

A Decade of Cirrhosis

Edna Aurelus*

Assistant Professor, Wagner College, Staten Island, New York, USA

***Corresponding Author:** Edna Aurelus, Assistant Professor, Wagner College, Staten Island, New York, USA.

Received: June 11, 2019; **Published:** July 31, 2019

Identifying the motive of a potential harmful behavior within a specific population requires a deep understanding of that particular group of people. In January 2012, Haiti experienced a catastrophic magnitude 7.0 earthquake where countless lives were vanished forever. In October of that same year, an arrangement to travel to Haiti for medical relief help was finalized. The observation on the increased amount of alcohol consumption among the people there were alarming, to say the least to witness as a primary care provider. Prestige, a well-known beer in Haiti was often observed to be consumed from every street corner to the most upscale hotels in the country. This beer is known to all Haitian as "the beer of Haiti". The earthquake happened in January 2012, since then, frequent visits have been made to Haiti to provide medical care. However, the increased behavior of alcohol consumption remains unchanged. It was impossible not to think that immediate action is required, otherwise we, the country may be faced with a future decade of cirrhosis. As an agent of change, it would be a disservice if choosing to stay stagnant. A plan of action was created immediately in order to adapt and understand better the reason to which this particular population consumes so much alcohol.

After reading this paper you will have a clear understanding on the:

- a. Background and significance of alcohol consumption among adults
- b. Impact on individuals, family, and the community
- c. Ethical, cultural, legal and economic considerations
- d. Data Analyzed
- e. Discussion of the research
- f. Findings
- g. Implications for practice and education
- h. Conclusion

Background and Significance

Alcohol is not an essential nutrient; therefore the body does not need it to survive. The type of alcohol that is consumed by human is called ethanol, it is known to be safe when digested, but not harmless. If consumed imprudently it can cause some irreversible damage to the vital organs. The other two types of alcohol are methanol, which is used as antifreeze and isopropanol, used as rubbed alcohol, they are not ingestible, because they are poisonous. Young adults have some of the highest rates of problem drinking and alcohol use disorders (AUDs) relative to any other age according to Kiselica, *et al* [6]. Given this confirmed information and own observation, it is only logical as a healthcare provider to investigate such behavior and formulate a relevant program to prevent not only fatal crash, but disease like cirrhosis among the people of Haiti. Among all cirrhosis deaths in 2013, 47.9 percent were alcohol related. The proportion of alcohol-related cirrhosis was highest (76.5 percent) among deaths of persons ages 25 - 34, followed by deaths of persons aged 35 - 44, at 70.0 percent in a report published by the National Highway Traffic Safety Administration (NHTSA) in May 2017 [9].

Excessive alcohol consumption prevention has been one of the media and the NHTSA's main target as way of decreasing fatal drunk driving from occurring in an article reported in 2017. They indicate that everyday, 28 people in the United States die in an alcohol-related vehicle crash-that's one person every 51 minutes. Bedelmeir and Detsky [12] indicates that it is estimated that in 2014, over 100,000 people in the United States were hospitalized because of alcohol-related traffic crashes, and 9,967 died which exceed the 6,721 US deaths from HIV in the same year. Acknowledging the severity of harm caused by alcohol consumption only triggers curiosity in finding the motive of such consumption.

Impact on individuals, family, and the community

The National Institute of Alcohol Abuse and Alcoholism reported in 2011 that heavy alcohol consumption in a brief period of time might be dangerous, especially for women, as they metabolize alcohol at slower rates than men stated Sheehan., *et al* [13]. Often time frequent alcohol consumption can result in systemic chaos within a family dynamic. Once chaotic, the family becomes more vulnerable to conflicts, which can expose possible systematic physical, emotional and psychological abuse. Continuous consumption alcohol can become pathological, and can expose the community to risky behavior such as drunk driving, promiscuous behavior and even death. Labrie., *et al.* [5] indicates in her research, "Sexual experience and risky alcohol consumption among incoming first-year college females" participants who were sexually experienced reported stronger alcohol expectancies and endorsed higher drinking motives, and drank more frequently and in greater quantities than sexually inexperienced participants. It is no surprise to predict that higher drinking motives can be negatively impactful not only an individual, but their family and community.

