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Intimate Partner Violence, Anxiety Diagnosis, and Binge Drinking Behavior Among College Students

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This research is a product of the Doctor of Psychology (PsyD) program at George Fox University. Find out more about the program.

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Intimate Partner Violence, Anxiety Diagnosis, and Binge Drinking Behavior Among College Students

by

David Kays

Presented to the Faculty of the Graduate Department of Clinical Psychology

George Fox University

in partial fulfillment of the requirement for the degree of

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in Clinical Psychology

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March 6, 2018
Approval

Intimate Partner Violence, Anxiety Diagnosis, and Risky Drinking Behavior Among College Students

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3/6/18
Abstract

Drinking behavior is common among students at colleges and universities, and binge drinking is particularly problematic due to its association with a variety of unwanted, negative experiences including anxiety (Thomas, Randall, Book, & Randall, 2008), unwanted intimate encounters (Lefkowitz, Waterman, Morgan, & Maggs, 2016) and intimate partner violence (IPV) (Rizo, 2015). The present study sought to determine if there were significant differences in college student drinking based on their experience of IPV, anxiety and its treatment. Archival data from the National College Health Assessment was used in this study. A randomly selected sample of 800 college students was analyzed. Results failed to find significant differences in binge drinking based on experience of IPV or anxiety diagnosis and treatment.

Keywords: Intimate Partner Violence, Binge Drinking, College Students, Anxiety, Anxiety Treatment
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Chapter 1

Introduction

Excessive drinking behavior is common among students at colleges and universities. Approximately 2.2 million college-age adults used alcohol for the first time in 2016 (Lipari, Ahrnsbrak, Pemberton, & Porter, 2017) and according to the 2015 National Survey on Drug Use and Health (National Survey [NSDUH], 2015), college students report binge drinking at a higher rate (37.9 %) than do their non-collegiate, same-aged peers (32.6 %; Lipari et al., 2017). Binge drinking is problematic for several reasons and is associated with a variety of unwanted, negative experiences including anxiety (Thomas, Randall, Book, & Randall, 2008), unwanted intimate encounters (Lefkowitz, Waterman, Morgan, & Maggs, 2016) and intimate partner violence (IPV; Rizo, 2015). While the relationship between alcohol use and IPV, as well as alcohol use and anxiety have previously been explored to varying degrees, the relationship of these three together has not yet been investigated. As a result, the purpose of this study is to examine if IPV and various treatments for anxiety diagnoses are associated with differences in college student drinking.

Binge Drinking Behavior and College Students

Alcohol is one of the most commonly abused substances in college populations (Substance Abuse and Mental Health Services Administration, 2012; World Health Organization, 2015). College students drink more frequently than their same aged peers (NSDUH, 2015) with 58.0% of full-time college students aged 18-22 drinking within the last 30 days compared to
48.2% of their peers. Common alcohol related problems for college students range from academic delay to unintentional injury to assault and victimization of others (Hingson, Zha, & Weitzman, 2009). In addition, alcohol use is associated with impaired executive functioning along with unwanted sexual outcomes and experiences (Lefkowitz et al., 2016). However, despite alcohol’s association with deleterious experiences, alcohol use in conjunction with sexual activity is viewed as a positive combination by the majority of college students (Lefkowitz et al., 2016).

Regarding binge drinking, Lipari et al. (2017) found that 62.3% of college-aged individuals believe there’s great risk in binge drinking daily (4-5 drinks of alcohol in a sitting). However, the perception of great risk dropped to 37.1% when asked about binge drinking only 1-2 times a week. Further, binge drinking is heavily influenced by peer binge drinking behavior regardless of previously held attitudes about binge drinking (Byrd, 2016; Lefkowitz et al., 2016).

**Intimate Partner Violence**

Research shows that IPV remains the most common form of violence in the United States (Breiding et al., 2014; Garcia-Moreno et al., 2006; Garcia-Moreno et al., 2013) and continues to be a significant national public health issue with approximately one in every four women experiencing IPV in their lifetime (Garcia-Moreno et al., 2013). One reason IPV is so common is due to the fact that people are often most vulnerable within romantic relationships and this vulnerability may result in IPV (Garcia-Moreno et al., 2013).

IPV is defined as physical, sexual, or psychological aggression and stalking (Intimate Partner Violence: Definitions, 2015). In the present study, IPV was divided into three categories: Emotionally abusive, e.g., called derogatory names, yelled at, ridiculed; physically abusive, e.g.,
kicked, slapped, punched; and sexually abusive, e.g., forced to have sex when you didn’t want it, forced to perform or have an unwanted sexual act performed on you (American College Health Association [ACHA], 2009).

