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The Relationship Between Substance Use and Academic Performance in Baccalaureate Nursing Students

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Students

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Abstract

Drug and alcohol use is a negative way to cope with stress in undergraduate nursing students, which may affect academic performance. The purpose of this study was to examine the relationship between substance use and academic performance in baccalaureate nursing students. This study was guided by the Transactional Model of Stress and Coping by Lazarus and Folkman and used a non-experimental, correlational design. The sample included pre-nursing, accelerated, and second-, third-, and fourth-year nursing students at a public mid-Western university. The sample size was 146 subjects. Alcohol use was measured with the AUDIT questionnaire, drug use was measured by the CAGE-AID questionnaire, and academic performance was measured by grade point average. Data was analyzed with Pearson correlation coefficients using the SPSS analytical software.

The results of this study yielded a negative correlation, however the data was not statistically significant for both the CAGE-AID and AUDIT questionnaires. Due to these findings, the researchers' hypothesis: as substance use increased, academic performance would decrease, was not proven. The implications of the findings of this study for future nursing practice outlined the importance of continued education and screenings for substance use and alcohol dependency.

The Relationship Between Substance Use and Academic Performance in Baccalaureate Nursing Students

Alcohol and drug use in the college-aged population has been a worldwide problem (Rabanales Sotos, et al., 2015). This substance use, which was defined as alcohol and drug use throughout this paper, causes alcohol-related injuries, sexual assault, acute and chronic health problems and many more negative consequences, including medical malpractice in the workplace (Gnadt, 2006). Researchers have found high prevalence of alcohol use among college students. Students are often unaware of more effective coping mechanisms for stress brought about by clinical nursing education (Nair, Nemeth, Williams, Newman & Sommers, 2015).

Approximately 79% of college students self-report alcohol use, however there are few studies about the prevalence of alcohol misuse (Nair et al., 2015). "According to the Dietary Guidelines for Americans, moderate drinking is up to 1 drink per day for women and up to 2 drinks per day for men" (Drinking Levels Defined, n.d.). According to the National Institute on Alcohol Abuse and Alcoholism a standard drink is defined as 12 fl. oz. of regular beer, 5 fl. oz. of table wine or 1.5 fl. oz. of distilled spirits [hard liquor] (What Is A Standard Drink?, n.d.). Further, despite many researchers using descriptive methods to study substance use in college students, few have studied health profession students, and specifically nursing students, and substance use with a focus on academic performance. Alcohol and substance abuse in college students should be a concern to the general public; not only does substance abuse affect the public while driving on the road, but nursing students who abuse alcohol or substances can make mistakes in the healthcare field, which could impact the patients they work with and their family members.

Misuse of substances may indicate underlying mental or emotional issues that need to be addressed. They may also be formative habits, coping mechanisms, and reflective of addictive tendencies that could cause problems further down the road during the students' professional careers (Nair et al., 2015). Finally, as previously mentioned, substance use in nurses and nursing students may be detrimental to patient care due to the increased risk for patient safety issues. Therefore, the purpose of this study was to examine the relationship between substance use and college GPA in baccalaureate nursing students. This project used an online survey to collect data about self-reported substance use, grade point average (GPA), age, gender and work outside of school. The study has answered the following research question: Is there a relationship between substance use and academic performance in baccalaureate nursing students?

Review of Literature

Substance Use in College Students

Substance use affects grade point average in college students (Garnier-Dykstra, Caldeira, Vincent, O'Grady, Arria, 2012). In addition to grade point average, there are various, important dimensions of substance use in college students. These dimensions include trends in exposure opportunity, outcomes, and sources of nonmedical prescription stimulants (NPS) during college (Garnier-Dykstra et al, 2012). These dimensions are further explained in the subsequent information.

Trends in exposure opportunity. Garnier-Dykstra et al. (2012) studied students at various points during their college career. During their first year of college, students were asked, "Sometimes people are offered a chance to try prescription stimulants non-medically. How old were you the first time you were offered prescription stimulants?" (p.227). In subsequent interviews, the subjects were asked, "In the past 12 months, on how many days were you offered

prescription stimulants for nonmedical use?" (p.227). The researcher found by the fourth year of college, approximately 62% of the subjects were offered prescription stimulants at least once and around 33% had used a non-medically prescribed stimulant (NPS). Specifically, average frequency of NPS use was 11.3 days in year two, 12.1 days in year three, and 13.8 days in year four. Overall, male subjects were more likely to use NPS than female students and almost half (45.8%) of the students who were offered NPS used in the same year they were offered the stimulants. The average age of first exposure was 18 years.

Outcomes of substances use in college students. Researchers have described the effects of substance use in college students (Arria et al., 2012; White & Hingson, 2011). Arria et al. (2012) studied academic performance and substance use including marijuana, alcohol, and other illicit drugs. The researchers found that students using these substances have had problems in academic performance, such as skipping classes and ineffective studying, which in turn decreased GPA. White and Hingson (2011) identified the results of excessive drinking in college students to include "injuries, assaults, car crashes, memory blackouts, lower grades, sexual assaults, overdoses, and health" where secondary effects "place non-binge-drinking students at a higher risk of injury, sexual assaults, and having their study disrupted" (p. 201). Use of alcohol and nonmedical drug use can have ill-fated effects not just on the student participating in the usage, but also on those students that may be in the same vicinity. Along with having detrimental effects on both the students and surrounding students, the patterns students set up in their first year of college set a crucial pattern for students' future success (Arria et al., 2015).

Sources of nonmedical prescription stimulants. Health care providers need to be aware of substance use in college students to more effectively assess problems and use treatment interventions in this population. According to Garnier-Dykstra et al. (2012),

> Clinicians should be aware of the likelihood of medication overuse among their college age patients with ADHD, and, given that the most common source of prescription stimulants used non-medically was a friend with a prescription, physicians should caution patients against sharing or selling their medications (p. 226).

Moreover, healthcare providers who prescribe also need to be aware of patients who may identify themselves as having Attention Deficit Hyperactivity Disorder, but who do not meet the diagnostic criteria of the disease. Additionally, university administrators need to pay attention to the prevalence of substance use of nonmedical prescription stimulants in students on college campuses (Garnier-Dykstra et al., 2012).

Substance Use in Nursing Students

Although researchers have examined substance use in college students, there has not been a specific focus on nursing college students. Further, although substance use in college students is estimated between 90-95% (Gnadt, 2006), few researchers have examined the prevalence of substance use in nursing students. Researchers, however, have studied outcomes of substance use in nursing students. For example, Nair et al. (2015) conducted a systematic review evaluating nursing students and found that the outcomes of alcohol misuse included academic decline, alcohol-related health issues, unintentional injuries, sexual assault and death. These researchers found that some of the nursing students who ranked highest academically also identified as those drinking at unsafe levels (Nair et al., 2015). Moreover, they found that students were unaware of alcohol's addictive nature, safe levels of consumption, and associated

dangers of substance abuse; while faculty members were unable to see the signs and symptoms of abuse. Gnadt (2006) examined substance use and risk of substance use in nursing students. In spite of religious belief systems and strong norms against substance abuse, she found that 24% of the nursing students in her sample of 241 reported current use. A limitation of findings, reported by Gnadt (2006), is that respondents may have felt the need to give socially desirable responses even knowing that the survey is anonymous, thus under-reporting use of alcohol. Similar limitations were found throughout the article analysis.

Researchers have also studied substance use in nurses, nursing students, and other health professionals, asking them to report use during years of education. Kenna and Wood (2004) used surveys to collect data from 262 nurses, pharmacists, pharmacy and nursing students. They found that 88% of pharmacists who reported substance abuse first started in college. They also found that substance use in college was one of the strongest predictors of future use. Nurses reported an average of 18-20 drinks per month and pharmacists an average of 15-18 drinks per month. Nurses were also found to use cigarettes significantly more in their lifetimes, or in the past month, than pharmacists. The most commonly used drugs by nurses were marijuana (57.4%) followed by opiates (14.5%), cocaine (14.0%) and stimulants (10.9%). Marijuana was the most used drug by pharmacists as well (44.4%). Compared to the general public, pharmacists used more opiates, stimulants, and anxiolytics. Further, Kenna and Wood (2004) found that nursing students consumed 20-34 drinks per month, while pharmacy students drank around the same 19-30. The students were found to have heavy episodic use. Nursing students were also more likely to use tobacco in their lifetime and daily compared to pharmacy students (80 vs. 75% and 9.8 vs. 4.6% respectively). Again, marijuana was the most used drug with

nursing students, having a higher lifetime use. There were other drug uses reported between the different students; however, there was not a large difference in use between the two groups.