Cultural, legal and economic considerations

Culture defines what is acceptable and what is not within a specific society. However, one must not ignore the legal stigma and biological factor that are connected if the blood alcohol concentration levels (BAC) is found to exceed the legal expectation defined by such society. A BAC is the amount of alcohol in a person's blood, which means the more an individual drinks the higher its BAC level. Alcohol is a depressant, therefore as its level increases in the blood serum which travels the brain, so does consciousness impairment. The New York State (NYS) Department of Motor Vehicle (DMV) [11] reports that it takes only a few drinks to increase your BAC to levels at which it is illegal to drive. And remember, the effects of alcohol on your ability to drive begin at even lower BAC levels after just one drink. One 12 Oz beer contains approximately 1/2 Oz. of pure ethyl alcohol as seen in appendix A. Knowing this fact is extremely frightening to know that with each 12 Oz of beer, there is a consummation of 15 millimeters of pure alcohol effect to the body which also equal to one table spoon. Since this behavior is often observed among the people living in Haiti, they take the consumption of alcohol very lightly and sometime very irresponsible, it was inhumane not to react knowing the fatal consequences.

Per NYS DMV (2017) the legal purchase and possession age for beverages containing alcohol in New York State is 21. Under the state's "zero tolerance" law, it is a violation for a person under 21 to drive with any BAC that can be measured (.02% to .07%) by a breathalyzer. World Health Organization (WHO) in 2014 [14] reveals that many countries in the Americas have established legal limits to blood alcohol content (BAC) while driving, Bolivia, Guatemala, Paraguay, and many Caribbean countries and territories have no such limits. Among the territories that have no such limits is Haiti, because no measuring data is available. One can only imagine the amount of chaos and injuries that can result in a country where there are no type regularity of such fatal substance. Be Responsible About Drinking, Inc. (B.R.A.D.) [1], a nonprofit corporation displays on their website two BAC tables for men and women based on their weight and drinks per hour, please see appendix A for the women, as it indicates that at a weight of 200 pounds the BAC is at 0.02% after one hour with one drink and 0.07% with three drinks. Differently for men, one drink per hour causes their BAC to be at 0.02% from 160 to 200 pounds and with three drinks per hour their BAC is 0.07 at 160 pounds. The effect of alcohol consumption can be costly. Fatal car crashes can affect the healthcare system cost, because they usually include multiple victims and chronic health problem which can be a burden economically. It is rather difficult to locate a reliable concrete data on alcohol regulation and economic consideration of the Haitian people due to limited data from world health organization. However, being a native of Haiti and familiar with the country's penal code, the legal age that is instructed for alcohol consumption is 18 years old.

Data analysis

The Statistical Package for the Social Sciences (SPSS) were utilized to analyze the data collected. Fifty subjects completed the Drinking Motives Questionnaire, Revised (DMQ-R). Data were categorized in three main group: ages, gender and reasons. The questionnaire was provided and collected from each consented subject. Male was categorized by the number one and female by the number two. The questionnaire contains category of reasons, which include four main variables along with subtitles, identifying the different reasons people drink. See appendix B for the questionnaire.

Cross tabulations were completed with the data collected based on participants age ranges, gender and questionnaire responses. Chi-square analysis was selected for this study, because we know that it is relating to a statistical method to assess the goodness of fit between observed values and those expected theoretically. A descriptive statistic on all of the data to analyze findings and evaluate the relationship of each category of reason in regards to their gender and age was completed. See appendix C for more descriptive details.

Discussion of the Research

This study was a quantitative study. It was based on an exploratory approach where questionnaires were provided to participants reside in Haiti to analyze their motives for consuming alcohol. In order to thoroughly understand the motive of alcohol consumption, an exhaustive search was completed using CINHALL, Cochrane, Medline and PSYCH INFO.

