

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF SOCIOLOGY AND CRIME, LAW, AND JUSTICE

BINGE VS. MODERATE DRINKING BEHAVIOR: A SITUATIONAL STUDY

JULIE KNAUB

Spring 2012

A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Crime, Law, and Justice; French and Francophone Studies; and Global and
International Studies
with honors in Crime, Law, and Justice

Reviewed and approved* by the following:

Dr. Julie Horney
Professor of Crime, Law, and Justice
Thesis Supervisor

Dr. Jeffery Ulmer
Associate Professor of Sociology and Crime, Law, and Justice
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This thesis investigates various associations between the situational aspects of both binge drinking and drinking in moderation among Penn State undergraduate students. While previous studies have looked at the problem of binge drinking on college campuses as well as factors of specific drinking habits within this population, this study looks at such behaviors on an individual and event-based level to determine variations between these two different types of events. Using a survey unique to this study, students were asked to indicate such factors as the day of the week, the people present, and the location and type of each of the two events. Then using matched pair data, analyses were conducted and found that the longer an event, the more likely an individual will progress to binge drinking and when many drunk people are in attendance the relationship with binge drinking is true. In addition, the availability of food acts as a protective factor and decreases the likelihood that an individual will progress to binge drinking.

TABLE OF CONTENTS

LIST OF TABLES.....	iii
ACKNOWLEDGEMENTS.....	iv
Chapter 1 Introduction.....	1
Chapter 2 Literature Review.....	3
Chapter 3 Methodology.....	7
Chapter 4 Results.....	10
Chapter 5 Discussion and Limitations.....	17
Chapter 6 Conclusion.....	20
Appendix.....	21
Bibliography.....	30

LIST OF TABLES

Table 1: Cross Tabulation of Type of Drinking and the Duration of the Event	11
Table 2: Cross Tabulation of Type of Drinking and the Presence of College Friends.....	12
Table 3 Matched Pair Results before the Addition of “time” and “manydr”	14
Table 4: Matched Pair Results including “time” and “manydr”	16

ACKNOWLEDGEMENTS

First and foremost I would like to thank Dr. Julie Horney for the incredible amount of guidance and support provided as my thesis advisor from the point of conception to the final product of this study, especially with regard to the development of the matched pair regression. I would also like to thank Dr. Jeffery Ulmer for answering any and all questions I had as well as for preparing me for the extensive work involved in a thesis. Appreciation also goes to Dr. Richard Felson, Dr. John Kramer, and Thomas Backenstoe for allowing me to conduct my survey within their classes. Finally, I would like to thank my friends and family for their immense encouragement.

Chapter 1

Introduction

Alcohol consumption by students is a universal concern for colleges which have seen high percentages of binge and heavy drinking over the past two decades. With 45,000 students at Penn State University Park campus, it is clearly not exempt from drinking problems such as high numbers of alcohol poisoning cases, lower academic performance and in some instances more violent or aggressive incidents. Past studies have shown that even students not involved such drinking practices are negatively affected by the behavior of others by way of being hit or assaulted, having one's property damaged or experiencing an unwanted sexual advance (Wechsler et al 1995). In 2009, Penn State was rated the number one party school in the country by the Princeton Review, a ranking reported in national newspapers. Over the following two years this ranking fell first to third position in 2010 and then to seventh position in 2011. These numbers, determined by a simple poll of approximately 120,000 students and of no scientific value, are proven false when one sees the two consecutive Annual Assessment Reports in 2009 and 2010, demonstrating a rise in visits to the Mount Nittany Medical Center, in the average Blood Alcohol Concentration, and also in alcohol related violations such as public drunkenness and DUI arrests (McCarthy and Dixon 2010).

In order to institute policies that will ameliorate this situation, it is necessary to understand the characteristics of the drinking culture and situations of a large college community such as Penn State's. One's perceptions of other's attitudes toward drinking

play a significant role in determining whether one drinks heavily or not, and there is a large discrepancy between students' understanding of the drinking norm and the reality of peer drinking behaviors (Perkins and Berkowitz, 1986). There is a full field of research concerning alcohol consumption for college students, with a subset focused on sobriety, but what are noticeably lacking are studies investigating drinking in moderation (to be defined later) in addition to drinking in excess, or binge drinking. Understanding the contextual differences between the two would allow researchers and policy makers to tailor various alcohol programs to address the key factors which escalate moderate drinking to that of binge drinking or which temper binge drinking behavior and keep it within moderate limits.

