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PREVENTING IMPAIRED DRIVING THROUGH COLLEGE-BASED FREE RIDE HOME PROGRAMS

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PREVENTING IMPAIRED DRIVING THROUGH COLLEGE-BASED FREE RIDE HOME
PROGRAMS

By

ANDREW J. NOGAR

Thesis

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Northern Michigan University
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2013

Signature Approval Form

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ABSTRACT

PREVENTING IMPAIRED DRIVING THROUGH COLLEGE-BASED FREE RIDE HOME PROGRAMS

BY

Andrew J Nogar

College students throughout the country continue to drink at relatively high rates and Northern Michigan University students are no different (NMU, 2008). One of the most dangerous activities associated with drinking, is the operation of a motor vehicle after one has consumed alcoholic beverages. This study has shows that 29% of NMU students had ridden with a driver after they had consumed two or more alcoholic beverages within a 30 day period and 22% had driven after having consumed two or more alcoholic beverages within a 30 day period. This shows that NMU students are drinking and driving. This study looks to determine whether a free ride home program offered to NMU students would reduce these percentages. Students were presented a survey via e-mail and were asked a number of demographic questions as well as questions regarding their alcohol usage and behaviors associated. The sample of students was chosen by the Northern Michigan University Office of Institutional Research and they were e-mailed the survey via Qualtrics software. The software automatically e-mailed the survey and collected the results in an autonomous fashion. The survey showed that a free ride home program would in fact be popular amongst NMU students and may, if instituted, do a great deal to reduce the prevalence of drunk driving amongst NMU students. In fact, 70% of NMU students answered that they would definitely not drive after they had consumed alcoholic beverages if a free ride home service was provided and another 25% said that they would not likely drive after they had consumed alcoholic beverages if a free ride home program was provided. In totality, this would account for 95% of NMU students.

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Introduction

“THIS THESIS FOLLOWS THE FORMAT PRESCRIBED BY THE APA STYLE MANUAL AND THE DEPARTMENT OF CRIMINAL JUSTICE”

Numerous universities throughout the country such as University of Texas A&M, Northern Illinois University, and The University of Chicago offer their students free transportation in order to prevent students from operating motor vehicles after having consumed alcoholic beverages (<http://www.tamu.edu/>, <http://www.niu.edu/index.shtml>, & <http://www.uchicago.edu/index.shtml>). However, Northern Michigan University (NMU) does not provide free ride services to its students. NMU students as well as other college students throughout the country continue to drink at relatively high rates (NMU, 2008). Chaloupka and Wechsler (1996) reported that alcohol abuse has fallen sharply in many youth and young adult groups; however, college students do not display the same reduction.

According to Northern Michigan University (2008) nearly half (48%) of its students were involved in episodes of binge drinking in 2004 (Office of Institutional Research). This statistic is troubling because previous research has indicated that binge drinkers are the most likely to drive after they have been drinking (Marczinski & Harrison, 2007). Drinking and driving is obviously an extremely dangerous activity. During 2008, the Centers for Disease Control and Prevention estimated that 11,773 people lost their lives in alcohol impaired driving crashes (CDC, 2008). Because driving under the influence (DUI) is among the most common and serious alcohol-related problems experienced by US college students, they are particularly at risk for the

negative consequences associated with drinking and driving (Clapp, Johnson, Voas, Lange, Shillington, & Russell, 2005).

From January 1, 2004 to October 6, 2008 131 NMU students were arrested and charged with drinking and driving by the Marquette City Police (Marquette City Police Department, 2008). Additionally, 68 NMU students were arrested and charged with drinking and driving by NMU Public Safety from January 1, 2004 through September, 2008 (NMU Public Safety Department, 2008). The location of NMU campus and the city is also patrolled by Marquette County Sheriff's department and the Michigan State Police. In all likelihood, these agencies may have also arrested NMU students. Statistics relating to arrests by Marquette County Sheriff's office and Michigan State Police were unavailable.

There is evidence supporting that college students indulge in alcohol use and binge drinking (NMU, 2008). Many negative effects are associated with these behaviors. Driving under the influence is one of the most dangerous consequences of alcohol consumption. In fact, driving after one has been drinking is an extremely dangerous decision that contributes to the estimated deaths of 1,700 college students every year (Brody, 2008).

Therefore, to better understand this behavior, the current study solicited information from NMU students regarding their operation of a motor vehicle after consuming alcoholic beverages and attempted to determine if students would use free ride homes if offered. The study was done using an electronic survey (Qualtrics) which was e-mailed to the sample of NMU students chosen.

Chapter 1: Literature Review

The literature in this area mainly focuses on drinking and driving by students. The literature was accumulated through the use of online databases. Clapp and Johnson (2005) conducted a study at two similar universities located along the US/Mexican border. These universities were similar in size, ethnicity, gender makeup, and geographic location. One university was used as the control and no changes were implemented. The other university experienced a number of environmental changes to reduce the rates of drunk driving amongst its students. Some of those environmental changes included social marketing campaigns, media advocacy campaigns, and increased law enforcement techniques. The study included 4832 students from both universities. To obtain results, telephone surveys were administered at both universities. Changes were then implemented at one university while the other was left unchanged. Telephone surveys were again administered at both universities. At the university where changes were not made, self reported DUI remained stable while the university that implemented changes produced a significant drop in self reported DUI rates.

Clapp and Johnson (2005) showed that different environmental changes could be made to reduce drunken driving rates amongst students. Although the results of this experiment seem quite promising, there are a few potential problems. Because the information was obtained through telephone surveys, some of the results may be inaccurate (<http://www.oup.com/>). Students may have lied or not taken the survey seriously. Those who were administering the survey may have also misunderstood some of the student's responses and recorded them inaccurately. Even though these problems may have occurred, the results did show a promising step in the right direction and it would be helpful to see similar experiments conducted at other universities throughout the country.

Clapp and Johnson's (2005) study is important because it showed that students DUI rates can be reduced. Social marketing campaigns, media advocacy campaigns, and increased law enforcement techniques may reduce drunken driving rates momentarily, but they are expensive to maintain and require the cooperation of a number of different organizations (Clapp & Johnson). Solutions that are more permanent, easier to implement, and more cost effective should be considered. A free ride home program may prove to be a solution to these problems.

Wechsler and Lee (2003) studied alcohol control policies as they related to drinking and driving. To conduct this experiment, the researchers mailed a survey to students attending nationally recognized colleges in 39 different states. In all, 10,809 students completed and returned the survey from 119 different universities. Self reported drinking and driving rates were then compared with local policies and laws regarding underage drinking, laws regarding all alcohol related offences, and drinking and driving laws. The universities policies on alcohol were also considered. After reviewing the results of the surveys and different laws and policies, the authors concluded that stricter laws, policies, and enforcement did have a significant impact on students self reported drinking and driving rates. The stricter the laws, policies, and enforcement, the less self reported drinking and driving there was amongst students.