Some of the main inclusion words on the study were adults, motives, alcohol consumption, exclusion were adolescents, teenagers and abuse. The process required Institutional Review Board approval (IRB), which was provided by Wagner College in February 2017. Once received, the next step was to retrieved a valid questionnaire. DMQ-R was developed in Italy in 1994 to identify the motive of alcohol use among adolescents. However, this tool has since adopted and utilized by many researcher studying motives among adults as Kuntsche., *et al.* mentioned in 2009 [7].

The strategic plan used to collect data was, while providing care in an outpatient burning unit located in the northern part of Haiti. The secretary registering patients was instructed to inquire about alcohol consumption and if the answer was yes, then patient was asked about if they would voluntarily like to complete the questionnaire if agreed an informed consent and questionnaire were provided to be completed. Participants were advised that there is no pressure for them to complete the questionnaire and they can withdraw at anytime while completing if they feel that the questions were too evasive. We clearly instructed participants that this study is solely investigating motives of alcohol consumption and not alcohol abuse. The questionnaire for this study included eight categories of ages, however the sample reflected only people from three categories, 18 through 50 years of age who participated. Categories 1, 2 and 3 simultaneously represent the followings: represent ages 18-28; 29-19 and 40-50. See appendix C for age categories.

The decision to complete this study, was to determine why the Haitian people consume so frequently alcohol, especially their native beer, prestige. In a study completed by Fitzgerald and Long in 2012 [4], majority of research on alcohol motives has been in the United States with a small number of European studies, therefore this study is primal for the people of Haiti to explore their motives. The percentage of alcohol that this particular beer contains is alarming and activate the motivation to investigate on the behavior, because an increased level of alcohol in the body negatively affect one's health. To know the ingredients on the beer, a purchased of the beer, prestige from a local store in Haiti was made during one of the many trips in the country. The label revealed that the alcohol volume is at 5.6%. Remember, alcohol is not essential for the body, however during different interaction with the participants, all had one type of alcohol consumption in common, and it was prestige. They all verbalized that they drink prestige regularly, one participant even wanted to convince people to drink prestige, by telling them that "prestige can clean your kidneys". This belief was quickly understood that it was a cultural myth, which was carefully analyzed and with the participant, then educated him on the scientific fact of alcohol consumption and kindly declined on the offer. It was obvious what the participant meant by "cleaning your kidneys" was that the beer can keep the kidneys healthy. As a health care provider, it was automatic to know that the information was incorrect, however it was important to be culturally

sensitive and cautious with the conversation, because it was clear that he truly believed that beer would heal his kidneys. It was important that quick education was performed because of the guilty feeling of letting him leave the burn unit knowing that his ignorance on alcohol consumption can have negative impact on his health.

Findings

The results showed correlation between different age ranges, gender differences and reasons for alcohol consumption. Although none of the four categories revealed statistical significance results, there were huge differences in gender choices in regards to their motives for alcohol consumption.

The frequency of each gender's response was analyzed in relation to each variable, enhancement, coping, conformity and social. There were a total of 58 participants, 37 males and 21 females. 52 participants responded to the enhancement, 51 to the coping, 45 to the conformity and 51 to the social variables. To view the sub-variables frequencies for each component refer to the histogram results.

What caught my attention was the fact that social and enhancement include three ages category of ranges 18-28, 29-39 and 40-50 years old where as in coping and conformity include only two age categories of ranges 18-28 and 29-39 years old. It was observed to have a big difference in the coping components where a total of 10 participant responded, it was also noted that 9 males indicates that they drink due to worries and only 1 female indicates that they drink for that same reason. For enhancement, 17 participants responded 11 males indicates that they drink for fun and 6 females for the same reason. What was also interesting was that 12 participants responded to the enhancement variable and 6 males and 6 females indicate that they drink for excitement. The only variable where female participants outweigh the male participants was in the conformity variable. 16 participants responded, 9 females indicates that they drink to fit in and 7 males indicate for the same reason. Another interesting observation was noted on the social component. 12 males reported that they drink for enjoyment, whereas only two females report similar response. See appendix C for complete results.

