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High-Risk Drinking Levels Among Master's-Level Graduate Students at a Mid-Size Midwestern University

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This research is a product of the graduate program in Counseling and Student Development at Eastern Illinois University. Find out more about the program.

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HIGH-RISK DRINKING LEVELS AMONG MASTER'S-LEVEL GRADUATE STUDENTS AT A MID-SIZE MIDWESTERN UNIVERSITY

(TITLE)

BY

Susan Winterhalter

Thesis

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I HEREBY RECOMMEND THAT THIS THESIS BE ACCEPTED AS FULLFILLING THIS PART OF THE GRADUATE DEGREE CITED ABOVE

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ABSTRACT

This study has quantitatively examined the high-risk drinking levels of graduate students at a mid-size Midwestern university. The sample (N=204) was studied to investigate the hypothesis that the high-risk drinking level of graduate students is lower than the average national high-risk drinking levels of undergraduate college students. Specifically this study has quantitatively (Core Alcohol & Drug Survey) evaluated the at-risk drinking levels of graduate students and sought answers to the following thesis questions: 1) Do graduate students who participate in at least one hour of service per week report a lower level of high-risk drinking than those who do not participate in service? 2) Do graduate students who belong to social Greek-lettered organizations have a higher level of high-risk drinking than those graduate students who do not belong to Greek-lettered organizations? 3) Do undergraduates’ high-risk drinking behaviors predict their high-risk drinking as graduate students? 4) Do traditional-age graduate students (less than 25 years of age) drink more than non-traditional graduate students (25 years of age and higher)?
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CHAPTER I

Introduction

Introduction to the Research Problem

High-risk drinking among students on college campuses has gained increasing awareness in the last 10-15 years (Presley, 1998; Wechsler, 1996; Ziemelis, 1999). This phenomenon is not limited to undergraduate students, but also affects graduate students since they are a part of the campus community. As Dowdall, Maenner, & Wechsler, (1998) concluded, “Students' heavy episodic alcohol use, or high-risk drinking, is by far the single most serious public health problem confronting American colleges” (p. 57). Not surprisingly, “college presidents across the nation rank alcohol abuse as the #1 problem on college campuses” (Wechsler, 1996, p.20). Despite numerous alcohol-related tragedies across college campuses nationwide, college students, both undergraduate and graduate students, continue to drink at levels that are defined as high-risk. Deaths, violence, and other negative consequences as a result of high-risk drinking have become a pressing concern at American college campuses.

In a recent review of literature, however the author found little research in the area of graduate students' alcohol use. Therefore, the author embarked on this study in order to address the lack of research in this area and encourage dialogue among those with an interest in this critical area. It is the authors' hope that subsequent researchers will continue this line of inquiry, which has been unfortunately overlooked in previous studies.
For the last 5-10 years the appropriate definition of heavy episodic alcohol use has been disputed by many alcohol researchers. Recently, a proclamation from the Inter-Association Task Force on Alcohol and Other Substance Abuse Issues (2000) encouraged associates, researchers, and government agencies to:

refrain from using the term 'binge drinking' except as it is generally and historically used to denote a prolonged (usually two days or more) period of intoxication (BAC ≥ .08) that interferes with the student's ability to perform customary social and academic obligations and responsibilities (p.1).

For this reason, the term high-risk drinking, rather than binge drinking, will be used in this investigation of alcohol use among graduate students.

Purpose

The purpose of this study was to examine the high-risk drinking levels of graduate students at a mid-size Midwestern university. To date, most research on college students' high-risk drinking has focused on undergraduate students (Borsari & Carey, 1999; Clements, 1999; Durkin, Wolfe, & Clark, 1999; Ichiyama & Kruse, 1998; O'Hare, Cohen, & Sherrer, 1997; Presley, Leichliter, Meilman, & Harrold, 1998; Wechsler et al, 1998; Ziemelis, 1999;). Although the number of graduate students has decreased since 1996, negative behavior often associated with high-risk drinking has increased (Presley, Leichliter, & Meilman, 1998; Syverson, 1996). Similarly this researcher has witnessed on several occasions graduate students who admitted they used high-risk drinking to "escape" from the
stressors of their everyday work on a college campus. Therefore based on the growing evidence of quantitative and aggregate data, a need existed for an in-depth examination of the impact of graduate students' high-risk drinking behaviors. This study will hopefully provide necessary data to inform and support university efforts towards alcohol education and prevention among graduate students. Furthermore, it is the researcher's hope that the results of this investigation be used to plan future studies in the area of alcohol use among graduate students.

Hypothesis

The hypothesis was that high-risk drinking levels of graduate students at a mid-size, Midwestern university are lower than the average national high-risk drinking level of college students. Furthermore, the researcher investigated factors that decrease, maintain, or increase high-risk drinking among graduate students. These factors that are given in the following research questions 1 through 4 include service involvement, Greek-affiliation, continuity of undergraduate high-risk drinking, and traditional versus non-traditional student status.

Research Questions

1) Do graduate students who participate in at least one hour of service per week report a lower level of high-risk drinking than those who do not participate in service activities?
2) Do graduate students who belong to social Greek-lettered organizations have a high level of high-risk drinking than those graduate students who do not belong to Greek-lettered organizations?

3) Do undergraduates' high-risk drinking behaviors predict their high-risk drinking as graduate students?

4) Do traditional-age graduate students (less than 25 years of age) drink more than non-traditional graduate students (25 years of age and higher)?

Limitations of the Study

Several limitations exist that may have effected the results of this study. First, the data are primarily based on administered questionnaires, thus reporting bias may exist. Self-reports introduce the possibility of error due to under- or over-reporting of students' perceptions of alcohol use and alcohol-related problems. However, most researchers who study the high-risk drinking of college students typically use this method (Davenport, Dowdall, Rimm, & Wechsler, 1995). According to the Core Alcohol and Drug Survey User's Manual- Sixth edition, "Polich (1982) has shown that even with sensitive topics (such as alcohol and drug use behavior) individuals are as likely to overreport as underreport, so that with reasonably large samples the mean scores will approximate the true means" (Presley, Meilman, Leichliter, & Harrold, 1998, p. 48).
Second, limiting the study to one university and its' unique demographics may affect representativeness and generalizability. In other words, the researcher administered the Core Alcohol & Drug Survey at one mid-size, rural, residential, public university rather than to multiple universities that are characteristically different. The Core Alcohol User's Manual- Sixth edition states, "The sample should be similar to the larger population in percentages of gender, ethnicity, classification, and other attainable demographic variables" (Presley, Meilman, Leichliter, & Harrold, 1998, p. 49). Although the sampling in this research did approximate typical graduate demographics, clearly sampling from one university could negatively impact the robustness of the findings.

Based on the graduate population of 1,200-1,400 students found at this mid-size, Midwestern university, the Core Institute also recommended a sample no smaller than 300 subjects. The result of this research produced only a final sample of 204 graduate students. Furthermore Ichiyama & Cruse (1998) agree that the "demographic factors such as age, ethnicity, family income level and type of institution (i.e. public vs. private) can contribute to variations in college binge drinking rates" (p. 19). Therefore, a larger and more diverse sample would have increased the chance of producing statistically significant findings.

Third, the most important limitation is that the sample was not random. Graduate students were chosen by those graduate coordinators and faculty who agreed to allow the administration of the questionnaire in their class(es). In addition, each prospective research participant had the option of refusing
involvement in the study. Thus, the results were subject to two levels of volunteer bias which may potentially limit the generalizability of the findings.