Through the course of this work, a survey was created and approved by the Pennsylvania State University IRB as the instrument for collecting data. The data were coded by the researcher while being entered into the IBM SPSS statistics program for analysis. This paper will present the work done by first exploring past research on this field, its methods, findings and shortcomings, as well as the specific influence on the structure of this study. The following chapter will describe the methodology involved in creating an instrument, collecting data, and performing multi-level analyses. The results discovered through these analyses will then be presented along with tables expressing the data. The interpretation of these findings, their importance, relevance, limitations and future implications will be discussed, followed by a brief conclusion.

Chapter 2

Literature Review

The vast majority of studies, as previously mentioned, focus on individual, identity-based factors such as sex, race, different levels of religiosity, and previous drinking habits in high school (Siebert, D.C. et al. 2003; VonDras, Schmitt, and Marx 2007, Wechsler et al. 1995). A common definition of binge drinking has been used by researchers for years, but Wechsler and Kuo conducted a study in 2000 considering college students' definitions of the same concept and found that male students considered six consecutive drinks binge drinking and female students considered five consecutive drinks binge drinking, one drink higher than the definition accepted by the academic world. These perceptions then lead to students drinking larger quantities of alcohol but not considering it a problem due to their underestimating of the amount of binge drinking at their school.

O'Hare conducted a study in 1990 of undergraduate students from Rutgers University, where participants were separated into five different strata of alcohol consumption including abstainers, light drinkers, light-moderate drinkers, heavy-moderate drinkers, and heavy drinkers. The data collected were then used to determine the connections among sex, living situations, and drinking level designation of one specific college campus, tailoring the living arrangement options (on campus, off campus independently, and off campus with parents) to the population at hand. The findings involving living arrangements however, are not particularly useful for policy makers, as the available living arrangements are not likely to change. In this study he found that the

drinking age had little to no effect on consumption levels or consequential drinking problems. This finding revealed that university policies aimed at reducing consumption levels by restricting the availability of alcohol were in fact not being successful. In addition, it was found that students who lived on (and within walking distance to) campus drank more heavily than those who commuted, key information for policy makers seeking a target group.

One of the earliest applications of a situational approach within the context of alcohol use was by Harford in 1983 where contexts such as place and people in attendance were explored from data collected using multiple events per individual. He found that drinking is higher among men when in bars or when with friends rather than with a spouse or relatives while, women's drinking behavior, location, and those present were linked and consumption with friends in bars was significantly higher than at home with relatives. The data collected in this study were from a survey conducted outside of a college setting and in addition, they did not treat situational and individual factors separately, thus ignoring potential interactions between these two variable categories.

In 2000, Clapp, Shillington and Segars conducted one of the first situational studies on the contexts of binge drinking (and only binge drinking) among college students, and this work has since served as the main source and foundation for the research of other studies of similar structure, such as that of Demers et al. which investigated the "why, where, when and with whom [Canadian] students consume alcohol" (2002). The Demers et al. study was conducted on a much larger scale than that of O'Hare and over 26,348 individual drinking occasions were collected from 6,850 drinkers from 18 different universities. The first study used random sampling and

telephone interview to collect data, while the second used surveys, but both described individual drinking events. While the Demers et al. study found that the location of the drinking event was significantly related to the amount of alcohol consumed, Clapp, Shillington and Segars focused more on the correlation between the role that risk factors and protective factors played with respect to negative consequences to drinking such as driving drunk, riding in a car with a drunk driver, getting into a physical fight, being physically injured, getting sick, and having a hangover the following morning. They found that the presence of friends and the availability of food during the event protected against these negative alcohol-related problems.

The Clapp, Shilington, and Segars study does not control for individual preferences, habits, stress levels, etc. which differ from person to person, making some results purely coincidental. The Demers research however, took into account that “the apparent relationship between setting and alcohol intake is an artifact of a self-selection process, i.e., heavy drinkers are more likely to find themselves in heavy drinking situations,” and the concluded that “self-selection cannot be the sole determinant because the alcohol intake of any given individual is not invariant across drinking events.” This research created a concrete foundation for the current study for not only did it use situation-specific criteria, but it also collected multiple sets of data from the same individuals to control for interpersonal differences to focus on trends in intrapersonal deviations within the sample population.

One way to fix this problem can be found within a study of weapons effects to determine whether guns kill people or in fact the people wielding them kill people. Wells and Horney look at several accounts for each offender in order to control for variation

within the intentions of the offender himself (2002). It is through a comparison between the accounts of the same person that one determines what changed from each offence (Wells and Horney, 2002). By collecting situational variables of two distinct and well-defined events from one subject, one can control for discrepancies that would arise between the data of someone predisposed to drinking larger quantities as opposed to someone who is not, which is described in the Demers quote on the previous page. Phillips and Maume use the work of Wells and Horney in “disentangling weapon instrumentality from intent,” but streamline the analysis of the data by using matched pairs (2007). Collecting matched pairs of data makes intrapersonal comparison possible, which can isolate significant interaction while getting rid of possible mitigating factors.