Implications for Practice and Education

This study was initiated to determine what motivate people reside in Haiti to consume alcohol. The enhancement variable response clearly indicate that both male and female drink for excitement, therefore thorough education is needed within the specific population to avoid fatal injuries and illness. The National Institute of Alcohol Abuse and Alcoholism [10] reports that heavy alcohol consumption in a brief period of time may be dangerous, especially for women, as they metabolize alcohol at slower rates than men. Women must be educated on consuming less to no alcoholic beverages than men.

Based on the results, the next step is formulating a program, to bring forth a comprehensive educational program on alcohol consumption and its fatal consequences to the people living in Haiti. The plan to initiate this program is no later than January 2018 to tackle such problem that will cause multiple cases of cirrhosis in the decades to come. We cannot reiterate enough on the danger of alcohol consumption and the need to prevent ingesting it at a frequent rate. As mentioned earlier, alcohol is not essential to the human body and can become fatal if reaches a toxic level.

Conclusion

The results made an impact in relation to age with social and enhancement, where three categories of age ranges were involved as opposed to coping and conformity where only two categories of age ranges were observed. Interestingly enough, we now know that according to Kuntsche, *et al.* [8], enhancement and social motives are defined as positive reinforcement motives, as they are associated with drinking to enhance positive outcomes, such as affect and sociability. Coping and conformity motives can be considered negative reinforcement motives, as greater endorsement of these motivations are related to drinking to alleviate negative conditions, such as negative affect and fear of negative evaluation as stated by Cooper [2].

Although the results were not statistically significant, they definitely revealed differences in gender and age ranges when it comes to motive of alcohol consumption.

In the future, it is advisable for further studies being conducted with a larger sample groups, that would possibly ended in a statistically significant result. Additionally, the time frame to collect the sample should be longer, because in the study it was found that only had five days to collect sample. Therefore, time restriction seems to be a factor that impacted my data collection. Nonetheless, we are now aware of the motives of our sample group, and will work on implementing an education program promptly.

Appendix A

BAC calculation for men										
Drinks in one hour	Pure Alcohol Fluid Oz.	100 lbs	120 lbs	140 lbs	160 lbs	180 lbs	200 lbs	220 lbs	240 lbs	260 lbs
0	0	.00%	.00%	.00%	.00%	.00%	.00%	.00%	.00%	.00%
1	1/2	.04	.03	.03	.02	.02	.02	.02	.02	.01
2	1	.07	.06	.05	.05	.04	.04	.03	.03	.03
3	1 1/2	.11	.09	.08	.07	.06	.06	.05	.05	.04
4	2	.15	.12	.11	.09	.08	.07	.07	.06	.06
5	2 1/2	.19	.16	.13	.12	.10	.09	.08	.08	.07
6	3	.22	.19	.16	.14	.12	.11	.10	.09	.09
7	3 1/2	.26	.22	.19	.16	.15	.13	.12	.11	.10
8	4	.30	.25	.21	.20	.17	.15	.14	.12	.11

To calculate BAC over time, subtract .01% for each 40 minutes after the first drink. One 12 Oz. beer, or 5 Oz. of wine, or 1 1/4 Oz. of 80 proof spirits, contains approximately 1/2 Oz. of pure ethyl alcohol.