**Terminology**

Terms defined for this thesis are as follows:

1. **Core Alcohol & Drug Survey** – Nationally developed data collection instrument distributed to assess campus-wide patterns of substance abuse (See Appendix A).

2. **A Drink** – Equivalent to a 1.5-ounce shot of liquor, one 12-ounce beer, or one 5-ounce glass of wine (O'Hare, 1990). These equivalents are very similar to those used by other prominent alcohol researchers (Wechsler et al. 1994; Sanchez-Craig, Wilkinson, & Davila, 1995).

3. **Graduate Student** – A student who has received a bachelor's degree and is currently pursuing a master's degree.

4. **High-Risk Drinking** – Five drinks in a row for men and four drinks in a row for women at least once in the last two weeks (Castillo, Davenport, Dowdall, Moeykens, & Wechsler, 1994). A distinction is made due to differing rates of gastric metabolizing alcohol for men and women (Davenport, Dowdall, Rimm, Wechsler, 1995).

5. **Non-Traditional Graduate Students** – Graduate students who are 25 years of age and older.
6. Service Involvement - The Core Institute defines “service involvement” as at least one hour dedicated to community service (Presley, Meilman, Leichliter, & Harrold, 1998).

7. Traditional-Aged Graduate Students – Graduate students who are younger than 25 years of age.

8. Undergraduate Student - Student who has received a high school diploma or the equivalent and is currently pursuing a bachelor's degree.
CHAPTER II

Literature Review

Hypothesis

Within the last five years, extensive research has been conducted and published with regard to undergraduate students' high-risk drinking—the consumption of large amounts of alcohol on a single occasion. While most researchers typically focus on the high-risk drinking levels of undergraduate students, it could be argued that it is also important to consider graduate students in this fundamental research (Presley, Meilman, Leichliter, Harrold, 1998; Wechsler et al., 1998; Ziemelis, 1999). For instance, researchers found that, "Binge drinking was associated with elevated risks for various alcohol-related educational, interpersonal, health, and safety problems for the individual drinker" (Dowdall, Meanner, and Wechsler, 1998, p. 57), which could be applicable to undergraduate or graduate students. Currently, there is no evidence that suggest graduate students drink either more or less than undergraduates.

Historically, undergraduate and graduate students face similar issues such as academic performance, social adjustment, career concerns, and overwhelming amounts of stress. However, it is important to note that graduate students (specifically women) do face additional demands; balancing graduate assistantships, classes, and families are unique to this population (Anderson & Miezitis, 1999). A researcher found that, "The decided majority of students
pursuing graduate study are quite different than the traditional student--they are older, more often women, typically married, and have family and career responsibilities" (Syverson, 1996, p. 7). Unfortunately, the dearth of research in the area of alcohol studies among graduate students precludes a more in depth examination of this population alone. Therefore, comparisons will be made among both groups in order to provide a foundation for future studies.

The only study found dealing with alcohol use among graduate students was conducted by researchers at Fordham University at Lincoln Center in the Graduate School of Social Service. Busby, Petraglia, & Waring (1984) found that the majority of students seeking a master's degree in social service were either light (35%-woman, 26%-men) or heavy drinkers (51%-women, 75%-men). The authors defined light drinkers as "using alcohol on special occasions or holidays only, and up to four times weekly at a rate of one or two drinks," and heavy drinkers as "alcohol use from once weekly to daily at the rate of four or more drinks" (Busby, Petraglia, & Waring, 1984, p.10). Researcher by Presley et al. (1998) provided data that indicated 36% of college age students in their sample had abstained from alcohol in the week prior to the survey. Busby et al. (1984) found lower rates (approximately 15%) of graduate students either do not drinking or had abstained from alcohol one week prior.

Because Busby and colleagues' (1984) research is insufficient for an adequate literature review, the researcher pursued common themes among previous alcohol research at the undergraduate level. This resulted in a review of
the literature among four common areas of study: a) service involvement, b) Greek affiliation, c) continuity of undergraduate drinking patterns, and d) traditional vs. non-traditional graduate students. These will serve as the foundation for the author's research questions.

Service Involvement

In recent years, alcohol researchers have concluded that volunteer work negatively predicts high-risk drinking (Davenport, Dowdall, & Wechsler, 1995; Ziemelis, 1999). Davenport, Dowdall, & Wechsler (1995) found "...those college students who socialize with friends and participate in physical activities were more likely to binge drink, as did spending fewer hours in studying pursuits and volunteer work" (p. 924). The Core Alcohol & Drug Survey yielded similar results. Ziemelis reported (1999) that, based on an analysis derived from the Core Survey data from the 1992-93 cohorts, "...the likelihood for binge drinking decrease was greatest where students were involved in volunteer service activities" (p. 3). Also, according to social bond theory, individuals who spend their time involved in conventional pursuits (i.e. volunteer activities) simply do not have enough time to participate in deviant behavior (i.e. high-risk drinking) (Clark, Durkin, & Wolfe, 1999).

Greek Affiliation

Research indicates that high-risk drinking is "standard practice" during the time of undergraduate fraternity and sorority membership. In virtually every study, higher drinking levels are seen in members of Greek organizations than in non-
members (Faulkner, Alcorn & Gavin, 1989; Globetti, Stern, Marsco & Haworth-Hoeppner, 1988; Goodwin 1990; Hendren 1988; Kraft, 1985; Mills, Pfaffenberger & McCarty, 1981; Miser, 1981; Presely et al. 1993; Tampke, 1990; Wechsler, Dowdall, Davenport, & Castillo, 1995). For instance, in a nationwide study, Weschler and associates (1998) found that in the previous 2 weeks approximately 75% of Greek students had binged, compared to 45% of non-Greek students. Chaloupka & Wechsler (1996) found fraternities and sororities simple presence on campus is associated with high campus-wide levels of alcohol consumption. In a study published by the Journal of Studies on Alcohol, Presley et al (1999) found that as the use of alcohol increases, so does Greek Life involvement.

Since fraternity or sorority membership seems to be a strong predictor of high-risk drinking, the question of whether Greek organizations attract or create high-risk drinkers needs to be raised. The data suggests that both dynamics are at work.

Sixty percent of those who lived in fraternity houses had been binge drinkers in high school and over three-fourths of fraternity residents who had not binged in high school became binge drinkers in college. Conversely, sororities do not seem to attract prior binge drinkers: one in three women who lived in sororities would have been defined as high-risk drinkers in high school—only slightly higher than the proportion among other students. The researcher concluded that three out of every four
women who had not binged in high school became binge drinkers while living in sorority houses (Wechsler, 1996, p. 21).

More often than not, students join the fraternity or sorority that best fits their values, possibly even the values of drinking.

Subsequently, other questions need to be raised such as whether Greek alumni are more likely to be high-risk drinkers than non-Greeks. It could be inferred from the previous research that this dynamic is also at work. Recently, Kenneth J. Sher (2001) conducted research at a university in a college town with Division I sports and a Greek system, which is similar to the studied mid-size, Midwestern university. He reported in the Philippine Daily Inquirer that, "... shortly after college, former Greeks drink no more than the former independents," (Thompson, 2001, 1). However, to date no research has been conducted to determine high-risk levels of drinking among Greeks who pursue graduate education.