This study will combine aspects of the previously mentioned studies, while tweaking certain methodologies to adapt and build on the existing research in order to add another layer of controls. The data in this study were collected using a survey of students solely from Penn State University, not unlike O’Hare’s study of Rutgers undergraduates. Demographic variables similar to traditional studies were then combined with situational variables from studies like those of Clapp, Shillington, and Segars and of Demers et al. The different levels of drinking utilized were moderate drinking and binge drinking, both of which are defined in the methodological section on the following page. These two classifications became the key distinguishers of the counterpoints of a matched pair analysis. This study seeks to discover what contextual characteristics are associated more closely with binge drinking than with moderate drinking in order to discover possible indicators for whether an individual will participate in moderate drinking or escalate this behavior to that of binge drinking status.

Chapter 3

Methodology

The data for this study were collected from an eight page survey created using variables similar to those used in the Clapp, Shillington, and Segars survey, but with additional characteristics concerning the celebratory features of the specific events in question. These surveys were distributed in and during three different Criminology classes on campus two of which were beginner and general education classes and one was a more advanced 400 level class. The restriction to Criminology classes was due to university research policy requiring that any research conducted during class time that is not a direct part of a course's curriculum have a special significance or relevance to the material of the course. The decision to collect data during class time was deemed the most efficient method of collection as the completion of the survey would be immediate, ensuring a high completion rate and immediate feedback. Of 453 total students enrolled in three classes surveyed, 309 students participated, a response rate of 68.2% in an ideal world, but when taking into account absentees, students under the age of 18, and students who were in more than one of the classes (as they were all at different times of the day), the actual response rate is much higher though impossible to calculate. Of the 309 responses, 177 were matched pairs, 150 were male and 159 were female, 55.5% were not social science majors, 68% participated in binge drinking and 73.5% participated in

moderate drinking. The data were analyzed using the IBM SPSS program. Any missing values were coded as 99 and thus excluded from the analyses.

The survey, which is available for viewing in the Appendix, started with several demographic questions concerning sex, age, undergraduate level, and whether or not their major was included within the social sciences. This last question was to determine the extent to which conducting the survey only within criminology courses affected the sample. Following these background questions, the students were asked to describe the last event in the last thirty days during which participated in binge drinking, defined as when a male consumes 5 or more alcoholic beverages in one sitting or when a female consumes 4 or more alcoholic beverages in one sitting, a definition consistently used throughout the literature. The students were then asked to answer the exact same questions with respect to the last event in the last thirty days where they participated in moderate drinking, which is defined as when a male consumes 1-3 alcoholic beverages in one sitting or when a female consumes 1-2 alcoholic beverages in one sitting.

Students were instructed to respond to the survey even if they had not participated in either binge or moderate drinking, or if they had participated in one but not the other over the past month in order to provide richer descriptive data and a more representative sample of the population. These individual data were used to determine frequencies and certain Chi-square analyses for binge drinking and moderate drinking separately, but were then also reformatted to investigate how other variables such as the presence of food or the playing of drinking games was related across both forms of alcohol consumption. For those who had participated in both binge and moderate drinking, a matched pair analysis was used in to control for the preferences of the

individual when examining the differences between the two situations. Since the occasions occurred during the same month, by the same person, preferences, habits, schedules, stress levels, commitments, and responsibilities are much more likely to remain constant and act as controlled variables within the analyses.

The situational variables included on the survey are the day of the week, the type of event, whether or not the event was a celebration and if so what kind of celebration (birthday, holiday, or wedding), and whether or not the event was a date. The location was split into four categories of private residence (dorm rooms were included in this category when specified), a fraternity or sorority house, a bar (restaurants were included in this category when specified), and other. The duration of the event was listed as either 1-2 hours, 3-4 hours, or more than 4 hours. The people present during the event were represented by the groups non-college friends, college friends, roommates, fellow fraternity or sorority members, fellow club members (other than fraternity or sorority members), coworkers, date/spouse/significant other, family members, and other. The event was further described by the number of people present: 1-10, 11-30, 31 or more. The final variables mentioned deal with what Clapp, Shillington, and Segars define as protective factors (the availability of food, the availability of non-alcoholic beverages, and whether a bartender was serving drinks at the event) and also as risk factors (people played drinking games, whether alcohol was available to everyone, and whether many people were intoxicated at the event). These were then used to gauge the negative consequences of drinking--driving drunk, riding in a car with a drunk driver, getting into a physical fight, being physically injured, getting sick, and having a hangover the following morning.

