

Alcohol Consumption and Sexual Attitudes of Students:  
The Possible Effects of Studying Abroad

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### **Abstract**

The present research study explores the difference in alcohol consumption of students between the time they are studying abroad and when they are studying in their home country, using the Alcohol Time-line Followback scale as a means of identifying these alcohol differences between the two time-points. It also determined their attitudes towards sexual activity using the Basic Sexual Attitudes Scale. The sex and nationality of these participants was used as a means of comparison, seeking which sex and nationality groups consumes more alcohol and had a more open towards different aspects of sexual activity. Results have found that males and those from Ireland and the UK consumed more alcohol, while both males and females had a relatively similar attitude towards sexual attitudes. A negative relationship was found between the alcohol consumption between the two time points and sexual attitudes.

## **1.0 Introduction**

Studying abroad has become an increasingly popular choice for third-level students (O'Reilly, Ryan & Hickey, 2010). Data suggests that an estimated 2.9 million students were reported to have studied outside their country of citizenship in 2008, with this number thought to increase to 6 million by 2020 (Organisation for Economic Cooperation and Development, 2008; United Nations Educational, Scientific and Cultural Organisation, 2006). According to Pedersen, Skidmore and Aresi, (2014) the experiences one may encounter while participating in a study-abroad programme include learning about the local culture, completing coursework and gaining valuable experience in another environment. However, they go on to say that those student are at risk for an increased level of alcohol consumption while studying abroad (2014). Goldstein, Barnett, Pedlow and Murphy (2007) have stated that casual sex, or 'hooking-up', often involves the use of alcohol. Hooking- up is defined as "distinctive sex-without-commitment interaction between college men and women" (Glenn & Marquardt, 2001, p4.). This study will look at the difference in alcohol consumption levels between the time students study abroad and when they are back in their home country. Sexual attitudes of these students will also be part of this research, and it will be seen if there is a correlation between the two dependent variables.

### **1.1 Studying Abroad**

In their paper, International Students in New Zealand: Needs and Responses, Butcher and McGrath (2004) state that recognising the needs of students who are studying abroad is incredibly important. Whether it is financial support or social needs, students need to feel comfortable in their new temporary homes. Butcher (2002) has found that students will either

solely interact with those from their own country, or will be in favour of mingling with those from their new environment; students will rarely do both. He also finds that those who engage with those from their new environment will have a more fulfilling time while studying abroad (Butcher, 2002). Studies from Irish researchers O' Reilly, Ryan and Hickey (2010, 2015) have given detailed descriptions of the pros and cons of studying abroad, as well as some of the consequences an individual may encounter, as well as numerous other researchers. Of the numerous factors that contribute to the experiences of these students, social support and the need to fit in would be most applicable to discuss for this present study.

According to O' Reilly et al, (2015) students may have a difficult time adjusting to their new environments, and find that there is a lack of resources and supports to avail of to manage this issue. Leaving friends and loved ones behind can contribute to one's experience abroad, which in turn presents a sense of loss (O' Reilly et al, 2015; Sandhu, 1994). Home-sickness, a subtype of culture-shock according to Poyrazli and Lopez (2007) is a significant problem students face while studying abroad. Archer, Ireland, Amos, Broad and Currid, (1998) define home-sickness as the absence of significant others and familiar surroundings. Poyrazli and Lopez (2007) have found that homesickness may affect a student's behaviour. Homesickness was thought to have occurred more so in females, but Stroebe, Vliet, Hewstone and Willis (2002) have found that the males and females experienced a similar level. Although this is not extremely important for the present study, it could potentially explain why students partake in excessive alcohol consumption. Van Tilburg, Vingerhoets and Van Heck (1997) state that those who seek social support are less likely to suffer from home-sickness, unlike those who do not. Ponizovsky and Ritsner (2004) state that the lack of social involvement of students is one of the most common types of loneliness. They go on to say that friends are a

means of social integration, who are like-minded in their values and interests (2004). However, having this lack of support in a new environment can give student the initiative to meet new people and gain support from their new home. Butcher, Lim, McGrath and Revis (2002) have stated that student clubs are a good source of support and a way to meet like-minded people.

Fitting in is an important factor to note when immersing oneself into a new environment, as is the feeling of belonging. Reay and colleagues (1997; 2001) state that one may turn down a place at a prestigious university and opt for the less prestigious one just so they feel more comfortable among their peers. According to Read, Archer and Leathwood (2003), if one does not feel they belong they may be put off the idea of attending university or attend and feel out of place among others. They go on to describe class, maturity and ethnicity playing a part in acceptance. Commonalities may be seen among peers in these three variables, and so in regard to homesickness, being among those with similar interests, and now of similar backgrounds, one may be able to deter the oncome of homesickness.

In contrast to the downsides of studying abroad which have been mentioned above, there are many benefits to studying abroad. Holoviak, Verney, Winter & Holoviak (2011) have found that one of these benefits is an increase in academic performance; one's GPA (Grade Point Average) and QPA (Quality Point Average) will increase. They found that those in accounting did especially well, with a +.229 GPA increase, and those in Supply Chain Management did better with a +.032 increase in QPA. However, their study did not use a wide variety of courses and modules, and so it is not possible to see if those taking Arts and Science classes would see a significant change in their grades. Another positive implication of taking part in a study-abroad programme is a developed identity from their shared



experiences of groups of people they decide to identify with (Hamad & Lee, 2013). This leads to an increase of understanding one's cultural identity, which Ting-Toomey, (2015, p. 214) defines as "the emotional significance we attach to our sense of belonging or affiliation with the larger culture". Communication skills also develop, as those who are now given the opportunity to speak in a second language take this opportunity, which does not limit them to communicating with solely people from their home countries or only others who speak the same language. This leads to higher levels of self-esteem (Hamad & Lee, 2013).