Continuation of Undergraduate Drinking Patterns

During the graduate students' journey to complete a Master's degree, many new and old behaviors may surface, including high-risk drinking. Students who were high-risk drinkers as undergraduates may continue similar drinking patterns into their graduate education. Ample evidence exists to support that drinking in high school is correlated with alcohol use during college (as an undergraduate) (Wechsler, 1996; Borsari & Carey, 1999; Wechsler, Kuh, Davenport, 1996). For example, Wechsler (1996) found that "...at least 80% of
high school students who were high-risk drinkers continued drinking at similar levels in college" (p. 21). Likewise Borsari & Carey (1999) stated, "Students who drink heavily in college are often continuing drinking patterns they established in high school," (p. 32). However, no such data exists in the area of undergraduate to graduate drinking. Nonetheless, Leonard Goodwin (1989) stated, "...previous experience shapes current practices" (p. 452). Thus it could be inferred that undergraduate binge drinking does, in part, shape students' tendency to drink while in Graduate School.

Traditional vs. Non-Traditional Students

Although an on-going debate continues over the most appropriate definition of nontraditional aged students, researchers and others typically defined students 25 years of age or older as nontraditional (Hirschorn, 1988; Constitution of the Order of Athena, 1995). This criterion is adopted in this paper. Age plays an important role in the realm of high-risk drinking among college students (undergraduate and graduate). A Harvard School of Public Health College Alcohol Study found that "Younger students (under 24 years of age) were more likely to binge drink than were students in older age groups," (Davenport, Dowdall, & Wechsler, 1997, p.196). Similar results can be found in most alcohol studies including Quigley & Marlatt (1996) who found that young adults have higher binge drinking rates than any other age group. Consistent with most literature (Cahalan, Cisin, & Crossley, 1969), younger students
Graduate High-Risk Drinking 14

(defined as between the ages of 20 through 31 years of age) overall were those who drank the heaviest (Busby et al., 1984).

In contrast, Busby and associates (1984) also found that 87% of the older students (defined as 50 to 61 years of age) were defined as heavy drinkers or those who used alcohol once weekly to daily at the rate of four or more drinks. In comparison, 65% of younger students and 41% of maturer students (defined as 32 to 49 years of age) were categorized as heavy drinkers (Busby et al., 1984).

Non-traditional students often report different concerns than traditional students (Bean & Metzner, 1985); it was expected that their responses would differ from traditional students. Sher agreed that adult roles of the work force, being a spouse, being a parent-- interfere with the lifestyle of being a heavy drinker (Thomson, 2001, 1). As a result, the researcher expects that the rate of reported high-risk drinking in traditional graduate students would be higher than the average high-risk drinking levels of non-traditional graduate students.
CHAPTER III

Methodology

Purpose

The purpose of this study was to investigate selected aspects of high-risk drinking levels among graduate students at a mid-size Midwestern university. Specifically, the researcher conducted an evaluation of graduate students in several departments to determine if graduate students' high-risk drinking level was lower than the national average high-risk drinking levels of undergraduate college students.

Subjects

The research sample consisted of 204 graduate students enrolled in fall semester 2000 or spring semester 2001 at a mid-size Midwestern university. After two surveys were eliminated for students who did not complete the survey correctly, the final research sample consisted of 204 graduate students from across campus. All students who participated in the study were classified as graduate students.

Demographic information was collected in the areas of age, classification (year in college), ethnic origin, marital status, gender, current residence, work involvement, living arrangement (with whom), approximate grade point average (GPA), and student status (full or part-time student). An attempt was made to verify the representativeness of student demographic information in the sample data. Unfortunately, the university used in this study was not able to provide
similar demographic information in fall 2000 or spring 2001 concerning current residence, work involvement, and living arrangement (with whom). In an effort to maintain cross validation among demographic variables for comparison purposes, only overlapping data were used.

The subjects' ages ranged from 21 to 61 years of age. A majority (17.5%, N=204) of the graduate students surveyed were 23 years of age. Furthermore, 17% (N=204) of those graduate students surveyed were twenty-two years old and 11.5% (N=204) were twenty-four years old. Sixty-three percent (N=204) of those graduate students surveyed were between the ages of twenty-two and twenty-nine. In comparison, the norm for the university surveyed indicated that most graduate students (approximately 77%) during academic years 2000-2001 were between the ages of 22 and 29 years of age.

The second demographic used in this study was ethnic origin. Approximately 90% (N=204) of those individuals who participated in the study classified themselves as white (non-Hispanic), while 4% (N=204) were black and 3% (N=204) Asian/Pacific Islander. In contrast, institutional studies showed that approximately 88% graduate students are white, 4% black, and less than 1% Asian. The researcher speculated the 2% difference between the sample and the greater graduate population among Asians was primarily due to the greater participation in certain departments with a high Asian population of graduate students.
Approximately 70% (N=204) of the sample was female, while approximately 30% (N=204) of the subjects were male. These demographic findings were consistent with the overall graduate population of approximately 64% women and 36% men.

Additional comparable demographic information collected by this researcher included the approximate cumulative GPAs and student status (part/full-time) of each subject. By comparing the samples' approximate GPAs to the data collected by the university surveyed, it was shown that: forty-one percent (41%) of the respondents claimed their approximate cumulative grade point average was an "A" or a 3.8, while the institutional data showed the average GPA of all graduate students was a 3.32. Two factors that may contribute to this disparity include the fact that not all departments were surveyed and those students who were surveyed may perceive their grades to be higher than they actually are.

The student status (full or part-time student) of the subjects was approximately 54% full-time (12+ credits) and 46% part-time (1-11 credits) in fall 2000 and spring 2001. Institutional data gathered during the same time period revealed 37% of the total graduate student population described themselves as full-time, and 63% as part-time. A possible reason for this discrepancy may be the sampling data was not representative of the university graduate student population.
Procedure

The data collection was completed using a quantitative methodology. The quantitative data consisted of results from the Core Alcohol & Drug Survey, a nationally used survey developed by the Core Institute (Presley et al., 1998). For this study, the survey was administered to graduate students enrolled in fall semester 2000 or spring semester 2001 from several academic departments. Of the 21 graduate departments at this institution, 11 participated in this study. The participating academic departments include College of Arts & Humanities (1 of 4), College of Education & Professional Studies (4 of 5), College of Business & Applied Sciences (3 of 3), and College of Science (3 of 9).

Survey Instructions- Each graduate student taking the Core Alcohol & Drug Survey received either verbal or written instructions for completion of the survey, along with an explanation of the purpose of the research project (Appendix C). Each subject who chose to participate was instructed to read and complete the Informed Consent sheet (Appendix D). Subjects read or listened to the following assurances of confidentiality:

The data from the surveys are collected and analyzed in a way that will yield profiles of the campus graduate student population. No analyses are conducted on a single individual; in fact, it is impossible for me to associate the identities of individuals with their responses to the survey. Therefore, mark the truest answer (Appendix C).
Also, the researcher stressed that participation in this survey was voluntary. The researcher assured participants that their confidentiality would be maintained, participation was voluntary, and taking the survey more than once was not necessary.

**Instrumentation**

The Core Alcohol & Drug Survey was developed to collect information on matters such as use of tobacco, alcohol and other drugs, consequences of use, perceptions regarding the risk of use, and involvement in campus activities and groups (Presley et al., 1998). The survey consisted of 39 multiple-choice questions in which graduate students indicated their perceived level of drinking (Appendix A). Subsequently, the Core Alcohol & Drug Survey was not an all-inclusive survey, resulting in the researcher developing a multiple-choice questionnaire to further investigate subjects' alcohol usage (Appendix B). These additional likert-scale questions gathered information concerning Greek membership, undergraduate drinking patterns, bachelor's degree, first/last half of graduate education, and women's high-risk drinking levels. A representative from the Core Institute approved the additional questions developed by the researcher.

