

**The Impact of COVID-19 on Access to Coping, Perceived Stress and Drinking  
Attitudes in Undergraduate Students**

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**Abstract**

The objective of this study was to assess how the ongoing COVID-19 pandemic has impacted students' ability to access their preferred coping mechanisms and investigate if increased stress and decreased access has resulted in an increase in drinking as a means of coping. Participants were recruited from Roanoke College's SONA system or via an external anonymous link and completed a brief survey focused on individual coping preferences, perceived stress and drinking behavior, with supplementary questions regarding commitments outside of academics as well. The initial expectation for this research was that students who were unable to access their preferred coping mechanism would be more likely to utilize drinking as a way to cope. Upon completion of data analyses it was found the subset of the sample population who were more engaged with extracurricular commitments did not report using alcohol as a means of coping, and the majority of participants did not self-report increased drinking as a result of stress in light of the pandemic when their preferred coping mechanisms were compromised.

**The Impact of COVID-19 on Access to Coping, Perceived Stress and Drinking Attitudes in Undergraduate Students**

The relationship between stress and alcohol consumption has been studied for decades. In 1943, the tension-reduction hypothesis investigated that an increased level of stress caused an uptake in alcohol consumption as a means to quell anxious feelings (Horton, 1943). Chronic alcohol abuse may also put users at an increased risk for reduced cognitive function, liver disease, and other health concerns impacting heart function (Centers for Disease Control and Prevention [CDC], 2020). Cognitive abilities such as delayed processing speeds, impulsive decision making and inability to retrieve information are also impaired from heavy alcohol use (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2021). A reliance upon alcohol as a primary coping mechanism may develop into a greater substance abuse problem later on and put individuals at a significant risk of performing poorly academically assuming the individual is a student. An individual who may utilize this coping mechanism after college and into early adulthood may find themselves unable to be financially stable or maintain a job in their field of choice.

Poor academic performance may be a side effect of heavy drinking. A common theme perpetuated in American film, television, and media is the notion that college is a period in young adulthood in which individuals are able to explore numerous outlets and interests at their own discretion (Bonnie, 1970). These influences may blur the line between social drinking and problem drinking for some students, as alcohol consumption can become a determining factor in an undergraduate's performance (Berkowitz & Perkins, 1986). The personal fable comes to play as an integral guide in developing an individual's sense of self. Alberts, Elkind and Ginsberg define the personal fable as the belief that each adolescent finds themselves to be unique and therefore will never have to deal with the repercussions of their choices and behaviors (Alberts et al., 2007). Students may find themselves engaging in risky behaviors and rebelling with their

new found freedom, which may result in students not prioritizing their degree. A demanding academic workload coupled with balancing a social life and new responsibilities may overwhelm students to a point of mental burnout and avoidant behavior regarding schooling. Previous studies have shown that academic stress and extracurricular engagement has been linked to a decline in college students' mental and physical health (Koch, 2018).

When looking at the implications of the survey administered in this study from a social psychology perspective, despite coping mechanisms being an individualized preference, social groupings and peers tendencies may begin to impact an individual's selection of coping means by way of descriptive norms. Some of the strongest predictors for individuals' attitudes towards drinking and other substances have been explored by Melissa Lewis and Clayton Neighbors as college students often overestimate the amount and frequency that their peers are drinking (Lewis & Neighbors, 2004). When looking at marijuana use, having peers who use the substance, believing the use to be prevalent in your community, and having a positive attitude regarding the substance act as predictors in an individual's willingness to try and use the substance as well; these predictive factors may possibly be applied to alcohol consumption as well (Hart & Ksir, 2018). For example, a new member of a group that tends to manage stressful scenarios by drinking may see that as an appropriate means to cope. One study found that college students with low self-control and low academic commitment were more likely to abuse substances (Tibbetts & Whitmore, 2002). Life stress and its responding coping mechanisms in relationship to adolescent substance abuse was further explored by Thomas Wills. Wills work was able to find a positive correlation between an individual's ability to manage stress and drinking (Wills et al., 2001).