### 1.2 Alcohol consumption in students

Engaging in alcohol consumption is a common part of student life (Hope, Dring & Dring, 2005). The majority of the universities have an on-site student bar or being in the close proximity of a bar or pub (Leontini, Schofield, Brown, Hepworth & Germov, 2015), making alcohol more accessible which in turn may lead to binge-drinking. The term 'binge-drinking' refers to the consumption of four or more alcoholic beverages in one sitting for females, and five or more for males (Johnston, O'Malley, Bachman & Schulenberg, 2011). Binge-drinking is becoming more and more frequent, evidently among the student population (Murphy & Murphy, 2010), with an approximate figure of one in four students abusing alcohol which is becoming a major health concern (Benedict, 2007). Davoren, Shiely, Byrne & Perry (2015) state that Ireland too displays a unique relationship with alcohol, as well as the American studies mentioned above, with larger intakes compared to other parts of the world. However, high alcohol consumption is not something remotely found in North America and Ireland; there has been a noticeable increase in alcohol consumption among young people widely documented internationally (Griffin, Bengry-Howell, Hackley, Mistral & Szmigin, 2009;

Lunnay, Ward & Borglagdan, 2011; McCreanor, Moewaka- Barnes, Kaiwai, Borell & Gregory, 2008; Measham, 2006).

High alcohol consumption may be present among those in third-level education for a number of reasons. For example; students may not be aware of proper alcoholic measurements. Studies conducted by White and colleagues (2003, 2005) involved asking a sample of students to pour certain measurements of drinks, resulting in the participants pouring too much alcohol than thought. However, as these tests were not done in a natural environment where alcohol is being consumed such as a house party or bar, these studies cannot be taken as completely reliable and valid. Another reason for high alcohol consumption may be the social aspect. Research conducted by Savicki (2010) states that finding a way to fit in is important for one who is adjusting to their new culture, with Wechsler and Nelson (2008) suggesting that this may result in the consumption of a higher level of alcohol.

Similar to Butcher and McGrath's findings, (2004), Citron (1996) states that American students prefer to socialize with fellow Americans, rather than get to know people of other nationalities, which may result in 'drinking-buddies'. Lau-Barraco and Linden (2014) define drinking-buddies as peers in one's social network, who are available for alcohol-related activities. They go on to explain that being in the presence of drinking-buddies is shown to predict heavy alcohol consumption over time (2014), with Pedersen et al (2009) suggesting that those who study abroad may try and match the drinking levels of their peers, i.e. fellow students. Other factors that enhance the likelihood of students partaking in high levels of alcohol consumption include genetic susceptibility, drinking 'norms' among peers, the influence of members on one's sports team or in a common university society that may make an individual feel like following suit, the attitudes towards consuming alcohol of a parent,

and if one can actually afford alcohol (White & Hingson, 2013). For further reference about these factors, one can refer to White and Hingson's paper for a more comprehensive explanation of these findings.

While the majority of the research that is referred to is regarding the North American population, little research has been conducted with an Irish or British population, making it hard to draw comparisons between the two regions and their alcohol-consuming practices. Although North America and Ireland and Britain are similar in many ways (both are English-speaking, predominately white, and in the developed world, for instance), there are still some differences in their respective cultures, however minor. Cultural differences are important to account for while conducting research, and to clump all students into the same category would be simply unethical. With the legal age of alcohol consumption in Ireland and the UK being 18 years old; different from 21 in the USA and 19 in Canada, one cannot assume that the participants in this study are all of the same maturity level, even with their ages being accounted for. Research that has been carried out by Davoren et al. (2015) will serve as a main point of comparison for this research for the Irish population, as well as the British. The reason Britain and Ireland will be accounted for in the same group is due to their cultural similarities and shared history, as well as the two regions being in close proximity of each other, in which one can assume there will be a common ground for alcohol consumption and sexual attitudes, although there is no concrete evidence. Davoren et al's study is important as it gives a comprehensible account of hazardous alcohol consumption (HAC) among university students from an Irish perspective, with reference especially to gender, which is of course a main variable of the present study (2015). HAC is defined as "a pattern of alcohol consumption that increases the risk of harmful consequences for the user or others" (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). Studies conducted by White and Colleagues

(2003, 2005, 2013) have given a detailed account of the drinking behaviours in students from the United States, which has given an insight so their student drinking culture, and so both the US and Canada will be grouped together for similar reasons as why both Ireland and the UK will be grouped together.

In terms of alcohol consumption level differences between males and females, research by Davoren et al (2015) found that more females were 'shifting' towards heavier alcohol use. Their data found that 66.4% of their participants (67.3% of females and 65.2% of males) reported drinking alcohol at a hazardous level. There has been no research found as yet comparing those in Group 1 and Group 2 in terms of alcohol consumption between nationalities, and so this paper will hopefully be able to fill in that gap in literature.

### 1.3 Sexual activity in students

Just like alcohol consumption, many students engage in sexual activity during their time in university. Garcia & Reiber (2008) have found that 72% have initiated hooking up with another person, with 64% of students have said that they actually did end up engaging in sexual activity. Of those who did engage in sexual activity, at least once if not multiple times, were asked to identify who it was with; resulting in 66% saying with romantic partners, 30% said with a friend, 30% with an acquaintance and 13% reported with strangers (Garcia & Reiber, 2008). Further results proved that the mean age of first sexual encounter was 16.8 years, with no gender differences, and 34% of the participants described their first time as being a hook-up, with the mean age of first casual sexual encounter being 16.4 years (Garcia & Reiber, 2008).

Stinson (2010) has said that students engage in sexual activity for numerous reasons. Of particular interest to this research project are peer acceptance and approval, similar reasons Savicki and Wechsler and Nelson have given for the high levels of alcohol consumption (2010, 2008). Bogle (2007, 2008) has stated that single students tend to meet each other through casual hook-ups, and that dating is no longer as popular as it used to be on campus. Bogle (2008) goes on to say that students in fact prefer to engage in casual sex than formal relationships with one another.