The Core Institute reported a high level of validity and reliability in the long form of the Core Alcohol & Drug Survey. The Core Alcohol & Drug Survey User's Manual- Sixth edition (Presley et al., 1998, p. 60) states, "...the long form of the Core Alcohol & Drug Survey has been developed using APA (1985)
standards for test development in order to insure that they are valid and reliable instruments.” More specifically, the content-related and construct validity, that is, does the instrument measure what it purports to measure, and is it a theoretically sound measure, were insured by a professional panel during the test construction. “To establish content-related validity for this instrument, existing instruments and literature were reviewed to ensure that major aspects, consequences, and types of alcohol and drug use were adequately covered by items on the Core Alcohol & Drug Survey” (Presley et al, 1998, p. 60). The authors also found strong inter-rater agreement (.90) for item inclusion (Presley et al, 1998). Lastly, test-retest reliability was measured using the Spearman rank correlation coefficient and the phi correlation coefficient (Presley et al, 1998). Both statistical measures showed the Core Alcohol and Drug Survey to be a reliable and stable instrument (Presley et al, 1998).

Statistics

After 206 surveys were completed by participants, only 204 surveys were sent to the Core Institute at Southern Illinois University at Carbondale for scoring. Two students who completed surveys were not classified as graduate students and were omitted from the sample. The Core Alcohol and Drug survey is designed to be read by an optical scanner and cross-tabulated resulting in frequencies, percentages, and bar graphs for each survey item.
Hypothesis

This chapter presents a detailed account of the quantitative results of this study based on responses to items on the Core Alcohol & Drug Survey. First, frequency data were calculated to examine the drinking behaviors of the graduate students in the sample. Correlations and cross-tabulations were performed on the quantitative Core Alcohol & Drug Survey data to examine the data in more detail. The data showed that approximately 41% (N=204) of graduate students (38% female and 46% male) at the studied institution reported high-risk drinking in the previous two weeks before the survey (see Table 1 & 2). These percentages were lower than those reported in a 1993 national study of undergraduate drinking conducted by Wechsler and colleagues. Their data showed that approximately 44% (N=14,995) of undergraduate students (39% women and 50% men) engaged in high-risk drinking. Further, a chi-square test showed that Wechsler's and the researcher's data were not significant (see Table 3). Therefore, the hypothesis that the high-risk drinking level of graduate students is lower than the average national high-risk drinking levels of undergraduate college students, but not significantly lower.
Table 1

Frequency Table Showing Female (n=141) High-Risk Drinking Levels

Drank 4 or more drinks at one sitting in previous 2 weeks

<table>
<thead>
<tr>
<th></th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>38.2%</td>
</tr>
<tr>
<td>No</td>
<td>87</td>
<td>62.8%</td>
</tr>
</tbody>
</table>

Table 2

Frequency Table Showing Male (n=58) High-Risk Drinking Levels

Drank 5 or more drinks at one sitting in previous 2 weeks

<table>
<thead>
<tr>
<th></th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>27</td>
<td>46.6%</td>
</tr>
<tr>
<td>No</td>
<td>31</td>
<td>53.4%</td>
</tr>
</tbody>
</table>
Table 3

Frequency Table Showing Wechsler's (N=14,995) and Researcher's (N=204) High-Risk Drinking Levels

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wechsler's Undergraduate Research</td>
<td>56.0%</td>
<td>44.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Researcher's Graduate Research</td>
<td>58.8%</td>
<td>41.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>56.0%</td>
<td>44.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Frequency distributions were also calculated to address the following research questions: 1) Do graduate students who participate in at least one hour of community service report a lower level of high-risk drinking than those who do not participate in service? 2) Do graduate students who belong to social Greek-lettered organizations have a higher level of high-risk drinking than those graduate students who do not belong to Greek-lettered organizations? 3) Do undergraduates' high-risk drinking behaviors predict their high-risk drinking as graduate students? 4) Do traditional-age graduate students (less than 25 years of age) drink more than non-traditional graduate students (25 years of age and higher)?
Service Involvement

With regard to the first question, whether graduate students who participated in community service for at least one hour during the last month reported lower levels of high-risk drinking than those who did not volunteer. Frequency data showed that approximately 34% of graduate students who volunteered as at least one hour a month reported they had engaged in high-risk drinking at least once during the two weeks prior to the survey.¹ Of those subjects whose drinking levels were not high-risk, approximately 65% participated in at least one hour per month of community service. In contrast, 45% of high-risk drinkers and 54% of non-high-risk drinkers did not participate in one hour of community service (see Table 4). The results showed that those graduate students who had participated in at least one hour of community service do high-risk drink less than their counterparts who do not volunteer.

¹ As explained earlier in this paper, high-risk drinking for women equates to four or more drinks in one sitting during the previous two weeks; for men, it is five or more drinks. The term "high-risk drinking" reflects those differences.
Table 4

Frequency Table Showing Volunteerism and High-Risk Drinking Levels (N=204)

<table>
<thead>
<tr>
<th>1 Hour of Community Service</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>54.2%</td>
<td>45.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Yes</td>
<td>65.8%</td>
<td>34.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>58.8%</td>
<td>41.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Greek Affiliation

The second question was whether membership in a social-Greek organization (as undergraduate students) was associated with increased levels of high-risk drinking among graduate students. Females with Greek membership as undergraduates, who were currently graduate students, had an overall mean of .76 (standard deviation=.43) on the Core Alcohol & Drug Survey. In comparison, the overall mean for all females in the sample regardless of Greek membership was .68 (standard deviation=.1.08) (see Table 5). A Pearson Product-Moment Correlation Coefficient was calculated to determine the relationship between social-Greek membership and female high-risk drinking. The results showed a negative relationship between female Greek membership and alcohol use. The correlation was significant at the .05 level (2-tailed) of
Pearson Correlation Coefficient comparing female high-risk drinking and Greek membership among graduate students. Please note that the correlation, although statistically significant, was very small.

Males who were members of social Greek organizations as undergraduates, who were currently graduate students, had an overall mean of .76 (standard deviation= .43) on the Core Alcohol & Drug Survey. In comparison, the overall mean of males in the survey regardless for Greek membership was 2.24 (standard deviation= 1.58) (see Table 6). A Pearson Correlation Coefficient was calculated to determine if a relationship exists between social-Greek membership and male high-risk drinking. The resulting correlation was not significant at the .05 level (2-tailed) (see Table 6).

Table 5
Frequency Table Showing Female (n=141) Greek Membership and High-Risk Drinking Levels

<table>
<thead>
<tr>
<th>Women</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek membership &amp; High-Risk Drinking</td>
<td>-.179*</td>
<td>.034</td>
<td>141</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
Table 6

Frequency Table Showing Male (n=51) Greek Membership and High-Risk Drinking Levels

<table>
<thead>
<tr>
<th>Men</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek membership</td>
<td>-.237</td>
<td>.093</td>
<td>51</td>
</tr>
</tbody>
</table>

Continuation of Undergraduate Drinking Patterns

The third research question examined whether participant who had engaged in high-risk drinking as undergraduates continued that pattern during graduate school. The Core Alcohol & Drug Survey asked, "As an undergraduate, how many drinks on average did you consume per week" (Appendix A). The cross-tabulated survey results showed that 41% of the subjects did not characterize themselves as high-risk drinkers either as undergraduates or graduate students. In comparison, 27% characterized themselves as high-risk drinkers both as undergraduates and graduate students. Of the 45% who indicated that they drank at high-risk levels at either the undergraduate or graduate level, 18% began to consume alcohol in a high-risk manner as undergraduates. Therefore, approximately 27% reported they continued to high-
risk drink as graduate students. These data show an increase of 8% (see Table 7).

