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# Depression and Substance Abuse: Is There A Relationship?

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# Depression and Substance Abuse: Is There A Relationship?

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## Introduction

Episodic drinking and alcohol-related problems with college students continue to rise (Grant, Stewart & Mohr, 2009). Society generally views substance abuse as a result of inadequate willpower or personal vice, but could there be other reasons people use products like alcohol, tobacco, and illegal drugs? As our country continues to wage a "war on drugs" we are left to question how to best deal with such a major problem. Researchers have been looking into the ways emotional and psychological problems relate to addictive and harmful drug use. Numerous studies have found high smoking rates among people with mental illness (Kassel, Yates & Brown, 2007). However, we cannot assume mental illness or other psychological conditions are completely to blame. Conner, Pinquart, & Duberstein (2007) suggested poverty, homelessness, and infectious disease could impact who partakes of these substances. The objectives of this survey were to investigate the relationships between smoking and alcohol consumption with previous treatment for depression and depressive symptoms in college students.

## Aim of Study

1. To determine the number of students at Southwestern Oklahoma State University (SWOSU) who have received treatment for depression.
2. To determine if there is a correlation between current alcohol use and cigarette use with past treatment for depression.
3. To study the relationship between alcohol use and cigarette use with depressive symptoms (energy, irritability, optimism, or focus) in SWOSU students.
4. To investigate other factors, such as living situation and relationship status, on alcohol use and cigarette use.

## Materials and Methods

➤ This project was done to meet the requirements of ALHLT 3043 Health Statistics in Spring 2010.

The following steps were followed:

- Prepared survey with the help of Dr. Mindy Burgess, Associate Professor, Department of Psychology.
- Received approval from SWOSU Protection of Human Subjects Committee.
- Conducted survey using convenience sampling of 97 students in PSYCH-3213 on April 21 and 22, 2010.
- Subjects completed the survey to right.
- Data was organized and analyzed using Microsoft Excel® and PASW® Statistics 17.0 software.
- Data analysis was conducted via Chi Square and correlation testing.

| SWOSU Student Survey  |   | Subject Number: _____ |
|---|---|-----------------------|
| AGE _____   | Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female   |                       |
| Living Situation: <input type="checkbox"/> On Campus <input type="checkbox"/> Off Campus                  | Relationship Status: <input type="checkbox"/> Single <input type="checkbox"/> In A Relationship <input type="checkbox"/> Married <input type="checkbox"/> Separated <input type="checkbox"/> Divorced |                       |
| Do you have children? <input type="checkbox"/> Yes <input type="checkbox"/> No                            |   |                       |
| 1. How many alcoholic beverages do you consume during an average school week (beverages through alcohol)? | 0 1 2 3 4 5 6 7 8 9 10 or more  |                       |
| 2. How many alcoholic beverages do you consume during an average weekend (Friday, Saturday, Sunday)?      | 0 1 2 3 4 5 6 7 8 9 10 or more  |                       |
| 3. How many cigarettes do you consume during an average school week?                                      | 0 1 2 3 4 5 6 7 8 9 10 or more  |                       |
| 4. How many cigarettes do you consume during an average weekend?  | 0 1 2 3 4 5 6 7 8 9 10 or more  |                       |
| 5. How would you rate your level of energy on average?  | 1 = Very energetic 2 = Not at all energetic   |                       |
| 6. How would you rate your level of irritability on average?  | 1 = Not at all irritable 2 = Very irritable   |                       |
| 7. How would you rate your level of optimism (i.e., how quick are you to get angry or become frustrated)? | 1 = Not at all optimistic 2 = Very optimistic   |                       |
| 8. How would you describe your ability to focus?  | 1 = Very able to focus 2 = Not at all able to focus   |                       |
| 9. Have you ever been treated for substance abuse?  | Yes No  |                       |
| 10. Have you ever been treated for depression?  | Yes No  |                       |

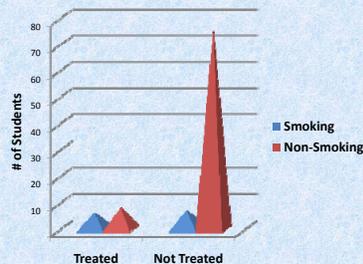


Figure 1. Comparison between students who were and were not previously treated for depression in smokers versus non-smokers.