In their 2006 study, Hendrick, Hendrick & Reich investigated Permissiveness, Birth Control, Communion and Instrumentality of sexual activity in their newly constructed BSAS; a condensed version of their Sexual Attitudes Scale. Their population had a mean age of 22 years, with 67% of participants being females and 33% being males. They found that males were more open to the idea of sexual permissiveness ( $m=3.31$ ) than the females were ( $m=4.37$ ). Both sexes scored almost identically in terms of attitudes towards birth control, with both being open to the idea that both sexes should be in charge of producing birth control during sexual activity (males,  $m=1.83$ , females= 1.74). The study also looked at communion, asking participants to rate questions like “sex is a very important part of life” and “sex is the closest form of communication between two people”. Results have shown that again both sexes scored extremely similarly (males,  $m=2.09$ , females=,  $m=2.02$ ), both being open to this category, and again a similar outcome for instrumentality, or the uses of sexual activity (males,  $m=3.38$ , females,  $m=3.53$ ). Their research is vital for this study, as it is the basis of the sexual attitudes element of the present study. Tying this aspect of the study in with alcohol consumption will give a broader idea as to if sexual activity and alcohol consumption are in fact correlated.

The Sexual Strategy Theory (Buss & Schmitt, 1993) investigates the attitudes towards permissiveness in both males and females, with different viewpoints of each sex. For instance, males seek sexually permissive partners for sexual access (Buss & Schmitt, 1993), or what we would describe as partners that have a liberal or tolerable attitude towards sexual activity. However, men are inclined to seek less sexually permissive companions when starting a family, unlike their female counterparts who are less accepting of sexual permissiveness in either context (Buss & Schmitt). It is important to consider this particular research for two reasons. Firstly, society has changed and become more liberal towards sex and sexual activity in the years since the article has been published, and so it can be said that it is somewhat out-dated. Secondly, as their research suggests that males want to settle down with a non-permissive partner, Buss & Schmitt's participants are considerably older than the participants in this study, and so attitudes may differ to those of a university-going age.

Research conducted by the American College Health Association in 2012 found that only 50.9% of college students actually claim to use birth control while engaging in sexual intercourse, with 16% of students using emergency contraception. Research by Vail-Smith, Whetstone and Knox (2010) found that 27% of males and 20% of females in their study have openly cheated on their significant others. Of those, 40% would engage in unprotected sex with their partner, even after having cheated (Vail-Smith et al, 2010). Carter, Nair, Corbin and Williams (1999) found that in relation to condom negotiation between partners, men were more likely the sex to be convinced to use contraception, but would also more likely try and talk their partners out of using contraception. Ultimately, this results in the USA having the highest rate of adolescent pregnancies of the developed countries (22% of women under 20 had given birth), compared to 15% in Britain and 10% in Canada (Darroch & Singh, 1999). Darroch & Singh go on to say that American females are likely to have multiple

partners, with 20% not using contraception in recent accounts of intercourse (1999). Langille, Andreou, Beazley and Delaney (1997) surveys high school students in Canada, and found that 27.1% of males and 20.6% of females thought that the 'pulling-out' method was a significant type of birth control, and 56% of males and 51.4% of females were not aware how a condom should properly fit on a penis. With such a high number of high-school students unaware of proper contraceptive practices, perhaps it is no surprise that there is such a high teen-pregnancy rate. This too could account for the why only 50% of university students use contraception during sex, as they may not have been educated in the interim.

#### 1.4 Rationale

The aim of this study is to research the difference in levels of alcohol consumption of students who have studied abroad, comparing consumption levels of when they are studying abroad (Time 1) and when they are in their home country (Time 2). Two groups of nationalities will be used as participants, with Group 1 consisting of students from Ireland and Britain, and Group 2 consisting of students from the USA and Canada. All participants are of a typical university- attending age, ranging from 18 to 25. Conclusions will be drawn in order to determine which group drinks more in terms of nationality, but also sex differences will be accounted for so see if there is a significant difference. These results will then be used to determine if there is a correlation between the difference in level of alcohol consumption between Time 1 and Time 2, and sexual attitudes of the participants. These sexual attitudes are divided up into four categories; permissiveness, birth control, communion and instrumentality. Due to the lack of research conducted on Irish students in terms of alcohol consumption and sexual attitudes, it is for this reason to compare Group 1 to Group 2 with the hope of gathering new data that can be used in future research. The reason for using

the USA (and Canada) as choice of comparative nationality is due to the high level of students in this area choosing to study abroad, making it highly likely that there will be a considerable amount of participants available to take part for this study. Due to the near proximity of Britain to Ireland, it is likely that British students will be available to partake in this study also.

### 1.5 Hypotheses

Hypothesis 1: Students who have engaged in a studying abroad programme will consume more alcohol when they are abroad compared to when they are in their native country.

Hypothesis 2: Males will consume more alcohol than females in both time points.

Hypothesis 3: Group 2 will consume more alcohol than Group 1 in both time points

Hypothesis 4: There will be a significant correlation between the difference in alcohol levels between Time 1 and Time 2 and levels of sexual attitudes.

Hypothesis 5: Females will have a more open attitude towards sexual activity in all four sub-categories than males.



## **2.0 Method**

### **2.1 Participants**

A total number of 91 participants were used as the sample for this study. Both male and female students from Group 1 and Group 2 were used as the sample. A snowball sample method was used, aiming to gather participants via social media. Word of mouth was also used to encourage others to take part, with an objective of gaining as many suitable participants as possible. No incentives were used to entice the participants, and all acted out of their own accord to be part of this study, giving full permission before they could commence taking part. The only criteria that was asked of the students was that they have studied abroad for any period of time, were currently between the ages of 18- 25, and that they were either from Ireland, the UK, the USA or Canada. Anyone who filled out the questionnaire and did not fit this criterion was not used in the study.