College-aged individuals (18 to 24 years old) are at increased risk of experiencing IPV with 13% reporting sexual victimization, 18% reporting physical domestic violence, and 39% reporting unwanted pursuit (Edwards et al., 2014). Some of the reasons college students are at increased risk include their transitions in living situations, close proximity to intimate partners, and access to drugs and alcohol (Hingson et al., 2009, Rennison & Welchans, 2000). Problematic and risky drinking behaviors occur in approximately 18.5% of IPV victims and much of the IPV experienced is excused by victims as a symptom of their own drinking behaviors (Rizo, 2015).

Drinking to cope (DTC) literature posits that a considerable amount of drinking behavior is determined by current stressors and whether alternative coping strategies are available (Breese, Sinha, & Heilig, 2011). This theory suggests that as stressors increase and coping strategies decrease, individuals who drink are more likely to increase their alcohol consumption both in amount and frequency. As a result, one would expect that individuals who are experiencing IPV will increase their alcohol consumption since they experience increased daily stressors (Rizo, 2015) and reject certain coping strategies (e.g., social support) that moderate drinking behavior (Breese et al., 2011; McCaul, Hutton, Stephens, Xu, & Wand, 2016)

Anxiety and Intimate Partner Violence

Anxiety and anxiety disorders are often developed or exacerbated after experiencing IPV (Amar & Gennaro, 2005; Breiding et al., 2014; Campbell, Kub, Belknap, & Templin, 1997; Garcia-Moreno et al., 2013; Singer, Anglin, yu Song, & Lunghofer, 1995; Thompson et al.,
Anxiety disorders among female victims and survivors of IPV are estimated to be as high as 63.8% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995) and include disorders such as PTSD, Generalized Anxiety Disorder (GAD), and Unspecified Anxiety Disorders (Flicker, Cerulli, Swogger, Cort, & Talbot, 2012).

Exposure to IPV can lead to structural changes in hippocampus, amygdala, and prefrontal cortex due to prolonged or acute stress responses in the brain (Garcia-Moreno et al., 2013). IPV is a unique and chronic stressor that frequently has no apparent end to the victim experiencing it. Due to its chronic nature, IPV survivors are in a constant state of stressful alertness and often experience isolation and withdrawal from social interactions as a result. This causes many survivors to perceive it as a personal stressor and thus they avoid using common social coping strategies, such as group participation and sharing with others (Rizo, 2015).

**Anxiety Treatment and Alcohol Use**

Research documented a relationship between alcohol use and anxiety (Thomas et al., 2008). People with high anxiety are more likely to report a stronger urge to drink after being stressed and are more at risk for engaging in binge drinking (McCaul et al., 2016). As mentioned above, DTC research shows that drinking behavior is significantly impacted by anxiety (Breese et al., 2011), with increased anxiety positively correlated with increased frequency and amount of alcohol consumed.

In treating the dual diagnoses of anxiety combined with alcohol use, several studies have found certain treatments for anxiety also help treat alcohol use disorders (Brady & Verduin, 2005; Thomas et al., 2008). For example, Boden et al. (2012) found that anxiety focused psychotherapy is effective at reducing alcohol use, in both frequency and amount. Additionally,
medication (venlafaxine) and anxiety-focused cognitive behavioral therapy combined proved to be a more effective treatment for reducing heavy drinking (Ciraulo et al., 2013). However, while some studies have found that both anxiety-focused pharmacotherapy and psychotherapy have proven to be effective at managing symptoms and reducing drinking behaviors (Brady & Verduin, 2005), other research found that treatment of anxiety with medication does not directly impact binge drinking behaviors (Thomas et al., 2008).

**Objective of the Present Study**

It is evident that college students face unique challenges. College students diagnosed with anxiety and who have received various types of treatment may be more equipped to cope with daily stressors, which in turn may impact their use of alcohol. The present study aims to determine if there are significant differences in college student drinking based on the experience of IPV and various treatments for anxiety.

**Hypotheses.** Hypothesis 1: Students who experienced IPV will report a significantly higher number of drinks per hour the last time they “partied/socialized” than those who have not experienced IPV. Hypothesis 2: Students who endorse being diagnosed with anxiety but received no treatment will endorse significantly higher number of drinks per hour the last time they “partied/socialized” than any other anxiety/treatment conditions. Hypothesis 3: Students who endorsed IPV and whose anxiety was treated with both medication and psychotherapy will report having fewer drinks per hour the last time they “partied/socialized” than any of the other combinations of anxiety/treatment conditions and no endorsement/endorsement of IPV.
Chapter 2

Methods

Participants

Students attending a variety of national universities completed the American College Health Association’s (ACHA) National College Health Assessment II (NCHA II) in the Fall of 2008. In keeping with the ACHA reference group standards, these institutions either “surveyed all students, or used a random sampling technique” (ACHA, 2010, p. ii).