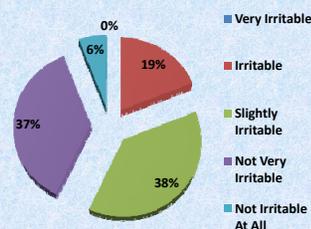


Figure 3. Self-rating of depressive symptom "level of irritability" in students who do not smoke during the week.

## Results

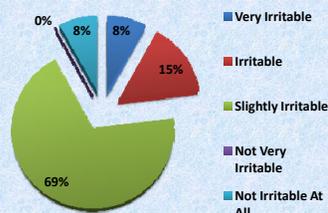


Figure 2. Self-rating of depressive symptom "level of irritability" in students who smoke during the week.

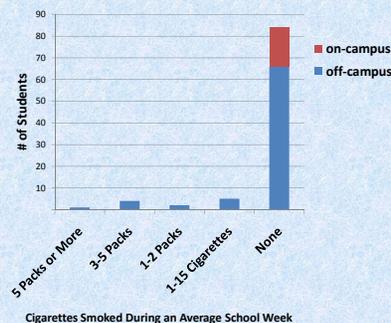


Figure 4. Comparison of student living status and cigarette use during the week.

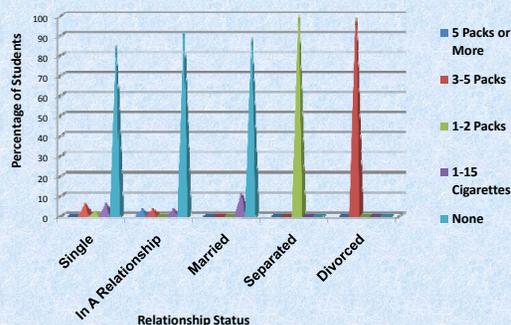


Figure 5. Comparison of student relationship status and cigarette use during the week.

## Conclusions

- Fourteen of 97 students surveyed reported to have previously received treatment for depression. Thirteen out of 97 subjects were smokers, and 29 out of 97 students reported to consume alcohol during the week (Monday – Thursday).
- Self-reported level of energy, optimism, or focus did not relate significantly ( $P > 0.05$ ) to previous treatment for depression. Those subjects who had received treatment tended ( $P = 0.10$ ) to report a higher level of irritability than those who had not.
- Strong correlations were found in relating alcohol use during the week to alcohol use during the weekend ( $r = 0.70$ ) and cigarette use during the week and during the weekend ( $r = 0.84$ ). Alcohol and cigarette use were not strongly related to each other ( $r < 0.35$ ). We focused on alcohol and cigarette use during the week because it suggests more habitual versus social use.
- There was not a significant relationship ( $P > 0.05$ ) between current alcohol use and previous treatment for depression. There also was not a significant relationship ( $P > 0.05$ ) between alcohol use and self-reported depressive symptoms.
- We found an interaction ( $P < 0.05$ ) between cigarette smoking and previous treatment for depression (see Figure 1).
- We also found level of irritability was different ( $P < 0.05$ ) between smokers and non-smokers (see Figures 2 and 3) – overall, smokers appeared to express a higher irritability level. Other self-reported levels of depressive symptoms were not different.
- There was a significant relationship ( $P < 0.05$ ) between where a student lives (on or off campus) and weekday cigarette use. No students living on campus reported smoking during the week (see Figure 4).
- We found an interaction ( $P < 0.05$ ) between relationship status and weekday cigarette use (see Figure 5). All students classified as "Separated" or "Divorced" smoked at least 1-2 packs of cigarettes during the school week, whereas over 90% of students who were married, in a relationship, or single did not smoke.
- This project would have benefited from having a higher number of subjects who had received depression treatment. We hypothesize we would find more interactions between alcohol use and the other factors in older subjects.
- Results suggest irritability level, relationship status and living status may be related to smoking and depressive symptoms.

## Works Cited

- Conner, K.R., Pinquart, M., Duberstein, P.R. (2007). Meta-analysis of depression and substance use and impairment among intravenous drug users (IDUs). *Addiction* 103, 524-534
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