### **2.2 Design**

This research study is a quantitative study, using both a between-groups and a correlational design, as it looks at one the responses of alcohol consumption from participants in either Group 1 or Group 2 and both sexes, but also looks at a potential correlation between the difference in alcohol consumption levels between Time 1 and Time 2 and sexual attitudes. The population is a stratified random sample, with the individuals fitting into either group 1 or Group 2. It is therefore a quasi-experimental design as it allows a cut off for those who do not fit the criterion (i.e. too old).

The IVs for this study will be the sex and nationality of the participants, while the DVs will be the participant's scores on both the TLFB and BSAS. Religion was originally counted as an independent variable in order to deem if the reason those who did not drink alcohol was due to religious reasons, but was dropped at the last minute as it was not valid and could not be assessed properly.

### 2.3 Materials

An online survey was created and distributed to the participants through Qualtrics and Google Docs. This was to ensure that there would be sufficient room for individuals to participate, as Qualtrics only allows 100 participants to take the survey and so another survey needed to be created to allow for more participants. This survey consisted of basic questions, like asking the individual's age category, gender, nationality and religion, as well as two questionnaires; Alcohol Time Line Follow Back, or TLFB (Sobell & Sobell, 1995) making and the Basic Sexual Activity Scale, or BSAS (Hendrick, Hendrick & Reich, 2006). Both the TLFB and BSAS questionnaires have been used in the past, and were chosen due to their clear instructions and phrasing of the questions, as well as their validity.

The TLFB is generally used to calculate or estimate the amount of alcoholic beverages consumed in a one month period. However, as the aim of the research project is to see if students will consume more alcohol whether they are home or abroad, a 7-day version was used instead (see Appendix A). This was simply for convenience, as one would not be able to recall what they drank over the course of one whole month. The participants were asked to firstly fill out the average amount of units they would consume over the course of a seven day period while away, marked Monday to Sunday. The student would fill in the answer they felt

was most accurate, ranging from 0 being no drinks, to 7 being 10+ drinks. Once they have filled this out, they were asked to do the exact same again, except this time, answering in reference to a typical week of alcohol consumption when they were back home.

The next part of the survey consisted of the BSAS as stated above (see Appendix B). This is comprised of 23 questions using a Likert scale regarding Permissiveness, Birth Control, Communion and Instrumentality. Participants were asked to fill in the answer which they thought best fitted their beliefs and attitudes towards sexual activity. The answers ranged from 1 (strongly agree) to 5 (strongly disagree). The questions look at different aspects of sexual activity, for example, who should be in charge of birth control (Birth Control), whether sex is used for one's own pleasure (Instrumentality), if sex is the closest form of communication between two people (Communion) and whether casual sex or sex with different partners is acceptable (Permissiveness).

#### 2.4 Procedure

In order to firstly commence the study, approval was given to start collecting the data from the Ethics Board in Dublin Business School. Once this was approved, links to the online survey was put up on social media sites, like Facebook. Members of the Facebook community were asked to fill the survey out, given they were eligible candidates and fit the criteria. They were also asked to send the link on to their friends and others they may know who have studied abroad (and again fit the criteria). A link was also posted on the DBS Students Research page on Facebook. The cover page of the survey gave a complete description of what the study involved, as well as participant information, such as how long it will take to complete the survey and that they are allowed to withdraw from the study at any

time. Once this was read, the participants were then asked to tick 'I agree' to the above terms in order to go on to the study. As well as full disclosure, the participants were told that the survey was completely anonymous, and that once they submitted their data, they could not withdraw their answers and participation. The participants then had to complete the entire survey and submit their answers.

### **3.0 Results**

#### **3.1 Descriptive Statistics**

As previously mentioned, there were a total of 91 participants who took part in this study. This is comprised of 25% males (n=23) and 75% females (n=68). There were two groups of nationalities that made up the sample; 40% from Group 1, being Ireland and the UK (n= 36) and 60% from Group 2, being the USA and Canada (n=55). The range of ages of the participants was from 18 to 25 years; fitting with the average ages of students in third level, with the average age group being 20-21 years (25.27%). Figure 1 shows the breakdown of ages of these participants. The ages were coded as 1= 18-19, 2= 20-21, 3= 22-23 and 4= 24-25. Anova tests were ran to investigate the differences in alcohol consumption levels of the participants between Time 1 (the study abroad period) compared to Time 2 (the period in which the participants were at home), and to also investigate the sex and nationality differences too. Pearson's Correlations were then created to look at this difference between alcohol levels between Time 1 and Time 2 and the total of average answers of each of the four sub-categories of the Basic Sexual Attitudes Scale.

Table 1 below shows the split of the variables with regard to sex, nationality and age.

Variables		Number	Percentage
Sex	Males	23	25%
	Females	68	75%
Nationality	Ireland/ UK	36	40%
	USA/ Canada	55	60%

Age	18-19	23	25.3%
	20-21	25	27.5%
	22-23	20	22%
	24-25	23	25.3%

Table 1.