Wechsler and Lee's (2003) research used different students from different universities. This research showed that environmental factors could play a significant role in reducing drunk driving amongst college students. Both of the above research studies offer some insight into reducing drunk driving amongst college students.

The problem with implementing environmental changes as recommended by these studies is that they are extremely expensive to apply and maintain. They also take the

cooperation of many different organizations which may include: the university, police, city officials, residents of the town, and students. To organize all these different groups towards one objective is often difficult to achieve. The results of these studies should not be discarded but other, less expensive, and easier solutions should be considered.

Phelps (1987) conducted research that used a survey, which was administered to 50 undergraduates attending the University of Rochester. This study looked at student's perceived risks of drunk driving compared with that of actual rates. Based on the results of the survey, Phelps found that student's perceived risks of drinking and driving was much less than actual rates. For example, students believed that drinking six or more drinks and driving was about 7.5 times more dangerous than driving while sober. Actual rates showed that drinking and driving after six drinks is about 100 times more dangerous than not drinking and driving (Phelps). The researcher concluded that better education on the risks of drinking and driving could do a great deal to reduce drunk driving amongst college students. This was an extremely small experiment and was conducted over 20 years ago. Today students are much more educated on the risks of drinking and driving (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002). Consequently, it is believed that research should be conducted to see if the more educated students on drinking and driving would yield different results.

Phelps (1987) shows that college students may not actually know how dangerous it is to drink and drive. A free ride home program would inform students on the actual risks associated with this activity by putting some statistics on the backs of cards distributed with the phone number of the service.

Wechsler and Seiborg (2004) researched 747 different universities and their policies on alcohol. These universities were categorized by size, region, type of funding received, policies, and others. Of all the universities studied, every institution had some type of policy and program change to reduce alcohol abuse. Wechsler and Seiborg indicated, “The most popular actions included providing counseling and treatment services for students with abuse problems; conducting alcohol education targeted to freshman; providing alcohol-free residences; employing a substance abuse official; restricting alcohol use at home athletic events; and conducting alcohol education targeted toward fraternity members, sorority members, or athletes.” (p. 166)

All of the responding universities considered alcohol use to be a problem at their universities (Wechsler & Seiborg, 2004). The universities with more policies and programs to reduce alcohol abuse were also the universities which were less likely to restrict alcohol use on their campuses. Another somewhat contradictory finding was that the universities all considered alcohol to be a problem, while the students thought that alcohol use was not a problem at their universities.

Based on these results, universities are considered ineffective in reducing alcohol abuse and the negative consequences associated with this phenomenon (Wechsler & Seiborg, 2004). Instead of trying to reduce alcohol use, universities should consider new programs that focus on reducing the negative consequences associated with drinking (Wechsler & Seiborg). A free ride home program would look to reduce some of the most costly negative consequences associated with drinking. These would include: death, injury, automobile accidents, academic attrition, and others.

Weitzman and Nelson (2004) used information from the Harvard School of Public Health College Alcohol Survey to conduct their study. Based on information from the study, Weitzman and Nelson found that although the heaviest drinkers are the most at risk of harm and creating harm, the heaviest drinkers are few in number and create little of the overall harms caused by college students and drinking. Currently, most programs offered to college student's focus on these relatively few heavy drinkers. Instead, programs offered to students should focus on the majority of students and reducing the harms caused by the majority. Of the programs being offered and used, the researchers concluded that different environmental preventive strategies would work best at reducing the harms caused to the overall community by college student drinkers (Weitzman & Nelson).

Hingson and Heeren (2005) reviewed mortality and morbidity among U.S. college students ages 18-24. Based on their research, it is estimated that in 1998 more than 1400 college students ages 18-24 enrolled in two and four year colleges died from alcohol related injuries. "Further, of the 8 million college students in the United States more than 2 million drove under the influence of alcohol and over 3 million rode with a drinking driver". (Hingson & Heeren, p 1).

Statistical analyses were used to interpret 24 different surveys for this study. "In 2001, in the United States among persons 18-24, 51% of the 8242 traffic deaths were alcohol related". (Hingson & Heeren, 2005, p 3) It is estimated that 32% of the U.S. population ages 18-24 were college students (Hingson & Heeren).

Marczinski, Harrison, and Fillmore (2008) studied drinking and driving amongst binge drinkers and non-binge drinkers. The researchers used a sample of 24 binge drinkers and 16

non-binge drinkers to participate in their study. In one session the participants received a moderate dose of alcohol and the next session they received a placebo. Marczynski, Harrison, and Fillmore estimate that in 80% of the episodes of driving while intoxicated the individuals had participated in binge drinking. Binge drinkers are also estimated to be 14 times more likely to drive while intoxicated compared with non-binge drinkers. This study indicates that “binge drinkers reported feeling less sedated by the alcohol and reported having greater ability to drive following the acute dose of alcohol”. (Marczynski, Harrison, & Filmore). Further, the results also indicate that binge drinkers should be targeted when trying to reduce DUI amongst college students. Results show that binge drinkers are more likely to drink and drive while intoxicated.

Usdan and Moore (2005) obtained information from the Impaired Driving Assessment on 91 college students identified as high risk for drinking and driving. The study revealed that location was a significant predictor of blood alcohol content prior to driving. After drinking at a party students blood alcohol content averaged .089 prior to driving compared with .033 at other drinking locations (Usdan, Moore). Parties were considered as students drinking at locations other than restaurants, bars, or their own residence. DS in the article stood for the number of days the student drove after drinking. These incidents were self reported by students to the researchers. Also, drinking locations were also self reported by students. “For all DS episodes (n=543 for 91 students), approximately 41% occurred after drinking at a friend’s house, 27% after drinking at a bar or restaurant, and 1% reported drinking at home”. (Usdan, Moore). Slightly more men were involved in the survey (52.8%) and numbers show that the majority of drinking and driving by women took place after leaving a bar or restaurant (41.3%).

Places such as bars or restaurants could be targeted to provide information on free ride home services for students. Also, liquor and convenience stores in areas of high student

populations should participate because these are the places where students are purchasing alcohol. Students would then be informed of their options prior to having consumed alcohol and therefore may choose their best option on getting home later in the evening. This could be accomplished using posters and business cards with the numbers of the free ride home service offered. Marked vehicles used for the service should also be stationed in these areas for high visibility. These vehicles would be large vans and would be paid for by the university through donations received by the university or tuition.