Chapter 4

Results

The first level of analysis was conducted using cross-tabulations and the Chi-Square test. Several situational factors were found to be significantly associated with the level of drinking. This means that while not controlling for any variables not included in the test, certain variables showed a frequency with respect to the type of drinking that is significantly different than would reasonably be expected. These variables are the duration of the event, the number of people at the event, type of event, and type of celebration. The cross-tabulations of type of drinking and duration of the event and of type of drinking and number of people at the event (Table 1) indicate that more time and more people are associated with a greater likelihood of binge drinking. Also significant with a p-value of .000 are the relationships between type of drinking and type of event and between type of drinking and type of celebration. Hanging out with friends and dinners are more associated with cases of moderate drinking and parties with cases of binge drinking. With respect to celebrations, the pattern suggests that holidays are associated more with binge drinking cases. All of the Chi-Square tests were performed with N=437, the number of moderate and binge drinking incidents reported.

Table 1: Cross Tabulation of Type of Drinking and the Duration of the Event

type * Duration of the event Crosstabulation

			Duration of the event			Total
			1-2 hours	2-4 hours	4+ hours	
type	Binge	Count	24	87	99	210
		% within Duration of the event	21.8%	45.8%	72.3%	48.1%
	Moderate	Count	86	103	38	227
		% within Duration of the event	78.2%	54.2%	27.7%	51.9%
Total		Count	110	190	137	437
		% within Duration of the event	100.0%	100.0%	100.0%	100.0%

Chi-Square Asymp. Sig. (2-sided) =.000; N=437

All the protective and risk factors (the variables included in question numbers 14 and 25 in the Appendix), with the exception of whether or not a bartender served alcohol, were found to be significant. The trends shown by these analyses indicate what is to be expected from the terms “protective” and “risk.” When food and nonalcoholic beverages were present at an event they were associated a greater likelihood of moderate drinking. Both of these trends are highly significant with a p-value of .000 for the food variable and of .002 for the nonalcoholic beverage variable. All three risk factors—the presence of drinking games, the availability of alcohol to everyone, and that many people at the event being drunk at the event were associated with a greater likelihood of binge drinking, and all were highly significant with p-values of .000.

Significance was also discovered when looking at the relationship between the type of drinking event and the people present at the event. The presence of club or

organization members (p-value .009), of fraternity or sorority members (p-value .003), of roommates (p-value .003), of non-college friends (p-value .012), and especially of college friends (p-value .000) corresponds to more cases of binge drinking. The cross-tabulation for the type of drinking and the presence of college friends can be found below in Table 2. Since these results are based on individual events, one for binge drinking and one for moderate drinking at most per participant, the frequency of an individual's drinking habits cannot be determined from the data.

Table 2: Cross Tabulation of Type of Drinking and the Presence of College Friends

type * The presence of college friends Crosstabulation

			The presence of college friends		Total
			No	Yes	
type	Binge	Count	15	195	210
		% within type	7.1%	92.9%	100.0%
	Moderate	Count	59	168	227
		% within type	26.0%	74.0%	100.0%
Total		Count	74	363	437
		% within type	16.9%	83.1%	100.0%

Chi-Square Asymp. Sig. (2-sided) =.000; N=437

After these initial cross tabulations and Chi-Square tests, a more sophisticated controlled logistic regression focusing solely on the matched pair data collected was formed using dummy variables to analyze the data within the SPSS program. Of the 309 respondents to the survey, 49 had participated in neither binge nor moderate drinking, 33 had participated in binge but not moderate drinking, and 50 had participated in moderate but not binge drinking, leaving 177 matched pairs of data (they had participated in both)

to be included in the analysis. Of these 177, 2 were excluded because of missing data.

This test has a built-in 95% confidence level and measures the significance and influence of the included variables above and beyond that of other variables. Due to the large number of variables and the relatively small sample size, several different combinations of variables were used to determine significance and interaction between variables while controlling for a certain level of error.