Table 7
Frequency Table Showing Continuation of Undergraduate to Graduate High-Risk Drinking Levels (N=204)

<table>
<thead>
<tr>
<th>Graduate High-Risk Drinking</th>
<th>Undergraduate High-Risk Drinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>41.5%</td>
</tr>
<tr>
<td>Yes</td>
<td>12.8%</td>
</tr>
<tr>
<td>Total</td>
<td>54.3%</td>
</tr>
</tbody>
</table>

Traditional vs. Non-Traditional Students

The fourth question addressed in this study was whether traditional-age (younger than 25 years of age) or non-traditional graduate students (25 years of age and older) had higher levels of high-risk drinking. The cross-tabulated results showed that traditional-age graduate students reported engaging in higher levels of high-risk drinking than non-traditional graduate students. Fifty-eight percent (58%) of traditional age graduate students (95% men, 47% women) reported high-risk drinking compared to, only 24% (22% men, 26% women) of non-traditional graduate students (see Tables 8 & 9). Fishers Exact Test was
used to test for independence in a 2X2 contingency table that compared the
observed breakdown against the expected among traditional and non-traditional
graduate students. This type of chi-square test, Fischer's Exact Test, was used
due to the small sample size of the studied institution.

Table 8
Frequency Table Showing Graduate Student High-Risk Drinking Levels and Age
of Subjects (N=204)

<table>
<thead>
<tr>
<th></th>
<th>Traditional Men</th>
<th>Traditional Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-risk Drinking %</td>
<td>95%</td>
<td>47.9%</td>
<td>58.2%</td>
</tr>
<tr>
<td>Non-Traditional Men</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-risk Drinking %</td>
<td>22.2%</td>
<td>26.2%</td>
<td>24.8%</td>
</tr>
</tbody>
</table>

Table 9
Fisher's Exact Test: Self-Reported Graduate Student High-Risk Drinking Levels
and Age of Subjects (N=204)

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Exact Significance (2-sided)</th>
<th>Exact Significance (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Age</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Non-Traditional Age</td>
<td>.811</td>
<td>.426</td>
</tr>
</tbody>
</table>
Chapter V
Discussion & Implications

This study assessed high-risk drinking among graduate students at a mid-size Midwestern University as compared to data found in Wechsler (1994) on undergraduate high-risk drinking. Further, this study examined the variables service involvement, Greek-lettered organizations, continuity of drinking behaviors, and traditional-age versus non-traditional-age in regards to high-risk drinking.

**Hypothesis**

Using quantitative measures to collect data, this study used the Core Alcohol & Drug Survey to measure the self-reported high-risk drinking of graduate students. The Core data provided some key findings concerning the hypothesis that the high-risk drinking levels of graduate students is lower than the average national high-risk drinking levels of undergraduate college students.

The researcher's hypothesis was compared to a 1993 national study conducted by Wechsler (1994). The researcher's data showed that approximately 41% (N=204) of graduate students (38% female and 46% male) at the studied institution reported high-risk drinking in the previous two weeks before the survey (see Table 3). These percentages were lower then those reported in a 1993 national study of undergraduate drinking conducted by Wechsler and colleagues. Their data showed that approximately 44% (N=14,995) of undergraduate students (39% women and 50% men) engaged in high-risk drinking (see
Further, a chi-square test showed the researcher's data were not significant at .05 (2-tailed). Therefore, the hypothesis that the high-risk drinking level of graduate students is lower than the average national high-risk drinking levels of undergraduate students was not rejected. These findings may imply that graduate students have less time, due to family, spousal, and career pursuits, to engage in high-risk drinking in comparison to undergraduate students.

Data from the Core survey were quantitatively analyzed by performing correlations and cross-tabulations for the following research questions: 1) Do graduate students who participate in at least one hour of community service have a lower level of high-risk drinking than those who do not participate in service? 2) Do graduate students who belong to social Greek-lettered organizations have a higher level of high-risk drinking than those graduate students who do not belong to Greek-lettered organizations? 3) Do undergraduates' high-risk drinking behaviors predict their high-risk drinking as graduate students? 4) Do traditional-age graduate students (less than 25 years of age) drink more than non-traditional graduate students (25 years of age and higher)?

**Service Involvement**

The first research question addressed was: Do graduate students who participate in at least one hour of community service have a lower level of high-risk drinking than those who do not participate in service? The statistical analysis for this research was consistent with previous research by Davenport, Dowdall,
Graduate High-Risk Drinking 32

and Wechsler (1995), Ziemelis (1999), Clark, Durking, & Wolfe (1999). Results of the present study support their findings that volunteerism is associated with lower levels of high-risk drinking among graduate students (see Table 4). Specifically, those graduate students who engaged in one hour of community service per month were twice as likely to avoid high-risk drinking than their non-volunteerism counterparts. This implies that community service should be strongly encouraged by those who have a vested interest in reducing the alcohol consumption of graduate students.

Greek Membership

The second research question addressed was: Do graduate students who belong to social Greek-lettered organizations as undergraduates report a higher level of high-risk drinking than graduate students who did not belong to Greek-lettered organizations? Again, the statistical analysis for this research was consistent with previous research (Wechsler, 1996). Wechsler found that a higher proportion of sorority members drink at high-risk levels than non-sorority students. In the present study, female graduate students who belong to a social Greek-lettered organization as undergraduates did report higher levels of high-risk drinking than non-Greek females. These findings imply that female graduate students who belong to Greek-lettered organizations as undergraduates similarly need alcohol education as much as undergraduate Greeks.

The correlation (-.237) was not significant among male, Greek-affiliated graduate students. This contradicts previous research by Wechsler (1996); thus
one must be cautious in interpreting these results because of the small sample size. Given the previous research by Wechsler and findings among female Greek graduate students in this study, this discrepancy may reinforce the limitations of generalizability.

**Continuation of High-Risk Drinking**

The third research question addressed was: Do undergraduates’ high-risk drinking behaviors predict their high-risk drinking as graduate students? The frequency data indicated that undergraduate high-risk drinking may continue into graduate school (see Table 7). These findings are consistent with Borsari & Carey’s (1999) research showing that college students’ tended to continue drinking patterns established as high school students. Goodwin (1989) indicated that past performance is a good predicator of future behavior. In other words, it would appear that continuation patterns are difficult to break. There may be several environmental factors that contribute to this continuation, such as academic stressors and institutional culture. Future research is needed to parse this phenomenon further.

**Traditional vs. Non-Traditional Students**

The fourth research question addressed was: Do traditional-age graduate students (less than 25 years of age) drink more than non-traditional graduate students (25 years of age and higher)? Similar to Davenport, Dowdall, and Wechsler (1997), the statistical data in this study indicated that male and female traditional-age graduate students do report drinking more than non-traditional
graduate students (see Table 8). "Younger students (under 24 years of age) were more likely to binge drink than were students in older age groups;" Davenport, Dowdall, & Wechsler, 1997, p.196). These findings support the contention that non-traditional graduate students often take on more family responsibilities and are typically more focused in their career aspirations than traditional-age students (Bean & Metzner, 1985). In contrast, traditional-age graduate students have more discretionary time to high-risk drink and less responsibility to mediate drinking behaviors. Therefore, the population of traditional-age graduate students, than non-traditional-age graduate students, should be primary target in campus alcohol interventions.

Implications

The results of this study illustrate that high-risk drinking does occur among graduate students, however less so than at the undergraduate level. Although the data does show this phenomenon, the difference among undergraduate and graduate high-risk drinking was quite slim. This implies that in general, participating in graduate education is not necessarily associated with lower high-risk drinking levels.

