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Perception of risks related to drinking and driving among UB students



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Title Page

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Abstract

The perception of UB students regarding risks associated with drinking and driving was studied with the aim to create a baseline data on perceived risks of drunk driving among college students in Belize. Quantitative descriptive methodology was used to look at the relationships between the variables while stratified sampling method was used for sample selection. Questionnaires were used for online (surveymonkey.com) data collection with a total of 81 students participating from the selected target population. Results showed that majority (95.1%) of respondents from different faculties indicated that they are aware of the risks associated with drinking and driving. Although students are aware of the risks and even proffered solutions on how to curb the menace of drinking and driving among college, majority (75.3%) of the total respondents indicated that they have consumed alcohol one time or the other in their life time. Out of the total, 64.3% admitted that they have had one trouble or the other as a result of alcohol consumption including driving and drinking or being driven by a drunk driver. The study therefore concluded that UB students are aware of harms and risks associated with drinking and driving but they are still involved in drinking and driving. The study's findings suggest that interventions should focus on lowering college students' risk-taking attitudes and raising risk perception to reduce risky driving behaviors.

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Chapter One

Statement of the Problem

In the United States alone, Hingson, Zha, & Weitzman, (2009) reported that each year an estimated 3,360,000 students between the ages of 18 and 24 drive under the influence of alcohol. In addition, each year an estimated 599,000 students between the ages of 18 and 24 are unintentionally injured under the influence of alcohol while an estimated 696,000 students in that age group are assaulted by another student who has been drinking (Hingson et al., 2009). Alcohol consumption influences coordination, leads to poor judgment and can cause accidents. Majority of Belize's population are youth below the ages of 35 (Statistical Institute of Belize [sib].org, 2014) and college students form part of that population. Although people of different ages could be daring youth are known to be very daring, adventurous and experiment with many substances including alcohol. Many young people have access to vehicles and can drive even sometimes before the legal driving age. With the increase in road traffic accidents from drunken driving (7NewsBelize.com) accessibility to alcohol and vehicles; and the daring adventurous nature of many youth in college, altered perception of risks associated with drinking and driving may exist, hence the need for current study to assess the perception of risks related to drinking and driving among UB students.

Purpose of the study:

Several studies have reported high rates of drinking and alcohol-related problems, including drinking and driving, among college students. However, most studies have been conducted in other countries and colleges but not in Belize and not at UB. With increase in road traffic accidents some resulting from drunken driving (Hingson et al., 2009); college students may not be aware of the risks associated with drunk driving or if they are aware, they may or may not be taking heed to the seriousness of the matter. This study therefore, is specifically targeted to UB students with aim to assess their perceived risks related to drinking and driving. UB is the highest educational institution in Belize and its students have the highest levels of formal education that exists in the country. The University has a faculty of nursing, where student nurses, pharmacist and medical laboratory technologists are regularly sent to the hospitals for internship, come face to face with effects of drinking and driving.

Although motor vehicle accidents mortality and morbidity rates significantly impact the health of Belizeans, the estimates may need to be adjusted by 25% to account for general underreporting that occurs in developing countries (Kopits & Cropper, 2005). This study is needed to identify the various factors that lead to or increase the risk of road traffic accidents. There is a paucity of information, data or published reports on road traffic epidemiological, economic, and risk factor data. This scarcity of data hinders the development of interventions that effectively address motor traffic accidents in Belize.

Significance of the study:

The significance of this study is to create a baseline data on perceived risks of drunk driving among college students. Although there is an ongoing traffic safety project, the project is yet to conduct studies of this nature at the moment. The baseline data and recommendations will stimulate further detailed and comprehensive research in this area. The study result will also serve to create awareness to UB students on the risks associated with drunk driving. Finally the study results will in a way guide policy makers and traffic control officials to adopt other effective approaches to reduce the incidence of drunk driving among college students. This study is needed to identify the perception of students that led to or increase the risk of road traffic accidents. There is a paucity of information, data or published reports on road traffic epidemiological, economic, and risk factor data. This scarcity of data hinders the development of interventions that effectively address motor traffic accidents in Belize.

Research question:

Are UB students aware of the risks associated with drinking and driving?

Limitations:

1. The data for this study was collected using questionnaire. Although the data was collected anonymously, we noticed some minor discrepancies in the students' responses that bother on honesty.
2. Because the study was limited to UB students alone, the results was not used to generalize as being applicable to other college students in Belize

Definition of terms:

Drink: In this study the term drinking does “not include a few sips of wine for religious purposes.” Rather, a drink in this context is defined as “a glass of wine; a wine cooler; a shot of hard liquor such as rum; a mixed drink; or beer.

Perception: The state of being or process of becoming aware of something through the senses.

Casual Drinking: refers to social drinking in a social setting without intent to get drunk.

Binge Drinking: the consumption of an excessive amount of alcohol in a short period of time.

Coordination: the ability to use different parts of the body together smoothly and efficiently

Risks: a situation involving exposure to danger.

Drunk driving: act of operating or driving a motor vehicle while under the influence of alcohol or drugs to the degree those mental and motor skills are impaired.