The implications of drinking behavior amongst college students during the COVID-19 pandemic has not been a heavily researched topic. By January 2021, the United States reported over 25.6 million cases of COVID-19 and a death toll of nearly 580,000 (Johns Hopkins, 2021). Unlike previous incidences of infectious disease such as H1N1, SARS or the 1918 Spanish Flu, the existence of COVID-19 and associated risks have been scrutinized with some individuals and groups fully refuting the threat of the disease. This inconsistency in how much of a threat populations view the virus to be has likely resulted in an increase in individual stress for some. As the pandemic has impacted preferred outlets of stress (i.e. gyms being closed and social distancing guidelines enforced), at-risk groups may be more prone to engage in drinking as an alternative coping mechanism. COVID-19 has resulted in increased unemployment, strain on families, and a significant decrease in social opportunities (World Health Organization [WHO], 2021). Individuals who were previously moderate drinkers may find themselves in a position with few of their former outlets available to be utilized to cope. The pandemic may have put an additional financial strain on individuals and to those with poor adjustment capabilities, the added fiscal weight may act as a strong catalyst for problem drinking (WHO, 2021).

First year students may face the added challenges of living in a new environment if participants were living on campus or away from home and traditional support systems as well as managing a more intense academic load. The ongoing pandemic and COVID-19 regulations likely added an additional source of stress to first year students that previous classes had not been faced with in their first semesters away from home. This may imply that individuals who have had previous experience with traditional college settings may continue to struggle adjusting to remote learning. This exposure may result in students struggling to fully engage with remote or hybrid courses in the case that they did not have the opportunity to attend a face to face lecture,

as well as adhere to the recommended and enforced protocols of the college regarding COVID-19, social distancing, and limiting potential exposures. On a broader spectrum this challenge may provide insight to risk taking behavior in any students with time in a customary class setting who now may not perceive COVID-19 as a serious illness or possibly view it as a barrier to their personal freedoms.

This project aims to address what variables in an undergraduate student's lifestyle during the COVID-19 pandemic may put them at risk of using drinking as a preferred coping mechanism. COVID-19 has not only strained college students' traditional means of interacting with one another, whether it be in the classroom or in social settings, but altered the trajectory of their young adulthood. Students are now weighted with an additional degree of responsibility to be cautious and aware of their actions affecting those around them and in their community. The survey administered in this study examined general student demographic information, extracurricular commitments, and other lifestyle factors that could contribute to an individual's ability to access coping mechanisms when under stress, and if an inability to do so could change their perceptions about drinking. Students who are unable to access coping mechanisms when under stress would feel more positively about drinking to cope.

### **Drinking Attitudes**

In 2020, the average American consumed seventeen alcoholic beverages per week. The CDC provides a definition of alcoholism in adults as fourteen drinks per week for men and seven for women. Individuals who abuse alcohol are at a higher risk of developing certain types of cancers, liver disease, and heart problems (CDC, 2020). The increase in alcohol consumption in 2020 as opposed to 2019 rates has been viewed by many as a byproduct of the ongoing pandemic and harsh quarantine restrictions enforced early on last year. A survey conducted in June of 2020

by the American Addiction Center reported that one in five individuals who lost their jobs due to COVID-19 lockdowns turned to alcohol (Mosel, 2021).

Earlier research aimed at college students during the pandemic and drinking behavior has produced a myriad of results on the issue of whether or not students are consuming alcohol at a higher rate compared to before the pandemic, often with studies finding contradictory results. One such study showed increased consumption amongst college students directly following campus closings (Lechner et al., 2020), while another study found an overall decline in undergraduate alcohol rates (Jackson et al., 2020).

### **Perceived Stress**

Stress often applies to any event or change that results in increased physical, emotional, or psychological strain to an individual. COVID-19 as an illness and its secondary impacts such as loss of employment and social isolation negatively impacted the state of many Americans' mental health (Nirmita-Panchal, 2021). In terms of physiological effects, stress can impair cognitive skills as well as cause hormonal imbalances (Yaribeygi et al., 2017). The most detrimental effect for the population in focus of this study was memory impairment and cognitive deficit on college students working to adjust to the various challenges of college under restrictions. In contrast to previous generations of college students, participants of this study were enrolled in an academic year that was almost entirely taught remotely with social distancing restrictions and alternative classroom options that may pose additional challenges to an already unconventional and stressful time.