In the first research question I looked at service involvement and high-risk drinking. It was evident from the results that most graduate students (65%) who do participate in at least one hour of community service per month had lower high-risk drinking levels, than their less involved counterparts (34%). There are a number of reasons why this may be true. If an individual is engaged in
volunteerism he/she obviously has less time to drink at levels that may be high-risk. Also, civic-mindedness, a by-product of community service may increase awareness and sensitivity to the negative consequences of high-risk drinking. Future studies could not only evaluate the relationship between civic-mindedness and levels of high-risk drinking, but also the number of volunteer hours in relation to high-risk drinking among graduate students.

In the second research question, I looked at the relationship between membership in social Greek-lettered organizations and levels of high-risk drinking among graduate students. The results showed that female, Greek-affiliated graduate students did report higher high-risk drinking levels than their non-Greek counterparts. On the other hand, male, Greek-affiliated graduate students compared with their non-Greek counterparts did not have a higher level of high-risk drinking. Although the results were surprising and in some aspects countered previous research, one positive result in that this research confirms the need to target interventions toward female Greek graduate students.

In the third research question, I looked at the continuation of undergraduate high-risk drinking among graduate students. The frequency data indicated that continuation of undergraduate high-risk drinking does occur in graduate education among students (see Table 7). This demonstrates that graduate students may not break high-risk drinking behaviors experienced during their undergraduate years. Given these findings, it is my hope that a serious dialogue occurs among university officials, specifically at the graduate level,
concerning the continuation of behavior that undermines the mission of graduate education.

In the last research question, I compared high-risk drinking among traditional-age graduate students (less than 25 years of age) and non-traditional graduate students (25 years of age and higher). The statistical results showed that the traditional-age graduate students in the sample on average consumed more alcohol than the non-traditional-age graduate students. Consistent with previous research (Davenport, Dowdall, & Wechsler, 1997; Quigley & Marlatt, 1996; Cahalan, Cisin, & Crossley, 1969), younger students overall drink more in comparison to their older counterparts. As suggested earlier, factors such as less discretionary time due to spousal and family commitments and clearer career goals detract from high-risk drinking behaviors among non-traditional graduate students. In comparison, the research infers that traditional-age graduate students may continue their undergraduate days of drinking as a result of more time and less responsibilities.

Implications for Further Research

This study collected data from only one institution of higher education. Without further research, it would be difficult to sustain the generalizability of this study. However, this research may serve as a catalyst in the area of graduate students' high-risk drinking. Although collective data from multiple types of colleges and universities would be an extremely lengthy process, it would be beneficial to test these results against other graduate alcohol research. Such
studies have been carried out among undergraduate populations at institutions with graduate programs (Wechsler, 1999).

Additionally, it would be beneficial to retest the same group over a period of time to determine when or how their high-risk drinking levels change. Further analysis of each variable—community service, Greek-affiliation, undergraduate high-risk drinking levels, and age—or multiple variables could show differences and similarities among graduate students' high-risk drinking levels. A trend analysis or a longitudinal study could shed some light on the differences among the research variables and high-risk drinking, particularly traditional-age and non-traditional-age graduate students.

The research findings may support the allocation of additional resources for alcohol interventions specifically tailored to the needs of graduate students. For example, this research could be very helpful to the Health Education Resource Center, Graduate School, and the Office of Safety Programs at the studied institution. In addition, this research supports the idea that a universal plan to address high-risk drinking needs to include all university students.

In conducting the literature review, it became evident that more research is needed on this important topic. Although there is a well-established foundation of research concerning undergraduate high-risk drinking levels, the same cannot be said about graduate students. It is my hope that this study will serve as an impetus for future research in the area of high-risk drinking among graduate
students; studies that will shed light on what has been a silent phenomenon on university campuses.
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female undergraduates. Addictive Behaviors, 15, 561-566.

Addictive Behaviors, 7, 123-132.


17. Within the last year about how often have you used...
(mark one for each line)
- Tobacco (smoke, chew, snuff)
- Alcohol (beer, wine, liquor)
- Marijuana (pot, hash, hash oil)
- Cocaine (crack, rock, freebase)
- Amphetamines (diet pills, speed)
- Sedatives (downers, ludes)
- Hallucinogens (LSD, PCP)
- Opiates (heroin, smack, horse)
- Inhalants (glue, solvents, gas)
- Designer drugs (ecstasy, MDMA)
- Steroids
- Other illegal drugs

18. During the past 30 days on how many days did you have:
(mark one for each line)
- Tobacco (smoke, chew, snuff)
- Alcohol (beer, wine, liquor)
- Marijuana (pot, hash, hash oil)
- Cocaine (crack, rock, freebase)
- Amphetamines (diet pills, speed)
- Sedatives (downers, ludes)
- Hallucinogens (LSD, PCP)
- Opiates (heroin, smack, horse)
- Inhalants (glue, solvents, gas)
- Designer drugs (ecstasy, MDMA)
- Steroids
- Other illegal drugs

19. How often do you think the average student on your campus uses...
(mark one for each line)
- Tobacco (smoke, chew, snuff)
- Alcohol (beer, wine, liquor)
- Marijuana (pot, hash, hash oil)
- Cocaine (crack, rock, freebase)
- Amphetamines (diet pills, speed)
- Sedatives (downers, ludes)
- Hallucinogens (LSD, PCP)
- Opiates (heroin, smack, horse)
- Inhalants (glue, solvents, gas)
- Designer drugs (ecstasy, MDMA)
- Steroids
- Other illegal drugs

20. Where have you used...
(mark all that apply)
- Tobacco (smoke, chew, snuff)
- Alcohol (beer, wine, liquor)
- Marijuana (pot, hash, hash oil)
- Cocaine (crack, rock, freebase)
- Amphetamines (diet pills, speed)
- Sedatives (downers, ludes)
- Hallucinogens (LSD, PCP)
- Opiates (heroin, smack, horse)
- Inhalants (glue, solvents, gas)
- Designer drugs (ecstasy, MDMA)
- Steroids
- Other illegal drugs

21. Please indicate how often you have experienced the following due to your drinking or drug use during the last year...
(mark one for each line)
- Had a hangover
- Performed poorly on a test or important project
- Been in trouble with police, residence hall, or other college authorities
- Damaged property, pulled fire alarm, etc.
- Got into an argument or fight
- Got nauseated or vomited
- Driven a car while under the influence
- Missed a class
- Been criticized by someone I know
- Thought I might have a drinking or other drug problem
- Had a memory loss
- Done something I later regretted
- Been arrested for DWI/DUI
- Have been taken advantage of sexually
- Have taken advantage of another sexually
- Tried unsuccessfully to stop using
- Seriously thought about suicide
- Seriously tried to commit suicide
- Been hurt or injured

22. Have any of your family had alcohol or other drug problems: (mark all that apply)
- Mother
- Father
- Stepfather
- Brother/sisters
- Mother's siblings
- Father's siblings
- Spouse
- Mother's parents
- Father's parents
- Children
- Stepchildren
- Aunts/uncles

23. If you volunteer any of your time on or off campus to help others, please indicate the approximate number of hours per month and principal activity:
- Don't volunteer, or less than 1 hour
- 1-4 hours
- 5-9 hours
- 10-15 hours
- 16 or more hours
- Principal volunteer activity:
24. Within the last year to what extent have you participated in any of the following activities? (mark one for each line)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Intercollegiate athletics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Intramural or club sports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Social fraternities or sororities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Religious and interfaith groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. International and language groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Minority and ethnic organizations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Political and social action groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Music and other performing arts groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Student newspaper, radio, TV, magazine, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. In the first column, indicate whether any of the following have happened to you within the last year while you were in and around campus. If you answered yes to any of these items, indicate in the second column if you had consumed alcohol or other drugs shortly before these incidents.