Chapter Two

Literature review

Introduction

Although many issues are of concern among college students, drinking and driving still remains a source of serious anxiety (NHTSA, 2005). In the United States alone, Hingson, Zha, & Weitzman, (2009) reported that each year an estimated 3,360,000 students between the ages of 18 and 24 drive under the influence of alcohol. In addition, each year an estimated 599,000 students between the ages of 18 and 24 are unintentionally injured under the influence of alcohol while an estimated 696,000 students in that age group are assaulted by another student who has been drinking (Hingson et al., 2009). The magnitude of drinking and driving among college students has become so serious that Wechsler, Lee, Nelson, & Lee, (2003) in a 2001 College Alcohol Survey, found that one in three college students who regularly drove reported driving after drinking in the previous month. In 2005, there were 16,885 traffic fatalities due to alcohol-related crashes and over 1.4 million drivers were arrested for driving under the influence of alcohol or narcotics (NHTSA, 2005). Although there were no data found on deaths or harm as a result of drinking and driving among college students in Belize, the attendant road traffic accidents being experienced in the nation showed that the road traffic accident is of concern to the nation. According to the WHO data published in April 2011 Road Traffic Accidents Deaths in Belize reached 94 or 8.02% of total deaths. The age adjusted Death Rate is 36.95 per 100,000 of population and Belize ranked #15 in the world (worldlifeexpectancy.com). This current study intends to assess the perceived risks of drinking and driving among University of Belize (UB) students.

Defining the problem of drinking in college students

In examining the problem of drinking and driving among college students, a major problem is the definition of a “drink.” There appears to be no standard definition of what “a drink” is among many authors (Clements, 1999). For example, Farke W and Anderson P (2007) defined binge drinking as five or more 'standard drinks' in a single occasion, Lekskulchai V, Rattanawibool (2007) used only one standard drink in their studies. The differences in definition and estimation of one’s drink, makes it difficult to directly compare studies. For this reason, even individuals are not always accurate in estimating their level of intoxication (MacDonald, Zanna, & Fong, 1995; Turrisi & Jaccard, 1991) and thus, may drive when they are unaware that they are intoxicated. However, even if individuals are aware of their level of intoxication, they may still drink and drive (Lewis & Merz, 1995; Turrisi & Jaccard, 1991). This present study was not designed to provide a solution to the differences seen in the definition of what constitutes “a drink” rather to simply assess the perception of risks related to drinking and driving. In this study therefore, the term drinking does “not include a few sips of wine for religious purposes.” Rather, a drink in this context is defined as “a glass of wine; a wine cooler; a shot of hard liquor such as rum; a mixed drink; or beer within a day.

Impact of drinking and driving

Globally, motor vehicle crashes are a major cause of fatalities and injuries and a globally recognized public health problem (Jacobs, Aeron-Thomas, & Astrop, 2000; Kopits & Cropper, 2003; Murray & Lopez, 1997a, 1997b, 1997c; World Health Organization [WHO], 2004a). In 2000, the estimated motor vehicle crash mortality rate for the world was 20.8 per 100,000 population with a rate of 30.8 for males and 11.0 for females (WHO, 2004a). WHO (2004a) reported that an estimated 1.26 million people died in 2000 from motor vehicle crashes worldwide, with 85% to 90% of deaths occurring in low and middle income countries (Peden,

McGee, & Sharma, 2002). Recent estimates on the number of motor vehicle crash related deaths range from 750,000 to 880,000 persons for 1999 with 85% of these deaths occurring in low and middle income countries (Jacobs et al., 2000). Jacobs et al, (2000) also estimated worldwide motor vehicle crash related injuries at 23 to 34 million persons annually.

Apart from the mortality and morbidity, motor vehicle crashes produce an additional economic burden on countries. The estimates ranged from 0.3% to 4% of gross national products (GNP) (Jacobs et al., 2000; Kopits & Cropper, 2003; WHO, 2004b). Widely accepted formulas provide a crude estimate of the economic impact of motor vehicle crashes by using the value of 1% of the gross national product (Jacobs et al., 2000; WHO, 2004b). However, recent studies suggest that a more realistic value would be 2% of GNP for highly motorized countries (high income countries) and 1% of GNP value for less motorized countries (low and middle income countries) (Jacobs et al., 2000; Kopits & Cropper, 2005; WHO, 2004).

Developed countries have studied the causes and effects of motor vehicle crashes and have implemented measures to reduce the incidence (Odero, Garner, & Zwi, 1997; Soderlund & Zwi, 1995). However, low and middle income countries such as Belize have lagged in addressing the effects of motor vehicle crashes, by failing to implement comprehensive interventions shown to be effective in reducing injury and deaths (Nantulya & Reich, 2003; Odero et al., 1997; O'Neill & Mohan, 2002; Soderlund & Zwi, 1995).

Regionally, Hoare (2007) reported that the economic and social costs of motor vehicle crashes in Latin American and Caribbean countries provide a glimpse of the impact of motor vehicle crashes. In 2002, the Pan American Health Organization (PAHO) (2004a) reported that over 128,000 persons died due to MVCs in the Americas. Of the reported deaths in 2002, the Latin

American and Caribbean countries of Brazil, Colombia and Mexico accounted for 46% of the fatalities (PAHO, 2004a). Although these countries accounted for the majority of fatalities, smaller population countries have shown disproportionate mortality rates. Mortalities rates in the Latin American and Caribbean countries range from 15 per 100,000 populations in high-income countries to 18.1 per 100,000 population in low and middle income countries. In Caribbean countries, these rates can range from 26 (Guadaloupe) to 64.1 (St. Lucia) per 100,000 population (Le Franc & Alleyne, 2004; PAHO, 2004a). The disproportionate mortality rates in the Caribbean exemplify the need for concern and the urgency to address the steady increase in the number of motor vehicle crash related deaths in Latin American and Caribbean countries especially drunk driving related accidents. Vasconcellos (1999) identified possible reasons for the observed increasing trends of motor vehicle fatalities and injuries. The motor vehicle crashes were attributed to multiple causes, such as poor traffic management, lack of enforcement of traffic regulations, poor road conditions and maintenance, and the absence of a coordinated effort to address motor vehicle crash related deaths and injuries (Vasconcellos, 1999). These challenges require a coordinated effort to reduce the mortality and morbidity rates attributed to motor vehicle crashes hence the focus of current study.

