_\_\_\_
- ☐ 12 oz of coffee (tall) \_\_\_\_\_
- ☐ 16 oz of coffee (grande) \_\_\_\_\_
- ☐ 20 oz of coffee (venti) \_\_\_\_\_



**Q: Do you drink caffeinated tea at least once a week?**

- ☐ Yes
- ☐ No

**Q: Please indicate how many servings of tea you consume on average, each week. A few teas that contain caffeine include black tea, matcha, green tea, white tea, oolong tea, and earl grey tea.**

- ☐ 8 oz tea \_\_\_\_\_
- ☐ 12 oz tea (tall) \_\_\_\_\_
- ☐ 16 oz tea (grande) \_\_\_\_\_
- ☐ 24 oz tea (venti) \_\_\_\_\_



**Q: Do you drink soda at least once a week?**

- ☐ Yes
- ☐ No

**Q: Please indicate how many servings of soda and diet soda you consume on average, each week. A few sodas do not consume caffeine such as Sprite, 7-up, Fanta, Crush, and Root Beer**

- ☐ 12 oz soda \_\_\_\_\_
- ☐ 16.9 oz soda \_\_\_\_\_
- ☐ 20 oz soda \_\_\_\_\_
- ☐ 32 oz soda \_\_\_\_\_



**Q: Do you drink energy drinks at least once a week?**

- ☐ Yes
- ☐ No

**Q: Please indicate how many servings of energy drinks you consume, on average, each week.**

- ☐ 2 oz energy shot \_\_\_\_\_
- ☐ 8.4 oz energy drink \_\_\_\_\_
- ☐ 12 oz energy drink \_\_\_\_\_
- ☐ 16 oz energy drink \_\_\_\_\_



Monsters are 160z  
Celsius are 12oz

**The following questions intend to assess side effects as a result of caffeine consumption including coffee, tea, soda, and energy drinks within the last week.**

**Q: Within the last week after consuming coffee, which of the following did you experience? (check all that apply)**

- ☐ Fidgeting
- ☐ Irritability
- ☐ Anxiety
- ☐ Insomnia
- ☐ Dehydration
- ☐ Headache(s)
- ☐ Dizziness
- ☐ Shakiness
- ☐ Rapid Heartbeat
- ☐ None

- ☐ Did not consume tea within the last week

**Q: Within the last week after consuming caffeinated tea which of the following did you experience? (check all that apply)**

- ☐ Fidgeting
- ☐ Irritability
- ☐ Anxiety
- ☐ Insomnia
- ☐ Dehydration
- ☐ Headache(s)
- ☐ Dizziness
- ☐ Shakiness
- ☐ Rapid Heartbeat
- ☐ None
- ☐ Did not consume tea within the last week

**Q: Within the last week after consuming soda which of the following did you experience? (check all that apply)**

- ☐ Fidgeting
- ☐ Irritability
- ☐ Anxiety
- ☐ Insomnia
- ☐ Dehydration
- ☐ Headache(s)
- ☐ Dizziness
- ☐ Shakiness
- ☐ Rapid Heartbeat
- ☐ None
- ☐ Did not consume tea within the last week

**Q: Within the last week after consuming energy drinks which of the following did you experience? (check all that apply)**

- ☐ Fidgeting
- ☐ Irritability
- ☐ Anxiety
- ☐ Insomnia
- ☐ Dehydration
- ☐ Headache(s)
- ☐ Dizziness
- ☐ Shakiness
- ☐ Rapid Heartbeat
- ☐ None
- ☐ Did not consume tea within the last week

APPENDIX B  
INFORMED CONSENT FORM

## **Informed Consent**

The study in which you are asked to participate is designed to understand the mental health concerns of college students, including stress, as a result of academic expectations and balancing a personal life in relation to coping mechanisms. The study is being conducted by Stacey Trejo, a graduate student, under the supervision of Dr. Laurie Smith, Professor at California State University, San Bernardino (CSUSB). The study has been approved by the Institutional Review Board at CSUSB.

**PURPOSE:** The purpose of the study is to understand stress, mental health, and caffeine consumption among college students.

**DESCRIPTION:** Participants will be asked questions on academic stressors and balancing a personal life, stress, mental health challenges, and caffeine consumption.

**PARTICIPATION:** Your participation in the study is totally voluntary. You can refuse to participate in the study or discontinue your participation at any time without consequences.

**CONFIDENTIALITY:** Your responses will remain confidential, and data will be reported via survey, using Qualtrics.

**DURATION:** It will take 5-10 minutes to complete the survey.

**RISKS:** Although not anticipated, there may be some discomfort in answering some of the questions. You are not required to answer all of them and can skip the question or end your participation in the study.

**BENEFITS:** Findings from this study will add to the literature pertaining to college students and an understanding of what students experience during their academic journey.

**CONTACT:** If you have any questions about this study, please feel free to contact Dr. Laurie Smith at (909)537-3837

**RESULTS:** Results of the study can be obtained from the Pfau Library Scholar Works database (<http://scholarworks.lib.csusb.edu/>) at California State University, San Bernardino after May 2024.

APPENDIX C  
SOCIAL MEDIA POST

I will be conducting research about college student stressors in relation to mental health and caffeine consumption while attending college. If you would like to participate and are a current college student, enrolled part or full-time in community college, undergraduate study, graduate school, or a doctoral program, please send me a direct message.

APPENDIX D  
EMAIL TO PROFESSORS

Hello Professor or Dr. Name of Professor

I am a current 2<sup>nd</sup> year MSW student conducting research for my thesis project and would like to request your assistance. Attached to this email is a PowerPoint slide that displays my study's QR code. It would be very much appreciated if you would display the QR code for your students. Their participation is not mandatory. Thank you in advance for your assistance.

Best,

Stacey Trejo

APPENDIX E  
IRB APPROVAL FORM

Submission Type: Initial Date: 4-9-2024

IRB #: IRB-FY2023-361

Title: Stressors, Caffeine Consumption, and Mental Health Concerns among College Students

Creation Date: 4-24-2023

Status: Review Complete

Principal Investigator: Laurie Smith

Submission Type: Modification Date: 4-9-2024

IRB #: IRB-FY2023-361

Title: Stressors, Caffeine Consumption, and Mental Health Concerns among College Students

Creation Date: 10-2-2023

Status: Review Complete

Principal Investigator: Laurie Smith

IRB#	Submission	Status	Review Type	PI	My Assignment	Decision
<a href="#">IRB-FY2023-361</a>	Stressors, Caffeine Consumption, and Mental Health Concerns among College Students Modification	● Review Complete	Exempt	Laurie Smith	Co-Principal Investigator	Approved 10-03-2023
<a href="#">IRB-FY2023-361</a>	Stressors, Caffeine Consumption, and Mental Health Concerns among College Students Initial	● Review Complete	Exempt	Laurie Smith	Co-Principal Investigator	Exempt 09-26-2023

Key Contacts ⓘ		Attachments	
Team Member	Role	Number	Email
Laurie Smith	Principal Investigator	909/537-3837	lasmith@csusb.edu
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