### **Coping Mechanisms**

Traditional and effective coping mechanisms include exercise, venting, seeking out support from others, and various other outlets (UCLA). The need to have a preferred coping

mechanism and utilize it when challenged is an important skill in day to day life, but even more so in the last year as the world has worked to adjust to the pandemic. To some, the steady flow of stressful news and increased restrictions may have inhibited individual ability to cope and/or access to their preferred coping mechanism for example exercising at a gym or attending group meetings such as Alcoholics Anonymous (Addiction, 2020). This decrease in access may have forced some individuals who were less willing to adapt or find an alternative option to lessen their stress to turn to alcohol (CDC, 2021). Undergraduate students' capacity to find additional means to cope during the pandemic may vary depending upon additional external stressors such as employment and extracurriculars, these discrepancies were statistically investigated through the completion of this study.

## **Methods**

### **Participants**

Participants were Roanoke College students ranging from first years to seniors. The majority of students used the SONA Experiment Management System to sign up, which prompted them to complete the initial survey and a brief external survey to receive 0.5 SONA credits upon completion. Additional responses were recorded from participants who received an external link to the survey. Eighty-five participants completed the survey; two identified as nonbinary, sixty-two as female, and twenty-one as male. Due to the low number of nonbinary participants, their responses were recorded and analysed but would have yielded more insight and generalized had there been more individuals in this gender category.

Thirty-five first year students completed the survey, nineteen sophomores, sixteen juniors, and fourteen seniors. Thirteen participants were eighteen years old at the time the survey



was administered, thirty-one were nineteen years old, seventeen were twenty years old, thirteen were twenty-one years old, and ten were twenty-two.

The surveys were completed via Qualtrics. The first survey asked basic demographic questions in addition to having participants rate the degree of stress they were under over the last semester, what their traditional coping mechanisms are, and select any additional lifestyle variables that may have contributed to stress. The second survey was used to verify completion and collect participants names. This was used only to apply credit when necessary in SONA accounts and was not published in the final data analysis.

### **Procedure**

This study was conducted online through the SONA Experiment Management System and Qualtrics. Once participants signed up, they responded to a series of self-ranking questions about drinking behavior, means of coping with stress, and the impact of COVID-19 on their individual lives. Additional yes or no questions pertaining to variable life stressors were then answered; lastly, basic demographic information including academic year, age, and gender at the end of the survey to avoid any underlying cognitive biases these questions could have elicited had they been placed at the beginning of the survey. A complete list of the survey questions can be found at the beginning of the appendix. A second survey was used to gather participants' names to grant a credit of 0.5 via SONA to those registered in classes in the psychology department. Responses were then processed through Jamovi to create a statistical analysis of the impact of COVID-19 on drinking, perceived stress and coping mechanisms.

### **Measures**

The three variables of focus in this study were drinking behavior, perceived stress, and access to coping mechanisms in light of the impact of COVID-19 on individuals. Participants

first responded to a series of questions regarding their ability to access their preferred coping mechanism, drinking patterns, and stressful perceptions of COVID-19. Nineteen questions were scored using a Likert scale ranking from one being strongly disagree to seven being strongly agree. A brief number of yes or no questions were answered subsequently to create a composite stressor score of participant responses. Yes or no questions contained material focused on individual variables that may cause increased stress such as employment, extracurricular participation, and quality of relationships. Lastly, open ended questions allowed for participants to state how they were presently coping with stress, if participants drank more under stress, and if so what the cause of their stress was.