Fletcher and Skinner (2006) looked at differences in drinking practices between urban and rural students, as well as gender. During the study, questionnaires were distributed to kinesiology and physical education students, 104 which were from rural backgrounds and 151 from urban backgrounds. Drinking practices did not vary between these two groups, but gender did show a difference in negative consequences. Both men and women in this group binge drank at almost the same rates and consumed alcohol the same number of days per week. Men were more likely to drive under the influence, damage property, injure another party, and get into a verbal or physical altercation after drinking (Fletcher & Skinner). This article re-affirms the notion that men are more likely to drive after they have been drinking. It further suggests that men should be targeted more heavily when trying to reduce rates in drunk driving and other negative consequences associated with drinking.

McCarthy, Pedersen, Thompsen, and Leuty (2006) researched measures of drinking and driving expectancies with high school and college students. The study shows that 38% of the students drank and drove out of convenience. Items were then listed on why a student would drink and drive. The respondents answers varied but most of the respondent's reasons for drinking and driving had to do with issues of convenience or availability.

Chaloupka and Wechsler (1996) studied binge drinking and the impact of price, availability, and alcohol control policies. The authors found that certain policies such as restrictions on the availability of alcohol, and tougher penalties may reduce binge drinking; other changes such as price increase virtually have no effect on binge drinking. The authors believe the only way too significantly impact binge drinking is that universities would have to radically change the campus environment.

Wechsler, Dowdall, Davenport, and Castillo (1995) conducted research of college students and binge drinking. A survey was completed of 17,592 students at 140 different campuses during 1993. Of the respondents, 44% were classified as binge drinkers with 50% of the men drinking five or more drinks in a row and 39% of the women drinking four or more drinks in a row at least once during the two week period prior to answering the survey. Results showed that the age of an individual and legal drinking age basically had no determinant factor on binge drinking. Students under the legal age of 21 and over the age of 21 binge drank at nearly identical rates. Students ages 24 and older did show lesser rates of binge drinking. The highest rates of binge drinking were shown in white, single males. Fraternity/sorority membership also showed high rates of binge drinking. Students were also much more likely to binge drink if they had previously done so in high school.

Wechsler, Dodall, Davenport, and Castillo (1995) suggested that binge drinking amongst college students is a significant problem. Risky behaviors have been associated with binge drinking and previous articles have shown that binge drinkers are more likely than others to drink and drive (Marczinski, Harrison, & Fillmore, 2007). It is unlikely that any program would significantly reduce binge drinking amongst college students. Instead, alternatives should be

considered that would lessen the occurrences of risky behaviors associated with these students (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002).

Wechsler, Lee, Kuo, Seibring, Nelson, and Lee (2002) used findings from the Harvard School of Public Health College Alcohol Study Surveys (1993-2001) to conduct an overview of results from these years. These results were then used in order to show trends in college student drinking. While the results from these surveys showed no significant changes in binge drinking from 1993-2001, they did show a slight increase in the number of students who drove after drinking: 26.6% in 1993 and 29% in 2001. Percentages also increased for students who had ridden with someone who was drunk or high (1993-18.4%, 2001-23.2%).

This study showed that students are now receiving more information on alcohol abuse than they were previously (1993). During 1993, one in three college students reported receiving information on alcohol use, penalties, policies, and dangers. In the 2001 survey, more than half of the students reported receiving similar information from their universities. While students are receiving more information from their universities on alcohol and policies to reduce alcohol use, drinking habits amongst college students is unchanged. “Given the unchanged nature of heavy drinking among college students and the serious health and social effects which result, the time has come for more campuses and communities to try new and comprehensive approaches”. (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee).

Wechsler, Lee, Hall, Waggener, and Lee (2002) conducted telephone interviews of 4661 residents living near college campuses. The study examined the second hand effects of alcohol use on the residents compared with the number of alcohol outlets within a mile of a particular campus. Secondhand effects include: noise, disturbances, vandalism, drunkenness, vomiting,

and urination. The authors concluded that more alcohol outlets around a particular campus showed higher rates of binge drinking and secondhand effects associated with available outlets. The research shows that reduction in the number of alcohol outlets around campuses could reduce the number of disturbances to residents in the area.

There are hundreds of studies relating to alcohol use amongst college students, but most share a common point of view and general approach. Dowdall and Wechsler (2002) studied current trends and approaches in investigating and understanding college drinking. The authors conclude that “there has been much progress in understanding the issue. Much more, however remains to be learned”. (Dowdall & Wechsler, p.20).

Many of these studies only focus on one institution at one particular time. “It is our belief that the literature needs to move away from single campus studies of individuals with alcohol-related problems toward multiple campus studies of the broader factors that shape college drinking behavior”. (Dowdall, & Wechsler, 2002, p.14) The Study found no reduction in college student drinking; suggest more research on the topic, and the implementation of new or different programs to address this growing social problem.

Weitzman, Nelson, Lee, and Wechsler (2004) examined the benefits of implementing “A Matter of Degree” or AMOD program. The AMOD program included changes in alcohol-related policies, marketing, and promotions to reduce college alcohol use and the harms associated. Thirty two colleges were studied; ten of which had implemented AMOD programs. Information from the 1997 survey was compared with information from the 2001 survey to yield results. The authors concluded that there was not a significant statistical change overall in the ten schools which implemented the AMOD program. There were small improvements in alcohol

use and harms associated at five of the schools which most closely implemented the environmental model. The environmental model is made up of the media, advertising, education, enforcement, laws, policies, and community.

Nelson, Naimi, Brewer, and Wechsler (2005) “assessed the relationship between college binge drinking, binge drinking in the general population, and selected alcohol control policies”. (Nelson, Naimi, Brewer, & Wechsler, p.441) The researchers found that there were strong correlations between college binge drinking and binge drinking amongst the rest of the population throughout a state. Researchers also found that state alcohol policies could predict the rates of binge drinking within a state. States with more policies and stricter penalties regarding alcohol showed lower rates of binge drinking by its college students. This study shows that stricter policies and enforcement at the state level can lower the prevalence of binge drinking amongst college students. Previous studies have also shown that more comprehensive policies at the state level have been associated with less driving after drinking (Nelson, Naimi, Brewer, & Wechsler).

Wechsler and Nelson (2008) again analyze results from the CAS and summarize their findings. Of the students who reported alcohol related injuries; 53% drank five or fewer drinks in a row while 21% had drunk eight or more in a row. From 1993 to 2001 the state rate of college binge drinking has remained constant at 44%. Among college drinkers, 48% reported that getting drunk was an important reason for drinking (Wechsler & Nelson). They suggest limiting exposure to aggressive marketing of alcohol, reducing easy accessibility to low-priced alcohol and super-sized quantity sales, limiting the density of alcohol outlets, changing laws or policies at the college, community, and state level to reduce alcohol use amongst college students.

Thompson and Richardson (2008) study the possible impact of DUI arrest on academic attrition. The study revealed that 28% of the students who enter a four year university leave after the first year and only 45% of the students complete a bachelor's degree within 6 years. The authors found that DUI arrest may contribute to these numbers. Thompson and Richardson states their "data indicate that being arrested for DUI increases the odds of attrition by 74% to 110% relative to not being arrested or cited" (p.7).