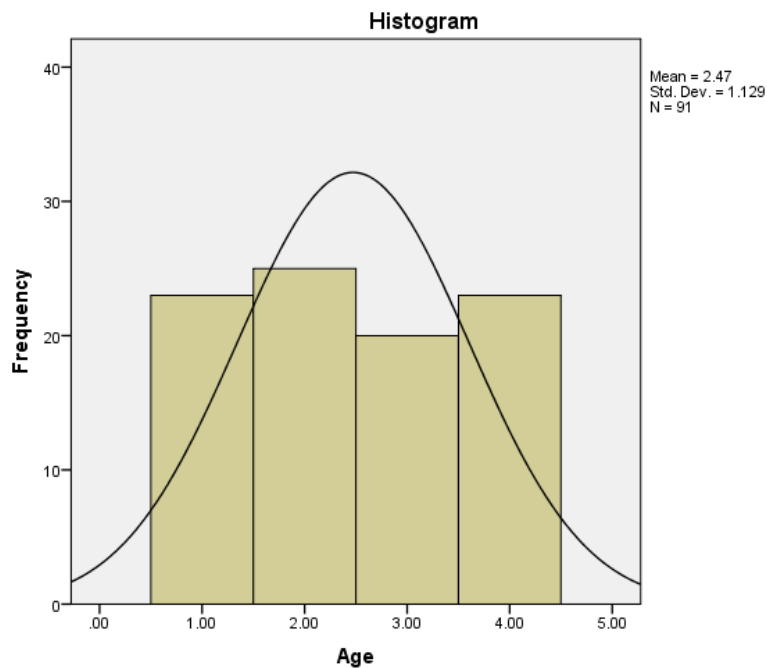


Fig. 1 Age distribution of participants

### 3.2 Alcohol consumption differences in two time points

An Analysis of Variance, or Anova test was ran to investigate the differences in alcohol consumption between Time 1 and Time 2. All of the participants were used in the test, and no missing values were accounted for. As the TLFB splits the number of alcoholic beverages consumed into groups (i.e. 1-2 drinks, 3-4 drinks, etc.) two approaches were taken while looking at the results, In the first group of tests ran, a conservative approach was taken, where the lesser number of each group was referred to as the number of beverages consumed (in the 1-2 drinks category, 1 drink was the amount consumed). In the second group of tests, a liberal

approach was taken, with larger of the two numbers was taken where the bigger of the two numbers was accounted for (1-2 drinks, 2 drinks was consumed).

Hypothesis 1: All participants who studied abroad were found to consume more alcohol in Time 2 than in Time 1.

In the conservative approach, results from an Analysis of Variance have found that there was a significant difference in the levels of consumption between Time 1 and Time 2 ( $F(22, 68) = 2.52, p < .002$ ). It showed that participants consumed more in Time 1 (mean= 10.89, SD= 7.95) than in Time 2 (mean= 6, SD= 7.18). This leads to the null being rejected.

In the liberal approach, An Anova was ran and again found a significant difference in results between the two time points ( $F(29,61) = 3.31, p < .001$ ) that students drank more alcohol in Time 1 (mean= 18.41, SD= 1.24) than Time 2 (mean= 9.71, SD= 11.50). This leads to the null being rejected also.

### 3.2.1 Sex differences

In the conservative approach to the results, an Anova was conducted to investigate sex differences of the participants in terms of alcohol consumption during Time 1. There was no significant result found between the sex of the participants and alcohol consumption in Time1,  $F(1, 89) = 4.239, p = .042$ , although it was found that males consumed more drinks weekly in Time 1 (mean=13.71, SD= 10.04) than females (mean=9.88, SD= 6.87). There was however a significant result between the sex of the participants and alcohol consumption in

Time 2,  $F(1, 89) = .000$ ,  $P < .001$ , where both males (mean= 6, SD= 7.31) and females (mean=6, SD= 7.19) consumed the same amount of drinks on average.

In the liberal approach, a difference in consumption levels among males and females was found again. An Anova was ran and found no significant result between the sex of the participants and alcohol consumption in Time 1,  $F(1, 89) = 1.23$ ,  $p = 2.70$ . Results show that again males still consumed more in Time 1 (mean= 20.1, SD= 12.86) than females (mean= 17.58, SD= 11.46). In Time 2, there was no significant result between alcohol consumption and the sexes of the participants,  $F(1, 89) = .653$ ,  $p = .421$ . Results show that from this approach, females drank more alcohol (mean= 10.30, SD= 12.40) than males (mean= 8.08, SD= 8.52).

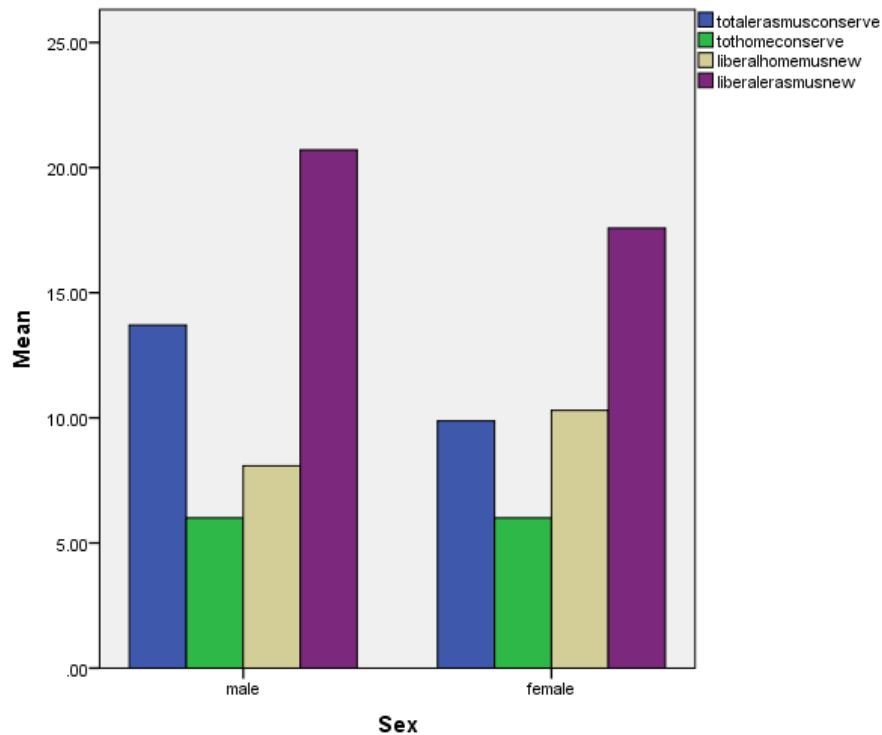
Hypothesis 2: Males did not consume more alcohol than females in both time points. In the conservative approach, males consumed more than females in Time 1, but the same levels in Time 2. In the liberal approach, males drank more than females in Time 1, but females drank more than the males in Time 2. Therefore the null is accepted. See Table 2.