<table>
<thead>
<tr>
<th>Incident</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Ethnic or racial harassment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Threats of physical violence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Actual physical violence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Theft involving force or threat of force</td>
<td>If</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Forced sexual touching or fondling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Unwanted sexual intercourse</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. How do you think your close friends feel (or would feel) about you... (mark one for each line)

<table>
<thead>
<tr>
<th>Feelings</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Trying marijuana once or twice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Smoking marijuana occasionally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Smoking marijuana regularly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Trying cocaine once or twice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Taking cocaine regularly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Trying LSD once or twice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Taking LSD regularly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Trying amphetamines once or twice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Taking amphetamines regularly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Taking one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Taking four or five drinks nearly every day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Having five or more drinks in one sitting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Taking steroids for body building or improved athletic performance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Do you believe that alcohol has the following effects? (mark one for each line)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Breaks the ice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Enhances social activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Makes it easier to deal with stress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Facilitates a connection with peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Gives people something to talk about</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Facilitates male bonding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Facilitates female bonding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Allows people to have more fun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Gives people something to do</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Makes food taste better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Makes women sexier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Makes men sexier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Makes me sexier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Facilitates sexual opportunities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

28. On this campus, drinking is a central part in the social life of the following groups: (mark one for each line)

<table>
<thead>
<tr>
<th>Group</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Male students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Female students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Faculty/staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Alumni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Athletes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Fraternities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Sororities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. Campus environment: (mark one for each line)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Does the social atmosphere on this campus promote alcohol use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Does the social atmosphere promote other drug use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Do you feel safe on this campus?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. Compared to other campuses with which you are familiar, this campus' use of alcohol is... (mark one)

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than other campuses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than other campuses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>About the same as other campuses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Housing preferences: (mark one for each line)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. If you live in university housing, do you live in a designated alcohol-free/ drug-free residence hall?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. If no, would you like to live in such a residence hall if it were available?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
32. To what extent do students on this campus care about problems associated with... (mark one for each line)

a. Alcohol and other drug use
b. Campus vandalism
c. Sexual assault
d. Assaults that are non-sexual
e. Harassment because of gender
f. Harassment because of sexual orientation
g. Harassment because of race or ethnicity
h. Harassment because of religion

33. To what extent has your alcohol use changed within the last 12 months?

- Increased
- Decreased
- I have not used alcohol

34. To what extent has your illegal drug use changed within the last 12 months?

- Increased
- Decreased
- I have not used drugs

35. How much do you think people risk harming themselves (physically or in other ways) if they... (mark one for each line)

a. Try marijuana once or twice
b. Smoke marijuana occasionally
c. Smoke marijuana regularly
d. Try cocaine once or twice
e. Take cocaine regularly
f. Try LSD once or twice
g. Take LSD regularly
h. Try amphetamines once or twice
i. Take amphetamines regularly
j. Take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day
k. Take four or five drinks nearly every day
l. Have five or more drinks in one sitting
m. Take steroids for body building or improved athletic performance
n. Consume alcohol prior to being sexually active
o. Regularly engage in unprotected sexual activity with a single partner
p. Regularly engage in unprotected sexual activity with multiple partners

36. Mark one answer for each line:

- If yes, answer b and c below.
- Yes
- No

a. Did you have sexual intercourse within the last year?

b. Did you drink alcohol the last time you had sexual intercourse?

c. Did you use other drugs the last time you had sexual intercourse?

37. During the past 30 days, to what extent have you engaged in any of the following behaviors? (mark one for each line)

a. Refused an offer of alcohol or other drugs
b. Bragged about your alcohol or other drug use
c. Heard someone else brag about his/her alcohol or other drug use
d. Carried a weapon such as a gun, knife, etc. (do not count hunting situations or weapons used as part of your job)
e. Experienced peer pressure to drink or use drugs
f. Held a drink to have people stop bothering you about why you weren't drinking
g. Thought a sexual partner was not attractive because he/she was drunk
h. Told a sexual partner that he/she was not attractive because he/she was drunk

38. To what extent do you agree with the following statements? (mark one for each line)

a. I feel valued as a person on this campus
b. I feel that faculty and staff care about me as a student
c. I have a responsibility to contribute to the well-being of other students
d. My campus encourages me to help others in need
e. I abide by the university policy and regulations that concern alcohol and other drug use

39. In which of the following ways does other students' drinking interfere with your life on or around campus? (mark one for each line)

- Yes
- No

a. Interrupts your studying
b. Makes you feel unsafe
c. Messes up your physical living space (cleanliness, neatness, organization, etc.)
d. Adversely affects your involvement on an athletic team or in other organized groups
- Prevents you from enjoying events (concerts, sports, social activities, etc.)
- Interferes in other ways
- Doesn't interfere with my life
Appendix B

For Additional Use:

A) As an undergraduate were you a member of a social fraternity or a sorority?
   0 = yes   1 = no

B) As an undergraduate, how many drinks (A drink is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink) on average did you consume per week?
   0 = none   1 = one   2 = two   3 = three   4 = four
   5 = five   6 = six   7 = seven  8 = eight  9 = nine or more

C) Did you receive your bachelor's degree from Eastern Illinois University?
   0 = yes   1 = no

D) As a graduate student are you in the first half or last half of your masters? For instance, a graduate student in a 48-hour program who only has 12 credit hours is in the first half of their master's degree.
   0 = first half   1 = last half

E) Women Only: Think back over the last two weeks. How many times have you had four or more drinks (A drink is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink) at a sitting?
   0 = none   1 = once   2 = twice   3 = three to five times
   4 = six to nine times   5 = ten or more times
Appendix C

To: Prospective Subject

From: Susan Winterhalter, Graduate Student

Subject: Introduction/Script for Survey

As a thesis project, I have decided to examine the high-risk drinking level of Eastern Illinois University graduate students through the administration of the Core Alcohol & Drug Survey. The survey collects information on matters such as use of tobacco, alcohol and other drugs, consequences of use, perceptions regarding the risk of use, and involvement in campus activities and groups.

The data from the surveys are collected and analyzed in a way that will yield profiles of the campus graduate student population. No analyses are conducted on a single individual; in fact, it is impossible for me to associate the identities of individuals with their responses to the survey. Therefore, mark the truest answer.

Please use the following suggestions as a guide when completing the survey:
1) Do not put your name on this survey, 2) Use a #2 pencil when marking your answers (one will be provided), 3) Fill out the attached "Informed Consent" form if you choose to be a participant, and 4) Fill out the "For Additional Use" sheet by circling the truest answer. I expect that it will take about 20 minutes to complete the survey. If you are doubtful about the meaning of a question, please use your best judgment or skip the question.
Upon completion of the survey please place the entire, paper clipped packet (with the informed consent form, the survey itself, and the "for additional use" sheet) in the manila envelope located at the front of the classroom. Also, please return all borrowed #2 pencils.

You should know that participation in this survey is voluntary. You are not required to participate. However, I encourage you to participate so that I have a representative sample of the graduate student population. You have my thanks for use of this time for the survey.

If you have already taken this survey in another class, you do not need to fill it out again.

Appendix D

Informed Consent

Prospective Research Subject: Please read this consent carefully before deciding to participate in this study.