Students are ruining their academic careers and possibly their life because of drinking and driving (Thompson & Richardson, 2008). Universities are losing tuition due to students dropping out after being arrested for DUI. Free ride home programs may be costly to implement, but the positive benefits may outweigh the negatives.

Mallett, Bachrach, and Tussisi (2008) explored whether individual based motivational interventions which have shown to reduce college student drinking have also reduced negative consequences associated with drinking. A total of 650 freshmen at a large northeastern university were e-mailed surveys. Of these, 341 responded with answers for the survey ranging from extremely negative to extremely positive.

The authors found several consequences such as being arrested/citation, belongings stolen, receiving a lower grade and others were perceived as negative. Research also showed that a number of items which others may perceive as negative were not seen as negative by a majority of the test group. Items including a hangover, waking up in someone else's bed after a night of drinking, skipping an evening meal after a night of drinking, leaving a party alone after a night of drinking, and binge-eating late at night after drinking were all included in the consequences not seen as negative by the majority. "Furthermore, nearly half of the individuals

who reported blackouts, physical, and/or social embarrassment as a result of drinking described the experience as neutral or positive” (Mallett, Bachrach, 2008, p.5)

Consequences that are seen as negative by campus officials may not be seen as negative to college students. When establishing a program to reduce college student drinking, people instituting the program need to know what college students believe are the negative consequences associated with drinking. Administrators would then need to focus on the negatives when presenting their programs.

Mallett, Bachrach and Tussisi (2008) shows that the majority of college students believe that being arrested or cited because of alcohol use was negative. When instituting a free ride home service the consequences of being arrested for drinking and driving should be the focus.

Weitzman, Nelson, and Wechsler (2003) explored person, social group, and environmental factors associated with the acquirement of binge drinking. Students who began binge drinking in college were more likely to live in co-educational on campus housing, belong to Greek organizations, less affiliated with religion, and were generally more social. These students were also more likely to have more education on the risks associated with drinking, have greater access to cheap alcohol, and more likely to attend NCAA Division 1 schools. Again the authors suggest limiting the availability of alcohol, control cheap pricing, and maximize substance free environments and associations.

The students more involved in the social aspects of college are the students who are more likely to begin binge drinking. The researchers suggest a number of environmental changes to limit the number of students who engage in binge drinking. These types of solutions are commonly offered, but rarely instituted. These changes include things such as; limiting the

number of alcohol depots near campus, limiting the number of bars, implementation of new laws, roadblocks, banning alcohol on campus, higher enforcement, higher consequences, and ext. New, easier, more feasible approaches need to be tested and implemented to make the negative consequences associated with alcohol use amongst college students less likely. Many researchers focus on reducing alcohol use amongst students with little or no success. The college environment that promotes drinking and partying has not changed in years and shows no signs of changing anytime soon. Researchers should instead be looking to reduce the most dangerous consequences associated with drinking. One of the most dangerous consequences associated is the operation of a motor vehicle after drinking. Solutions in limiting this behavior must be considered.

Floyd-Bann and Tassel (2005) report on a free ride home service implemented at the University of Texas A&M. This program is called CARPOOL and was offered to all Texas A&M students, Thursday through Saturday, from 10p.m. to 3a.m. The service was recognized by the university and utilizes student volunteers to run the program. The program has the support of local law enforcement, the community, and the university.

The university was so supportive of the service that it actually places the phone number of carpool on the back of every student ID. The program has been especially popular amongst A&M students. In a six year period, the service gave 59,651 students free ride homes safely, rather than having driven home while intoxicated.

Other universities throughout the country offer similar services. NMU currently lacks this type of service. These universities are concerned with getting their students home safely and NMU should be no different. This study looks to show whether a free ride home program would

be popular amongst NMU students. The results will prove useful for the university and the entire Marquette, MI community. This study may also be replicated at other universities to determine the benefits of a similar program.

The reviewed literature focuses primarily on college students and drinking alcohol. Much of the reviewed literature includes binge drinking, consequences associated with drinking, the frequency in which college students drink, and different programs which have been instituted to reduce the frequency and amount in which college students drink alcoholic beverages.

The current study is unique because it looks at whether a free ride home service would be beneficial in reducing the number of occurrences in which NMU students decide to drive after they have been drinking. Other universities have instituted such programs but have not evaluated their effectiveness.

Chapter 2: Methods

Population and Sample

The purpose of this study is to determine whether a free ride home program would reduce the prevalence of drunk driving amongst NMU students residing in the Marquette, MI area. NMU was chosen due to its inclement weather and long winter months. Students living in the Marquette, MI area often do not have the option of walking/riding a bike home during the long winter months due to extreme low temperatures, high winds, and large amounts of snowfall. Northern Michigan University is located on Lake Superior in Michigan's Upper Peninsula. The university resides in the town of Marquette, MI. The town itself is hilly and surrounded by woods. Students come from a variety of backgrounds and places (rural, suburban, and urban).

Sample

Freshman through graduate level NMU students were surveyed. They were surveyed because they represent the majority of NMU students residing in the Marquette, MI area. Only students enrolled in on-campus classes were administered the survey. In addition, only students taking six credits or more were used in the survey. These students were surveyed because they were the only NMU students living on campus or in the Marquette area. These students were also surveyed because they are the only ones who would benefit from a Free ride Home Program provided for by NMU. Northern Michigan University has a student population close to 10,000 students. The sample was consisted of 1049 students fitting these requirements. This accounted for approximately 13% of the student population and therefore provided an adequate sample to represent the entirety of NMU students (NMU, Office of Institutional Research). Of the 1,049 students who were administered the survey, a response rate of 25% was adequate. This means

that 269 of the 1,049 student's responded to the survey. The students matching these requirements were randomly selected using the Qualtrics software. Qualtrics is an online survey tool used to administer surveys and to tally their results. These students were administered the survey on March 12, 2012 of the winter semester. The survey that was used is attached in Appendix A.

Administration

To complete the survey, Qualtrics software was used. This software was provided by the university through the Office of Institutional Research. The software administered the survey to the sample of NMU students, collected the results, and provided the results of the surveys administered.

Qualtrics software automatically e-mailed the survey to the chosen sample of NMU students. The survey was open for students to complete on March 12, 2012 at 8:00 am eastern time. The survey was then closed on April 3rd, 2012 at 8:00 am eastern time.

With any type of self report survey a number of problems were for-seen (Coughlan, Cronin, & Ryan, 2009). Students may have decided to answer the survey untruthfully. Also, students must recall different events from their memories which can sometimes be faulty. A majority of the sample also had to complete the survey. Students are often times busy and may not have taken the time to complete the survey. This was limited by using a relatively short and straightforward set of questions and answers.