The results from the Chi-Square tests acted as a guide to determine which variables should be included in the regression. As some of these variables remained consistently insignificant, they were excluded from the regression to allow for less error. Table 3, found below shows levels of significance with the variables “games,” “food,” “party,” “other,” “hanging,” and “bar.” The variable “Holiday” is nearly significant with a p-value of .056. These results indicate that the presence of drinking games makes it between 1.404-8.642 times more likely that an incident will be one of binge drinking. The presence of food however, has a negative relationship with the occurrence of binge drinking, meaning that the presence of food is an indicator that an individual will be less likely to participate in binge drinking. “Party,” “hanging” (out with friends), and “bar,” all of which are significant, are being compared to “dinner” within the regression as a type of event. When compared to the small number of dinners collected, the standard error rises, but all of these types of events are associated with the higher likelihood of an individual’s of binge drinking. When compared to all other possible locations, bars are significantly related to the occurrence of binge drinking with a p-value of .006. Since holidays were significant within the Chi-Square tests, it was also isolated and compared with all other types of celebrations. It was found to be only nearly significant, but

demonstrated a relationship that would be positively associated with binge drinking occasions. All of these findings were without the addition of the duration of the event and whether or not many people were drunk at the event, which cause changes with respect to what stays significant.

Table 3: Matched Pair Results before the Addition of “time” and “manydr”

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for	
							Lower	Upper
games	1.248	.464	7.247	1	.007	3.483	1.404	8.642
collegef	.969	.669	2.100	1	.147	2.635	.711	9.770
SigOther	1.243	.942	1.740	1	.187	3.466	.547	21.971
peopnum	.333	.272	1.494	1	.222	1.395	.818	2.379
food	-1.229	.513	5.735	1	.017	.293	.107	.800
party	3.582	1.316	7.408	1	.006	35.950	2.725	474.206
other	3.670	1.583	5.379	1	.020	39.264	1.766	873.037
hanging	2.580	1.220	4.472	1	.034	13.196	1.208	144.192
bar	1.819	.666	7.462	1	.006	6.165	1.672	22.734
Holiday	.837	.437	3.666	1	.056	2.309	.980	5.437

N=175

With the addition of these two variables to the matched pair regression, the duration of time and many people being drunk were both found to be highly significant, each with a p-value of .001, but other variables lost their previous significance. The presence of games and whether or not the event was a holiday lose their power and a great deal of significance. Whether or not many people present were drunk acts as a mediator between games and the result of binge drinking. Drinking games are an instrument to get more people drunk, which plays a more significant role in facilitating binge drinking which explains why “games” loses its significance when many people drunk, or “manydr” is added to the regression. There is a similar interaction between “time,” or the duration of the event, and “holiday.” “Holiday” loses its significance when “time” is added because a holiday is a daylong event, meaning that it is associated with a longer length of time, which accounts for “holiday” becoming less significant and the high significance of the duration of the event.

The variable “bar” remains significant with a p-value of .035, suggesting that it holds power independently of the two added variables. The presence of food also remains significant, with a p-value of .005, however the power of the relationship is relatively small becoming between .055 and .603 less likely to be binge drinking rather than moderate drinking. “Party” and “hanging” (out with friends) lose their significance, while “other” stays significant, although the standard error nearly doubles from the previous regression. When considered without controlling for all other variables as in the Chi-Square tests, variables that were then significant like the number of people present, the presence of college friends, non-college friends, roommates, club members, fellow fraternity and sorority members, etc. never reach a significant level. In addition, other

variables like day of the week, sex, and age do not attain significance within the context of this study, where details from one isolated event of binge and one of moderate are considered.

Table 4: Matched Pair Results including “time” and “manydr”

Variables in the Equation

	B	SE	Wald	df	Sig.	Exp(B)	95.0% CI for	
							Lower	Upper
time	1.088	.328	11.003	1	.001	2.969	1.561	5.647
manydr	2.029	.623	10.602	1	.001	7.609	2.243	25.815
games	.672	.534	1.584	1	.208	1.959	.687	5.580
collegef	1.894	1.023	3.426	1	.064	6.643	.895	49.329
SigOther	2.273	1.677	1.837	1	.175	9.713	.363	260.127
peopnum	.003	.344	.000	1	.993	1.003	.511	1.969
food	-1.700	.609	7.778	1	.005	.183	.055	.603
party	2.481	1.673	2.199	1	.138	11.951	.450	317.299
other	4.165	2.039	4.173	1	.041	64.387	1.184	3501.653
hanging	2.055	1.570	1.712	1	.191	7.805	.360	169.425
bar	1.744	.828	4.438	1	.035	5.721	1.129	28.982
Holiday	.741	.507	2.138	1	.144	2.097	.777	5.661

N=175

Chapter 5

Discussion and Limitations

Several of the variables in this study have provided significant information indicating contextual differences between binge and moderate drinking occurrences. The first of these and perhaps the most important, based on its statistical significance and interaction with other variables, is the duration of a drinking event. Especially if it lasts over two hours, an individual is between about 1.5 and 5.5 times more likely to binge drink than to simply drink in moderation. Therefore time is an important factor in the escalation of drinking behavior. Another very important finding was that the presence of many drunk people at the event is also strongly associated with an escalation from moderate to binge drinking although the possible effect has a much larger range, probably due to the small sample size.