Approach	Time Point	Sex	Average Drinks Weekly
Conservative	Time 1	Male	13.71
		Female	9.88
	Time 2	Male	6
		Female	6
Liberal	Time 1	Male	20.1
		Female	12.86
	Time 2	Male	8.08



Female	10.30
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Table 2.



*Mean of alcoholic beverages consumed with regard to in sex of participants from both a conservative and liberal approaches in Time 1 and Time 2.*

### 3.2.2. Nationality differences

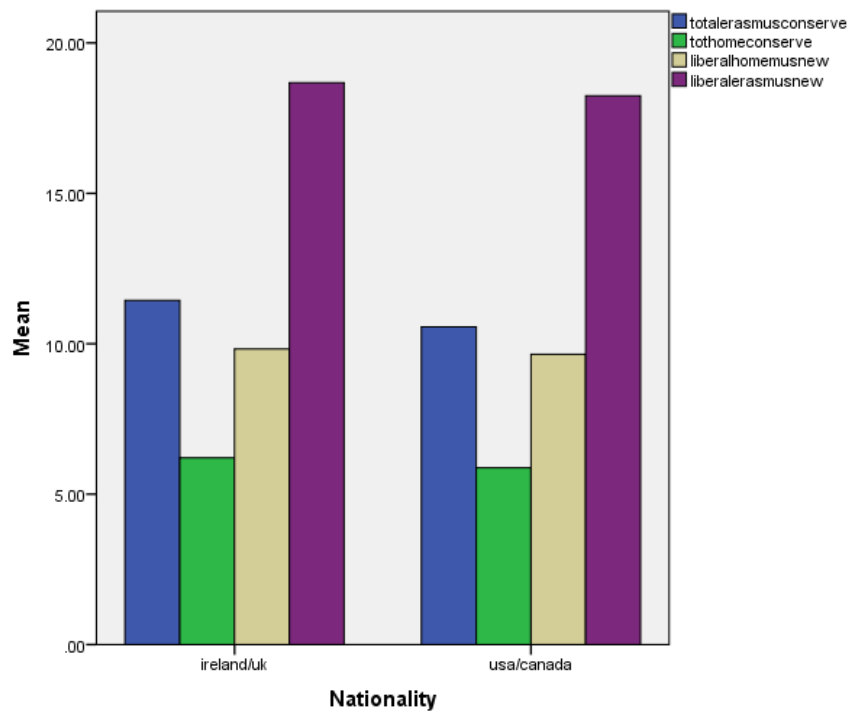
In the conservative approach to the results, there was no significant difference in alcohol consumption levels between nationalities. An Anova found that in Time 1, there was no significant interaction between nationality and alcohol consumption,  $F(1, 89) = .258, p = .613$ . Results show that Group 1 (mean= 11.44, SD= 7.47) drank more alcohol than Group 2 (mean= 10.56, SD= 8.28). In Time 2, again there was no significant relationship between nationality and alcohol consumption,  $F(1, 89) = .044, p = .834$ . Group 1 (mean= 6.21, SD= 6.88) consumed more alcohol than Group 2 (mean= 5.88, SD= 7.40).

In the liberal approach, very similar results were seen among the nationalities. There was no significant relationship between nationality and alcohol consumption in Time 1,  $F(1, 89) = .028$ ,  $p = .868$ , with Group 1 (mean= 18.68, SD= 10.07) consuming slightly more alcohol than Group 2 (mean= 18.25, SD= 12.89). In Time 2, there also was no significant relationship,  $F(1, 89) = .005$ ,  $p = .945$ , with Group 1 (mean= 9.82, SD= 10.23) drank slightly more alcohol than Group 2 (mean= 9.65, SD= 12.28).

Hypothesis 3: Group 2 did not consume more alcohol than Group 1 in both time points according to either of the approaches. The null is therefore accepted. See Table 3.

Approach	Time Point	Nationality	Average Drinks Weekly
Conservative	Time 1	Irl/ UK	11.44
		USA/ Canada	10.56
	Time 2	Irl/ UK	6.21
		USA/ Canada	5.88
Liberal	Time 1	Irl/ UK	18.68
		USA/ Canada	18.25
	Time 2	Irl/ UK	9.82
		USA/ Canada	9.65

*Table 3.*



*Mean of alcoholic beverages consumed with regard to in nationality of participants from both a conservative and liberal approaches in Time 1 and Time 2.*

### 3.3 Sexual Attitudes

The BSAS looks at attitudes towards sexual activity, using a Likert scale to answer the questions. An answer of 1 (strongly agree) would indicate that the participant has an open attitude to the sexual practice or idea, and an answer of 5 (strongly disagree) would show that they are not open to this concept at all. These results to each participant's BSAS answers were added to the data set, and coded from 1-5. They were then divided into the four sub-categories as mentioned previously, for example, question 1-10 were categorized as 'permissiveness'. The scores on each sub-total of the sub-category were then added up, and divided by the amount of questions in that category in order to acquire the average result of the participants to each question. These were then analysed in terms of sex and nationality,

just as the TLFB had been. These were then correlated against the difference in alcohol (DiffAlco) from Time 1 and Time 2.

In this study, the participant's attitudes towards Permissiveness was seen as 'neutral', where they do not agree nor disagree (mean= 3.14, SD= .83). They had a very open attitude towards the use of Birth Control (mean= 1.38, SD= .55) where the majority of participants agreed that both partners should be in charge of using Birth Control. The participants had a somewhat open attitude towards the Communion of sex (mean= 2.55, SD= .86) and were again had a neutral attitude towards the Instrumentality of sex (mean= 3.15, SD= .86).

Two Pearson's Correlation tests were ran in order to determine if there was a relationship between the difference in levels of alcohol consumed between the two time points and the sexual attitudes of the participants, one for the conservative approach and another for the liberal approach. Four different tests were conducted; one for each of the four sub-categories.