Of those students surveyed, 10 sample groupings were made based on endorsement/denial of IPV, and endorsement/denial of anxiety disorder diagnosis and treatment type. Anxiety disorder diagnosis was documented in five categories (see Materials).

An a priori test of power indicated that samples of 39 or more students from the data set’s grouping criteria would be effective for comparative analysis. To account for the exclusionary criteria that were applied to the overall sample, initial stratified random samples of 80 undergraduate students, were taken from each of the ten groups for a total sample of 800.

Of the 800 participants, 628 identified as female (78.5%), 155 identified as male (19.6%), 7 identified as transgender (.9%), and 10 (1.3%) did not answer the demographic question about gender (see Tables 1 and 2). Of the 800 participants, 680 identified as heterosexual (86.2%), 27 identified as gay/lesbian (3.4%), 55 identified as bisexual (7.0%), 27 identified as unsure (3.4%), and 11 (1.4%) did not answer the demographic question about sexual orientation (see Tables 3 and 4). The majority (638 individuals) of the sample identified as White, non-Hispanic. Racial identification appears in Table 5.
Table 1

**Descriptive Statistics – Gender and IPV**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total Sample</th>
<th>Endorsed IPV</th>
<th>Denied IPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Female</td>
<td>628</td>
<td>78.5</td>
<td>317</td>
</tr>
<tr>
<td>Male</td>
<td>155</td>
<td>19.6</td>
<td>71</td>
</tr>
<tr>
<td>Transgender</td>
<td>7</td>
<td>.9</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>790</td>
<td>98.7</td>
<td>394</td>
</tr>
<tr>
<td>Missing</td>
<td>10</td>
<td>1.3</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
<td>100.0</td>
<td>400</td>
</tr>
</tbody>
</table>

Table 2

**Descriptive Statistics – Gender and Anxiety**

<table>
<thead>
<tr>
<th>Gender</th>
<th>No Anxiety Diagnosis</th>
<th>Diagnosis without Treatment</th>
<th>Diagnosis with Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Female</td>
<td>120</td>
<td>76.4</td>
<td>121</td>
</tr>
<tr>
<td>Male</td>
<td>37</td>
<td>23.6</td>
<td>32</td>
</tr>
<tr>
<td>Transgender</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>157</td>
<td>19.9</td>
<td>155</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.8</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100.0</td>
<td>160</td>
</tr>
</tbody>
</table>
Table 3

*Descriptive Statistics – Sexual Orientation and IPV*

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Endorsed IPV</th>
<th>Denied IPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>680</td>
<td>86.2</td>
<td>328</td>
</tr>
<tr>
<td>Gay/Lesbian</td>
<td>27</td>
<td>3.4</td>
<td>18</td>
</tr>
<tr>
<td>Bisexual</td>
<td>55</td>
<td>7.0</td>
<td>31</td>
</tr>
<tr>
<td>Unsure</td>
<td>27</td>
<td>3.4</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>789</td>
<td>98.6</td>
<td>394</td>
</tr>
<tr>
<td>Missing</td>
<td>11</td>
<td>1.4</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
<td>100.0</td>
<td>400</td>
</tr>
</tbody>
</table>

Table 4

*Descriptive Statistics – Sexual Orientation and Anxiety*

<table>
<thead>
<tr>
<th></th>
<th>No Anxiety Diagnosis</th>
<th>Diagnosis without Treatment</th>
<th>Diagnosis with Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>%</td>
<td>$n$</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>147</td>
<td>93.6</td>
<td>127</td>
</tr>
<tr>
<td>Gay/Lesbian</td>
<td>1</td>
<td>.6</td>
<td>5</td>
</tr>
<tr>
<td>Bisexual</td>
<td>5</td>
<td>3.2</td>
<td>15</td>
</tr>
<tr>
<td>Unsure</td>
<td>4</td>
<td>2.5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>157</td>
<td>19.9</td>
<td>154</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.8</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100.0</td>
<td>160</td>
</tr>
</tbody>
</table>
Table 5