In Belize, apart from national and PAHO reports, just two non-peer reviewed journal article about motor vehicle crashes was found. Hoare (2007) reported that males were 2.6 times more likely than females to suffer from traffic accident injury and identified the 21 to 25 age group as the one most at risk. Hoare (2007) reviewed police reports from 1990 to 1992 and found the data to be deficient in content. In 2002, traffic accidents were the leading cause of death in Belize (National Health Information and Surveillance Unit [NHISU], 2003). Available mortality and morbidity data show that MVC mortality rates rose from 10.7 per 100,000 population in 1993 to

31 per 100,000 in 1999 (PAHO, 1998, 2002). During the period of 1990 to 1998 (excluding 1992 due to unavailable data), males accounted for 84% of the deaths from traffic accidents (WHO, 2004a). traffic accidents accounted for 49% and 62% of deaths from all external causes of death for the period 1993 to 1996 and 1996 to 1999, respectively (PAHO, 1998, 2002). Silvi (2004) reported that Belize had the highest male-to-female death ratio of 5.4 per 100,000 population relative to 12 countries during 1985 to 2001, but did not identify whether these were adjusted rates or not. Proportionally, Belize reports one of the highest mortality rates in Latin American and Caribbean countries in 2002 with 30.1 per 100,000 population (PAHO, 2004a). Mortality rates for males increased from 14.4 per 100,000 population in 1993 to 55 per 100,000 in 1999, whereas female rates changed from 6.9 per 100,000 population to 7.4 per 100,000 for the same period, (PAHO, 1998, 2002; Hoare, 2007).

Causes of drinking and driving among college students

Although majority of students come to college already having some experience with alcohol, certain aspects of college life, such as unstructured time, the widespread availability of alcohol, inconsistent enforcement of underage drinking laws, and limited interactions with parents and other adults, can intensify the problem. In fact, college students have higher binge-drinking rates and a higher incidence of drunk driving than their non-college peers (National Institute on alcohol abuse and Alcoholism, 2013). Many intra- and interpersonal factors have also been studied in relation to college student drinking patterns and associated problems. For instance, certain personality traits such as neuroticism and conscientiousness are related to problematic alcohol involvement (Littlefield, Sher, Wood, 2010). Other studies have investigated the role of stress, tension reduction (Rutledge & Sher, 2011), and coping (Goldstein & Flett , 2009; Moeller

& Crocker, 2009) on alcohol drinking patterns. In their review of the literature, Kuntsche, Knibbe, Gmel & Engels, (2005) concluded that drinking for social motives appears to be associated with moderate alcohol use, whereas drinking for coping reasons is associated with alcohol-related problems.

Drinking behavior has been reported to be influenced by many factors, including messages in the media, community norms and attitudes, public and institutional policies and practices and economic factors (Toomey & Wagenaar, 2002). College student drinking however may be influenced majorly by some of these factors but other factors could play a vital role especially on the decision to drive after drinking. Issues commonly associated with drinking among students include poor academic performance, damage to property, sexual activity that could be unprotected or date rape, injuries and sometimes suicide.

Scales have been developed and validated to measure and identify the following six contexts of drinking within a college population (Beck, Thombs, Mahoney & Fingar, 1995):

1. Social facilitation (drinking in a context of conviviality and social enhancement such as a party with friends or to have a good time).
2. Peer acceptance (drinking to be part of a group or to gain peer approval).
3. Emotional pain (drinking to relieve depression or stress or to forget about academic or personal problems).
4. Family drinking (drinking during family religious or celebratory circumstances).
5. Sex-seeking (drinking to establish sexual relationships such as drinking to bolster confidence to talk to or have sex with someone); and
6. Motor vehicle (drinking while in a parked car or while driving around).

These scales have been shown to have acceptable and reliability across genders (Beck, Arria, Caldeira, Vincent, O'Grady & Wish, 2008), and discriminant validity in identifying high-intensity drinkers (Beck et. al., 2008; Thombs, Beck & Mahoney, 1993; Thombs, Beck & Pleace, 1993), drinking drivers, and those who ride with a drinking driver (Beck et al., 1995; Thomas et. al., 1993). It might be expected therefore that driving after having too much to drink (drinking after having too much to drink---poorly worded) would be less common in countries with a higher legal age for purchasing alcohol and in those with more draconian drink driving laws. It is possible that concern about drinking and driving might also be greater in more developed countries where immediate health priorities related adequate environmental protection, hygiene and nutrition are less pressing. Belize being a developing country with archaic and weak traffic laws might be facing a higher risk of drinking and driving amongst population compared to other developed countries. Although the University of Belize has a majority of its population living outside dorms, less social events are organized per semester and alcohol use on campus is banned unless with special permission, the country statistics do not offer much comfort.

