STRESS LEVELS AND ALCOHOL USE AMONG UNDERGRADUATE STUDENTS: A QUANTITATIVE STUDY

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Introduction

• In a national survey conducted by Substance Abuse and Mental Health Services Administration (SAMHSA, 2011) it identified that among full time college students in 2011, 60.8% were current drinkers, 39.1% were binge drinkers, and 13.6% were heavy drinkers; for those enrolled in a part time student program, 52% were current drinkers, 35.4% were binge drinkers and 10.5% were heavy drinkers.

• According to the NIAAA (2013), about 25% of college students have reported academic consequences of their drinking that include: missing classes, falling behind in their studies, performing poorly on exams or papers and receiving overall lower grades (NIAAA, 2013)

• College students are confronted with a variety of stressors that can include time management, financial problems, sleep deprivation, social activities such as a school club/organization/team, or having to raise a family (Womble, 2001)

Research Questions

1. Will undergraduate students exceed low risk drinking levels when experiencing high stress levels?
2. Will working long hours affect student’s stress levels and/or increase alcohol use?
3. Will minimal sleep affect students stress levels and drinking?
4. Will participating in a campus organization affect student’s stress levels and/or increased alcohol use?
5. Will living on/off campus versus at home affect students’ stress levels and/or increase alcohol use?
6. Will a first generational student experience higher stress levels and/ or higher alcohol use?
7. Will gender identification impact students’ stress and/or alcohol use?
8. Will a students’ ethnicity identification affect the students’ stress levels and/or alcohol use?
9. Will class standing affect a student’s stress and/ or alcohol use?
10. Will there be patterns of undergraduate students’ stress and alcohol use that particularly revolve around midterms in the fall semester?
This study aspired to contribute valuable information to the social work field. Results of this study aimed to help guide social workers develop interventions for college students to learn to manage their stress and alcohol consumption. Lastly, this study sought to provide social workers with knowledge that would have assisted them in advocating for students’ education on stress management and alcohol consumption risks and would urge for policy change that will benefit college students.
This study aimed to explore college students’ temporal relationship between perceived stress and alcohol consumption. Moreover, this study sought to understand the experience of a diverse group of students as compared to other studies whose participants have been predominately of Caucasian decent. CSULB undergraduate students are diverse: Hispanic/Latino students comprise 35.0%, Asian American students 23.1%, Caucasian students 23.3% and African American 4.1% of the total enrollment population for the Fall 2012 (CSULB, n. d.). This study took into account various demographic information to have representation and increase generalizability.
METHODS

Sample Method

- Following IRB approval the study recruited 68 college students (15 men and 53 women) from California State University, Long Beach (CSULB) undergraduate classes. In order to have participated in the study, participants must have been undergraduate students who were 18 years and older.

Data Collection Method

- In the month of November, the researcher went to five classrooms to invite students, while following the script, to participate in the study. In addition, the invitation notified students of the surveys and of the two email invitations that contained the link to the surveys. Furthermore, students were notified that the email invitations came from the instructor at two different time periods. The researcher assured the students that the instructor did not have knowledge of whether they participated or not for each survey. Potential participants received the invitation email with the survey I and II links, at differing times.

- In the month of December 2013, the same CSULB instructor invited the same students from the classroom to participate in the study. Students were emailed a link to the Stress and Alcohol Scale II and were screened for the age qualification of 18 years and older. If students were not 18 years and older the survey terminated and they were thanked for their participation. However, if students were 18 years and older they were to continue to answer questions from the Stress and Alcohol Scale II, which consisted of the same demographic questions, the PSS-10 (Cohen, et al., 1983) and the all the questions on the AUDIT (Saunders, et al., 1993). Upon completion of the Stress and Alcohol Scale II and electronic raffle via Survey Monkey was conducted with one winner of a $25 gift card to Amazon.
METHODS CONT.

The 10-item Perceived Stress Scale (PSS-10; Cohen, et al., 1983) was used in both the Stress and Alcohol Scale I and II to measure students’ stress levels: “in this month (November, for scale I and December for scale II) how often have you . . .” The PSS-10 has good internal consistency with an alpha of .78. In addition, the PSS-10 possesses good construct validity.

An adaptation to the Alcohol Use Disorders Identification Test (AUDIT; Saunders, et al., 1993) was made for the Stress and Alcohol Scale I; it only included the first three questions of the survey. For the Stress and Alcohol Scale II all questions were used. This scale assessed college students’ alcohol consumption and its consequences; questions included were: “how many standard drinks containing alcohol do you have on a typical day when drinking?” and “during this month (December), how often have you failed to do what was normally expected of you because of drinking?” The validity of this instrument has been in the mid .90s and across countries in the .80s. The reliability of this instrument has a very favorable sensitivity and an acceptable specificity.

Statistical analysis was conducted using the Statistical Package for the Social Sciences 21. Descriptive statistics was used to run frequencies on variables and to ensure data had been entered correctly. Cronbach’s Alpha was used on the Stress and Alcohol Scale I and II to measure consistency reliability. Chi-square ($X^2$) and Correlations ($r$) statistics was used to determine whether or not a relationship existed between variables. One-way Analysis of Variance was used to compare three or more sets of scores, each provided by a different group of individuals. Low risk drinking was measured by a score of 0-7 on the AUDIT (Saunders, et al., 1993). Furthermore, risky drinking was measured by a score of 8-15 on the AUDIT and by the question from the AUDIT (Saunders, et al., 1993): how often do you have six or more drinks on one occasion? The frequency of students’ drinking was measured by the question from the AUDIT: how often do you have a drink containing alcohol?
RESULTS

- Pearson product-moment correlations were calculated between the Perceived Stress Scale-10 (PSS-10) and the in the month of December, how often do you have six or more drinks on one occasion? These analyses indicated that drinking levels were not significantly associated with high stress levels among undergraduate students $r (n = 12, .061) p, = .85$.