Descriptive Statistics – Race

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Hispanic (Includes Middle Eastern)</td>
<td>638</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>43</td>
</tr>
<tr>
<td>Hispanic or Latino/a</td>
<td>56</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>42</td>
</tr>
<tr>
<td>American Indian, Alaskan Native, or Native Hawaiian</td>
<td>13</td>
</tr>
<tr>
<td>Biracial or Multiracial</td>
<td>37</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
</tr>
</tbody>
</table>

Materials

National College Health Assessment-II. The American College Health Association’s National College Health Assessment II (ACHA NCHA II) was developed 13 years ago and has been administered to thousands of students at universities and colleges throughout America and Canada (http://www.acha-ncha.org, October 25, 2014). The assessment was first implemented in Spring of 2000 and since then has been used by over 500 institutions. The most recent edition, the NCHA-II, has been used since 2008 and is administered both in paper and electronic format. The assessment surveys students on a wide array of health perceptions and behaviors. The assessment takes around 30 minutes to complete. The purpose of the NCHA-II is “to adequately identify factors affecting academic performance, respond to questions and concerns about the health of the nation’s students, develop a means to address these concerns, and ultimately
improve the health and welfare of those students” (http://www.acha-ncha.org, October 25, 2014).

**Intimate Partner Violence.** IPV conditions were constructed using the three parts of question 6,

Within the last 12 months, have you been in an intimate (coupled/partnered) relationship that was: Emotionally abusive? (e.g., called derogatory names, yelled at, ridiculed) No/Yes; Physically abusive? (e.g., kicked, slapped, punched) No/Yes; Sexually abusive? (e.g., forced to have sex when you didn’t want it, forced to perform or have an unwanted sexual act performed on you) No/Yes? (ACHA, 2009, p. 3)

Question 6 was recoded such that people fell into one of two different IPV conditions: **No IPV of any type endorsed**, and **IPV endorsed**.

**Binge Drinking Behavior.** Risky alcohol behavior was evaluated using question 10, “The last time you ‘partied’ / socialized how many drinks of alcohol did you have (If you did not drink alcohol, please enter 0)” (ACHA, 2009, p. 4); and question 11, “The last time you ‘partied’ / socialized over how many hours did you drink alcohol? (If you did not drink alcohol, please enter 0)” (ACHA, 2009, p. 4). The number of drinks was divided by the number of hours over which they were consumed to produce drinks per hour. The NCHA-II stated in this section that “One drink of alcohol is defined as a 12-oz. can or bottle of beer or wine cooler, a 4-oz. glass of wine, or a shot of liquor straight or in a mixed drink” (ACHA, 2009, p. 4).

**Anxiety Diagnosis and Treatment.** Anxiety diagnosis and treatment conditions were established using question 31b

Within the last 12 months, have you been diagnosed or treated by a professional for any of the following? (Please mark the appropriate column for each row), No; Yes, diagnosed
but not treated; Yes, treated with medication; Yes, treated with psychotherapy; Yes, treated with medication and psychotherapy; Yes, other treatment. (ACHA, 2008, p. 8)

Only the first five conditions were evaluated in this research, excluding students who endorsed “Yes, other treatment.”

**Procedure**

Archival data were selected from the NCHA II national reference set. Ten samples of 80 students each were randomly selected according to endorsement/denial of any IPV (see above) and endorsement of one of five different anxiety conditions, totaling 800 students. Scales for IPV and risky alcohol behavior were constructed by blending three questions together (6a, 6b, and 6c) and two questions together (10 and 11) respectively, while anxiety conditions were identified from a single question having five response options.
Chapter 3

Results

Correlations were run on the IPV, sexual orientation, anxiety conditions, and gender. Significant results were found between sexual orientation and the other three variables (see Table 6).

Table 6

<table>
<thead>
<tr>
<th>Correlation Matrix</th>
<th>Endorsed IPV</th>
<th>Sexual Orientation</th>
<th>Anxiety Conditions</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's rho</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endorsed IPV</td>
<td>Correlation Coefficient</td>
<td>1.000</td>
<td>.084*</td>
<td>.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.018</td>
<td>1.000</td>
<td>.568</td>
</tr>
<tr>
<td>N</td>
<td>800</td>
<td>789</td>
<td>800</td>
<td>790</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>Correlation Coefficient</td>
<td>.084*</td>
<td>1.000</td>
<td>.088*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.018</td>
<td>.</td>
<td>.013</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>789</td>
<td>789</td>
<td>789</td>
<td>789</td>
</tr>
<tr>
<td>Anxiety Conditions</td>
<td>Correlation Coefficient</td>
<td>.000</td>
<td>.088*</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>1.000</td>
<td>.013</td>
<td>.</td>
<td>.236</td>
</tr>
<tr>
<td>N</td>
<td>800</td>
<td>789</td>
<td>800</td>
<td>790</td>
</tr>
<tr>
<td>Gender</td>
<td>Correlation Coefficient</td>
<td>-.020</td>
<td>.133**</td>
<td>-.042</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.568</td>
<td>.000</td>
<td>.236</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>790</td>
<td>789</td>
<td>790</td>
<td>790</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).
A two-way Analysis of Variance was used to assess the three hypotheses regarding risky drinking behavior of students using questions 10 and 11, “The last time you ‘partied’/socialized how many drinks of alcohol did you have?” and “The last time you ‘partied’/socialized over how many hours did you drink alcohol?” to determine how many drinks are consumed on average per hour by students. Responses for both were free-answer, with valid responses ranging from 0 to 99. Descriptive statistics are presented in Tables 1, 2, and 3.