7News Belize (May, 20th 2014) reported that a global survey by the World Health Organization shows that Belizean drinkers consume large volumes of alcohol. Spread across the entire population, consumption is quite low in comparison to other countries, but it is trending up sharply. From 2003 to 2008, the average consumption for persons 15 and older was 5.3 liters of pure alcohol per year - that's about 12 pints. But for 2008 to 2013, it was up to 6.8 liters, about 14 pints. And while that is the average, the study found that among drinkers, consumption was very high - meaning there's a lot of binge drinking, or what would be called, sprees. Male drinkers 15 and older consumed 67.8 pints of pure alcohol, and females of that same age, about 44 pints. Although the issues of traffic safety are presently being addressed by the government of

Belize through a special project, such projects will still require necessary empirical data that can help inform necessary intervention methods they plan to implement.

Risks associated with drinking and driving among college students

Perceptions of risk play an important role in one's decision to drink and drive. Nonetheless, drinking among college students most often occurs in a social context, thus, other individuals may also influence decisions to drink and drive. The fact individuals choose to drive despite their level of intoxication and impairment indicates that additional variables impact one's decisions concerning drinking and driving. Heavy episodic consumption puts college students at risk for negative health, academic, social, and interpersonal consequences. Such consequences include alcohol poisoning, traumatic injuries, motor vehicle accidents, antisocial/aggressive behavior, sexual assault, unplanned pregnancy, and sexually transmitted disease (Hingson & Howland, 1993; Larimer, Lydum, Anderson, & Turner, 1999; Quigley & Marlatt, 1996; Rivinus & Larimer, 1993; Wechsler, Davenport, Dowdell, & Moeykens, 1994; Wechsler et al., 1995; Wechsler & Isaac, 1992). Drinking also interferes with academic performance too. About 25 percent of college students report academic consequences from their drinking, including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall (Wechsler et al., 2002a).

Even though Belize's media have reported a number of mortalities involving UB students in the past, reports did not necessarily link such mortalities to drinking and driving though it may exist. You could be easily challenged on this assertion- you are widely speculating. Previous studies examined in this review showed the consequences of drinking and driving in other countries and although they may be applicable to UB students, no data exist in recent times (you said earlier

you have no UB data any at all to show such evidence. Whereas, this study does not intend to go into such details and may not be generalized, a baseline data can be generated as to the perception of college students to drinking and driving which can form the foundation for other large scale studies.

Present study:

This study was designed to evaluate the perceived risks associated with drinking and driving among UB students with a view to create necessary data that can inform intervention methods if such situation is found to exist. !!! The study will contribute literature in terms of cultural peculiarities of Belize as compared with other countries where similar studies were conducted.

Although researchers have focused on many important outcome measures of drinking and driving among college students, such as drunken driving alcohol use, frequency of drunken driving, and characteristics of individuals who drink and drive, an important aspect of drinking and driving among UB students has not been adequate if done at all. Poorly worded The present study intends to investigate the perception of risks associated with drinking and driving as well as the likelihood of providing the much needed data especially so with the recent project on road traffic safety.

Although motor vehicle accidents mortality and morbidity rates significantly impact the health of Belizeans, the estimates may need to be adjusted by 25% to account for general underreporting that occurs in developing countries (Kopits & Cropper, 2005). This study is needed to identify the various factors that lead to or increase the risk of road traffic accidents. There is a paucity of information, data or published reports on road traffic epidemiological, economic, and risk factor data. This scarcity of data hinders the development of interventions that effectively address motor traffic accidents in Belize.

Chapter Three

RESEARCH DESIGN

Quantitative descriptive methodology was used to look at the relationships between the variables with the intent to establish cause and effect of the circumstances and to also use statistics that can be implored (analyzed) for the possibility of generalizing the findings among UB students. Questionnaires shall be used for data collection. The questionnaire for this research was created on surveymonkey.com.

Sample size

The sample size has been calculated considering the population of students at UB Belmopan Campus.

The proportions and the distribution of the population are as follows:

- a) Population of Belmopan Campus = 2418
- b) Sample size ($n=N/(1+ne^2)$) is 81
- c) Mean of population is 1209.5
- d) Standard deviation is 698.16
- e) Standard error is (S/\sqrt{n}) 34.96
- f) $100(1-\alpha)\%$: Confidence Level = 95% (z-score = 1.96)
- g) Margin of Error is (standard of error X Z score) $34.96 \times 1.96 = \underline{68.52}$

Mean	1209.5
Standard Error	14.19800455
Median	1209.5
Mode	#N/A
Standard Deviation	698.1607981

Sample Variance	487428.5
Kurtosis	-1.2
Skewness	5.29597E-17
Range	2417
Minimum	1
Maximum	2418
Sum	2924571
Count	2418

Participants and Sample size

The participants for this study comprised of 81 students who are actively registered (both full time and part time) and are taking classes at UB central campus.

Sample selection process

Sample selection was based on active registration of students at the Belmopan central in all four faculties. Stratified sampling technique was used to select the number of students that will participate from each faculty. Group members contacted lecturers from different faculties to forward the survey link to students. Students were informed to take survey only once and responses were collated electronically. Oversampling was used to ensure the number of students was appropriately covered.

Sample selection criteria:

Inclusion criteria: Students of any age, gender or ethnicity who were currently enrolled taking classes at UB central campus AND can provide informed consent were included in the study.