Sotos et al. (2014) and Baldwin and Barteck (2009) also conducted studies related to substance use in nursing students. Based on findings that many college students do not realize that what they are drinking is an unhealthy amount, the researchers recommended prevention activities for students, especially those who will be future health professionals. In conclusion, these researchers have all identified a need for information, prevention, and intervention with nursing students, pharmacy students, and college students as a whole.

Theoretical Framework

This study used a stress and coping theoretical model about cognitive appraisal, coping mechanisms, and the outcomes of short-term stressors developed by Folkman, Lazarus, and others. The theory discussed the long-range outcomes associated with acute mediators, in this case cognitive appraisal and coping, of stressful personal and environmental factors (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). Lazarus and Folkman define coping as "the person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources" (Folkman et al., 1986, p. 993). For this study, substance use was conceptualized as a negative coping mechanism in response to stress. Academic decline was anticipated as the negative outcome based on the negative consequences of alcohol and substance use. The hypothesis based on this theory was that there would be a negative correlation between academic performance and alcohol and substance use. That is, as substance use increases, academic performance, as measured by GPA, would decrease.

Methods

Design

The design of this research project was non-experimental and correlational. The researchers received approval for this study from the University of Akron Institutional Review Board (IRB).

Setting and Sample

The setting was a large, public mid-Western university in the United States. The institution's total number of students in 2013 was 22,122. Within the school of nursing there were approximately 1,000 undergraduate and graduate students. The undergraduate population constituted of approximately 600 students, and included a traditional baccalaureate program, RN to BSN program, LPN to BSN program, and an accelerated baccalaureate program.

The convenience sample was pre-nursing, second year, third year, fourth year, and accelerated nursing program students. Pre-nursing majors were students who were in the pre-admission courses but not yet admitted to the bachelors of nursing program. The inclusion criteria were nursing students and 18 years of age or older. No subject would be excluded based on gender, ethnicity, race, or age, as long as they were at least 18 years old.

Sampling and Data Collection Procedures

Data was collected during fall 2016 through an anonymous online questionnaire and used three waves of recruitment emails to all nursing students. The college office of student success initiated each recruitment email wave and the Qualtrics online site was used to maintain subject anonymity and protect human rights. Only the researchers and the sponsor had access to the data. Data was stored in a password-protected computer. In the recruitment email, potential subjects were linked to the online survey. There was a statement prior to beginning the survey,

informing possible participants of the terms and conditions of completing the survey. The

statement informed possible participants of the details of the study, the procedures used

throughout the study, and their rights as human subjects. Participants were informed that the

survey was anonymous and their data was not going to be distributed. Participants were also

informed that participation in the survey was voluntary. No signed consent forms were

collected; subjects were informed that advancement from the information page indicated consent

to participate (see Appendix D). Following the introduction with the informed consent was the

AUDIT questionnaire, the CAGE-AID questionnaire, along with additional demographics

composed by the researchers and the project sponsor. The survey was not to take any longer

than twenty minutes and the questions did not have any identifiers, or expose any identifying

information about subjects who took the survey. Completed surveys were submitted by subjects

and the results of the survey were imported into a statistical analysis program.

Measures

Alcohol use was measured with the AUDIT questionnaire. The AUDIT questionnaire

was comprised of 10 questions with yes/no answers, numerical answers, and answers describing

frequency of use. Subjects were asked to respond to each item, on a 0 to 4 scale, with never=0,

less than monthly=1, monthly=2, weekly=3, and daily or almost daily=4. For questions 9 and

10, which only had three responses, the scoring was 0, 2 and 4 (from left to right). Scores from

items were summed, with scores of 8 or more associated with harmful or hazardous drinking,

and scores of 13 or more in women and 15 or more in men indicating alcohol dependence

(Saunders, Aasland & Babor et al., 1993). (Refer to Appendix E). This tool was valid and

reliable based on its use by the World Health Organization collaborative project on early

detection of persons with harmful alcohol consumption (Saunders et al., 1993). Additional

measures of alcohol were determined by asking subjects to report average number of drinks per

week on an interval level of measurement and the types of drinks consumed on a nominal level

of measurement. Types of drinks were measured by selecting all that apply, including beer,

wine, wine coolers, hard liquor, and other in a fill-in box. Results from this question were tallied

and recorded via a frequency graph.

Drug use was measured with the CAGE-AID questionnaire (see Appendix E). This

questionnaire was comprised of four yes/no questions with yes=1 and no=0. An example of a

question was: Have you ever felt that you needed to cut down on your drinking or drug use? The

following was how the researchers scored this questionnaire: Scores from the four items were

summed with one or more positive responses to the CAGE-AID resulting in a positive screen.

This questionnaire was considered reliable and valid; Brown and Rounds (1995) found that the

CAGE-AID had a sensitivity of 79 percent and a specificity of 77 percent. Psychometric

properties of this tool vary based on the population and the validity standards (Dallah and Kopec,

2007). This meant the validity of the data depended on the population who completed the

questionnaire and their level of consciousness or level of impairment while they completed the

questionnaire. Additional measures of drug use were measured with items asking subjects to

identify the average number of substances used per week, in the past month, or in their lifetime

and the types of substances used. Subjects were asked to identify types of substances used:

marijuana, cocaine, hallucinogens, opiates, stimulants, inhalants, sedative-hypnotics or other in a

fill-in box (Kenna & Wood, 2004). Results were calculated and recorded in a table based on

percentage of use.

Academic performance was measured with grade point average (GPA), which was self-

reported when subjects were asked to write in their grade point average, using two decimals.

GPA was measured at the interval/ratio level of measurement with an open box for subjects to type in exact GPA with two decimals. Gender was measured at the nominal level of measurement as male, female, or preferred not to answer. Age was measured at the interval/ratio level with an open box for nursing students to type in their age in years. Work was measured at the interval/ratio level with an open box for subjects to type in their average number of hours worked per week. Level in the program was measured at the ordinal/categorical level as pre-nursing, second year nursing student, third year nursing student, fourth year nursing student, and the accelerated nursing program. Alcohol and substance use, GPA, gender, age, work, and level in the program were self-reported via the online survey.

Data Analysis

All data was imported in SPSS Statistics 24, a statistical analysis software program. Descriptive statistics were used to describe the sample and variables. The research question, "Is there a relationship between substance use and academic performance in baccalaureate nursing students?" was answered using Pearson correlation coefficients. The level of statistical significance was set at $p<0.05$.

Results

The research questionnaire was sent out in three waves of e-mails during the fall semester of 2016. The sample included pre-nursing, accelerated, and second-, third-, and fourth-year nursing students. The students used were from a public mid-Western university.

Sample and Variables

The conducted survey had 146 responses, which contained enough information to deem useable. The students who conducted the survey decided that a response deemed useable was one which contained at least 10% of submitted answers.

Based on the responses of the survey, the majority of the responders were female at 84%. Likewise, the majority of the responders were Caucasian at 92.2%, with a small number of African American, Asian American, Hispanic/Latino, and Other responders. The marital status of 85% of responders was never married, while 1% were divorced, 4% were married, and the remaining percentages were other. Further investigation revealed the bulk of responders lived off campus with others. Pertaining to the Nursing Program, 85% of responders were in the 4-year Baccalaureate nursing program. There was an equal number of responders across the four years of nursing school. The statistics provided can also be viewed in Appendix F.

AUDIT and CAGE Questionnaire

Approximately 81% of responders completed the AUDIT Questionnaire (Appendix G). This questionnaire measured alcohol usage; when students scored an 8 or above, it indicated alcohol dependence. This score was then measured against the student's GPA. The data was entered into the SPSS statistical analysis program and analyzed with Pearson coefficients with a statistical significance set at $p<0.05$. The results yielded a negative correlation but the data was not statistically significant. A negative correlation indicated that as a responder's alcohol usage increased, their GPA decreased.