Graduate Student: Susan R. Winterhalter

Faculty Advisor: Dr. Richard L. Roberts

Introduction/Purpose of this Study

You are being asked to participate in a research study that will investigate the "at-risk" drinking levels of graduate students at Eastern Illinois University. Approximately 350 subjects are expected to participate in this study.
Procedures

You are being asked to fill out the informed consent form, the Core Alcohol & Drug Survey, and "For Additional Use" section of the survey. This survey should take approximately 20 minutes to complete.

Possible Risks

There are no significant risks involved in being a participant in this study.

Benefits

The results from this study may be beneficial in creating intervention and educational strategies for those graduate students at EIU who encounter issues with alcohol.

Privacy and Confidentiality

As a participant in this study your identity will be kept anonymous and confidential. The results of this study will be published, however in no way will any identifiable references be made.

Refusal or Withdrawal of Participation

You are free to choose whether or not to participate in this study. If after beginning the survey, you decide that you wish to stop, you may also do so.

Subject's Authorization

I have read and understand this consent form, and all questions that I have asked have been answered to my satisfaction. I voluntarily choose to participate in this research study.

__________________________    _____________
Subject's Signature           Date
Susan Winterhalter
1810 10th St. Charleston, IL 61920 + (217) 340-6371 + swinterhalter3@hotmail.com + http://www.angelfire.com/home/susanw

OBJECTIVE
To obtain the position as Associate Director of Wellness Programs at Earlham College.

EDUCATION
EASTERN ILLINOIS UNIVERSITY, Charleston, IL
Masters of Science in Education
Major: Guidance & Counseling
Emphasis: College Student Affairs
GPA: 3.86/4.0
Thesis: “High-Risk Drinking Among Master’s Degree-Seeking Graduate Students at a Mid-size Midwestern University”

BALDWIN-WALLACE COLLEGE (Liberal Arts), Berea, OH
Bachelor of Arts
Major: Business Administration
Minors: Communication & Psychology
GPA 3.4/4.0

HIGHLIGHTS
+ Highly energized team player
+ Convincing advocate for lifelong wellness and fitness
+ Upbeat leader and motivator who constantly encourages others to find the most potential in themselves
+ Enthusiastic and dynamic presenter
+ Solid background in presentation, supervising, programming, training, revenue management, organizational, computer, and confrontational skills
+ Excellent verbal and written communication skills
+ Researcher in the area of alcohol usage among college students
+ Vast experiences with historically underrepresented groups

WELLNESS EXPERIENCE
EASTERN ILLINOIS UNIVERSITY
HEALTH EDUCATION RESOURCE CENTER (HERC)
Health Education Coordinator, Spring 2000-Present
+ Recruit, hire, train, and supervise ten student-workers and interns
+ Manage the HERC Clearinghouse budget, preview health-related educational materials for acquisition, and order all Clearinghouse items (i.e. books, videos, pamphlets, etc.)
+ Plan and coordinate campus-wide wellness campaigns
+ Plan and facilitate bi-weekly meetings, in-services, and teambuilding exercises with student-workers during staff meetings
+ Network, establish relationships, and provide wellness materials to faculty, staff, students, and greater community members
+ Advise and facilitate the direction of the Health Awareness Campaign Committee and BACCHUS to increase wellness presence on/off-campus
+ Prepare and enthusiastically conduct educational, interactive, and entertaining wellness presentations to the campus and greater community
FITNESS
EXPERIENCE
EASTERN ILLINOIS UNIVERSITY
STUDENT RECREATION CENTER
*Fitness Instructor (AFA Certified & CPR Certified),
Summer 2000-Present
+ Train and support prospective aerobic instructors
+ Serve as a role model in the area of fitness through group fitness
  classes and marathon training
+ Build a supportive and safe aerobic environment for students
+ Energetically teach the following classes:
  - ABS (3)
  - Aqua (2)
  - Creative Cardio (2)
  - Muscle Mania I & II (1 each)
  - Step (1)
  - Sculpting (1)
+ Co-coordinate "Surf & Turf" a 5K run and Aqua aerobics
+ Dynamically teach aerobics and provide spirituality presentation at
  EIU Aerobics Marathon

TEACHING
EXPERIENCE
EASTERN ILLINOIS UNIVERSITY & BALDWIN-WALLACE
COLLEGE
FRESHMAN SEMINAR
*Co-Instructor, Fall 2000 & Fall 1998
+ Empower freshmen students to become involved in the "college
  experience"
+ Create syllabi, grade assignments, and prepare teambuilders
+ Solicit speakers for class presentations
+ Provide interactive and informative class lectures

PRESENTATIONS
"The Circle of Leadership: What Type of Leader Are You?"
(Leadership), Spring 2001
"Leading a More Meaningful Life: Finding Your Spirit" (Wellness),
Fall 2000 & Spring 2001
"Alcohol 101" (Wellness), Fall 2000
"Stress Management 101" (Wellness), Fall 2000
"Nutrition: Food Pyramid" (Wellness), Spring 2000
"Drugs & Peer Pressure" (Wellness), Spring 2000
"The Five Love Languages" (Teambuilder), Spring 2000

GRADUATE
INVOLVEMENT
InterVarsity Christian Fellowship: Member, Fall 2000-Present
Newman Catholic Center/Student Volunteer Center: Intern &
Volunteer, Fall 2000-Present
Student Government: Student Senator, Fall 2000
Safe Zone: Ally, Spring 2000-Present
Office of Disability Services: Intern, Spring 2000
Graduate Student Advisory Council: President & Member, Fall 1999-
Present
College of Student Personnel Association (COSPA): Vice President &
Member, Fall 1999-Present
Omicron Delta Kappa: Vice-President, Fall 1999-Spring 2000
AFFILIATIONS

- AFAA, Aerobics & Fitness Association of America, Present
- NASPA, National Association of Student Personnel Administrators, Spring 2000-Present
- COSPA, College Student Personnel Association, Fall 1999-Present
- ACPA, American College Personnel Association, Fall 1999-Fall 2000
- OΔK, Omicron Delta Kappa, 1997-Present
- AΦ, Alpha Phi International Sorority, 1995-Present

CONFERENCE ATTENDANCE

+ Assessment and Treatment of Depression and Suicidal Behavior, A Cognitive-Behavioral Treatment Approach- Charleston, IL, Spring 2001
+ AFAA Certification Training- Mount Prospect, IL, Spring 2001
+ National Association of Student Personnel Administrators (NASPA)- Seattle, WA & Indianapolis, IN, Spring 2001 & Spring 2000
+ Teens Encountering Christ (TEC)- Cleveland, OH, Spring 2001
+ Metamorphosis- Decatur, IL, Spring 2001
+ Prevention First Social Norms Training- Springfield, IL, Fall 2000
+ National Association of Graduate & Professional Students Regional Conference (NAGPS)- Minneapolis, MN, Spring 2000

AWARDS

+ E. Warner/ S. Rives Higher Education Award: Recipient, Spring 2001
+ Guidance & Counseling Distinguished Graduate Student Award: Recipient, Spring 2001
+ Professional Travel Scholarship: Recipient, Spring 2001-2000
+ Alpha Phi Foundation Scholarship: Recipient, Summer 2000

REFERENCES

Dr. Richard Roberts, Chair of Counseling & Student Development Thesis Advisor
(217)581-2220, cfrrr@eiu.edu

Eric Davidson, Assistant Director of Health & Promotions Health Education Resource Center Supervisor
(217)581-3912, csesd@eiu.edu

Ken Baker, Director of Student Recreation Center Aerobics Supervisor
(217)581-2616, kibaker@eiu.edu