Exclusion criteria: Any student who was unwilling/unable to provide informed consent and has indicated (directly or indirectly) he/she will not be truthful/honest in providing answers was excluded.

Variables: The variables considered for this study are as follows:

Independent Variables:

Demographics: Sex, age, and academics.

Perception of harm: The general perception of harm will be assessed by the use of the questionnaire. Perception of specific harm will be assessed using the adapted but modified Benthin Risk Perception Measure (Benthin, Slovic, Severson, 1993).

Data collection and Monitoring

Data collection Instrument: Questionnaire was used for data collection. The questionnaire was divided into four parts consisting of introduction, demographics, use of alcohol and perception for risks associated with drinking and driving. Questions were drawn based on the objective of the study. The supervisor of the research and lecturer checked the questionnaire and gave appropriate feedback to ensure validity of the questionnaire. Perception of specific risks was assessed using the adapted but modified Benthin Risk Perception Measure (Benthin, Slovic, Severson, 1993). In total, 18 questions constitute the questionnaire.

Data Gathering Procedure: The data gathering procedure was divided into two phases: pretesting the instrument and administration of the instrument.

Pre-testing the instrument. Pre-testing the questionnaires was done among UB students to identify possible problems before the study was launched. The pretesting was done both using online and paper base methods. After completion of pre-testing on a sample of 10 UB students, it was observed that on question #9 “Have you ever done poorly in school because...” was left

blank. The option “do not apply” was added to that question with the intention that that student has not experienced any of the following that was asked.

Administering the instrument. Online questionnaires using survey monkey was used to collect data from students. Samples were collected from students registered for different programs from different faculties. Questionnaire was shared with specific lecturers in different faculties who made such available for their students to help in the data collection. Online survey was chosen to reach out to many students within a short period so as to hasten data collection. Online survey was also used because of ease of access to the students who should find it more convenient to use than paper based survey. Overall, sufficient data was collected from more than the number of students required due to the oversampling method employed.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyse the data collected.

Chapter Four

Data Presentation, Analysis and Discussion

Data Entry and Analysis

Data entry: SurveyMonkey online data collection tool was used to collect data from respondents. Sufficient data were collected for the analysis which was then transferred to SPSS software (version 22) for detailed analysis of the results. The questions were coded for ease of analysis on the SPSS. Codes (eg. Male (1), Female (2)) from questionnaire were created on SPSS to prepare the data entry screen.

Data analysis: Our research questionnaire consisted of 18 questions regarding our topic *“Perception of risks associated with drinking and driving amongst UB students”*. Our sample size was 81 from the population of 2418 UB Students.

In summary, the tables below illustrate data from students from faculty at the UB Belmopan campus. The analysis of the data collected is as follows:

- Out of a total 81 respondents from different faculties 95.1% indicated that there are risk associated with drinking and driving.
- Data on student’s opinion on awareness of harms associated with drinking and driving showed that 91.3% of respondents are aware of the harms.
- Varying degrees of risk were known by UB students including
 - Loss of finances (76.5%)
 - Death (22.3%);
 - Physical injuries (21.4%)

- Disabilities (19.1%)
- Destruction of property (19.1%)

87.7% of the respondents indicated that drinking and driving is a serious problem, 7.4% saw it as a minor problem while 2.5% did not see it as a problem. 2.5% did not respond to the question.

Majority (74.1%) of the respondents opined that drinking and driving can be avoided while 12.3% were not sure or that it can be slightly avoided and even suggested how to deal with the problem of drinking and driving where

- Campaign (21.5%)
- More laws (21.1%)
- Monetary fine and jail sentence (16.7%)
- Monetary fine (14.9%)
- Jail (7.9%)
- Ban alcohol (5.7%)
- Do nothing (0.4%).

75.3% (61) of the total respondents indicated that they have consumed alcohol one time or the other in their life time. Out of the total, 64.3% admitted that they have had one trouble or the other as a result of alcohol consumption including driving and drinking or being driven by a drunk driver.

Our study confirms previous studies reviewed. For instance, Wechsler, Lee, Nelson, & Lee, (2003) in a 2001 College Alcohol Survey, found that one in three college students who regularly drove reported driving after drinking in the previous month. Drinking behavior has been reported to be influenced by many factors, including messages in the media, community norms and attitudes, public and institutional policies and practices and economic factors (Toomey &

Wagenaar, 2002). College student drinking however may be influenced majorly by some of these factors but other factors could play a vital role especially on the decision to drive after drinking. Issues commonly associated with drinking among students include poor academic performance, damage to property, sexual activity that could be unprotected or date rape, injuries and sometimes suicide.

Other results obtained showed that:

- 61 respondents representing 75.3% of the total respondents consumed alcohol one time or the other in their life time while 19 (23.5%) did not take alcohol before.
- 64.3% of the respondents admitted that they have had one trouble or the other as a result of alcohol consumption including driving and drinking or being driven by a drunk driver.
- 43.2% of respondents drink at least once a week, out of which 33.3% have had 5 or more drinks at a time.
- 43.2% of respondents drink at least once a week, out of which 33.3% have had 5 or more drinks at a time.
- 51.9% of the respondents indicated that their friends seldom drink while 25.9% often drink and 9.9% frequently drank.
- 87.7% of the respondents indicated that drinking and driving is a serious problem, 7.4% saw it as a minor problem while 2.5% did not see it as a problem. 2.5% did not respond to the question.