The data did show that, in this population of people, there were 26 students who were found to be alcohol dependent. This statement was based on the AUDIT questionnaire where a score of 8 or greater indicates alcohol dependency. This meant that approximately 18% of the students who took the survey indicated that they were either physically or psychologically dependent on alcohol; alcohol dependence is different than alcohol use because these students may have a strong need or craving for a drink, or feel that they frequently need a drink just to get through their day. The students who reported this data felt it was important to include this

information because although the findings were not statistically significant, it is essential to point out that there was a group of nursing students who are dependent on alcohol to get through their day. The AUDIT scores are displayed on the horizontal axis (Appendix G) and frequencies on the vertical axis. Any scores over 8 on the horizontal, AUDIT, axis indicated alcohol dependency, which correlated to the frequency of 26 students, or 18% of the students.

The CAGE questionnaire was used to analyze chemical dependence (Appendix G). Any score of one or greater yielded a positive screen; meaning, a score of 1 or more indicated a possibility for a substance abuse, however emphasis was placed on score of greater than 1. Approximately 87% of responders answered the CAGE questionnaire. The correlation between the CAGE responses against GPA showed a negative correlation, so, as a responder's substance use increased, their GPA decreased. However, the results were not statistically significant.

Although the data did not prove to be statistically significant, there were 29 people who yielded a score of 1 or greater. This meant that approximately 29% of the students who responded to the survey might have had a problem with chemical dependence. Similar to alcohol dependence, chemical dependence indicated a possible addiction to a mood or mind-altering drug. Having a population of 29% of nursing students who may have had a problem with chemical dependence was a concern; there was a noteworthy group of students taking care of patients in the clinical setting who may be addicted to chemical substances, which could ultimately lead to devastating patient care mistakes. The scores from the CAGE questionnaire can be viewed on the bar graph in Appendix G. On the horizontal axis are the CAGE scores, along with the frequencies on the vertical axis.

Additional Findings

   Based on the evidence above, the students determined there was not a statistically

significant relationship between substance use and academic performance in this population of

baccalaureate nursing students. The nurse researchers also hypothesized as substance use

increases, academic performance, as measured by GPA, will decrease. As previously stated,

because the results were statistically insignificant, the students' hypothesis was proven incorrect.

   The AUDIT vs. GPA correlation showed a Pearson Correlation of -0.051 (r being the

correlation value of -0.051), which was a negative relationship. However, when a perfect

negative relationship exists when $r = -1$, a correlation value of -0.051 demonstrated a very low

relationship magnitude. Moreover the significance was 0.557 ($p = 0.557$), which was not a

strong enough value to be statistically significant. The CAGE vs. GPA correlation showed a

Pearson Correlation of -0.044 ($r = -0.044$), again another negative relationship with low

magnitude. The significance was 0.598 ($p = 0.598$), which was not a strong enough value to be

statistically significant. These correlation graphs can be found in Appendix G.

<div align="center">

Discussion

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   This study found that there was a negative correlation between alcohol and substance use

and academic performance. Nonetheless, the results were statistically insignificant in this

population of baccalaureate nursing students. Again, a negative correlation meant that as a

responder's alcohol or substance use increased, their academic performance

decreased. However, there were outliers in the subjects that showed possible indications of

alcohol dependency and substance abuse. There were multiple subjects who reported having

more than 10 drinks per week, and other participants who reported using more than two

substances per week. Although there were not enough subjects using substances or with

excessive alcohol use to make this study statistically significant, the data showed that there may have been a cause for concern within the nursing community that some students may have a problem with alcohol dependency and substance abuse.

Due to lack of evidence related to alcohol and substance abuse in baccalaureate nursing students, the researchers did not have many findings to compare with the results found in this study. It is clear that even though the data was not statistically significant, there were still a small percentage of nursing students that had a dependence on alcohol or substances; some of the following statistics discussed within the literature review can be compared to the study findings.

Kenna and Wood (2004) found that nursing students consumed 20-34 drinks per month. The researchers of this article found that students reported drinking a mean of 1.9 drinks per week, which would be an average of 7.6 drinks per month, lower than Kenna and Woods' findings in 2004. The data collected from this survey showed that 60% of responders reported alcohol use, while Nair et al. (2015) found 79% of students reporting alcohol use. Additionally, Gnadt (2006) estimated that 90-95% of college students use substances where 82% of the responders of this survey reported not using substances.

While examining the data, the researchers found a few unexpected findings. One subject reported an average use of substances 24 times per week. Possible explanations for this unexpected finding were: the subject clicked the wrong numbers, purposely responded incorrectly, or was not paying enough attention to what he or she was doing. However, the response also could have been accurate. Another subject reported the consumption of an average of 20 alcoholic beverages per week. This could be due to a purposeful incorrect response; not paying attention to the numbers the subject was entering, or possible alcohol dependency.

Conclusion

The overall findings of this study demonstrated that there was not a significant relationship between substance use and academic performance in baccalaureate nursing students. The hypothesis as substance use increased, academic performance would decrease was not proven.

Limitations

One limitation of the findings was that students responding to the survey might have felt obligated to respond in a socially desirable fashion, therefore under-reporting the amount of alcohol consumed or substances used, despite the fact that the survey was anonymous. Conversely, another possible limitation was that the survey was self-reported and not monitored. Subjects may not have taken the survey seriously and thereby over-exaggerated the number of substances used or amount of alcohol consumed.

When reflecting on the questions used in the survey, some of the questions were unclear in their purpose, some were unnecessary, and other questions were repeated. Questions with unclear purposes may have led to confusion for some of the responders, possibly leading to a decreased number of responses. The authors could have rephrased the questions, making them easier for the responders to answer. Further, this study was completed at a large public mid-Western university in an urban setting. Nursing programs of different size and setting may find results that vary from the findings of this project. Generalizability is a common limitation that occurs when researchers apply results from their study and make assumptions regarding a larger population. A study that focuses on college students as a whole may draw very different results than this study.

Findings

The implications of the findings of this study for future nursing practice outline the importance of continued education and screenings for substance use and alcohol dependency. As professionals caring for a vulnerable population, the public holds the nursing profession to high expectations. Nurses must be able to practice at the highest-level possible and dependence upon alcohol or substances in nursing school indicate possible red flags for future safe nursing practice.

Recommendations

After reviewing the outcomes of the study, the researchers would like to further explore relationships between negative coping mechanisms in response to stress. Substance abuse and alcohol use were viewed as being negative coping mechanisms as a response to stress. The student researchers still found this to be true, as 26 students reported using illegal substances every week and 135 students report using alcohol every week. There are many other variables that the researchers could have studied that may play a role in whether an individual chooses a negative or positive coping mechanism, including: what age the responders started drinking, average amount of hours slept each night, amount of exercise performed, number of children the responders have, and other stressors that might play a role in drinking or substance use. This being said, the student researchers think that there was a large amount of data related to negative coping mechanisms in nursing and college students that could drive a future study.

Due to the lack of data regarding alcohol and drug use in nursing students, it would be useful to see how this data compares to surrounding universities in the mid-West. Other mid-Western universities may have a higher or lower chemical dependence rate, a difference in access to alcohol or substances depending on university location, or a difference in

alcohol/substance use depending on the student body population. In addition, this study only looked at nursing students from one public university; future studies could look at students from different majors, different universities with more varied demographics, or countries with different drinking and substance use laws. There are many ways that this study can be improved and built upon in the future.

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Appendix A

Research ROL Summary Table

APA formatted reference	Problem. Research Purpose &/or Research Question	Theoretical Framework What is it and how is it used?	Design of study, Site, Population, Sampling Method. Sample Size.	Variables and measures/tools. Reliability and validity of measures/tools	Findings Conclusions	Implications	Limitations of findings
1 Nair, J. M., Nemeth, L. S., Wllliams, P. H., Newman, S. D., & Sommers, M. S. (2015). Alcohol misuse among nursing students. *Journal Of Addictions Nursing*, *26*(2), 71-80 10p.	**Problem**: Alcohol Misuse among nursing students leads to patient harm. **Purpose statement:** Scoping study describes the current state of alcohol misuse among nursing students by identifying themes and gap in literature and describes roadmap for future mixed methods studies. **Research question:** What is the current state of alcohol misuse among U.S. nursing students?	The authors used a scoping study methodological framework where they looked at existing literature on alcohol use and nursing students. They reinterpreted the existing data, identified and organized it, then produced their findings on the subject.	**Design**: Descriptive scoping study **Site**: United States colleges **Population**: Nursing students **Sampling method**: Convenience sample. Selected from existing sources based on criteria **Sample size**: 6 studies with 2,416 students	**Independent variable and tool**: Since this was a descriptive study identifying themes, no variables were measured. **V&R of tool**: **Dependent variables and tool**: **V&R of tool**:	Alcohol remained the most prevalent of substances used by nursing students. Students were unaware of alcohol's addictive nature or what is considered a safe level of consumption. Students were particularly vulnerable because they are not aware of coping mechanisms to manage stressful situations.	The intent was to provide evidence that may be used to inform future research that is designed to explore alcohol use, misuse, and abuse within this population.	Interpretive validity limited because of only one investigator conducting the thematic analysis.