With regards to the conservative approach of alcohol consumption, results show that there was a negative weak relationship between Permissiveness and the DiffAlco,  $r(89) = -.098$ ,  $p = .356$ . For Birth Control,  $r(89) = -.033$ ,  $p = .754$ , showing there is a negative moderate relationship between the two variables. Results have found that there is a negative significant relationship between DiffAlco and Communion  $r(89) = -.004$ ,  $p = .972$ . And with regard to Instrumentality, there is a negative weak relationship with the DiffAlco  $r(89) = -.145$ ,  $p = .169$ .

With regards to the liberal approach, there was an extremely weak relationship between Permissiveness and DiffAlco,  $r(89) = .001$ ,  $p = .994$ . For Birth Control, there was again a

weak relationship with DiffAlco,  $r(89) = .007$ ,  $p = .951$ . Results found a weak relationship between DiffAlco and Communion,  $r(89) = .020$ ,  $p = .852$ . And for Instrumentality, there was a weak correlation with DiffAlco,  $r(89) = -.099$ ,  $p = .348$ .

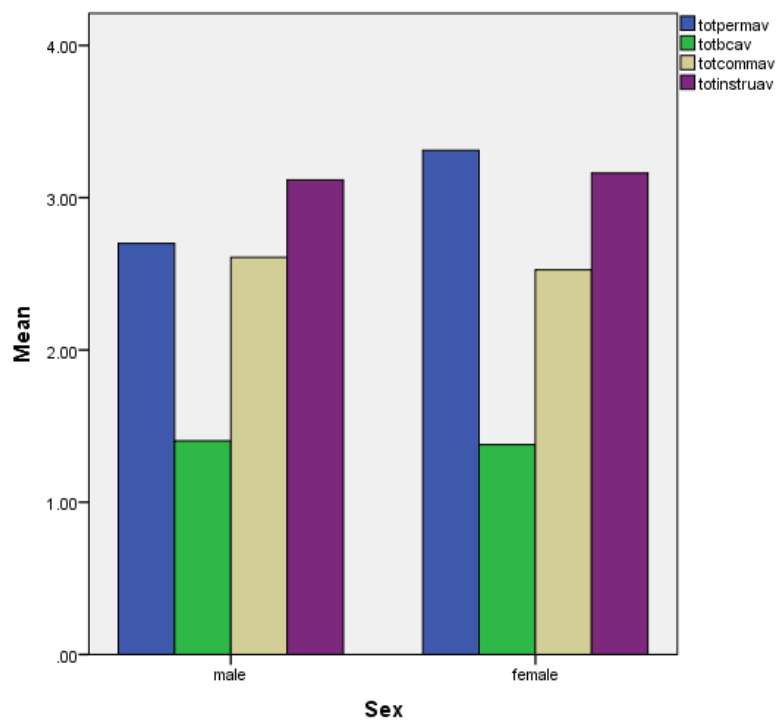
Hypothesis 4: These results have indicated that there is no significant relationship between the attitudes towards sexual activity and the difference in alcohol consumed in students. The null is accepted.

### 3.3.1 Sex differences

In order to find the mean of answers for both males and females, a Variance of Analysis test was ran. A significant result was found between the sex of participants and attitudes towards Permissiveness,  $F(1, 89) = 10.63$ ,  $p = .002$ . Results for Permissiveness have found that males (mean= 2.70, SD= .78) were seen to have a more open attitude towards Permissiveness compared to female (mean= 3.31, SD= .79). There was no significant relationship between sex and attitudes towards Birth Control,  $F(1, 89) = .035$ ,  $p = .852$ . Females (mean= 1.38, SD= .48) had a slightly more open attitude to the concept than males (mean= 1.40, SD= .72). There was no significant relationship between sex and Communion,  $F(1, 89) = .161$ ,  $p = .689$ . Females (mean= 2.53, SD= .86) proved be more open to the idea of Communion than males (mean= 2.61, SD= .90). There was no significant relationship between sex and Instrumentality,  $F(1, 89) = .047$ ,  $p = .829$ . There was an almost identical result for both males (mean= 3.12, SD= .58) and females (mean= 3.16, SD= .94) in terms of an open attitude towards Instrumentality. These results can be seen in Table 4.

Sub-Category	Sex	Average Score	SD
Permissiveness	Male	2.70	.78
	Female	3.31	.79
Birth Control	Male	1.40	.72
	Female	1.38	.48
Communion	Male	2.61	.90
	Female	2.53	.86
Instrumentality	Male	3.12	.58
	Female	3.16	.94

Table 4.



Mean of sexual attitudes with regard to in sex of participants.

Hypothesis 5: The only significant difference in scores was that males had a more open attitude to the idea of Permissiveness. For the other three variables, males and females seemed to have very similar results. Therefore the null is accepted.