- A total of 49.4% of the students indicated that there is great risk associated with once per week drinking and driving. 32.1% Moderate risk while 16% slight risk.
- A total of 46.9% of the students indicated that there is great risk associated with occasional drinking and driving. 35.8% Moderate risk while 16% slight risk.
- A total of 49.4% of the students indicated that there is great risk associated with regular drinking and driving. 32.1% Moderate risk while 16% slight risk.
- Majority (45.7%) of the respondents opined that drinking and driving can be definitely avoided by UB students. 28.4% said it can be avoided while 12.3% were not sure or that it can be slightly avoided.
- 95.1% of respondents were of the opinion that there are risk associated with drinking and driving while 3.7% indicated no.
- Every respondent agreed that there were harms associated with drinking and driving. (doesn't this contradict the statement above where you say 3.7% indicate no risk?) Harms associated with drinking and driving showed the following results: Death (22.3%); Physical injuries (21.4%); Disabilities (19.1%); Destruction of property (19.1%); Loss of finances (76.5%).
- Data on student's opinion on harms associated with drinking and driving showed the following results: Aware (33.3%); Very aware (32.1%); Slightly aware (25.9%); Not sure (7.4%) while 1.2% of the students did not respond to the question.
- Suggestions on how to reduce drinking and driving showed the following: Campaign

(21.5%); More laws (21.1%); Monetary fine and jail sentence (16.7%); Monetary fine (14.9%); Jail (7.9%); Ban alcohol (5.7%); Do nothing (.4%).

- 23 (28.4%) males, 57 (70.4%) females, 1 respondent did not respond to the question on gender. There were more female (70.4%) participants than males in the survey.
- The age with the highest responses were 15 to19 (39.5%) while 20 to 25 had (29.6%).
- 49.4% of the respondents are pursuing their associates while 43.2% bachelors degree.

Tables

QUESTION#1

GENDER

	Frequency	Percent	Valid Percent	Cumulative Percent
MALE	23	28.4	28.4	28.4
FEMALE	57	70.4	70.4	98.8
NO NRESPONS E	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#2

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
15TO19	32	39.5	39.5	39.5
20TO24	24	29.6	29.6	69.1
25TO29	11	13.6	13.6	82.7
30TO34	7	8.6	8.6	91.4

35ABOVE	6	7.4	7.4	98.8
NO	1	1.2	1.2	100.0
RESPONSE				
TOTAL	81	100.0	100.0	

QUESTION#3

DEGREE

	Frequency	Percent	Valid Percent	Cumulative Percent
CERTIFICA TE	6	7.4	7.4	7.4
ASSOCIATE S	40	49.4	49.4	56.8
BACHELOR S	35	43.2	43.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#4

FACULTY

	Frequency	Percent	Valid Percent	Cumulative Percent
MANAGEMENT	20	24.7	24.7	24.7
SCIENCE	22	27.2	27.2	51.9

NURSING	15	18.5	18.5	70.4
EDUCATION	24	29.6	29.6	100.0
TOTAL	81	100.0	100.0	

Q#5 CONSUMED ALCOHOL BEFORE

	Frequency	Percent	Valid Percent	Cumulative Percent
YES	61	75.3	75.3	75.3
NO	19	23.5	23.5	98.8
NO RESPONSE	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

	Frequency	Percent	Valid Percent	Cumulative Percent
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QUESTION#6**AGE OF FIRST DRINK**

9.00	1	1.2	1.2	1.2
10.00	2	2.5	2.5	3.7
11.00	1	1.2	1.2	4.9
12.00	3	3.7	3.7	8.6
13.00	2	2.5	2.5	11.1
14.00	3	3.7	3.7	14.8
15.00	6	7.4	7.4	22.2
16.00	10	12.3	12.3	34.6
16.00	8	9.9	9.9	44.4
17.00	11	13.6	13.6	58.0
18.00	6	7.4	7.4	65.4
19.00	2	2.5	2.5	67.9
20.00	1	1.2	1.2	69.1
23.00	3	3.7	3.7	72.8
24.00	1	1.2	1.2	74.1
NO RESPO NSE	21	25.9	25.9	100.0
TOTAL	81	100.0	100.0	

QUESTION#7**HOW OFTEN DO YOU DRINK**

	Frequency	Percent	Valid Percent	Cumulative Percent
ONCEPERWEEK	35	43.2	43.2	43.2
SEVERALTIMESAM ONTH	10	12.3	12.3	55.6
ONCEPERMONTH	10	12.3	12.3	67.9
NO RESPONSE	26	32.1	32.1	100.0
TOTAL	81	100.0	100.0	

QUESTION#8

HAD 5 OR MORE DRINKS AT A TIME

	Frequency	Percent	Valid Percent	Cumulative Percent
YES	27	33.3	33.3	33.3
NO	45	55.6	55.6	88.9
NO RESPONSE	9	11.1	11.1	100.0
TOTAL	81	100.0	100.0	

QUESTION#9**Have You Ever**

	Responses		Percent of Cases
	N	Percent	
ABSENT	9	7.6%	11.1%
DRUNK	4	3.4%	4.9%
POORLY IN SCHOOL	3	2.5%	3.7%
FAMILY PROBLEMS	4	3.4%	4.9%
DRIVEN INTOXICATED	9	7.6%	11.1%
PASSENGER	31	26.3%	38.3%
DRUNK AT PARTY	15	12.7%	18.5%
HAD INJURY	1	.8%	1.2%
DOES NOT APPLY	42	35.6%	51.9%
TOTAL	118	100.0%	145.7%