## **Results**

### **Descriptive Statistics**

Reliability of compiled questions within each category are referenced in Table 1. Overall mean and standard deviations of average participant responses for drinking, perceived stress, and coping are in Table 2. Means and standard deviations of average participant responses to questions regarding drinking, coping, and stress by academic year can be found in Table 3 and gender in Table 4. Proportion test outcomes for all yes or no questions are found in Table 5. Correlation scores are found in Table 6. Factor analysis of Likert scaled questions are in Table 7. Regression analysis of stressor scores with all categories as predictors are in Tables 8, 9 and 10. Sub-sample sizes of gender groups were two nonbinary participants, sixty-two as female, and twenty-one as male.

### **Reliability Analysis**

Internal validity of each Likert score category was assessed using Cronbach's alpha. Reliability of Likert scaled questions under the category of drinking reported an acceptable value

( $\alpha = 0.834$ ) after reverse scoring the final question in the category “I am drinking at the same rate as before the pandemic”. In contrast, both reliability analysis ran for categories coping ( $\alpha = 0.598$ ) and stress ( $\alpha = 0.639$ ) were statistically unacceptable due to values below 0.70. These were an improvement in comparison to the initial analysis run for the second and third categories that had questions placed in the incorrect categories. A completed report of reliability across the three categories is available in Table 1.

### **Mean Level Differences**

We examined mean-level differences through score assessments of drinking attitudes, access to coping, and perceived stress split by academic year and gender. The results of analyses of the three categories when split by academic year are available in Table 3. Data supporting the analyses of categories split by gender can be found in Table 4.

### **Proportion Test**

A proportion test was used to determine the percentage of participants who reported answering “yes” or “no” to the four questions included in the survey that were used to create composite stressor scores. “No” was equivalent to the integer one and “yes” equivalent to an integer value of two. These results can be found in Table 5.

### **Correlations**

A correlation matrix was created comparing the three categories of access to coping, perceived stress, and drinking attitudes to measure the strength and direction, whether positive or negative, of the relationship between variables. The correlation between drinking attitudes and coping was statistically insignificant. Individuals who found themselves to be proficient in coping likely had other preferred means to manage their stress than turning to alcohol. Perceived stress and coping resulted in a positive relationship, meaning that the better participants were at

coping, the less stress they perceived themselves to be under. Bivariate correlations can be found in Table 6.

### **Factor Analysis**

A factor analysis was utilized to determine which Likert scaled questions should be grouped into what categories. This application allows for maximum variance amongst variables to be determined and place them into a common score which can then be used for further analysis, which for the purpose of this study was multiple regression.

### **Multiple Regression**

Multiple regressions analysis allow for the strength of predictors to be determined, so that we can see how strong the effect of independent variables are on a dependent variable. The variance value indicates how far the observed values differed from the average of values predicted. Multiple linear regression was applied to the data set to examine if one composite category such as perceived stress, drinking and coping mechanisms had a stronger effect in addition to use of a composite stressor score of participants. See Table 8, 9, and 10 for results.

### **Discussion**

In this study, our primary focus was to determine if increased stress levels during the COVID-19 pandemic and a lack of access to coping mechanisms resulted in individuals having more positive attitudes towards drinking to cope. Correlation results were indicative that most students were sufficient in using coping mechanisms when under significant perceived stress. Completion of this study during the spring of 2021 allowed for a more broadscale visual of what individuals were doing to cope a year into the pandemic, rather than knee jerk reactions to entering into quarantine and social restrictions. Theoretical and practical implications for the

study of student drinking behavior when traditional coping mechanisms are unavailable are further discussed below.

### **Primary Results**

Participant capacity to cope was positively correlated to stress. This correlation allows for us to conclude that individuals who are more adept at applying coping mechanisms are less likely to report feelings of unmanageable stress. In summation, individuals who were able to cope with their stress felt less positively towards turning to alcohol as an alternative coping mechanism. The relationship between drinking attitudes and perceived stress was not statistically significant.