BAC calculation for women									
Drinks in one hour	Pure Alcohol Fluid Oz.	100 lbs	120 lbs	140 lbs	160 lbs	180 lbs	200 lbs	220 lbs	240 lbs
0	0	.00%	.00%	.00%	.00%	.00%	.00%	.00%	.00%
1	1/2	.05	.04	.03	.03	.03	.02	.02	.02
2	1	.09	.08	.06	.06	.05	.05	.04	.04
3	1 1/2	.14	.11	.10	.09	.08	.07	.06	.06
4	2	.18	.15	.13	.11	.10	.09	.08	.08
5	2 1/2	.23	.19	.16	.14	.13	.11	.10	.09
6	3	.27	.23	.19	.17	.15	.14	.12	.11
7	3 1/2	.32	.27	.23	.20	.18	.16	.14	.13
8	4	.30	.25	.26	.23	.20	.18	.17	.15

To calculate BAC over time, subtract .01% for each 40 minutes after the first drink. One 12 Oz. beer, or 5 Oz. of wine, or 1 1/4 Oz. of 80 proof spirits, contains approximately 1/2 Oz. of pure ethyl alcohol.

Appendix B

Questionnaire on Reasons for alcohol consumption							
Why do you drink alcohol? Circle below							
Gender: Male or Female				Nationality: Haitian			
Age 18-28	29-39	40-50	51-61	62-72	73-83	84-94	95-105
Enhancement				Pleasant			
				Fun			
				Feeling			
				Exciting			
				High			
Coping				Problems			
				Worries			
				Depressed			
				Mood			
				Confident			
Conformity				Left out			
				Fit			
				Liked			
				Others not kid			
				Pressure			
Social				Sociable			
				Enjoy			
				Parties			
				Social gatherings			
				Celebrate			

Appendix C

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
(M)=1 * Enhancement	52	89.7%	6	10.3%	58	100.0%

(M)=1 * Enhancement Crosstabulation							
Count1		Enhancement					Total
		2	3	4	5		
(M)=1	1	11	11	4	6	1	33
	2	5	6	2	6	0	19
Total		16	17	6	12	1	52

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.744 ^a	4	.783
Likelihood Ratio	2.048	4	.727
Linear-by-Linear Association	.448	1	.503
McNemar-Bowker Test	.	.	. ^b
N of Valid Cases	52		

a. 5 cells (50.0%) have expected count less than 5. The minimum expected count is .37.
 b. Computed only for a PxP table, where P must be greater than 1.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
(M)=1 * Conformity	45	77.6%	13	22.4%	58	100.0%

(M)=1 * Conformity Crosstabulation						
Count1	Comformity					Total
	2	3	4			
(M)=1	1	3	7	13	6	29
	2	1	9	4	2	16
Total		4	16	17	8	45

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.647 ^a	3	.200
Likelihood Ratio	4.597	3	.204
Linear-by-Linear Association	1.364	1	.243
McNemar-Bowker Test	.	.	. ^b
N of Valid Cases	45		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.42.
 b. Computed only for a PxP table, where P must be greater than 1.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
(M)=1 * Coping	51	87.9%	7	12.1%	58	100.0%

(M)=1 * Coping Crosstabulation							
Count1	Coping					Total	
	2	3	4	5			
(M)=1	1	11	9	2	8	3	33
	2	7	1	1	6	3	18
Total		18	10	3	14	6	51

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.827 ^a	4	.430
Likelihood Ratio	4.406	4	.354
Linear-by-Linear Association	.631	1	.427
McNemar-Bowker Test	.	.	. ^b
N of Valid Cases	51		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is 1.06.
 b. Computed only for a P x P table, where P must be greater than 1.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
(M)=1 * Social	51	87.9%	7	12.1%	58	100.0%

(M)=1 * Social Crosstabulation							
Count1	Social					Total	
	2	3	4	5			
(M)=1	1	4	10	12	2	6	34
	2	3	4	2	3	5	17
Total		7	14	14	5	11	51

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.042 ^a	4	.283
Likelihood Ratio	5.241	4	.263
Linear-by-Linear Association	.539	1	.463
McNemar-Bowker Test	.	.	. ^b
N of Valid Cases	51		

a. 7 cells (70.0%) have expected count less than 5. The minimum expected count is 1.67.
 b. Computed only for a P x P table, where P must be greater than 1.