| 2
Rabanales Sotos, J., López Gonzalez, Á., Párraga Martínez, I., Campos Rosa, M., Simarro Herraez, M. J., & López-Torres Hidalgo, J. (2015). Self-assessment of alcohol consumption as a health-education strategy in nursing students. *Nurse Education Today*, *35*(1), 132-137 6p. doi:10.1016/j.nedt.2014.08.004 | **Problem**: Alcohol consumption is a worldwide health problem and common in young adults.
Purpose statement: Discover nursing students' knowledge about alcohol prevention and assess skills through their own alcohol consumption and finding ways to detect hazardous drinkers.
Research question: In nursing students, how does an educational intervention affect knowledge and skill detection of hazardous drinkers and quantification of alcohol consumption? | No theoretical framework was used. | **Design**: quasi-experimental design with before and after intervention data collection
Site: The University of Castilla - La Mancha, Spain
Population: nursing students
Sampling method: Convenience sampling. Target population: students at any of the university's five nursing faculties registered in the nursing program
Sample size: 1060 students | **Independent variable and tool**: educational intervention
Dependent variables and tool: The self-assess./ Systematic Interview of Alcohol Consumption and Alcohol Use Disorders Inventory Test & the test for detection of hazardous drinking/Alcohol Use Disorders Test (AUDIT)
V&R of tool: No statistics provided; authors described AUDIT as a tool that is used around the world to detect mile alcohol-related problems. | **Findings Conclusions**: Pre and post knowledge about hazardous drinking: increased from 24.1% to 95.8% of students. Prevalence of hazardous drinking was 17.9%. Post intervention, 92.5% of students reported knowledge about assessment, completed to baseline knowledge (pg.132). By using a simple educational intervention, nursing students may improve their knowledge and skill detection of hazardous drinkers and quantification of alcohol consumption. | **Implications:** After assessing their [the nursing student's] own consumption, a considerable proportion of students realize that they are indulging in excessive alcohol consumption, which could in turn make for greater awareness of the problem among future health professionals. | **Limitations:** There are gaps identified in knowledge about alcohol consumption at universities and there is no solid theoretical framework for its assessment. |

| 3 Gnadt, B. (2006). Religiousness, current substance use, and early risk indicators for substance abuse in nursing students. *Journal Of Addictions Nursing (Taylor & Francis Ltd)*, *17*(3), 151-158 8p. | **Problem**: "Substance abuse is a health and social concern in the United States" (pg. 151). **Purpose statement**: The purpose of this study is to look into current substance abuse and early risk factors related to substance abuse. **Research question:** What are the early risk indicators for substance abuse and dependence in nursing students enrolled in their first year of nursing courses? | Donovan's multifactorial theoretical framework was used to study multiple risk factors that may lead to substance abuse. This framework also allows for prophylactic measures that may decrease substance use or the risk for substance use. | **Design:** descriptive method using a survey questionnaire **Site:** seven different Seventh-day Adventist (SDA) Colleges **Population:** first year nursing students **Sampling Method:** Convenience sampling. "350 surveys were administered to first year nursing students at 7 different seventh-day Adventist schools. 246 were returned and 5 were unusable. The sample contained both sexes and multiple ethnicities" **Sample Size:** 241 students | **Independent variable and tool**: All variables are research variables that are being observed. **V&R of tool**: N/A **Dependent variables and tool:** The Intrinsic/Extrisic Revised Scale (I/E-R), The Eflinger Alcohol Risk Survey (EARS) and the CAGE questionnaire **V&R of tool**: The validity and reliability of the I/E-R was not listed. This tool was used to see how students value their religion and their commitment to living it out. The EARS was developed to identify those at risk for alcoholism. "Test-retest reliability of EARS yielded a coefficient value of .85, a validity coefficient of .83" (pg.154). The CAGE questionnaire is another screening tool for alcoholism. The author did not discuss the validity and | **Findings Conclusions:** "Even though this sample of nursing students attended faith- based nursing programs with strong norms against substance use, 24% reported current use" (pg.157). | **Implications:** If at-risk student are identified early, this could eliminate some of the substance related problems that are being seen. | **Limitations:** It is likely that respondents wanted to give desirable responses. Because this study was done at a faith-based school, they have strong norms against substance use. This study only concerns students at SDA colleges. |

				reliability of this tool.			
4 Kenna, G. A., & Wood, M. D. (2004). Substance use by pharmacy and nursing practitioners and students in a northeastern state. *American Journal Of Health-System Pharmacy: AJHP: Official Journal Of The American Society Of Health-System Pharmacists*, *61*(9), 921-930.	**Problem**: There are problems with drug and alcohol use and abuse by health care workers **Purpose statement**: The prevalence and predictors of substance use among pharmacists and nurses and pharmacy and nursing students were studied. **Research question:** What is the extent and nature of substance use among health care professionals?	No theoretical framework was used.	**Design:** descriptive method using a survey questionnaire **Site:** a Northeast state and a midsized university in a Northeast state. **Population:** Licensed health professionals & students at a Northeast university **Sampling Method:** Each health care professional population in the state was randomly sampled by choosing every 7th person for pharmacists and every 83rd for nurses. **Sample Size:** 176 nurses and 184 pharmacists, 382 pharmacy and nursing students.	**Independent variable and tool**: substance use, self survey **V&R of tool**: authors used a logistic regression, ANOVA, and bivariate correlations to detect for bias in the survey. The analysis showed no evidence of bias. **Dependent variables and tool:** t-tests were used to evaluate continuous dependent variables **V&R of tool**: This is a valid way of computing statistical significance of a parameter although this was not	**Findings Conclusions:** A total of 262 usable question-naires were received from pharmacists and nurses (response rate, 72.8%), and 138 us- able questionnaires were received from students (35.3%). Large majorities of nursing students, pharmacy students, and nurses were women. A higher percentage of pharmacists reported having used an opioid or an anxiolytic at least once in their lives (24.8% and 14.3%, respectively) than nurses (14.5% and 7.8%). Higher percentages of nursing students and nurses reported having ever used an unprescribed drug (74.5% of nursing	**Implications:** A survey of pharmacy and nursing practitioners and students in a north- eastern state provided important information on alcohol, tobacco, and illicit drug use among these groups and highlighted the need for prevention and intervention.	**Limitations:** There was a slight underrepresentation of male pharmacists & male pharmacy students.The survey-distribution technique with students made it impossible for follow-up. Samples were only drawn from one state which makes it difficult to draw generalizations about an entire population. Substance abuse in health care professionals have been found to vary by geographical location. Also, under-reporting of substance use in surveys has been found to be common.

				specified in the document.	students and 63.6% of nurses).		
5 Rabanales Sotos, Joseba, Ángel López Gonzalez, Ignacio Párraga Martínez, Monchi Campos Rosa, María José Simarro Herraez, and Jesús López-Torres Hidalgo. 2015. "Prevalence of hazardous drinking among nursing students." *Journal Of Advanced Nursing* 71, no. 3: 581-590 10p. *CINAHL Plus with Full Text*, EBSCO*host* (accessed November 4, 2015).	**Problem**: According to other studies, there is a high amount of hazardous drinking in college students. **Purpose statement**: To estimate the frequency of alcohol consumption among nursing students and describe their behaviour patterns in relation to excessive consumption. **Research question:** What is the prevalence of alcohol consumption at this university and what are their patterns related to excessive alcohol use?	No theoretical framework was used.	**Design:** descriptive cross-sectional study **Site:** University of Castilla-La Mancha (Spain) **Population:** nursing students **Sampling Method:** any person registered in one of the university's 5 nursing facilities **Sample Size:** 1060 nursing students	**Independent variable and tool:** student alcohol use **V&R of tool:** **Dependent variables and tool:** AUDIT and ISCA questionnaires **V&R of tool:** ISCA = 3 questions that addresses the quantity and frequency of alcohol consumption. AUDIT uses 10 questions that assess drinking events within the preceding year. Both have been widely used in literature.	**Findings Conclusions:** "Hazardous alcohol consumption was observed in 43 4% of students. Moreover, 14 9% of men and 18 7% of women met criteria for hazardous drinkers, without any statistically significant difference between the sexes. The frequency of hazardous drinkers was significantly higher among participants aged under 21 years, those living outside the family nucleus and smokers" (pg. 581).	**Implications:** There are a large amount of nursing students that show evidence of hazardous drinking behaviors. It would be beneficial to promote alcohol prevention activities in the college setting.	**Limitations:** The results here may underestimate alcohol consumption if there is a higher prevalence in students who do not attend class. "There could also be biases in the results if non-attendance were to prove more frequent among persons with different socio- demographic characteristics, work obligations and income who also have different alcohol-related behaviours" (pg.588).

| 6 Arria, A., Wilcox, H., Caldeira, K., Vincent, K., Garnier-Dykstra, L., & O'Grady, K. (2013). Dispelling the myth of 'smart drugs': Cannabis and alcohol use problems predict nonmedical use of prescription stimulants for studying. *Addictive Behaviors*,38(3), 1643-1650 8p. | **Problem**: Cannabis and alcohol use problems predict nonmedical use of prescription stimulants for studying.