**Hypothesis 1**

Hypothesis 1 proposed that students who experienced IPV would report a significantly higher number of drinks per hour the last time they “partied/socialized” than those who had not experienced IPV. The ANOVA analysis failed to find a significant difference in the number of drinks per hour between those endorsing IPV ($M = 1.25, SD = 2.93$) and those not endorsing IPV ($M = 1.02, SD = 1.14$), $F(1, 790) = 2.13, p = .15$.

**Hypothesis 2**

Hypothesis 2 proposed that students who endorsed a diagnosis of anxiety but received no treatment would endorse a significantly higher number of drinks per hour the last time they “partied/socialized” than any other anxiety/treatment conditions. The ANOVA analysis failed to find a significant difference in the number of drinks per hour in these five groups, $F(4, 790) = 0.575, p = .68$. Means and standard deviations for all conditions can be seen in Table 7.
Table 7

Descriptive Statistics – Drinks per Hour

<table>
<thead>
<tr>
<th>Anxiety Condition</th>
<th>IPV</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denied Anxiety Disorder</td>
<td>Denied</td>
<td>1.17</td>
<td>1.49</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Endorsed</td>
<td>1.17</td>
<td>0.94</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.17</td>
<td>1.24</td>
<td>160</td>
</tr>
<tr>
<td>Endorsed Anxiety Disorder, no Treatment</td>
<td>Denied</td>
<td>1.32</td>
<td>1.42</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Endorsed</td>
<td>1.18</td>
<td>1.12</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.25</td>
<td>1.28</td>
<td>160</td>
</tr>
<tr>
<td>Endorsed Anxiety Disorder, Medication Only</td>
<td>Denied</td>
<td>0.94</td>
<td>0.82</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Endorsed</td>
<td>1.06</td>
<td>1.00</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.00</td>
<td>0.91</td>
<td>160</td>
</tr>
<tr>
<td>Endorsed Anxiety Disorder, Psychotherapy Only</td>
<td>Denied</td>
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<td>0.98</td>
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<td>2.22</td>
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</tr>
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</table>

Hypothesis 3

Hypothesis 3 proposed that students who endorsed IPV and whose anxiety was treated with both medication and psychotherapy would report having fewer drinks per hour the last time they “partied/socialized” than all other combinations of anxiety/treatment conditions and no endorsement/endorsement of IPV. The interaction effect between IPV and anxiety conditions was examined to ascertain if any significant difference existed. However, the ANOVA analysis failed
to find a significant interaction in the number of drinks per hour the last time they “partied”/socialized, $F(4, 790) = 1.287, p = .27$. 
Chapter 4

Discussion

This study explored the impact of IPV and anxiety on college students’ binge drinking behaviors. The hypotheses predicted that college students who experienced IPV (either emotional, physical, sexual, or any combination of the three) would report a significantly higher number of drinks per hour the last time they “partied/socialized” than those who have not experienced IPV. The results found no significant difference in binge drinking behaviors between college students who endorsed IPV and those who did not. This is inconsistent with the current DTC literature (Breese et al., 2011) and suggests that there may be moderating variables impacting the occurrence of binge drinking behaviors at social events and parties. Such moderating variables may include social support, additional coping strategies (i.e., exercise, etc.), or even additional stressors (Rizo, 2015). However, our results indicate that college students who experienced IPV do not alter their binge drinking behavior in response.

The second hypothesis predicted that college students who endorse being diagnosed with anxiety but received no treatment would endorse significantly higher number of drinks per hour the last time they “partied/socialized” than all other anxiety/treatment conditions. The results found no significant difference in risky drinking behavior among college students endorsing any of the anxiety diagnosis and treatment conditions. Although this did not align with previous research this is not totally inconsistent with the literature in that Thomas et al. (2008) found that while the number of drinking days decreased with anxiety-focused treatment, the amount
consumed during each drinking event was not significantly impacted. Thus, one might expect that due to asking about the amount they drank the last time they socialized or partied, the reduction in binge drinking behaviors identified in previous literature was not detected in this study because while the amount of alcohol consumed over a week decreased, the amount consumed at each drinking event remained more constant.