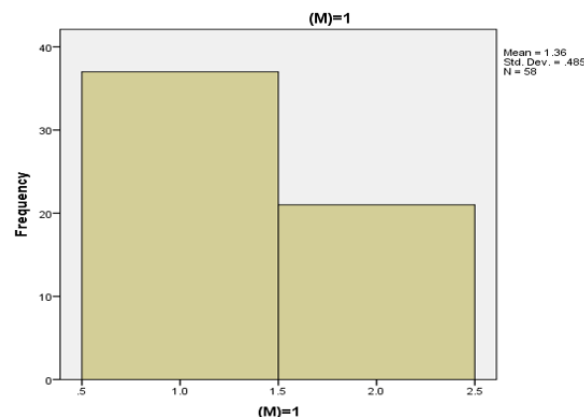
(M)=1=Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	63.8	63.8	63.8
	2	21	36.2	36.2	100.0
	Total	58	100.0	100.0	

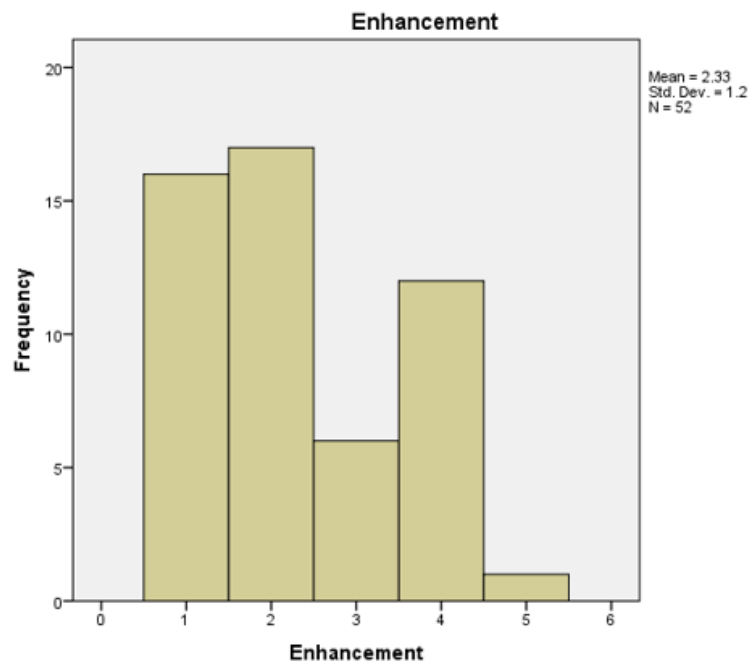
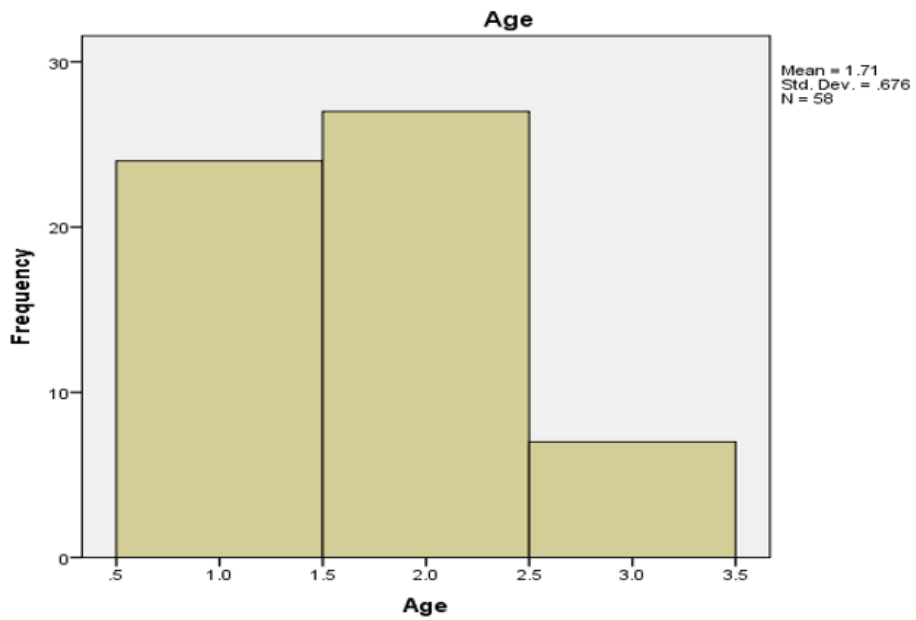
Age * Social Crosstabulation							
Count1		Social					Total
		2	3	4	5		
Age	1	3	6	7	3	4	23
	2	4	5	6	2	6	23
	3	0	3	1	0	1	5
Total		7	14	14	5	11	51