- Pearson product-moment correlation was used to analyze the association between the number of hours students worked and the PPS-10 and the question how many standard drinks containing alcohol did you have on a typical day when drinking? These analyses indicated that the number of hours a student worked was not significantly correlated with their perceived level of stress $r (n = 67, -.15) p = .24$. Also, the number of hours a student worked was not significantly associated with an increase in their alcohol use $r (n = 67, .038) p = .76$.

- Pearson product-moment correlations were calculated between the levels of risk for the total score of the AUDIT and the number of hours a student slept. Analysis of this test indicated that hours of sleep was not significantly associated with levels of risky drinking $r (n = 68, 1.89) p = .93$. An independent $t$ test was calculated between sleep and the PSS-10 stress scale. The results of the independent $t$ test ($t (65) = 1.64, p = .11$) indicated that students sleep was not significantly associated with increased stress levels.

- The results of the independent $t$ test ($t (66) = .09, p = .94$) indicated that there was no significant difference between the risk for the AUDIT total score among students who participated in campus organizations ($M = 26, S. D. = 4.15$) and those who did not participate in a campus organization ($M = 42, S. D. = 4.97$). An independent $t$ test was conducted between participating in a campus organization and the PSS-10 stress scale. The results of the independent $t$ test ($t (65) = .09, p = .93$) for stress and campus affiliation indicated that there was no significant differences between the stress levels among those students that participated in a campus organization ($M = 17.87, S.D. = 6.55$) and those students that did not participate in a campus organization ($M = 17.65, S.D. = 7.63$).

- The results of the independent $t$ test ($t (65) = 1.648, p = .11$) indicated that there was no statistical significance between males ($M = 15.47, S. D. = 7.14$) and females ($M = 18.42, S. D. = 5.81$) for the PSS-10. In addition, the results of the secondary independent $t$ test ($t (66) = -.706, p = .48$) indicated that there was no statistical significance between males ($M = 5, S. D. = 5.0$) and females ($M = 4.04, S. D. = 4.56$) for the AUDIT.
## Significant Statistical Analysis

**TABLE 3: Questions from the AUDIT by Living Arrangement, Ethnicity and Class Year**

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>F</th>
<th>df</th>
<th>p</th>
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<td><strong>Living Arrangement</strong></td>
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<tr>
<td>At home</td>
<td>43</td>
<td>.88</td>
<td>1.16</td>
<td>3.92</td>
<td>2, 65</td>
<td>.03</td>
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<td>On campus</td>
<td>6</td>
<td>1.33</td>
<td>1.03</td>
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<tr>
<td>Off campus</td>
<td>19</td>
<td>1.79</td>
<td>1.79</td>
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<tr>
<td><strong>Ethnicity</strong></td>
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</tr>
<tr>
<td>African American</td>
<td>6</td>
<td>.33</td>
<td>.816</td>
<td>3.45</td>
<td>3, 64</td>
<td>.02</td>
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<tr>
<td>Asian/Pacific Islander</td>
<td>22</td>
<td>.86</td>
<td>1.21</td>
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<td>Caucasian/White</td>
<td>18</td>
<td>1.83</td>
<td>1.43</td>
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<tr>
<td>Hispanic/Latino</td>
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<td>1.18</td>
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<td><strong>Class Year of Student</strong></td>
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<tr>
<td>First year</td>
<td>8</td>
<td>.25</td>
<td>.707</td>
<td>4.90</td>
<td>3, 63</td>
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<td>Second year</td>
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<td>.80</td>
<td>.862</td>
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<td>Third year</td>
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<td>Fourth year</td>
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<td>1.89</td>
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<td>Fifth year</td>
<td>12</td>
<td>2.08</td>
<td>1.17</td>
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</tbody>
</table>
DISCUSSION/ IMPLICATIONS OF STUDY

- This study sought to understand the experience of an ethnically diverse group of students while taking into account other demographic factors. The respondents in the study were predominately 20 years old. More than 75% of the participants were female. Importantly, 32.4% of the respondents identified themselves as Asian/Pacific Islander, 32.4% of the respondents identified themselves as Hispanic/Latino, 26.5% of the respondents identified themselves as Caucasian/White and lastly, 8.8% of the respondents identified themselves as African American.

- College students excessive drinking habits has been a growing concern for parents, educators and communities. In response to this, universities have adopted policies that address college drinking and the use of illicit drugs. Walter and Kowalczyk (2012) evaluated the different types of alcohol policies at various universities in the midwest of the United States of America. The study concluded that there was a need for the implementation of alcohol prevention programs among college campuses in addition to existing policies. Also, Walter and Kowalczyk conclude that alcohol interventions should target high risk groups such as males who are 21 years and older and athletes. The university in this study adheres to the Drug-Free Schools and Communities Act and the Higher Education Act Section 120A: Drug and Alcohol Abuse Prevention. The university distributes to all students in writing the standards of conduct that prohibit the possession or distribution of drugs or alcohol, descriptions of the legal sanctions for the possession or distribution of drugs or alcohol, the health risks associated with using drugs or alcohol. Furthermore, the university conducts a biennial review of the campus drug and alcohol abuse prevention program. The implications from this research suggest that the interventions implemented are working towards the direction of limiting heavy drinking among college students. To further encourage this direction, social workers, social work educators and policy makers from universities can begin to apply these environmental strategies and involve the community to reduce college student harmful drinking.
REFERENCES