Those who did report drinking at an increased rate after COVID-19 restrictions began being enforced cited non-academic sources as the majority of their stress such as interrelationship challenges and additional ramifications of the ongoing pandemic like decreased social opportunities and restrictions. The majority of those who did report drinking at an increased rate reported that they were members of a social group, organization, and/or team to the yes/no questions included in the survey. This finding may be reinforced by the concept of groupthink mentioned above in the introduction. Previous research of undergraduate students who are members of social groups or athletic teams drink alcohol at increased rates than their unaffiliated peers (Turrisi et al., 2006). Students in these groups at Roanoke College may have also found themselves surrounded by those engaging in risky behaviors and modeled the actions of their peers or teammates.

### **Implications**

When focusing on future implications from this data, the findings from this study offer greater insight for academic institutions in regards to providing outlets and resources to students

during stressful times as well as revising alcohol education. The survey data analysis found that willingness to find new forms of coping showed a decrease in students utilizing alcohol to manage stress. The most predominant being data supporting more extensive and inclusive alcohol education measures. Although Roanoke College does have a module dedicated to alcohol awareness for first year students to complete, this course is completed once and early on in a student's undergraduate career. With the application of the data from this study in use, the requirement to have students complete an alcohol education course each academic year may help continue to decrease the likelihood of students engaging in excessive drinking behavior as a means to cope.

Aside from purely addressing the substance abuse component, the college may also benefit their students by working to increase students' awareness of their options to access mental health resources and/or constructive outlets for stress relief. Although Roanoke does provide all students with access to a MaroonCare account in which they may seek out counseling, this may be seen by some as an additional hour in which they will have to be in front of a screen during a remote semester. Many participants cited physical activity or social engagements as their preferred means of coping when under stress; both of these options underwent varying degrees of accessibility throughout the course of quarantine and the pandemic. As the likelihood of an in person semester remains unknown for many higher education institutions, revising programs intended to provide stress outlets for students is critical to individual success.

A continuation of the college's efforts to educate students about all of the available resources may effectively decrease the level of stress students may be encountering. By promoting a diverse array of activities that are socially distanced and adhere to CDC and state

guidelines to slow the spread of COVID-19 may better enable students to seek out on campus engagements that are both safe from a medical standpoint but also enjoyable for the time being. The administration of a campus wide survey for student interests would allow for event coordinators to plan accordingly for opportunities that would appeal to a broader range of students. The findings of this research are significant to real world application as a means of providing empirical data to encourage individuals to diversify their coping mechanisms to be more equipped to avoid the development of potentially damaging behaviors or those that are deleterious to long term health.

### **Limitations and Future Directions**

The present study did have limitations worth acknowledging. First, this study was reliant purely on participants using self-reporting measures and was distributed after a year of COVID-19 restrictions. This survey was administered after a year of pandemic restrictions and guidelines, therefore participants likely had time to adjust and find replacement coping mechanisms. The use of self-reporting may have resulted in biased responses as individuals may feel uncomfortable honestly assessing their alcohol consumption and may be less likely to admit to increased drinking behaviors. Due to this, participants may have under-reported their drinking behaviors in an attempt to subconsciously minimize the amount of alcohol they consume.

The next limitation pertains to the study formatting itself. Rather than using a pre-existing scale to quantify students' drinking behavior, perceived stress and coping mechanisms, the survey consisted of questions created and categorized specifically for this study. In regards to reliability of the data gathered from participants and analyzed, failure to use a pre-existing scale likely resulted in poor reliability in each aforementioned category as not each category had equal numbers of questions assigned to it. Future replications of this study should like to implement

scales such as the Obsessive Compulsive Drinking Scale created in 1995 (Anton, Moak & Latham, 1995), the Perceived Stress Scale (Cohen & Janicki-Deverts, 1994), and the Brief Resilient Coping Scale (Sinclair & Watson, 2004).

Lastly, this study was given only to Roanoke College students, predominantly those enrolled in psychology courses. By utilizing a sample of students from one academic institution the external validity of this study is lacking. The sample population used for this study consisted of individuals enrolled at a small, private liberal arts college whereas responses from individuals at large schools or state schools may have more varied responses to the pandemic's impact on their access to coping mechanisms and changes in their drinking behaviors. If this study were to be added on to or replicated in the future, a more diverse pool of higher education institutions should be included such as state schools, single gendered, and military schools to acquire a broader spectrum of perspectives and responses. Additionally, participants should be recruited from all academic departments as there was a potential risk that Roanoke College psychology students had pre-existing knowledge of what constitutes binge drinking and were able to provide low scores to any questions regarding these behaviors.