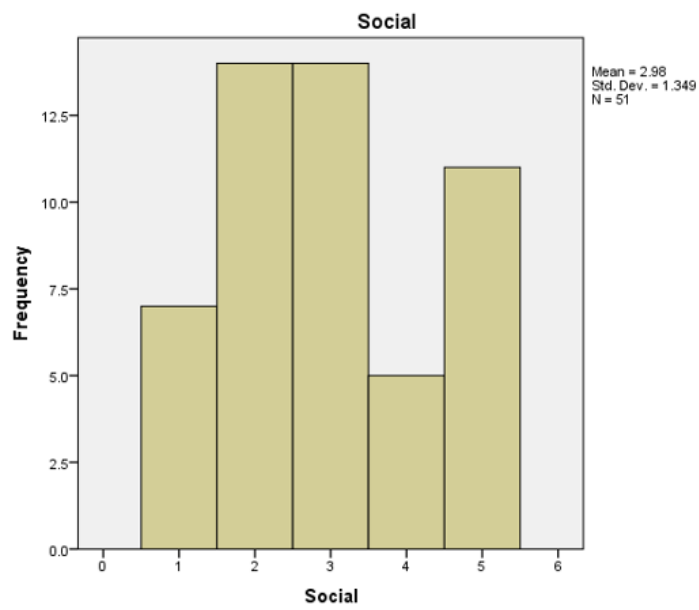
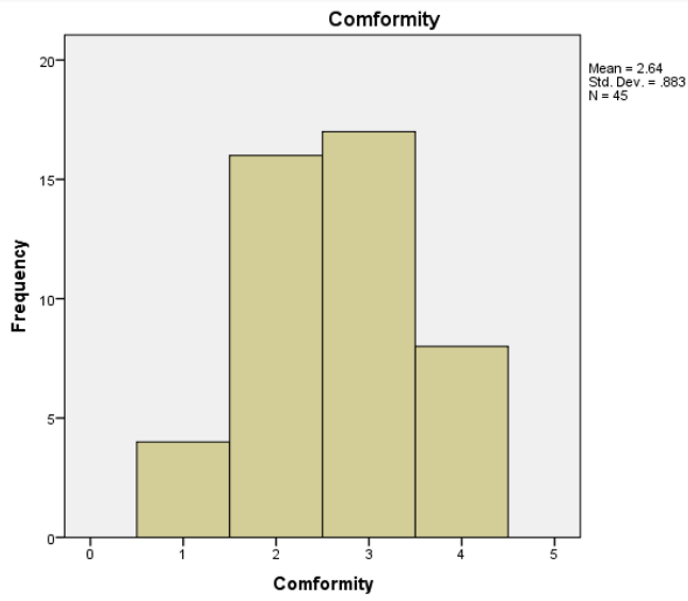
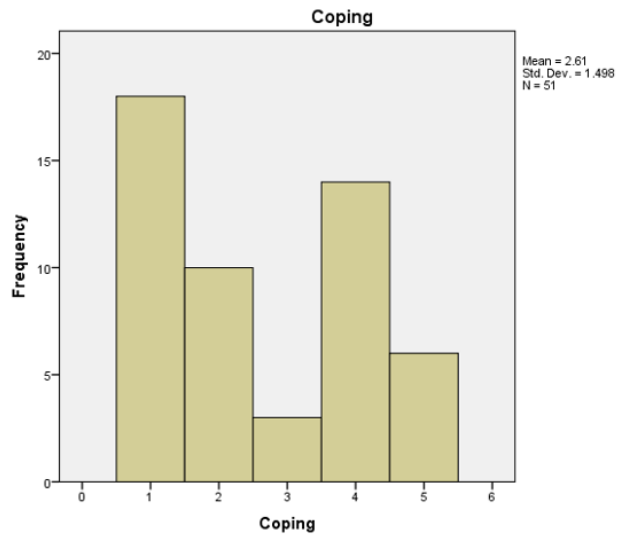
Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.504 ^a	8	.809
Likelihood Ratio	5.177	8	.738
Linear-by-Linear Association	.003	1	.955
McNemar-Bowker Test	.	.	. ^b
N of Valid Cases	51		