While similar to the study by Clapp, Shillington, and Segars in 2000, food was found to act as a protective factor, although in this study it simply indicated a higher association to moderate drinking rather than an indicator that negative drinking consequences were avoided, as only 9.3% of the sample even responded to having a hangover the next day, the most reported negative effect. Drinking games were significant only with respect to their influence on whether many people were drunk at the event. Bars were found to be positively associated with binge rather than moderate drinking events, which still holds true from Harford's 1983. Unlike in Clapp, Shillington,

and Segars's study however, the presence of college friends did not reach a level of significance and seemed to show a tendency toward escalation rather than protection.

This information about interacting contextual variables can serve as an important addition to the field of research concerning alcohol consumption and college students. The significant patterns discovered through the matched pair controlled logistic regression can serve as a foundation for policy makers at Penn State and similarly structured colleges to develop new alcohol programs and reduce cases of excessive drinking. Since the length of time is an important factor, universities could schedule appealing events where drinking is not be permitted in order to break up times of anticipated drinking events. The presence of non-alcoholic drinks, as in the Clapp, Shillinger, and Segars study, never reached a level of significance within the regression suggesting that their presence at a drinking event makes little if any difference in drinking levels, a misconception previously held by prevention specialists, but the virtues of the presence of food should still be made known. Encouraging smaller rather than larger social events could also act to temper drinking behaviors.

While these findings are helpful and some are supported by previous research, there are, of course many limitations to be addressed and improved upon for further advancement and understanding in this specific capacity. As the entirety of this study was conceived of and completed within a year, more time would have allowed for a further developed survey, tailored to apply more directly to the narrow target population, that of solely Penn State University Park undergraduates. Any problems in understanding could have been taken care of before the final data were collected. Another difficulty particular to this study deals with the collection of data and the sample's representativeness of the

population. The method of data collection was chosen in order to ensure a high response rate, but this came at the price of a truly random and representative sample and while both introductory as well as more advanced courses were chosen to get an equal distribution of ages and undergraduate levels, 44.5% of the sample were social science majors, possibly skewing the data. If similar research is to be conducted in the future, a method such as telephone interviews as used in Clapp, Shillington, and Segars might be more appropriate as responses would still be immediate, but a more random sampling could be attained. More time combined with this new method of data collection could then yield a much larger sample size which would allow for less error in regression calculations and more powerful findings.

Built into the approach of this research itself is a particularity which prohibits its application to the broader field of trends in alcohol consumption among (Penn State) undergraduate college students. Since this study asks for the MOST RECENT of moderate and of binge drinking events within the last 30 days, judgments cannot be made about the frequency of male or female binge or moderate drinking, nor about other trends regarding the frequency of occurrences as the participant could have consumed alcohol every day of the previous month or only in the two instances described in the responses to the survey. Since all of the data was originally meant to be paired, there is also a certain amount of error that should be corrected for in the Chi-Square analyses, which separated all cases of moderate and binge drinking, those with and without matches, and considered them as completely independent data. This poses a problem because certain aspects of the originally matched data will be repeated when considered separately due to individual preference controlled for in the matched pair regressions.

Chapter 6

Conclusion

Although much time has passed since the research of alcohol consumption of the 1970s and early 1980s, many drinking behaviors remain the same, and it has continued to be a problem for colleges in the United States. As years have passed universities have continued to grow and they have had to adapt new methods and programs to approach excessive drinking by students. Three years ago Penn State created a mandatory online alcohol education program for all incoming freshmen but brief internet modules such as these are quickly forgotten and excessive drinking returns as a problem affecting the health, safety, and education of the students. Through research that breaks down the contexts of drinking situations such as this, actions and policies can be put into place to take an active approach throughout the year and as drinking situations arise. Efforts focused on the variables discovered here, those identified in past research, and those to be discovered in the research to come may be able to curb a problem that has found little relief despite the half century of research that has gone by. Through this study alone, problems with previous prevention programs have been isolated and new programs can adjust accordingly to help Penn State and other universities like it, regain their status as academic institutions rather than “party schools.”