The key findings of this study indicate that college students are not drinking at an increased rate during the pandemic. COVID-19 has caused significant changes to what is defined as "normal" in addition to restricting traditional mechanisms of coping. With this knowledge moving forward, colleges and universities may apply this information to provide increased access to mental health and coping resources for students in addition to requiring routine or more in depth courses for alcohol education.



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## Appendix

### Complete Survey Questions

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Likert Scale (1 = strongly disagree, 4 = neutral, 7 = strongly agree)

1. I think drinking is part of the college experience.
2. I don't get much work done when I have a heavy workload.
3. I am drinking more now than before COVID-19.
4. I have a method to relax when I am stressed (exercise, drawing, cooking, etc.).
5. I put my school work before anything else.
6. I drink in social settings.
7. My friends think COVID-19 is a serious concern.
8. I drink to relax.
9. I struggle to say no to things people ask me to do.
10. COVID-19 is a big concern for me on a day to day basis.
11. I drink alone.
12. I am able to remain focused when I have a lot of work.
13. COVID-19 has negatively impacted my financial situation.
14. If I am drinking I have more than 4 to 5 drinks.
15. COVID-19 has made me more anxious to enter the workforce.
16. I drink more than 3 nights a week.
17. COVID-19 has affected my preferred coping mechanism (working out, socializing with friends, etc).
18. Stress about COVID-19 has changed my drinking patterns.

19. I am drinking at the same rate as before the pandemic.

Yes/No Questions

1. I work a job/have an internship during the school year.
2. I am a member of a team/organization/social group.
3. I have a significant other.
4. I am a part of a selective program (Honors Program, Fellows, etc.).

Open Ended

1. What are you currently doing to cope with stress?
2. Think of a time last semester when you were stressed, did you drink more than usual?  
Was the stress caused by: peers, academics, work, other?

Demographics

1. Gender
2. Age (confidential)
3. Academic year

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**Tables**

Table 1

Reliability analysis of composite categories of drinking, perceived stress and coping.

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	<u>Drinking</u>	<u>Perceived Stress</u>	<u>Coping</u>
<b>Reliability</b>	0.834	0.598	0.639

*Note.* Reliability was tested using Cronbach’s alpha in which a value greater than 0.70 may be statistically accepted.

Table 2

Mean level differences in drinking, stress, and coping mechanisms overall

	<u>Drinking</u>	<u>Perceived Stress</u>	<u>Coping</u>
<b>N</b>	85	85	85
<b>M</b>	2.89	4.39	3.86
<b>SD</b>	1.32	1.10	1.14

*Note.* M and SD represents mean and standard deviation throughout this study. N represents population.

Table 3

Mean level differences in drinking, stress, and coping mechanisms split by academic year

	<u>Academic Year</u>	<u>Perceived Stress</u>	<u>Coping</u>	<u>Drinking</u>
<b>Mean</b>	First year	4.35	3.82	2.66
	Sophomore	4.75	3.43	2.83
	Junior	4.16	3.99	3.12
	Senior	4.31	4.40	3.29
<b>SD</b>	First year	1.00	1.04	1.31
	Sophomore	1.04	1.19	1.27
	Junior	1.03	1.19	1.06



Senior 1.27 1.13 1.68

*Note.* M and SD represents mean and standard deviation throughout this study.

Table 4

Mean level differences in drinking, stress, and coping mechanisms split by gender

	<u>Gender</u>	<u>Perceived Stress</u>	<u>Coping</u>	<u>Drinking</u>
<b>Mean</b>	Female	4.51	4.11	2.89
	Male	4.09	3.08	2.94
	Non-binary	4.43	4.50	2.38
<b>SD</b>	Female	1.12	1.10	1.30
	Male	1.02	0.96	1.44
	Non-binary	0.40	1.41	1.59

*Note.* M and SD represents mean and standard deviation throughout this study.