Purpose To estimate the effect of college students' substance use problems on skipping classes and academic performance, and the use of prescription stimulants for studying occur in association.

Research question: Does college students' substance use problems predict increases in skipping classes and declining academic | No theoretical framework was used. | **Design:** Longitudinal prospective study

Site: One large, public university in the mid-Atlantic region of the US

Population: College students

Sampling Method: Screening survey, stratified random sample of screener participants was selected to participate in a longitudinal study by trained interviewer

Sample Size: 984 college students | **Independent variable and tool**: Cannabis and alcohol use disorders

V&R of tool: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)

Dependent variables and tool: Studying, skipping class, GPA, nonmedical use of prescription stimulants (NPS) for studying. The tool used was a latent variable growth curve

V&R of tool: LVGCM can be seen as a special form of structural equation modeling, in | **Findings Conclusions:** More than one-third (38%) reported NPS for studying at least once by Year 4. Increases in skipping class were associated with both alcohol and cannabis use disorder, which were associated with declining GPA. These longitudinal findings suggest that escalation of substance use problems during college is related to increases in skipping class and to declining academic performance | **Implications:** These results suggest that nonmedical users of prescription stimulants could benefit from a comprehensive drug and alcohol assessment to possibly mitigate future academic declines. | **Limitations:** Findings rely heavily on self-reported data on illicit drug use, possibility of social desirability bias, results may not be generalizable to institutions located in other regions of the country or smaller private colleges, models did not take into account other possible constructs that might influence GPA, such as academic major or course difficulty level, variable for skipping class was operationalized as "percentage of classes skipped" and was highly skewed with many zeros, e investigated NPS for studying sometime during college as a single outcome variable. |

	performance, and does the use of prescription stimulants for studying occur in association with this decline?			that it estimates changes in unmeasured or latent variables, in this case, growth trajectories—or rates of change over time—in a variable or variables that have been assessed on multiple occasions.	. NPS for studying is associated with academic difficulties		
7 White, A., & Hingson, R. (2013). The burden of alcohol use: excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Reviews*, 35(2), 201-218.	**Problem**: Causes and consequences of excessive drinking among college students relative to their non-college peers **Purpose statement**: This article reviews recent research findings about alcohol consumption by today's college students and the outcomes that follow.	No theoretical framework was used.	**Design:** National survey studies description **Site:** Various national surveys **Population:** Persons ages 12 and up, students in 8th, 10th, and 12th grades from roughly 420 public and private schools, citizens 18 and older, 15,000 students on more than 100 college campuses	**Independent variable and tool**: Since this source was a systematic review of other studies there are no tools to analyze. **V&R of tool**: **Dependent variables and tool:** **V&R of tool**:	**Findings Conclusions:** Drinking levels have remained relatively stable on and around college campuses over the last 30 years, with roughly two out of five male and female students engaging in excessive, or binge, drinking.	**Implications:** As understanding continues to improve with better measurement strategies, improvements in prevention approaches combined with declines in precollege drinking will lead to reductions in both the levels of alcohol consumption by college students and the negative	**Limitations:** Estimates of the rates of alcohol use and related consequences are imperfect, lack of knowledge of standard drink sizes and the effects of alcohol on memory formation all complicate the collection of accurate data from traditional self-report surveys, underreporting of sexual assaults leads to difficulty in estimating the true extent of the problem, lack of

					Excessive drinking results in a wide range of consequences, including injuries, assaults, car crashes, memory blackouts, lower grades, sexual assaults, overdoses and death. Further, secondhand effects from excessive drinking place non–binge-drinking students at higher risk of injury, sexual assaults, and having their studying disrupted.	consequences that result.	college identifiers in mortality records and the fact that alcohol levels are tested too infrequently in non–traffic-related deaths leaves uncertainty regarding the actual number of college students who die each year from alcohol-related causes, college identifiers are not present in most crime reports and hospital reports.
	Research question: What do we know about the causes and consequences of excessive drinking among college students relative to their non-college peers and what are some of the hurdles and limitations of such strategies.		**Sampling Method:** Face-to-face interviews, pencil and paper surveys, face-to-face computer assisted **Sample Size:** SAMHSA-67,500 persons, MTF 50,000 students, NESARC-46,500 citizens, CAS- 15,000 students				

| 8
Garnier-Dykstra, L. M., Caldeira, K. M., Vincent, K. B., O'Grady, K. E., & Arria, A. M. (2012). Nonmedical Use of Prescription Stimulants During College: Four-Year Trends in Exposure Opportunity, Use, Motives, and Sources. *Journal Of American College Health*, 60(3), 226-234 9p. doi:10.1080/07448481.2011.589876 | **Problem**: NPS is a complex behavior that requires the attention of students, parents, clinicians, and college administrators. Only through a better understanding of NPS can effective prevention and intervention strategies be implemented, with the ultimate goal of ensuring academic success among college students.

Purpose statement: Examine trends in nonmedical use of prescription stimulants (NPS), including | No theoretical framework was used. | **Design:** Longitudinal study
Site: Large, public university in the mid-Atlantic region of the United States
Population: College students from a large, public university in the mid-Atlantic region of the United States

Sampling Method: Data collected annually during academic years 2004–2005 through 2008–2009. Generalized estimating equations analyses evaluated longitudinal trends. Logistic regression models evaluated stability of associations between risk factors and NPS over time. | **Independent variable and tool:** Trends in nonmedical use of prescription stimulants (motives, routes of administration, sources, cost, and risk factors)

V&R of tool: Interviews were administered by similar-aged individuals who were trained extensively on research procedures and interviewing techniques.
Dependent variables and tool: Lower grade point average and alcohol/cannabis use disorders | **Findings Conclusions:** Prevention opportunities exist for parents, physicians, and college administrators to reduce NPS. | **Implications:** Clinicians should be aware of the likelihood of medication overuse among their college age patients with ADHD, and, given that the most common source of prescription stimulants used nonmedically was a friend with a prescription, physicians should caution patients against sharing or selling their medications. Physicians should be cognizant of possible medication seeking among young adults who self-report ADHD symptoms but do not meet standard criteria for the disorder. College administrators need to be aware that NPS is | **Limitations:** Study comes from a single cohort from one large public university, findings are most generalizable to other large university settings, data was gathered via self-report so findings are subject to recall bias, questions were interviewer administered so that students may have been reluctant to fully disclose their NPS, GPA data missing for students who had transferred or dropped out of school so the regression models for later years are most applicable to students who are continuously enrolled, past-year recall of NPS might have varied based on when the interview was administered during the year. |