a. 11 cells (73.3%) have expected count less than 5. The minimum expected count is .49.
 b. Computed only for a P x P table, where P must be greater than 1.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.297	.809
	Cramer's V	.210	.809
N of Valid Cases		51	







Bibliography

1. BRAD. Be Responsible about Drinking (2017).
2. Cooper ML. "Motivations for alcohol use among adolescents: development and validation of a four-factor model". *Psychological Assessment* 6.2 (1994): 117-128.
3. Dudinskaya EC. "Embracing globalization or reinforcing national culture? Evidence on the alcoholic beverages preferences and drinking motives in Europe". DEM Working Papers Series 132. University of Pavia, Department of Economics and Management (2017).
4. Fitzgerald KA and Long CG. "The influence of drinking motives and anxiety on low-, moderate- and high-risk drinkers". *Journal of Substance Use* 17.3 (2012): 240-248.
5. Kiselica AM, et al. "Alcohol Use Disorders: Translational Utility of DSM-IV Liabilities to the DSM-5 System". *Addictive Disorders and Their Treatment* 14.1 (2015): 53-59.
6. Kuntsche E and Kuntsche S. "Development and validation of the Drinking Motive Questionnaire Revised Short Form (DMQ-R SF)". *Journal of Clinical Child and Adolescent Psychology* 38.6 (2009): 899-908.
7. Kuntsche E, et al. "Why do young people drink? a review of drinking motives". *Clinical Psychology Review* 25.7 (2005): 841-861.
8. Labrie JW, et al. "Sexual experience and risky alcohol consumption among incoming first-year college females". *Journal of Child and Adolescent Substance Abuse* 20.1 (2011): 15-33.
9. National Highway Traffic Safety Administration. "Evaluation of Responsible Beverage Service to Reduce Impaired Driving by 21- to 34-Year-Old Drivers". *TRAFFIC TECH* (2017): 1-89.
10. National Institute of Alcohol Abuse and Alcoholism. "Are Women More Vulnerable to Alcohol Effects?" Rockville, MD: US Department of Health and Human Services. Alcohol Alert 46 (1999).
11. New York State Department of Motor Vehicle. Alcohol and other drugs. *NY DMV* (2017).
12. Redelmeier DA and Detsky AS. "Clinical Action against Drunk Driving". *PLOS Medicine* 14.2 (2017): e1002231.
13. Sheehan BE, et al. "An Examination of Risky Drinking Behaviors and Motivations for Alcohol Use in a College Sample". *Journal of American College Health* 61.8 (2013): 444-452.
14. World Health Organization. "Observatory Data Repository (Region of the Americas). Global Information System on Alcohol and Health, Drink driving" (2014).
15. Yoon YH and Chen CM. "Surveillance Report #105: Liver Cirrhosis Mortality in the United States: National, State, and Regional Trends, 2000-2013". Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism (NIAAA) (2016).

Volume 14 Issue 8 August 2019

©All rights reserved by Edna Aurelus.