Appendix

Study Survey

Binge and Moderate Drinking Events among College Students

Survey #

The Purpose of the Study:

Penn State is well known for its student body drinking culture. Perennially in the top ten on the Princeton Review's list of "top party schools," the majority of students contribute to this culture in some way, whether by abstaining from alcohol, binge drinking, or falling somewhere between these two extremes. This study aims to learn about the circumstances of different levels of drinking. The following survey will first ask general demographic questions, followed by questions describing an instance of binge drinking, followed by the same questions but this time in relation to an instance of moderate drinking. The definitions of binge and moderate drinking for the purposes of this study are as follows:

Binge Drinking:

When a male consumes 5 or more alcoholic beverages in one sitting (approx. 2 hours)

When a female consumes 4 or more alcoholic beverages in one sitting (approx. 2 hours)

Moderate Drinking:

When a male consumes 1-3 alcoholic beverages in one sitting (approx. 2 hours)

When a female consumes 1-2 alcoholic beverages in one sitting (approx. 2 hours)

Consent and Anonymity: This study is completely optional and voluntary. Your grade will not be affected in any way, nor will you receive any personal benefits. This study is also completely anonymous, and your answers to this survey will be used solely for analysis in this particular study. You must be at least 18 years old to participate in this survey. If you are at least 18 years old and agree to participate, please place a check mark next to the most appropriate answer to each question (unless multiple responses are specified). For more information or any questions, please contact jck5157@psu.edu.

Demographics: General Information

1.) Your Sex:

Male

Female

2.) Your Age:

18

19

20

21

22+

3.) Your Undergraduate Level:

Freshman

Sophomore

Junior

Senior

"Super" Senior (fifth year or higher)

4.) Is your major in the social sciences (Crime, Law and Justice; Sociology, Psychology, etc)?

Yes

No

Eligibility:

5.) Within the last 30 days, have you participated in binge drinking (When a male consumes 5 or more alcoholic beverages in one sitting (approx. 2 hours) or when a female consumes 4 or more alcoholic beverages in one sitting)?

Yes No

If yes, please continue. If no, then please skip to question #16.

Please think about the most recent event during the last 30 days in which you participated in BINGE DRINKING and place a check next to the categories below that best describe the event.

6.) Day of the Week (Choose One):

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

7.) Type of event (Choose One):

Party

Dinner

Hanging out with friends

Other (If other, please describe) _____

8.) Was this event a celebration? If so, what kind of celebration? (Choose One)

Not a celebration

Birthday

Holiday

Wedding

Other (If other, please describe) _____

9.) Was this event part of a date?

Yes

No

10.) Location (Choose One):

Private Residence

Fraternity/Sorority House

Bar

Other (If other, please describe) _____

11.) Duration of the event/How long you were there (Choose One):

1 to 2 hours

3 to 4 hours

more than 4 hours

12.) People present at event (Check all that apply):

Non-College Friends

College Friends

Roommates

Fellow Fraternity or Sorority members

Fellow members of a club or organization (other than Fraternity or Sorority members)

Coworkers

Date/Spouse/Significant Other

Family Members

Other (If other, please describe) _____

13.) Number of people at the event (Choose One):

1-10

11-30

31+

14.) Please check any of the following that were true at the setting:

Food available

Nonalcoholic beverages available

Bartender serving the alcohol

People played drinking games

Alcohol was provided to all

Many people were intoxicated

15.) Please place a check to indicate whether you experienced any of the following:

- Got into a physical fight
- Drove drunk
- Rode with a drunk driver
- Got physically injured
- Got sick
- Had a hangover the next day

Moderate Drinking

16.) Within the last 30 days, have you participated in **moderate drinking** (When a male consumes 1-3 alcoholic beverages in one sitting (approx. 2 hours) or when a female consumes 1-2 alcoholic beverages in one sitting)?

Yes No

If yes, please continue. If no, then please return the survey to the researcher.

Please think about the most recent event during the last 30 days in which you participated in MODERATE DRINKING and place a check next to the categories below that best describe the event.

17.) Day of the Week (Choose One):

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

18.) Type of event (Choose One):

Party

Dinner

Hanging out with friends

Other (If other, please describe) _____

19.) Was this event a celebration? If so, what kind of celebration? (Choose One)

Not a celebration

Birthday

Holiday

Wedding

Other (If other, please describe) _____

20.) Was this event part of a date?