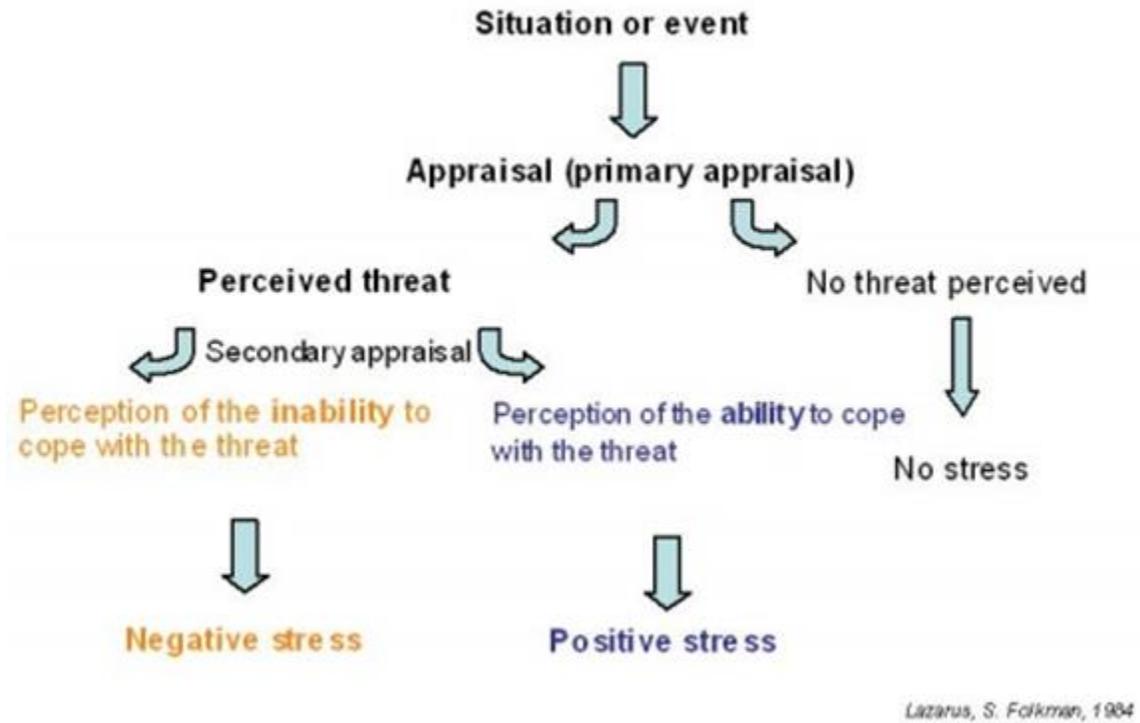|					V&R of tool: The study was approved by the university's institutional review board, with informed consent obtained in writing. A federal Certificate of Confidentiality was obtained.			prevalent on college campuses.	
	motives, routes of administration, sources, cost, and risk factors. **Research question:** What trends exist in nonmedical use of prescription stimulants and what is the stability of associations between risk factors and NPS over time.			**Sample Size:** 1,253 college students					
9 Arria, A. M., Caldeira, K. M., Bugbee, B. A., Vincent, K. B., & O'Grady, K. E. (2015, August 3). The Academic Consequences of Marijuana Use During College. *Psychology of Addictive Behaviors*, 29(3), 564-575 12 p.	**Problem:** Although several studies have shown that marijuana use can adversely affect academic achievement among adolescents, less research has focused on its impact on postsecondary educational	No theoretical framework was used.	**Design:** Large longitudinal cohort study **Site:** One large public university in the mid-Atlantic region **Population:** Young adults **Sampling Method:** 2-hr personal interview and self-administered	**Independent variable and tool:** Marijuana use, latent variable model (LVM) **V&R of tool:** LVM itself can be viewed as an extension to repeated measures analysis of variance because it examines mean	**Findings Conclusions:** In this sample of college graduates, students who used marijuana more frequently during the first year of college tended to skip more of their classes, which, in	**Implications:** Baseline marijuana use frequency during the first year of college had an enduring effect on delaying graduation several years later, via its influence on the path from skipping class to GPA at baseline. This pattern of findings highlights the importance of	**Limitations:** There were not sufficient numbers of individuals in any specific minority groups to explore race/ethnicity differences in detail, because participants were all recruited from one university, results might have limited generalizability to students in other areas or at other types of colleges, sample

	outcomes. **Purpose statement**: To test the direct and indirect effects of marijuana use on college grade point average (GPA) and time to graduation, with skipping class as a mediator of these outcomes. **Research question:** Does marijuana use have an adverse effect on college GPA, time to graduation, and skipping class?		questionnaires **Sample Size:** 1,253 young adults	differences over time **Dependent variables and tool:** College GPA, time to graduation, skipping class, latent variable model (LVM) **V&R of tool**: LVM can be viewed as an extension to confirmatory factor analysis, because the rates of change over time in a variable are considered to be unmeasured, or latent.	turn, contributed to their tendency to earn lower grades. Similar effects were also observed for baseline measures of alcohol use and other illicit drug use.	the first year of college as a critical period in which students' long-term academic trajectories begin to take shape, based in part on how they balance engagement in academic life - especially class attendance - with marijuana use.	restricted to individuals who completed their college degree, some majors are intrinsically more demanding than others, the number of distinct majors in our sample was large (100) and therefore difficult to analyze in a meaningful way, did not include other factors that are associated with academic achievement, namely financial stress, having a job, and academic self-efficacy
10 Baldwin, J., Bartek, J., Scott, D., Davis-Hall, R., & DeSimone EM, I. (2009). Survey of alcohol and other drug use attitudes and behaviors in nursing students. *Substance Abuse*, 30(3), 230-238 9p. doi:10.1080/08897070903040964.	**Problem**: Statewide nursing student alcohol and other drug (AOD) use attitudes and behaviors were assessed.	No theoretical framework was used.	**Design:** Descriptive method using a survey **Site:** Midwestern U.S. state **Population:**	**Independent variable and tool**: Alcohol and drug use **V&R of tool**: This study did not use any tools, they	**Findings Conclusions:** Nursing educational systems should proactively address student	**Implications:** The study results reinforce the need to proactively consider these recommendations and address issues of substance abuse	**Limitations:** Study conducted during the spring of 1999, so findings may not accurately re-flect current AOD use, especially for tobacco where use has been declining.

| | **Purpose statement**: Assess the attitudes and behaviors about alcohol and other drug use among nursing students. **Research question:** What are the attitudes and behaviors about alcohol and other drug use among nursing students? | | 12 nursing schools and colleges throughout a Midwestern state and nursing colleges at each of two health professions "university" systems, one public, one private **Sampling Method:** classroom visits or invitations to participate in the surveys via normal campus mail distribution system **Sample Size:** 2017 nursing students | constructed surveys of self-reported data. **Dependent variables and tool:** Attitudes and behaviors **V&R of tool**: This study did not use any tools, they constructed surveys of self-reported data. | AOD prevention, education, and assistance. | prevention, assistance, and education. | It reflects the attitudes and behaviors of nursing students in a single, Midwestern state with a predominantly white respondent population. |

Appendix B

Transactional Model of Stress and Coping (Lazarus & Folkman, 1984).

Situation or event

⬇

Appraisal (primary appraisal)

↙   ↘

Perceived threat   No threat perceived

↩ Secondary appraisal ↪

Perception of the **inability** to   Perception of the **ability** to cope   ⬇
cope with the threat   with the threat
                                                                                           No stress

⬇   ⬇

Negative stress   **Positive stress**

Lazarus, S. Folkman, 1984

Note: Alcohol and substance use is inserted after "Perception of the inability to cope with the

threat" and before "Negative stress."

Appendix C

Recruitment E-mail

Hello Undergraduate Nursing Students!

You are invited to participate in a nursing honors research project about use of alcohol and substances in nursing students. This important study is by senior nursing students: Calli Baumberger and Alexa Roberts at The University of Akron. If you are interested in participating, click the following link to complete the online survey, which should take less than 20 minutes. There is no way to link you to your data and all data will be anonymous.

Thank you in advance for your time and commitment to supporting research by undergraduate students in our nursing program! We appreciate your time and support!

Calli Baumberger and Alexa Roberts

Appendix D

Informed Consent

Title of Study: The Relationship Between Alcohol and Substance Use and Academic Performance in Baccalaureate Nursing Students

Introduction: You are invited to participate in a research project being conducted by Calli Baumberger and Alexa Roberts, nursing students in the College of Health Professions, School of Nursing at The University of Akron.

Purpose: The purpose of this project is to study alcohol and substance use in baccalaureate nursing students.

Procedures: If you volunteer to participate in this study, you will be asked to complete a short, online survey about alcohol and drug use. It will take less than 20 minutes to complete the survey. Additionally, you will be asked to give some information about your age, gender, level of education, ethnicity, and marital status. You will not be asked to give any identifying information at any time.

You are eligible to participate in the study if you are enrolled in an undergraduate nursing program and at least 18 years old. You are not eligible if you are in the graduate nursing program. No persons will be excluded based on gender, ethnicity, race, sexual orientation, marital status, or age as long as they are 18 years or older.