Two reminder e-mails were sent after the survey had been administered in order to receive an adequate response rate. One reminder e-mail was sent on March 19, 2012. When nearing the completion deadline another reminder e-mail was sent on March 26, 2012. Students

were more likely to answer the surveys honestly because they remained anonymous and the whole process was done through e-mail.

Confidentiality

Students were surveyed and their results remained anonymous. This was achieved by using the Qualtrics software. The software allows for students to be chosen randomly and their results to be accumulated without specifying who had completed the survey. The results were accumulated as totalities and presented as percentages. Approval was obtained through NMU's Institutional Review Board and it was used to assure the confidentiality and anonymity of the students surveyed.

Analytical Techniques

Statistical analysis using Qualtrics's functions aided the researcher in obtaining results. Descriptive statistics were used to summarize the results. The statistics were broken into percentages and totals. The percentages and totals were further divided into categories such as gender, class standing, age, and type of residence. Chi-square analysis automatically generated by Qualtrics was used to compare tables. Chi-square analysis was used so that similarities between populations and variables could be grouped under their characteristics of interest. The characteristics of interest then go under specific categories such as age, class standing, residence, and gender. This data then showed which students may benefit the most from a Free Ride Home Program.

Validity and Reliability

Validity is the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure (Colorado State University, 2011). Validity in this research was obtained by using a stratified random sample of 13 percent of NMU students taking six or more credits on campus. This accounted for 1049 NMU students. The sample was provided by the NMU Office of Institutional Research. The survey itself used questions from previous alcohol surveys administered to college students so that bias within the survey questions was limited. Human error in obtaining results was eliminated by using the Qualtrics software. Validity has most likely occurred because students were likely to reply truthfully to the survey questions because their identities remained anonymous. Students will not have to fear reappraisal or future embarrassment for having answered the questions truthfully because their identities remained unknown.

Reliability is concerned with accuracy of the actual measuring instrument or procedure (Colorado State University, 2011). Reliability was achieved by giving all of the students the same survey questions, answers, and number of questions. The main topic of the survey asked students about alcohol consumption and they were asked about this topic in several different ways. Therefore, their answers remained consistent. The surveys were also completely confidential. The students included in the sample were emailed the survey and they had approximately a month to complete it. The survey was relatively short and to the point in order to yield a higher response rate. Because the survey was completely confidential, it attempted to eliminate untruthful responses by students who might feel reappraisal or embarrassment for having answered the survey truthfully.

Reliability of the survey was maintained by using straightforward questions which were mostly related to alcohol consumption. The first questions of the survey simply asked students basic things such as age, class standing, and where they live. The remaining questions of the survey were all related to alcohol consumption. Students were able to answer the questions easily and without confusion because they were all related to alcohol consumption. Students were not confused by multiple topics being included in the survey. Because of the simplicity of the survey used, students within the control group should yield similar results if they were administered the same survey multiple times. The survey could then also be used at other universities throughout the country in order to test the hypothesis in question.

Analysis

The analysis was presented using descriptive statistics to show the demographic characteristics of the sample. Means, totals, and percentages were used to present the results of the survey in a series of tables. These were calculated by the Qualtrics software. The Chi Square test was used to show the differences among the various groups of students surveyed. These were shown through contingency tables that showed the relationship between categorical variables. All of the students surveyed were NMU students. The variables were things such as age, class standing, type of residence, ext. The results showed significant differences in alcohol consumption amongst the groups and similar ones. These were presented in tables using the Chi Square test. The survey limited the generalness of the results because just one university was surveyed. Further research should be conducted at other universities with similar demographics.

Chapter 3: Findings

Two hundred and sixty nine Northern Michigan University Students responded to the survey out of the one thousand and forty nine students who were e-mailed the survey. This equals a final response rate of 25.64%. The results are organized into three categories. The first category (Tables 1-3) includes demographic characteristics such as age, class standing, and type of residence. These characteristics are presented in tables as percentages. The second category (Tables 4-10) includes alcohol usage statistics such as type of alcohol consumed, number of days of having consumed alcohol in 30 days, ext. These statistics are also presented in tables as percentages. The last category (Tables 11-18) includes behavioral characteristics after one had been drinking such as, number of times having drove after drinking, rode with an intoxicated driver, been arrested for OWI, ext. The final category is also presented in tables as percentages.

The findings in Table 1 include the ages of the respondents as percentages. The majority of the students sampled were aged between 21 and 24 (43%). The next biggest majority of students were aged between 25 and 29 (32%), followed by 30 and over at (23%), and 18 to 20 (2%). Many college students are between the ages of 21 and 24 and it is not surprising this was the highest majority of student respondents. NMU students between the ages of 18 and 20 did not have a high response rate for one reason or another. The following data is included below in Table 1.

Table 1: Age of Respondents

#	Answer	Response	%
1	Less Than 18	0	0%
2	18-20	6	2%
3	21-24	111	43%
4	25-29	84	32%
5	30 and Over	59	23%
	Total	260	100%

The findings in Table 2 include the respondent’s class standing. The largest numbers of respondents were senior level NMU students (46%). The second largest numbers of respondents were NMU graduate students (16%), followed by juniors (14%), post bachelorette (13%), sophomore (7%), and freshman (5%). The following information is present below in Table 2.

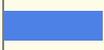
Table 2: Class Standing of Respondents

#	Answer	Response	%
1	Freshman	13	5%
2	Sophomore	17	7%
3	Junior	36	14%
4	Senior	119	46%
5	Post baccalaureate	34	13%
6	Graduate Student	41	16%
	Total	260	100%

The findings in Table 3 include the student’s place of residence. The majority of respondents were living in a house off campus (62%). The second largest number of respondents lived in non university apartments (21%) followed by living at home with parents (9%),

university apartment (7%), and residence hall (1%). The following information is present below in Table 3.

Table 3: Place of Residence for Respondents

#	Answer		Response	%
1	Living in a Residence Hall		3	1%
2	Living in a University Apartment		17	7%
3	Living in a non University Apartment		54	21%
4	Living in a House off Campus		161	62%
5	Living at home with Parents		23	9%
	Total		258	100%

The second category of results presented below in Tables 4 through 10 pertains to alcohol consumption amongst NMU students. The findings in Table 4 include the type of alcohol NMU students typically consume when drinking. The majority of students consume beer (52%) as their typical drink when consuming alcohol followed by liquor (37%), and wine (11%). The following information is present below in Table 4

Table 4: Type of Alcohol Typically Consumed by Respondents

#	Answer		Response	%
1	Beer		120	52%
2	Wine		25	11%
3	Liquor		84	37%
	Total		229	100%

The findings in Table 5 include the number of times NMU students had consumed alcohol over the past 30 days. The largest numbers of respondents reported to have consumed alcohol between 1-5 days (48%) followed by 6-14 days (27%), 0 days (15%), 15-29 days (8%), and all 30 days (1%). The following information is present below in Table 5.