Yes

No

21.) Location (Choose One):

Private Residence

Fraternity/Sorority House

Bar

Other (If other, please describe) _____

22.) Duration of the event (Choose One):

1 to 2 hours

3 to 4 hours

more than 4 hours

23.) People present at event (Check all that apply):

- Non-College Friends
- College Friends
- Roommates
- Fellow Fraternity or Sorority members
- Fellow members of a club or organization (other than Fraternity or Sorority members)
- Coworkers
- Date/Spouse/Significant Other
- Family Members
- Other (If other, please describe) _____

24.) Number of people at the event (Choose One):

- 1-10
- 11-30
- 31+

25.) Please check any of the following that were true at the setting:

- Food available
- Nonalcoholic beverages available
- Bartender serving the alcohol
- People played drinking games
- Alcohol was provided to all
- Many people were intoxicated

26.) Please place a check to indicate whether you experienced any of the following:

- Got into a physical fight
- Drove drunk
- Rode with a drunk driver
- Got physically injured
- Got sick
- Had a hangover the next day

❖ Many measures are similar or the same as those used in:

Clapp, JD, AM Shillington, and LB Segars. "Deconstructing Contexts of Binge Drinking among College Students." *The American Journal of Drug and Alcohol Abuse* 26.1 (2000): 139-54. Print.

BIBLIOGRAPHY

- Clapp, JD, AM Shillington, and LB Segars. "Deconstructing Contexts of Binge Drinking among College Students." *The American Journal of Drug and Alcohol Abuse* 26.1 (2000): 139-54. Print.
- D. D. VonDras, R. R. Schmitt, D. Marx. "Associations between Aspects of Spiritual Well-Being, Alcohol Use, and Related Social-Cognitions in Female College Students quick view." *Journal of Religion and Health*, Vol. 46, No. 4 (Dec. 2007), pp. 500-515.
- Demers, Andrée, Sylvia Kairouz, Edward Adlaf, Louis Gliksman, Brenda Newton Taylor, and Alain Marchand. "Multilevel Analysis of Situational Drinking among Canadian Undergraduates." *Social Science & Medicine* 55.3 (2002): 415-24.
- Harford, Thomas. "A Contextual Analysis of Drinking Events." *Substance Use & Misuse* 18.6 (1983): 825-34.
- McCarthy, John, and Jenny Dixon. *The Partnership Annual Assessment Report*. Rep. Vol. 2009 2010. University Park: Penn State University, 2010. Web.
<<http://studentaffairs.psu.edu/assessment/pdf/PartnershipReport0910.pdf>>.
- O'Hare, Thomas M. "Drinking in College: Consumption Patterns, Problems, Sex Differences and Legal Drinking Age." *Journal of Studies on Alcohol* 51.6 (1990): 536-41.
- Perkins, H. Wesley, and Alan Berkowitz. "Perceiving the Community Norms of Alcohol Use among Students: Some Research Implications for Campus Alcohol Education Programming*." *Substance Use & Misuse* 21.9 (1986): 961-76. Print.
- Phillips, S., and M. O. Maume. "Have Gun Will Shoot?: Weapon Instrumentality, Intent, and the Violent Escalation of Conflict." *Homicide Studies* 11.4 (2007): 272-94.

Siebert, D.C. et al., "Differences in African-American and White College Students' Drinking Behaviors, "Journal of American College Health, November/December 2003, p. 123.

Wells, William and Julie Horney. "Weapon Effects and Individual Intent to Do Harm: Influences on the Escalation of Violence" *Criminology*, 2002, 40, 265-296.

Wechsler, H., G. W. Dowdall, A. Davenport, and S. Castillo. "Correlates of College Student Binge Drinking." *American Journal of Public Health* 85.7 (1995): 921-26.

Wechsler, Henry, and Meichun Kuo. "College Students Define Binge Drinking and Estimate Its Prevalence: Results of a National Survey." *Journal of American College Health* 49 (2000): 57-64.

Wechsler H, Moeykens B, Davenport A, Castillo S, Hansen J. "The adverse impact of heavy episodic drinkers on other college students." *Journal of Studies on Alcohol* 56(6):628-634, 1995.

ACADEMIC VITA

Julie Knaub

Julie Knaub
329 Toftrees Ave. Apt. #126
State College PA 16803
jck5157@psu.edu

Education:

Bachelor of Arts Degree in Crime, Law, and Justice
Bachelor of Arts Degree in French and Francophone Studies
Bachelor of Arts Degree in Global and International Studies
Honors in Crime, Law, and Justice, Schreyer Honors College
Thesis Title: Binge vs. Moderate Drinking Behavior: A Situational Study
The Pennsylvania State University, May 2012

Semester Enrolled in Université Paul Valéry, Montpellier III, Spring 2011

Awards and Achievements:

Dean's List
Phi Beta Kappa Honor Society
President's Freshmen Award
Department of Crime, Law, and Justice Student Marshal 2012

Activities:

Active Member of Penn State Circle K International 2008-2012
Community Service Chair of Penn State CRU Bible Study
Member of Springfield THON