Benefits and Risks: You will receive no direct benefit from your participation in this study, but your participation may help us better understand the alcohol and drug use in undergraduate nursing students. There are some possible risks involved in completing the survey because you are asked to answer questions about personal alcohol and drug usage. You are not required to respond to every item on the survey, but we hope you do. There is a very minimal risk level for participant identification due to the facts that no identifying information is collected in the survey and survey distribution and submission occur anonymously and online. The survey will be completed at the participant's personal pace in a secure, private environment. In case you feel the need to talk with a counselors and health care provider after completing this survey, please contact: (1) The Counseling Center, Simmons Hall 306, Phone: 330-972-7082, Website: http://www.uakron.edu/counseling/ and/or (2) Student Health Services, Student Recreation and Wellness Center, Suite 260, Phone: 330-972-7808 Website: http://www.uakron.edu/healthservices/.

Right to refuse or withdraw: Participation is voluntary. Refusal to participate or withdraw from the study at any time will involve no penalty. Failure to participate in no way affects your academic standing.

Anonymous and Confidential Data Collection: No identifying information will be collected, and your anonymity is further protected by not asking you to sign and return the informed consent form.

Confidentiality of Records: Data are collected with an online survey. The survey is loaded into Qualtrics, an electronic survey software program. You will complete the survey electronically and at your own convenience. Electronic survey completion means that data are

automatically entered into a data set. Disconnecting participants from their surveys is also related to protection of human participants.

Who to Contact with Questions: If you have any questions about this study, you may contact Calli Baumberger (crb106@zips.uakron.edu), Alexa Roberts (ajr102@zips.uakron.edu), Lisa Hart (lahart@uakron.edu) or Christine Heifner Graor, PhD (Advisor) at (330) 972-6422 or graor@uakron.edu. This project has been reviewed and approved by The University of Akron Institutional Review Board. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance & Signature: I have read the information and voluntarily agree to participate in this study. My completion and submission of this survey will serve as my consent. I may print a copy of this consent statement for future reference.

Now, begin to complete the survey!

Appendix E

Measures

Directions: Please tell us some things about yourself.

1.   What is your gender?
        Female
        Male
        Prefer not to answer

2.   What is your age?

    Years of age _____

3.   What racial/ethnic category do you identify with?
        White
        African American
        Asian
        Hispanic/Latino
        Other – please specify:_____

4.   What is your marital status?
        Never married
        Married
        Separated
        Divorced
        Widowed
        Living together
        Other – please specify:_____

5.   What is your current GPA to the nearest 2 decimals?

        GPA _____

6.   On the average, approximately how many hours do you work weekly? Enter 0 if you are unemployed.

        Average number of hours worked weekly _____

7.   What are your current living arrangements?
        On campus by myself
        On campus with others
        Off campus by myself
        Off campus with others
        Other

8.   What program are you currently enrolled in at the College of Nursing
        4-year Baccalaureate nursing program
        RN/BSN program

      Accelerated program
      Other - Please specify: _____

9.   What nursing program year (level-status) are you currently in?
          Freshman level/pre-nursing
          Sophomore level/first year
          Junior level/second year
          Senior level/third year
          Accelerated nursing program

10.   What is the average number of drinks you consume per week? (Numeric value)

      _____

11.   What types of drinks do you consume? (Check all that apply)

- Beer
- Wine
- Wine coolers
- Hard liquor
- Other – please specify:_____

12.   What is the average number of substances used per week (in the past month)?

      _____

13.   What is the average number of substances used per week (in your lifetime)?

      _____

14.   What types of substances have you used in the past? (Check all that apply)

- Marijuana
- Cocaine
- Hallucinogens
- Opiates
- Stimulants
- Inhalants
- Sedative-hypnotics
- Other – please specify:_____

AUDIT Questionnaire

Please select the answer that is correct for you

1. How often do you have a drink containing alcohol?

- Never

- Monthly or less

- 2−4 times a month

- 2−3 times a week

- 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day when drinking?

- 1 or 2

- 3 or 4

- 5 or 6

- 7 to 9

- 10 or more

3. How often do you have six or more drinks on one occasion?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

4. During the past year, how often have you found that you were not able to stop drinking once you had started?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

5. During the past year, how often have you failed to do what was normally expected of you because of drinking?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

6. During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

7. During the past year, how often have you had a feeling of guilt or remorse after drinking?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

8. During the past year, have you been unable to remember what happened the night before because you had been drinking?

- Never

- Less than monthly

- Monthly

- Weekly

- Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

- No

- Yes, but not in the past year

- Yes, during the past year

10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?

- No

- Yes, but not in the past year

- Yes, during the past year

CAGE-AID Questionnaire

When thinking about drug use, include illegal drug use and the use of prescription drug use other than prescribed.

Questions:

Have you ever felt that you ought to cut down on your drinking or drug use?

- Yes
- No

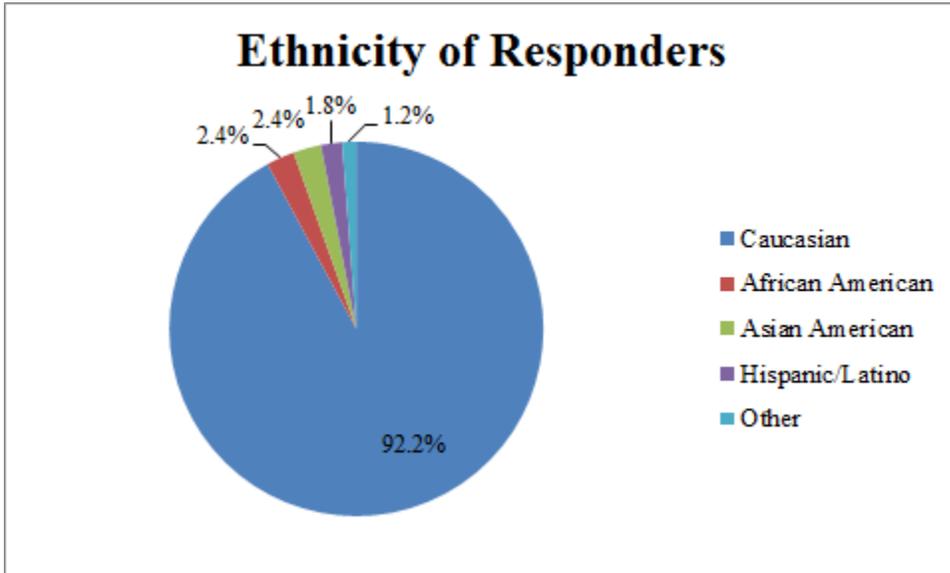Have people annoyed you by criticizing your drinking or drug use?
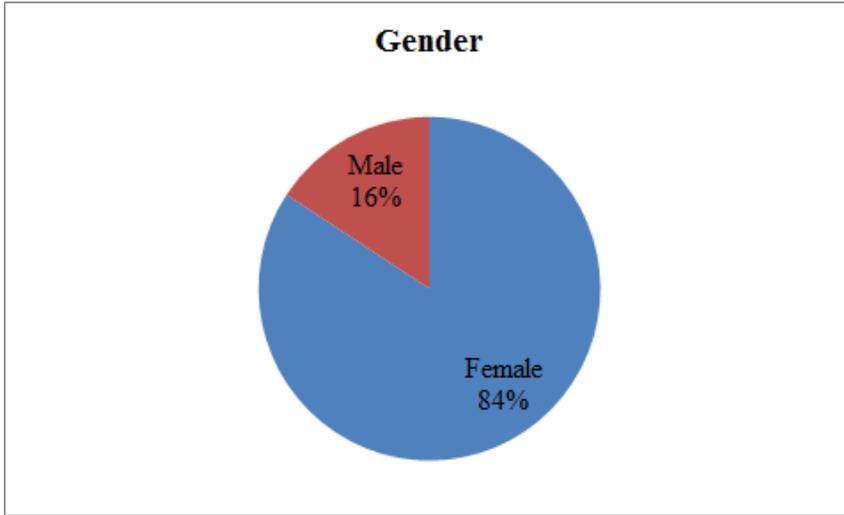
- Yes
- No