Table 5

Proportion test split of participants replies to “yes” or “no” questions.

	<u>Level</u>	<u>Count</u>	<u>Proportion</u>	<u>p</u>
<b>Q1</b>	No	38	0.447	0.39
	Yes	47	0.55	0.39
<b>Q2</b>	No	20	0.24	<0.001
	Yes	65	0.77	<0.001
<b>Q3</b>	Yes	85	1.00	<0.001
	No	0	0.00	<0.001
<b>Q4</b>	No	50	0.59	0.13
	Yes	35	0.41	0.13
<b>Q5</b>	No	56	0.66	0.01
	Yes	29	0.341	0.01

*Note.* Q1 “I work a job/have an internship during the school year”, Q2 “I am a member of a team/organization/social group”, Q3 “I am paying attention to the survey and answering honestly”, Q4 “I have a significant other”, Q5 “I am a part of a selective program (Honors Program, Fellows, etc.)”.

Table 6  
Correlation scores of each categorical average

		<b>Perceived Stress</b>	<b>Coping</b>	<b>Drinking</b>
<b>Perceived Stress</b>	Pearson’s r	-		
	P-value	-		
<b>Coping</b>	Pearson’s r	0.417	-	
	P-value	<0.001	-	
<b>Drinking</b>	Pearson’s r	0.053	0.156	
	P-value	0.632	0.153	

*Note.* Pearson’s r indicates strength of relationship between the two values being tested. The p-value reported indicates statistical significance between correlations of two variables when  $p < 0.05$ .

Table 7  
Factor Analysis of all Likert scaled questions.

	<u>Factor</u>		
	1	2	3
<b>Q1_1</b>	0.506		
<b>Q2R</b>		0.697	
<b>Q3_1</b>	0.730		
<b>Q4_1</b>			

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			27
Q5_1			0.519
Q6_1	0.730		
Q7_1		0.464	
Q8_1	0.844		
Q9_1		0.337	
Q10_1		0.696	
Q11_1			
Q12_1			0.697
Q13_1		0.596	
Q14_1	0.695		
Q15_1		0.488	
Q16_1	0.714		
Q17_1		0.598	
Q18_1	0.770		
Q19R			

*Note.* “Minimum residual” extraction method was used in combination with a “oblimin: rotation. Factor 1: “Drinking Attitudes”, Factor 2 : “Perceived Stress”, Factor 3: “Coping”.

Table 8

Regression of stressor scores with drinking and coping averages as predictors.

Predictor	Estimate	R <sup>2</sup>	df's	t	p
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Intercept	5.87	-	1,82	13.91	<.001
Drinking	-0.11	0.02	-	-1.39	0.17
Coping	0.14	0.04	-	1.44	0.15

*Note.* The variable df represents degrees of freedom. T-value measures the size of the difference relative to the variation in the data. R<sup>2</sup> implies goodness of fit for the models.

Table 9

Regression of stressor scores with perceived stress and coping averages as predictors.

Predictor	Estimate	R <sup>2</sup>	df's	t	p
Intercept	6.02	-	1,82	12.27	<.001
Stress	-0.14	0.01	-	-1.31	0.19
Coping	0.18	0.04	-	1.68	0.10

*Note.* The variable df represents degrees of freedom. T-value measures the size of the difference relative to the variation in the data. R<sup>2</sup> implies goodness of fit for the models.

Table 10

Regression of stressor scores with drinking and coping averages as predictors.

Predictor	Estimate	R <sup>2</sup>	df's	t	p
Intercept	6.60	-	1,82	13.24	<.001
Drinking	-0.09	0.02	-	-1.13	0.26
Coping	-0.06	0.02	-	-0.61	0.55

*Note.* The variable df represents degrees of freedom. T-value measures the size of the difference relative to the variation in the data. R<sup>2</sup> implies goodness of fit for the models.