Table 5: Respondent’s Alcohol Consumption Over the Past Thirty Days

#	Answer		Response	%
1	0 Days		40	15%
2	1 through 5 Days		125	48%
3	6 through 14 Days		71	27%
4	15 through 29 Days		21	8%
5	all 30 Days		2	1%
	Total		259	100%

The findings in Table 6 include the number of times NMU students drink in a given week. The majority of respondents report drinking once a week (39%) followed by zero times

(26%), two times (20%), three times (10%), four times (3%), and five or more times (2%). The following information is present below in Table 6.

Table 6: Number of Times Respondents Drink in a Given Week

#	Answer		Response	%
1	0 Times		67	26%
2	1 Time		101	39%
3	2 Times		52	20%
4	3 Times		26	10%
5	4 Times		8	3%
6	5 or more Times		5	2%
	Total		259	100%

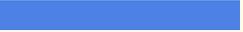
The findings in Table 7 include the number of times NMU students have had four or more drinks in one sitting over a two week period. The majority of respondents said never (36%) followed by once (33%), twice (17%), and three or more times (14%). The following information is present below in Table 7.

Table 7: Number of Times Respondents had Four or More Drinks in One Sitting over a Two Week Period

#	Answer		Response	%
1	Never		94	36%
2	Once		84	33%
3	Twice		45	17%
4	Three or more times		35	14%
	Total		258	100%

The findings in Table 8 include the number of times NMU students have had five or more drinks in one sitting over a two week period. The majority of respondents said never (51%) followed by once (25%), twice (14%), and three or more times (10%). The following information is present below in Table 8.

Table 8: Number of Times Respondents had Five or More Drinks in One Sitting over a Two Week Period

#	Answer		Response	%
1	Never		132	51%
2	Once		65	25%
3	Twice		36	14%
4	Three or more times		26	10%
	Total		259	100%

The findings in Table 9 include the percentage of students who drink until they are intoxicated. The majority of respondents said that they did sometimes (67%), followed by never (23%), and frequently (10%). The following information is present below in Table 9.

Table 9: Percentage of Respondents who Drink until Intoxicated

#	Answer		Response	%
1	Never		59	23%
2	Sometimes		174	67%
3	Frequently		26	10%
	Total		259	100%

The findings in Table 10 are the reasons why NMU students drink. The majority of respondents said they do so for social reasons (58%), followed by to relax (28%), other reasons (11%), and all of the reasons listed (3%). Students who said other reasons wrote a number of varying responses including: they didn't drink, they like the taste, they like to party, or multiple reasons which were not listed. The following information is present below in Table 10.

Table 10: Respondents Reasons for Drinking

#	Answer	Response	%
1	For social reasons	134	58%
2	To relax	66	28%
3	Addiction	0	0%
4	Peer pressure	1	0%
5	All of the above	6	3%
7	Other	25	11%
	Total	232	100%

The third category of results is presented below in Tables 11 through 18. These tables describe behaviors NMU students have engaged in during the past 30 days due to alcohol consumption.

The findings in Table 11 describe the number of times NMU students drove a car after having consumed two or more alcoholic beverages. The majority of students said 0 times (75%) followed by 1 to 3 times (22%), and 4 or more times (3%). The following information is present below in Table 11.

Table 11: Number of Times Respondents Drove a Car after Having Consumed 2 or More Alcoholic Beverages

#	Answer		Response	%
1	0 Times		196	75%
2	1 to 3 Times		56	22%
3	4 or more Times		8	3%
	Total		260	100%

The findings in Table 12 describe the number of times NMU students have been the passenger in a vehicle where the driver had consumed two or more alcoholic beverages. The majority of respondents said 0 times (70%), followed by 1 to 3 times (29%), and 4 or more times (1%). The following information is present below in Table 12.

Table 12: Number of Times Respondents were Passengers in a Vehicle where the Driver had Consumed 2 or More Alcoholic Beverages

#	Answer		Response	%
1	0 Times		183	70%
2	1 to 3 Times		75	29%
3	4 or more Times		2	1%
	Total		260	100%

The findings in Table 13 describe whether NMU students have ever been in a motor vehicle accident with a drunk driver. The majority of respondents answered no (93%). There were some students that reported that they have (7%). The following information is present below in Table 13.

Table 13: Number of Respondents who have been in a Motor Vehicle Accident with a Drunk Driver

#	Answer	Response	%
1	No	237	93%
2	Yes	19	7%
	Total	256	100%

The findings in Table 14 describe whether students have ever been arrested for OWI (Operating a Vehicle while Intoxicated). The majority of respondents answered 0 times (93%). There were students who answered 1 to 3 times (7%). The following information is present below in Table 14.

Table 14: Number of Respondents who had been Arrested for OWI

#	Answer	Response	%
1	0 Times	239	93%
2	1 to 3 Times	19	7%
3	4 or more Times	0	0%
	Total	258	100%

The findings in Table 15 describe whether NMU students have ever been the driver of a motor vehicle that was involved in an accident after they had consumed alcohol. The majority of

respondents said no (90%). The others said yes (10%). The following information is present below in Table 15.

Table 15: Number of Respondents who had been the Driver of a Motor Vehicle that was involved in an Accident after they had Consumed Alcohol

#	Answer		Response	%
1	No		233	90%
2	Yes		26	10%
	Total		259	100%

The findings in Table 16 describe whether NMU students would ride with someone who had consumed alcohol if a free ride home service was offered. The majority of respondents said no, definitely not (59%) followed by not likely (32%), more than likely (7%), and yes, definitely (3%). This shows that the majority of students would not ride in a motor vehicle with someone after they had consumed alcoholic beverages. If you combine the students who say that they would definitely not with the students who said not likely, that accounts for 91% of the respondents. Taken as a sample, this means that 91% of NMU students would not get into a vehicle with a drunk driver. This shows that a free ride home program could reduce the dangers of NMU students ridding in motor vehicles with someone who has consumed alcoholic beverages. This means that only 9% to 10% of NMU students would still likely ride with someone who had been drinking or definitely ride with someone who had been drinking. The following information is present below in Table 16.

Table 16: Number of Respondents who would Ride with a Driver after they had Consumed Alcohol if a Free Ride Home Service was Offered

#	Answer		Response	%
1	No, Definitely Not		153	59%
2	Not Likely		82	32%
3	More than Likely		17	7%
4	Yes, Definitely		7	3%
	Total		259	100%

The findings in Table 17 describe whether students who drink would drive after they had consumed alcohol if a free ride home service was offered. The majority answered no, definitely not (70%) followed by not likely (25%), and more than likely (5%). This shows that 95% of NMU students would definitely not or would not likely drive after they had been drinking. This means that only 5% would be likely to drive after they had been drinking. If NMU could provide safe rides for 95% of its students after they had been drinking, the option should definitely be considered. The following information is present below in Table 17.