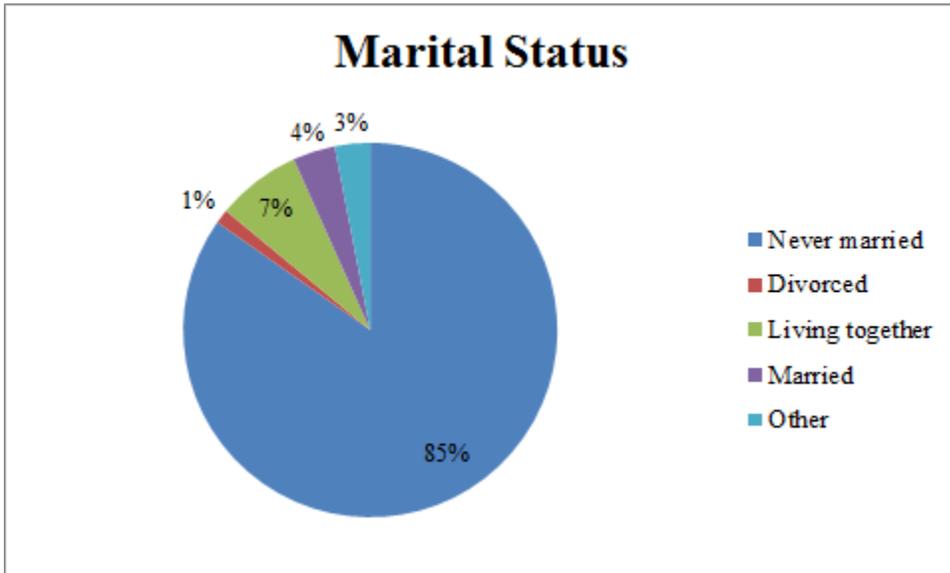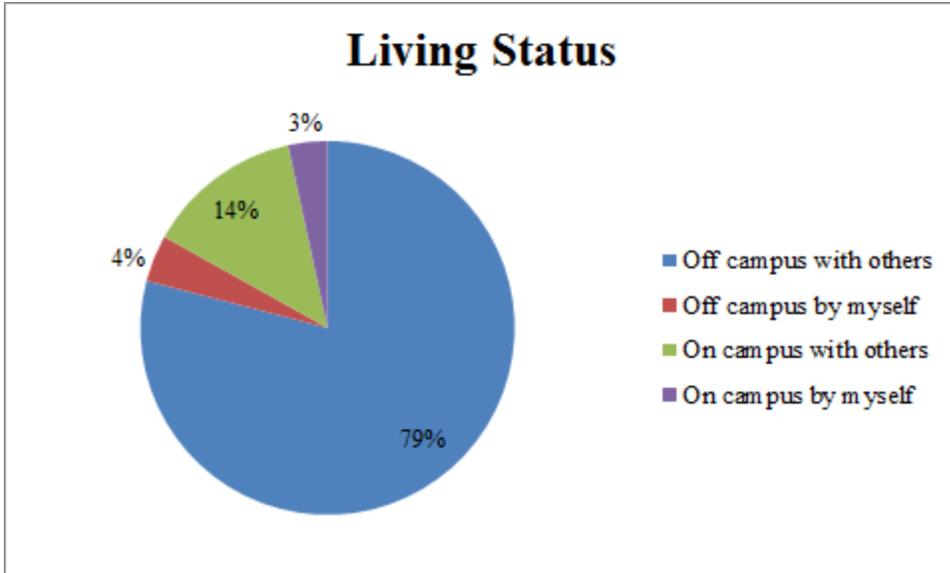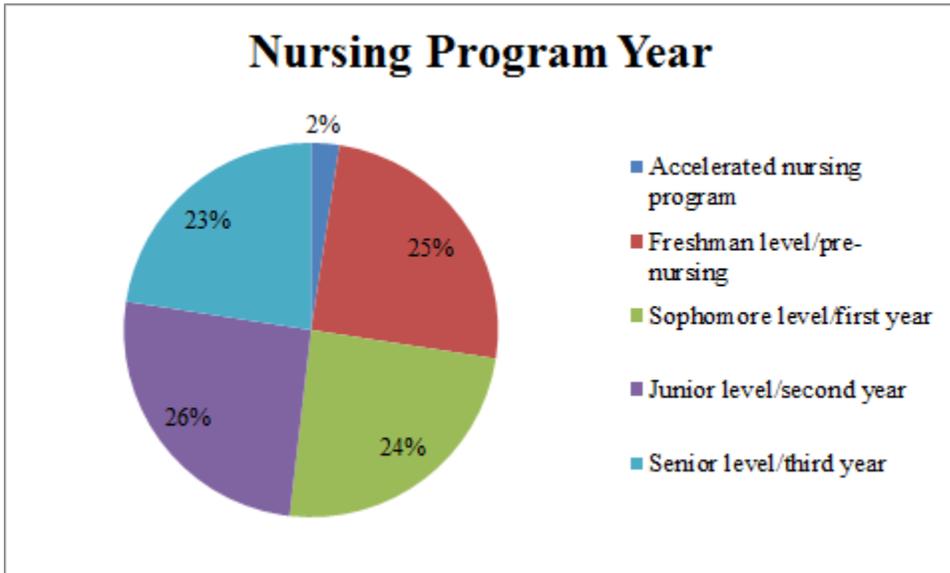Have you ever felt bad or guilty about your drinking or drug use?

- Yes
- No
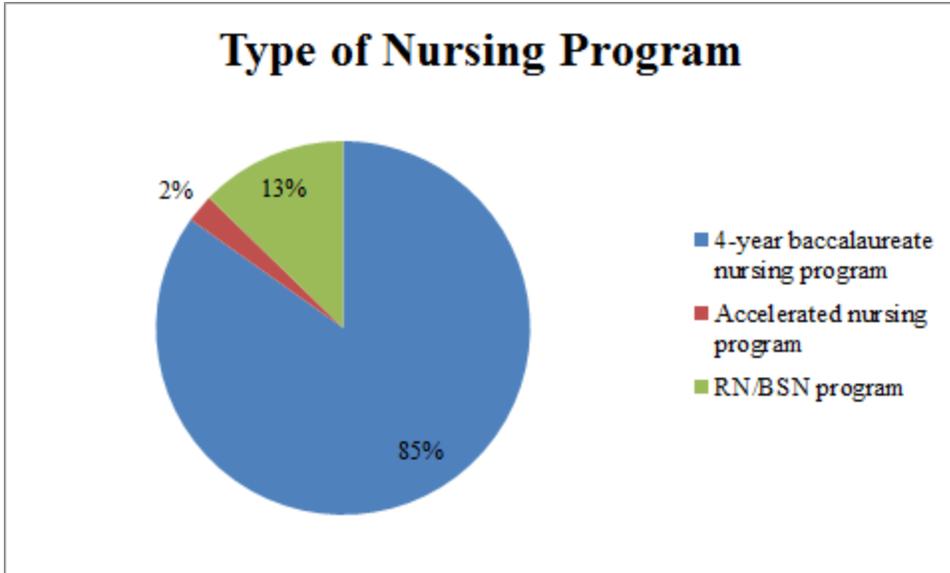
Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?

- Yes
- No

Appendix F

Gender

Male
16%

Female
84%

Ethnicity of Responders

2.4%   2.4%   1.8%   1.2%

92.2%

■ Caucasian
■ African American
■ Asian American
■ Hispanic/Latino
■ Other

Living Status

3%

14%

4%

79%

- Off campus with others
- Off campus by myself
- On campus with others
- On campus by myself

Marital Status

4% 3%

1%

7%

85%

- Never married
- Divorced
- Living together
- Married
- Other

Type of Nursing Program

Legend:
- 4-year baccalaureate nursing program
- Accelerated nursing program
- RN/BSN program

2% 13% 85%

Nursing Program Year

Legend:
- Accelerated nursing program
- Freshman level/pre-nursing
- Sophomore level/first year
- Junior level/second year
- Senior level/third year

2% 23% 25% 26% 24%

Appendix G

Correlations

Correlations		GPA	AUDIT_1
GPA	Pearson Correlation	1	-.051
	Sig. (2-tailed)		.557
	N	146	133
AUDIT_1	Pearson Correlation	-.051	1
	Sig. (2-tailed)	.557	
	N	133	137

Correlations

Correlations		GPA	CAGE
GPA	Pearson Correlation	1	-.044
	Sig. (2-tailed)		.598
	N	146	144
CAGE	Pearson Correlation	-.044	1
	Sig. (2-tailed)	.598	
	N	144	148