QUESTION#10**RATE HOW YOUR CLOSE FRIENDS DRINK**

	Frequency	Percent	Valid Percent	Cumulative Percent
OFTEN	21	25.9	25.9	25.9
SELDOM	42	51.9	51.9	77.8
FREQUENTLY	8	9.9	9.9	87.7
ALWAYS	3	3.7	3.7	91.4
NO RESPONSE	7	8.6	8.6	100.0
TOTAL	81	100.0	100.0	

QUESTION#11

NUMBER OF DRINKS TAKEN A STILL DRIVE SAFELY

	Frequency	Percent	Valid Percent	Cumulative Percent
MORE THAN FIVE	5	6.2	6.2	6.2
4 TO 5	10	12.3	12.3	18.5
2 TO 3	19	23.5	23.5	42.0
ONE DRINK	10	12.3	12.3	54.3
NOT APPLICABLE	32	39.5	39.5	93.8
NO REPOSE	5	6.2	6.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#12

IS DRINKING AND DRIVING A PROBLEM

	Frequency	Percent	Valid Percent	Cumulative Percent
SERIOUS PROBLEM	71	87.7	87.7	87.7
NO PROBLEM	2	2.5	2.5	90.1
MINOR PROBLEM	6	7.4	7.4	97.5
NO RESPONSE	2	2.5	2.5	100.0
TOTAL	81	100.0	100.0	

QUESTION#13**ONCE PER WEEK**

	Frequency	Percent	Valid Percent	Cumulative Percent
NO RESPONSE	1	1.2	1.2	1.2
SLIGHT RISK	13	16.0	16.0	17.3
MODERATE RISK	26	32.1	32.1	49.4
GREAT RISK	40	49.4	49.4	98.8
I DON'T KNOW	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

OCCASIONALLY

	Frequency	Percent	Valid Percent	Cumulative Percent
NO RESPONSE	1	1.2	1.2	1.2
SLIGHT RISK	13	16.0	16.0	17.3
MODERATE RISK	29	35.8	35.8	53.1
GREAT RISK	38	46.9	46.9	100.0
TOTAL	81	100.0	100.0	

REGULARLY

	Frequency	Percent	Valid Percent	Cumulative Percent
NO RESPONSE	1	1.2	1.2	1.2
MODERATE RISK	7	8.6	8.6	9.9
GREAT RISK	70	86.4	86.4	96.3
I DON'T KNOW	2	2.5	2.5	98.8
SLIGHT RISK	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#14

IN YOUR OPINION CAN UB STUDENTS AVOID DRINKING AND DRIVING

	Frequency	Percent	Valid Percent	Cumulative Percent
DEFINITELY CAN BE AVOIDED	37	45.7	45.7	45.7
CAN BE AVOIDED	23	28.4	28.4	74.1
UNSURE	10	12.3	12.3	86.4
CAN BE SLIGHTLY AVOIDED	10	12.3	12.3	98.8
CANNOT BE AVOIDED	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#15

**IN YOUR OPINION IS THERE RISKS ASSOCIATED WITH DRINKING &
DRIVING**

	Frequency	Percent	Valid Percent	Cumulative Percent
YES	77	95.1	95.1	95.1
NO	3	3.7	3.7	98.8
RESPONS E	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#16

HARMS ASSOCIATED WITH DRINKING AND DRIVING

FREQUENCIES

	Responses		Percent of Cases
	N	Percent	
PHYSICAL	73	21.4%	90.1%
DEATH	76	22.3%	93.8%
DISABILITIES	65	19.1%	80.2%
DESTRUCTION.OF.PR OPERTY	65	19.1%	80.2%
LOSS.FINANCES	62	18.2%	76.5%
^a TOTAL	341	100.0%	421.0%

QUESTION#17

WHAT ARE YOU OPINION OF UB STUDENTS AWARENESS

	Frequency	Percent	Valid Percent	Cumulative Percent
NOTSURE	6	7.4	7.4	7.4
SLIGHTLYAW ARE	21	25.9	25.9	33.3
AWARE	27	33.3	33.3	66.7
VERY AWARE	26	32.1	32.1	98.8
NO RESPONSE	1	1.2	1.2	100.0
TOTAL	81	100.0	100.0	

QUESTION#18

Reduce Drinking Driving SUGGESTIONS

	Responses		Percent of Cases
	N	Percent	
MONETARY	34	14.9%	42.0%
JAIL	18	7.9%	22.2%
BOTH.MONETARY.JAIL	38	16.7%	46.9%
BAN.ALCOHOL	13	5.7%	16.0%
CREATE.COURSES	27	11.8%	33.3%
CAMPAIGN	49	21.5%	60.5%
MORE.LAWS	48	21.1%	59.3%
DO.NOTHING	1	.4%	1.2%
^a TOTAL	228	100.0%	281.5%

Chapter Five

Conclusions, recommendations and suggestions for further studies

Conclusions

The perception of UB students towards the harms of drinking and driving was studied with the aim to identify current students' perception on drinking and driving and to provide information on the topic due to paucity of data within local content. Out of a total 81 respondents from different faculties 95.1% indicated that there are risk associated with drinking and driving. Based on this data therefore a conclusion can be drawn to imply majority of UB students are aware of the harms involved in drinking and driving. Additionally, UB students (91.3%) are aware of specific harms that result from drinking and driving which helps to buttress the fact that students are not just aware that there are risks involved with drinking and driving but are also aware of specific harms that can arise as a result of engaging in such behaviors. Furthermore, students (87.7%) indicated that drinking and driving is a serious problem and went ahead to proffer solutions as to how the problem can be solved. But with all this knowledge, 75.3% of the total respondents indicated that they have consumed alcohol one time or the other in their life time. With 64.3% out of the total, admitting that they have had one trouble or the other as a result of alcohol consumption including driving and drinking or being driven by a drunk driver.