Table 17: Number of Respondents who would Drive after they had Consumed Alcohol if a Free Ride Home Service was Offered

#	Answer		Response	%
1	No, Definitely Not		179	70%
2	Not Likely		63	25%
3	More than Likely		14	5%
4	Yes, Definitely		1	0%
	Total		257	100%

The findings in Table 18 describe why students would not use a free ride home program if it were offered. The majority of respondents answered other (48%) for those reasons not listed. Those who responded this way said that they would definitely use the service and therefore would not have a reason not to use the service. The other respondents answered do not want to wait (23%), may have to ride with others (16%), inconvenient (10%), and would rather drive (3%). The following information is present below in Table 18.

Table 18: Reasons Respondents would not use a Free Ride Home Service if it were Offered

#	Answer		Response	%
1	Inconvenient		18	10%
2	Do not want to wait		44	23%
3	May have to ride with others		30	16%
4	Would rather drive		6	3%
5	Other reasons		90	48%
	Total		188	100%

Chapter 4: Discussion

This study examined whether a Free Ride Home Program would be popular amongst NMU students. NMU students as well as other university students throughout the country continue to drink at relatively high rates (NMU, 2008). Many universities throughout the country including the University of Texas A&M, Northern Illinois University, and The University of Chicago offer their students free transportation services on weekends to curtail their students from drinking and driving (<http://www.tamu.edu/>, <http://www.niu.edu/index.shtml>, & <http://www.uchicago.edu/index.shtml>). Currently, NMU does not do so. NMU is a midsize university of approximately 10,000 students located in a rural section of the Upper Peninsula of Michigan. The university is located in the City of Marquette, MI which has an approximate population of just over 21,000 residents. What makes the university unique to others are the formidable winters. Marquette, MI resides on the coast of Lake Superior and has some of the highest amounts of snowfall and some of the lowest average temperatures in the nation. Due to the inclement weather, it is often difficult for students to walk or ride bikes for a good majority of the school year.

The study has shown that the majority (85%) of NMU students do consume alcoholic beverages (Table 5). The study has also shown that the majority (67%) of NMU students do sometimes drink until intoxicated (Table 9). The aim of the study was to determine the popularity of a Free Ride Home Program at NMU. The study has proven that the majority of NMU students (over 90%) would not (59%) or would probably not (32%) be the passenger in a

vehicle of a driver who had consumed alcoholic beverages if a Free Ride Home Service was offered (Table 9). An even higher percentage of NMU students (95%) responded that they would definitely not (70%) or probably not (25%) drive a motor vehicle if a Free Ride Home Service was offered (Table 10). While many universities throughout the country look for ways to reduce alcohol consumption amongst its students, this study focuses on a particular way to reduce one of the most dangerous behaviors associated with alcohol consumption (Clapp, Johnson, Voas, Lange, Shillington, & Russell, 2005).

Limitations and Future Research

This study is not without limitations. As described above, this study was conducted at a midsize university located in a rural region of the country. This particular region has above average snowfalls and below average temperatures. These conditions make it difficult for students to walk or ride bicycles throughout the majority of the school year. Other universities who are interested in Free Ride Home Programs and currently do not have such programs should conduct similar studies in order to gain information on the perceived popularity of such a program. Universities located in the more southern regions of the United States may not have a need for such a program.

Summary and Conclusions

The study has shown that policy makers at Northern Michigan University should consider a Free Ride Home Program. The respondents of the sample of NMU students have shown that such a program would be popular and well utilized by NMU students. Not only would NMU student's have a safe alternative to getting home after they have consumed alcoholic beverages, the entire community of Marquette, MI would be a safer place with less drunk drivers on the streets. Such a program could also be a great marketing strategy and could be included in tuition costs so that there would be little cost to the University.

Drinking and driving is one of the most dangerous activities associated with alcohol consumption (Clapp, Johnson, Voas, Lange, Shillington, & Russell, 2005). Based on the sample, 74% of NMU students drink at least once a week. In the past 30 days, 25% of NMU students drove a vehicle after having consumed two or more alcoholic beverages. In the past 30 days, 30% of NMU students rode with a driver who had consumed 2 or more alcoholic beverages. The study also showed that 10% of NMU students had been the driver of motor vehicle that was involved in an accident after they had consumed alcoholic beverages.

These number prove that NMU students drink, drive after having consumed alcohol, and ride with others who have consumed alcohol. Due to the seriousness of the implications provided, options should be considered on how to reduce the number of NMU students driving motor vehicles after having consumed alcohol or riding with others after they have consumed alcohol.

Of the respondents, 91% percent of NMU students said that they would definitely not or not likely ride with someone who had consumed alcohol if a free ride home service was

provided. Ninety five percent of NMU students said that they would definitely not drive or would not likely drive if a free ride home service was provided. Taking both of these numbers, it seems as though a free ride home service could definitely have a great effect on the number of NMU students getting into motor vehicles and driving or riding with someone who had been drinking.

The final question of the survey asked students why they would not use such a service. The majority of students answered “other” (48%) and wrote in their own answers. The majority of the students who answered “other” responded that they would use the service, did not want to leave their cars behind, only drink places they can walk home to, always have a designated driver, or believe the service would take too long. Twenty three percent of the respondents marked the answer that said “do not want to wait”. Sixteen percent answered that they would not want to ride with others, 10% said it would be inconvenient, and 3% said that they would rather drive.

If a free ride home service were to be instituted, the service would have to be quick and convenient. Students do not want have to wait an extended period of time to get home. The faster the service, the more effective it would be. This means that more than one vehicle and more than one driver would have to be utilized. The service would also have to be convenient. The telephone number for the service could be placed on the back of every student ID. Students could then call the service to pick them up from the exact location or various pick up points located throughout convenient locations in Marquette, MI. Although such a service would cost money to initiate and maintain, the positive effects could be enormous. The study has shown that students are drinking and driving and are riding with others who are drinking and driving.

This dangerous activity does not only put NMU students at risk but it also puts the entire Marquette, MI community at risk.

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APENDIX A

Survey

1. What is your age?

Less than 18

18-20

21-24

25-29

30 and over

2. What is your class standing?

Freshman

Sophomore

Junior

Senior

Post-Bachelorette

Graduate Student

3. Where is your residence?

Living in a residence hall

Living in a university apartment

Living in a non-university apartment

Living at home with the parents

For the purpose of this survey, one drink is defined as either one 12 ounce beer or one 5 ounce wine or 1 1/2 ounces of liquor.