Lastly, the third hypothesis predicted students who endorsed IPV and whose anxiety was treated with both medication and psychotherapy would report having fewer drinks per hour the last time they “partied/socialized" than all other combinations of anxiety/treatment conditions and no endorsement/endorsement of IPV. The results found no significant interaction between experiencing IPV and the anxiety diagnosis and treatment conditions on binge drinking behavior. Although IPV impacts an individual’s experience of anxiety (Coker et al., 2002), an official diagnosis of anxiety from a mental health provider may not have been acquired, even if the diagnostic criteria were met. For example, according to the ACHA-NCHA (ACHA, 2009), only 11% of students received either a diagnosis or treatment for anxiety compared with approximately 48% endorsing experiencing overwhelming anxiety. Thus, it may be that the experience of anxiety symptoms has a stronger relationship with binge drinking behaviors than does an official anxiety diagnosis. It is also possible that the expected differences in binge drinking behaviors do not occur in social or party settings and may occur in isolation. Although research suggests college students who identified higher anxiety also endorsed stronger urges to drink (McCaul et al., 2017) and engaged in more binge drinking behaviors (Thomas et al., 2008), it did not specify when and where they engaged in these behaviors.
In summary, while prior research found binge drinking associated with IPV and anxiety, the relationship of all three together had not been previously explored. This study was designed to explore the interaction effects of IPV and anxiety diagnosis and treatment on binge drinking. However, no interaction effects were found. Additionally, to my surprise, the expected relationships between IPV and binge drinking, and anxiety diagnosis and treatment and binge drinking were not found either. As mentioned above, there are several possible explanations for the results but because the expected relationships were not confirmed, it would seem premature to definitively state that no interaction effects exist between these three variables. What can be stated is that in the case of the current dataset, no interaction effects were found.

**Limitations**

In order to understand the results of this study, the limitations must be considered. First, the IPV questions did not assess the nature and severity of the IPV experience. Including such qualifiers would have increased the levels of severity in IPV that may have been able to better detect differences in binge drinking behavior. Instead of asking the students if in the past 12 months they had been in an intimate relationship that was emotionally, physically, or sexually abusive, asking the students the qualities of the IPV experience that have been shown to correlate with the intensity of impact on wellbeing (Black et al., 2011), might have produced more significant findings.

Similarly, the frequency of binge drinking behavior was not assessed by the NCHA. According to Hingson et al., (2009), repeated patterns of problematic drinking increase the present health risks. This measure did not include questions assessing the frequency of the behavior, the lasting impacts of the behavior (e.g., hangover, weight change, academic impact),
or the severity (e.g., Mild, Moderate, Severe). Measuring the extent of binge drinking may have detected significant findings in this study. Additionally, binge drinking behavior does not require a social or party event to occur. The specific questions assessed only the last time a student “partied/socialized,” which may have resulted in failing to detect a relationship between IPV or anxiety and binge drinking behavior across all settings.

Lastly, the duration and severity of anxiety disorder treatment was not identified. Students were asked whether they had been diagnosed or treated in the last 12 months for an anxiety disorder. Had the question included information on the duration, severity, and quality of treatment as perceived by the student, the analysis may have found different results.

Areas for Further Study

Future research should focus on remedying the limitations to confirm or challenge the present findings. As binge drinking is a common experience for college students, the impact of where people are drinking could be explored to further examine the theories behind DTC literature. In addition, identifying specific symptoms of IPV or anxiety that are related to binge drinking may yield a more nuanced understanding of the relationships between these experiences and binge drinking.

Summary

In conclusion, the aim of this study was to explore the relationship of IPV, anxiety disorders with varying modalities of treatment, and binge drinking behaviors of college students. Unexpectedly, the results failed to detect any relationship between the different conditions. Thus, binge drinking behavior was not found to be significantly related to anxiety diagnoses combined with various treatment modalities or history of IPV.
References


Appendix A

Curriculum Vitae

David Kays

4015 Sussex St., West Linn, OR, 97068 | 5039396579 | dkays06@gmail.com

EDUCATION

George Fox University, Newberg, OR

PsyD in Clinical Psychology 2013 – Present
Master of Arts: May, 2015
Doctorate of Psychology: Expected May, 2018
APA accredited