This study therefore concludes that even though UB UB students are aware of harms and risks associated with drinking and driving but they are still involved in drinking and driving.

Recommendations

In order to reduce the rate of drinking and driving in Belize our government should implement and enforce an education policy to make it mandatory that traffic safety education (as a subject) be taught to all senior secondary and college students. These include interactive skill development in resisting pressures to drink and drive. The goals for this should be to reduce impaired driving (including impairment by drugs), increase seatbelt use, promote speed management, increase intersection safety and educate new drivers. This will be beneficial as the legal age to obtain a driver's license in Belize is that of age sixteen (many teenagers this age are still in high school).

UB student government and other campus clubs should be proactive in creating awareness on the dangers of "even" taking one drink when such students are intending to drive.

Another method to aid in reducing the drinking and driving is promoting mass media campaigns on alcohol-impaired driving (AID) to persuade individuals to either take personal steps to avoid drinking and driving or try to prevent others from drinking and driving. Reinforcing factors may include law enforcement efforts, grassroots activities, and other media messages related to drinking and driving. One important aspect in mass media is its message content. It should involve themes that are used to motivate the desired behavior change towards drinking and driving. Some common motivational themes in mass media campaigns to reduce AID include: fear of arrest and legal consequences of arrest; promotion of positive social norms; fear of harm to self, others, or property; and stigmatizing drinking drivers as irresponsible and dangerous. The

actions promoted by the campaigns also vary, ranging from messages related to abstinence or moderation to more specific behavioral recommendations such as using a designated driver or taking the keys from an intoxicated person who plans to drive. Decisions related to message content are generally made based on the opinions expressed by experts or focus groups rather than on evidence of effectiveness in changing behavior

Suggestions for further research

Although alcohol usage is the primary cause of drinking and driving other factors could be behind the individual involved in drinking. Further studies should be done to investigate the factors that lead to college students being involved in drinking and driving (and other risky behaviors) when they are aware of the harms. If these causes were to be measure and analyzed (and provide possible solutions) this can help researchers understand why “drinking and driving” is a problem.

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Appendix 1

Questionnaire:

Dear Students,

We are UB students conducting a survey on the "Perception of risks associated with drinking and driving amongst UB students". We would like your approval to kindly complete this survey and note that responses will be treated with confidentiality.

You have the right to withdraw from completion of this survey as you wish.

Demographics

1. Gender

Male

Female

2. Age at last date of birth

15 to 19

20 to 24

25 to 29

30 to 34

35 and above

3. What degree are you pursuing?

Certificate

Associates

Bachelors

4. Faculty

Management

Science

Nursing

Education

Use of alcohol

5. Have you ever had alcoholic beverages like beer, wine, wine coolers, or liquor? If no, skip to Q9

Yes

No

6. How old were you when you took your first alcoholic drink?

7. How often do you drink alcohol?

At least once a week

Several times a month

Everyday

Once per month

Never

8. Do you ever have five or more drinks of alcohol at a time?

Yes

No

9. Have you ever.... (Check all that applies)

Been absent from school because you used alcohol

Been drunk at school

Done poorly in school because you used alcohol

Driver under the influence of alcohol

Been a passenger in a vehicle in which the driver was under the influence of alcohol

Been drunk at a party

Had an injury because you used alcohol

Do not apply

10. Kindly rate how you closest friends drink. (Any alcoholic beverages)

Always

Frequently

Often

Seldom

11. If you own a motor vehicle and you drink, what number of alcoholic drinks you believe you can consume and still be able to drive home safely?

One drink

2 3 drinks

4 5 drinks

More than 5 drinks

Not acceptable on my level

Perception of alcohol use

12. Do you think alcohol consumption and driving is a problem?

Minor problem

Not at all a problem

Serious problem

13. In your opinion, Kindly rate how you think UB students can harm them if they do

The following...

Great risk Moderate risk Slight risk No risk I don't know
Drink and drive Once per
Week
Drink and drive
Occasionally

Drink and drive Regularly

14. In your opinion, to what extent can a UB student avoid drinking and driving?

Strongly avoided

Can be avoided

Unsure

Cannot be avoided

Definitely cannot be avoided

15. In your opinion, do you think there are risks associated with drinking and driving?

Yes

No

16. In your opinion, do you think there are risks associated with drinking and driving? (Choose all that applies)

Physical injuries

Death to self and others

Disabilities to self or others

Destruction of property

Loss of finances

17. In your opinion, to what extent do you think UB students are aware of the risks associated with drinking and driving?

Very aware

Slightly aware

Aware

Not aware

Not sure

18. What would you suggest government should do to reduce drinking and driving on our highways? (Choose all that applies)

New and/or stiffer penalties

More law enforcement

More alcohol education in schools

More alcohol education in the mass media (TV, Radio, Magazines etc)

Do campaign to the general public on the dangers of drinking and driving

Ban on alcohol advertising