1. During the past 30 days, on how many days did you personally consume Alcohol? (beer, wine, liquor)

0 days

1 through 5 days

6 through 14 days

15 through 29 days

all 30 days

2. Think back over the last two weeks. How many times have you had four or more drinks in one sitting?

never

once

twice

three or more times

3. Think back over the last two weeks. How many times have you had five or more drinks at one sitting?

never

once

twice

three or more times

During the past 30 days, how many times have you experienced or engaged in the following due to your alcohol use?

1. Drove a car after having consumed two or more alcoholic beverages?

0 times 1 to 3 times 4 or more times

2. Was a passenger in a vehicle whose driver had consumed two or more alcoholic beverages?

0 times 1 to 3 times 4 or more times

3. Been arrested for OWI?

0 times 1 to 3 times 4 or more times

1. Would you have drunk and drove if a free ride home service was offered?

no

not likely

maybe

more than likely

definitely

Appendix B

**Application for Review of Research
Involving Human Subjects**
NMU Institutional Review Board (IRB)



Submission of this application signifies that you have read the NMU IRB Policy Manual and agree to adhere to the procedures and policies explained therein, and that you have completed the [requisite CITI Human Subjects Research Training Modules](#). You must include your CITI Completion Report as an attachment to this IRB application.

Submission of applications to the IRB review will be conducted electronically according to the following procedure:

1. After completing this application, the principal investigator will forward the application to the Department Head for approval.
2. If the Department Head approves the project, s/he will forward the application electronically to the administrative assistant to the IRB (kmaki@nmu.edu) and the IRB chair (dereande@nmu.edu). Please copy the principal investigator on the e-mail.

I. **Name of Investigator** [Andrew J Nogar](#)

Department [Criminal Justice](#)

Mailing Address [106 E Pepper Tree Dr Palatine IL 60067](#)

Phone [847-997-4770](tel:847-997-4770)

Email anogar@nmu.edu

II. **Faculty Advisor** (for student research) [Dr. Warchol](#)

Advisor's Phone [906-227-1617](tel:906-227-1617)

Advisor's E-mail gwarchol@nmu.edu

III. List the CITI Modules you have taken within the past three years:

IV. Project Title: Preventing Impaired Driving Through College Based Free Ride Home Programs

V. Funding: Pending funding decision Currently funded Not funded^x

List source of funding (if applicable):

VI. Proposed project dates: from [October 2011](#) to [November 2011](#)

Note: Do not begin your research (including potential research subjects) until you receive notification that your application has been approved by the IRB. This process will take approximately 2 weeks (excluding breaks).

VII. Type of Review (check one)

Administrative review Yes¹ No

Expedited review Yes² No

Full review Yes No

¹ If yes, explain why you feel your project should receive an administrative review (please relate your argument to one of the categories listed under Section I Part D in the IRB Manual).

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If yes, explain why your project should be expedited (please relate your argument to one of the categories listed under Section I Part D in the IRB Manual) and complete this application form.

There should be an expedited review based on category vii of the expedited review section. The research will use a survey and will be based on individual's behaviors.

IIX. Project Description (Abstract)

Please limit your response to 200 words

NMU students will be administered a survey online in order to gain responses to whether or not they would have driven home after they had been drinking or rode in a vehicle with someone who had been drinking if a free transportation service was offered.

<input checked="" type="checkbox"/> NMU student's	<input type="checkbox"/> Pregnant women, fetuses, or neonates	<input type="checkbox"/> NMU faculty or staff
<input type="checkbox"/> Cognitively impaired	<input type="checkbox"/> Prisoners	<input type="checkbox"/> Adult, non-student
<input type="checkbox"/> Minor	<input type="checkbox"/> Non-native speakers	

Number of subjects 1250

Age range of subjects 18 to Older

X. Procedures

A. Describe how the subject pool will be identified and recruited. If the subjects receive payment or compensation for participation, state the amount and form of payment.

The Office of Institutional Studies will develop the subject pool.

B. Discuss where the study will take place and any equipment that will be involved.

The survey will be administered online through the use of the students Northern Michigan University e-mail accounts.

- C. Describe what the participants will be doing in the research project and how long will they be asked to participate. Attach any interview scripts, questionnaires, surveys, or other instruments that the participants will be asked to complete or respond to.

Participants will be answering the attached survey.

- D. If there are any costs—laboratory tests, drugs, supplies, etc.—to the subjects for participating, they should be explained.
- E. If deception is involved or information withheld from the subjects, please justify the withholding and describe the debriefing plan.

XI. Risks

Describe the nature and likelihood of possible risks (physical, psychological, social, etc.) to the subjects and precautions that will be taken to minimize them. **Simply stating “none” is unacceptable; most research presents some risk to subjects.**

There will be minimal risks of any kind to the subjects. The survey will be administered online through the use of e-mail, the subjects will remain anonymous, and their results will remain anonymous.

XII. Benefits

Describe the benefits to the subject and/or society. The IRB must have sufficient information to make a determination that the benefits outweigh risks.

Northern Michigan University and the Marquette, MI area will benefit from the survey in question. The survey will provide information on current NMU students alcohol consumption, the number of times they have driven under the influence within the last 30 days, number of times they have rode with a drunk driver within the last 30 days, and whether they would have done so if a free ride home service was offered. The information will then be broken down further by class standing, age, and type of residence in which they live. This information will prove useful to NMU, Marquette, MI,

and other universities throughout the country which may be interested in conducting a similar experiment.

XIII. Voluntary Participation

Describe how you will ensure subject participation is voluntary. A copy of the consent form to be signed by the subject should be attached to this proposal, (See Section IV in the IRB Manual for information about informed consent forms.) If your research is exempted from obtaining a signed informed consent release, please include a written protocol that indicates how informed consent will be obtained.

The survey will be administered online by use of e-mail so students will have the decision as to whether or not they would like to answer the survey. There will be no rewards/risks to answering or not answering the survey.

XIV. Confidentiality of Data

Describe how you plan to protect the confidentiality of the data collected. Include a description of where the data will be stored and who will have access to it. If the data will be coded to protect subject identity, this should be explained. NOTE: ALL DATA MUST BE RETAINED FOR 7 YEARS

The data will be stored using the Qualtrics software. The software will collect and store the data in anonymous fashion. I and the Office of Institutional Research will be the only ones with access to the data.

Upon approval from the IRB, you will be issued a project number. Please list this project number on all materials distributed to your participants. If your project is approved, you will have one year from the date you receive your project number to conduct your research.

Within one year of your project approval, you must submit either an End of Project Report or request a one-year extension by submitting a Project Renewal Form.

At any point, should you wish to make changes to your protocol, you must submit a Project Change Form before initiating the changes.

If any unanticipated problems arise involving human subjects, you must immediately notify the IRB chair (dereande@nmu.edu) and NMU's IRB administrator (tseethof@nmu.edu) and must submit an Unanticipated Problem/Adverse Event form.