George Fox University, Newberg, OR

B.A. in Psychology 2007 – 2011

TEACHING EXPERIENCE

George Fox University, Newberg, OR

Adjunct Faculty teaching the following courses “Statistics, Research Methods, Addictions, and General Psychology” 2015-Current
Worked as the primary instructor and developed the course syllabi

George Fox University, Newberg, OR

Volunteer Lecturer “Adolescent Development, Personality Theories, Learning, History and Systems of Psychology” 2011-2016
Covered course material and facilitated teaching activities

SUPERVISED CLINICAL EXPERIENCE

Southern Oregon Rehabilitation Center and Clinics, White City, OR

Psychology Intern – Therapist
July 2017 – Present
Populations Served: Veterans
Duties: Therapist for the facility working with veterans, ages 18 and older; 40 hours a week supervised; inpatient and outpatient assessment, group and individual therapy; Cognitive Behavioral Therapy, Acceptance and Commitment Therapy used primarily with veteran population.
Supervisors: Megan Mack, PhD.; Jennifer Peterson, PhD.; Michelle Nerish, PhD.

George Fox University Behavioral Health Clinic, Newberg, OR

**Practicum Student – Assessment Coordinator**

**August 2016 – July 2017**

*Populations Served:* Community Members and County Referred Patients

*Duties:* Therapist and Assessment Coordinator for the facility working with clients, ages 6 and older; 16 hours a week supervised; outpatient assessment and individual therapy; Solution Focused Therapy used primarily with community population

*Supervisor:* Joel Gregor, PhD.

Cedar Hills Hospital, Portland, OR

**Practicum Student – Addictions and Trauma Therapist**

**April 2015 – May 2017**

*Populations Served:* Active Duty Military, Veterans, and Dependents

*Duties:* Therapist for military active duty, military dependents, and veterans; 24 hours a week supervised; inpatient assessment, group and individual therapy; Narrative Therapy and Motivational Interviewing used primarily with military population

*Supervisors:* Jory Smith, PhD., Mario Bolivar, LCSW.

Clark County Juvenile Justice Court, Vancouver, WA

**Practicum Student – Psychology Intern**

**August 2014 – July 2015**

*Populations Served:* Detention and Adolescents on Probation

*Duties:* Therapist for adolescents in detention or on probation; 16 hours a week supervised; outpatient assessment and individual therapy; suicide risk assessment and Dialectic Behavioral Therapy used primarily with detention population

*Supervisors:* Christine Krause, PhD., Shirley Shen, PhD.

George Fox University, Newberg, OR

**Pre-Practicum Trainee**

**August 2013 – May 2014**

*Populations Served:* College Students

*Duties:* Therapist for two college students; one male one female, 6 hours a week supervised

*Supervisors:* Carlos Taloyo, PhD., Trinity Parker, M.A.
Albertina Kerr Sub-Acute Facility, Gresham, OR

Psychiatric Technician
February 2012 – August 2012
Populations Served: Children ages 5-17, diverse ethnic populations, most recently hospitalized
Duties: Managed client Behavioral Support Plans, facilitated living activities, utilized Collaborative Problem Solving, led life skills and therapy groups, OIS approved protective interventions used
Supervisors: Amelia Glasier, B.A., Garnet Dittfurth, MSW

Chehalem Youth and Family Services Residential Treatment Facility, Newberg, OR

Primary Care Specialist
October 2009 – December 2010
Populations Served: Children ages 8-21, residential living situation, most with legal stressors and parole officers
Duties: Managed client Behavioral Support Plans, facilitated living activities within the residence, utilized Behavioral Modification techniques, led life skills and therapy groups, OIS approved protective interventions used
Supervisors: Tara Sanderson, PsyD., Jessica Compton, MSW.

RESEARCH EXPERIENCE

Research Vertical Team Member
George Fox University, Newberg, Oregon

Research Assistant
Chris Koch, PsyD., George Fox University, Newberg, Oregon

RESEARCH PUBLICATIONS/PRESENTATIONS


EDUCATIONAL EXPERIENCE

**Contemporary Psychoanalytic Therapy**  
August, 2016 to December, 2016  
George Fox University, Newberg, Oregon  
*Faculty:* Nancy Thurston, PhD

**Supervision and Management of Psychological Services**  
August, 2016 to May, 2017  
George Fox University, Newberg, Oregon  
*Faculty:* Rodger Bufford, PhD

**Professional Issues**  
August, 2016 to December, 2016  
George Fox University, Newberg, Oregon  
*Faculty:* Glena Andrews, PhD

**Christian History and Theology Survey for Psychologists**  
January, 2016 to May, 2016  
George Fox University, Newberg, Oregon  
*Faculty:* Kathleen Gathercoal, PhD

**Consultation, Education, and Program Evaluation**  
August, 2015 to May, 2016  
George Fox University, Newberg, Oregon  
*Faculty:* Marie-Christine Goodworth, PhD

**Substance Abuse**  
August, 2015 to December, 2015  
George Fox University, Newberg, Oregon  
*Faculty:* Jory Smith, PhD
Spiritual and Religious Diversity in Professional Psychology  
August, 2015 to December, 2015  
George Fox University, Newberg, Oregon  
Faculty: Winston Seegobin, PsyD

Statistics  
August, 2015 to December, 2015  
George Fox University, Newberg, Oregon  
Faculty: Kathleen Gathercoal, PhD

Research Design  
January, 2015 to May, 2015  
George Fox University, Newberg, Oregon  
Faculty: Kathleen Gathercoal, PhD

Psychodynamic Psychotherapy  
January, 2015 to May, 2015  
George Fox University, Newberg, Oregon  
Faculty: Nancy Thurston, PsyD

Multicultural Therapy  
January, 2015 to May, 2015  
George Fox University, Newberg, Oregon  
Faculty: Winston Seegobin, PsyD

Cognitive Behavioral Therapy  
August, 2014 to December, 2014  
George Fox University, Newberg, Oregon  
Faculty: Mark McMinn, PhD

History and Systems of Psychology  
August, 2014 to December, 2014  
George Fox University, Newberg, Oregon  
Faculty: Kathleen Gathercoal, PhD

Biological Basis for Behavior  
August, 2014 to December, 2014  
George Fox University, Newberg, Oregon  
Faculty: Celeste Flachsbart, PhD
Cognitive Assessment
August, 2014 to December, 2014
George Fox University, Newberg, Oregon
Faculty: Celeste Flachsbart, PhD

Social Psychology
June, 2014 to July, 2014
George Fox University, Newberg, Oregon
Faculty: Joel Gregor, PhD

Adolescent Psychopathology
May, 2014 to June, 2014
George Fox University, Newberg, Oregon
Faculty: Elizabeth Hamilton, PhD

Cognition, Behavior, and Emotion
May, 2014 to June, 2014
George Fox University, Newberg, Oregon
Faculty: Marie-Christine Goodworth, PhD

Clinical Foundations for Treatment II
January, 2014 to May, 2014
George Fox University, Newberg, Oregon
Faculty: Carlos Taloyo, PhD

Personality Assessment
January, 2014 to May, 2014
George Fox University, Newberg, Oregon
Faculty: Paul Stoltzfus, PsyD

Theories of Personality and Psychotherapy
January, 2014 to May, 2014
George Fox University, Newberg, Oregon
Faculty: Winston Seegobin, PsyD

Clinical Foundations for Treatment I
September, 2013 to December, 2013
George Fox University, Newberg, Oregon
Faculty: Carlos Taloyo, PhD
Ethics for Psychologists  
September, 2013 to December, 2013  
George Fox University, Newberg, Oregon  
Faculty: Rodger Bufford, PhD

Human Development  
September, 2013 to December, 2013  
George Fox University, Newberg, Oregon  
Faculty: Elizabeth Hamilton, PhD

Psychopathology  
September, 2013 to December, 2013  
George Fox University, Newberg, Oregon  
Faculty: Jeri Turgesen, PsyD

Addictions  
September, 2009 to December, 2010  
George Fox University, Newberg, Oregon  
Faculty: Kristina Kays, PsyD

Human Sexuality  
September, 2008 to December, 2008  
George Fox University, Newberg, Oregon  
Faculty: Kristina Kays, PsyD

Faith, Sexuality, and Identity: A Conversation - Panel  
November 7th, 2012  
George Fox University, Newberg, Oregon  
Faculty: Erika Tan, PsyD

LGBTQ and University Populations - Diversity Training  
February, 2013 to December, 2013  
Reed College, Portland, Oregon  
Instructor: Gary Granger, CSM

Sex and Gender Committee  
August, 2013 to May, 2017  
George Fox University, Newberg, Oregon  
Faculty: Kathleen Gathercoal, PhD
Multicultural Committee
Administration Team Member
August, 2013 to May, 2017
George Fox University, Newberg, Oregon
Faculty: Winston Seegobin, PhD

MEMBERSHIPS
American Psychological Association
Christian Association of Psychological Studies

REFERENCES
Jory Smith, PhD
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Director of Assessment
Newberg, OR
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