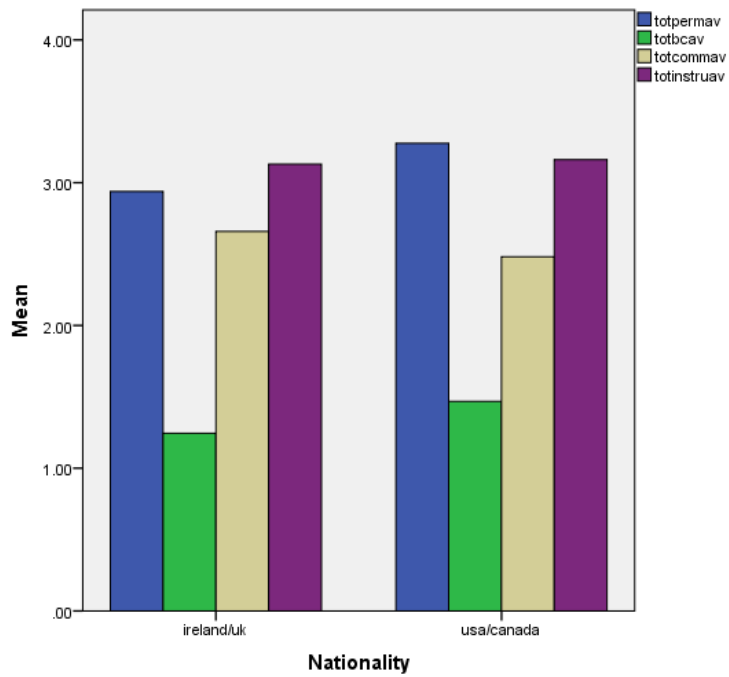
### 3.3.2. Nationality differences

Another Variance of Anova test was conducted again, but this time it was to look at the nationality differences of the students in regard to sexual attitudes. There was no significant relationship between nationality and Permissiveness,  $F(1, 89) = 3.63, p = .06$ . Results have shown that students from Group 1 (mean= 2.94, SD= .82) had a more open attitude towards Permissiveness than Group 2 (mean= 3.28, SD= .82) who appeared to be neutral, as well as having a very open attitude to Birth Control (mean= 1.25, SD= .36) which was similar for Group 2 (mean= 1.47, SD= .62). There was no significant relationship between nationality and Birth Control,  $F(1, 89) = 3.58, p = .062$ . Group 2 (mean= 2.48, SD= .92) were slightly more open to the idea of Communion than Group 1 (mean= 2.66, SD= .75). There was no significant relationship between nationality and Communion,  $F(1, 89) = .904, p = .344$ . In terms of Instrumentality, there was a near identical result between Group 1 (mean= 3.13, SD= .65) and Group 2 (mean= 3.16, SD= .97). There was no significant relationship between nationality and Instrumentality,  $F(1, 89) = .029, p = .865$ . The results can be seen in Table 5.

Sub- Category	Nationality	Average Score	SD
Permissiveness	Group 1	2.94	.82
	Group 2	3.28	.82
Birth Control	Group 1	1.25	.36

	Group 2	1.47	.62
Communion	Group 1	2.66	.75
	Group 2	2.48	.92
Instrumentality	Group 1	3.11	.65
	Group 2	3.16	.97

Table 5.



Mean of sexual attitudes with regard to the nationality of participants.



#### **4.0 Discussion**

Having conducted the present study and analysed the results, conclusions can now be drawn and future steps may be taken. Of the five hypotheses for this research project only one was accepted: student's levels of alcohol consumption while studying abroad is higher than when they are studying at home (Hypothesis 1). As it is difficult to predict correctly all five hypotheses, one must look at why the null was accepted for the other four. For Hypothesis 2, as there was a 60%: 40% ratio between the two nationality groups, and a 75%: 25% ratio between females and males respectively, it is expected that there may be a slight tip in the scale in terms of outcome. As there were more females than males in this study, statistically it is wrong to predict that the males will consume more alcohol than females. However, as previously mentioned, Johnston, O'Malley, Bachman & Schulenberg, (2011) state that males are deemed to be binge-drinking if they consume 5 or more drinks; 1 more drink than what is described as binge-drinking in females. Therefore one can hypothesize that perhaps males believe that they can 'manage' more drinks, and consciously decide to drink more. This could possibly be seen as the males acting more 'manly'. Hypothesis 3 stated that those from the USA and Canada will drink more than those from Ireland and the UK. As the results have indicated, this is not the outcome, with those from Group 1 drinking more than Group 2 in all of the conditions. Reasons for the hypothesis to be made was due to country drinking laws; as those in Group 2 had a legal older age to be allowed to consume alcohol, it was originally thought that they would drink more than Group 1 when given the chance. No watchful eyes of their parents and a high level of freewill backed up this view. Also, 60% of the population made up Group 2, so given the 18 extra participants in this group, it was expected that they as a whole would consume more alcohol. Again, the null was accepted. Hypothesis 4 stated that there was a positive correlation between student's sexual attitudes and the difference in

alcohol consumption between the two time points, in which the null was accepted. As Goldstein, Barnett, Pedlow and Murphy (2007) state a high intake of alcohol may lead to sexual activity, it was thought that those who have completed time abroad may have engaged in more sexual activity and so would be more open to different aspects of sex. Hypotheses 5 stated that females would be more accepting of males towards different areas of sexual activity. The results have found that males were more open to females in terms of Permissiveness, and that males and females were almost identical in terms of the other three sub-categories. The idea that females would have a more open attitude to areas of sexual activity is actually in contrast to Hendrick, Hendrick and Reich's (2006) original study, where the results of both sexes were fairly similar. Hendrick et al (2006) used a classroom to distribute their survey as opposed to an anonymous online survey as was used in this study, which may entice the female respondents to be more honest with their answers. It was expected that more females would complete the survey due to a number of reasons. Firstly, there was a larger amount of females sharing the link via Facebook and word of mouth, and so an increase of female participants was expected, as well as a higher percentage of female respondents backed up the hypotheses during the course of data collection. Also, more females than males tend to study overseas. It was found that two-thirds of students participating in study-abroad programmes were females in the 2009-2010 academic year (Fischer, 2012; Luo & Jamieson- Drake, 2015). With all of these factors taken into consideration, it was expected for this trend to be seen in the present study. Also, as feminism is becoming more and more apparent in the 21<sup>st</sup> century, a woman may be more conformable engaging in casual sex, which was before a taboo, adding to the current hypothesis. The null was accepted.

With the main finding having now been discussed, one must look at the implications and the limitations of this study, and look at further steps to take. Firstly, the implications alone may lead to a number of different avenues in terms of research ideas. For example; with the participant of this study all being over the legal drinking age and able to give their consent to take part, one can assume that all of the data collected is not fabricated; these are the actual levels of alcohol consumed by students, or at least best estimates. Therefore it can be concluded that while both home and away, students will engage in binge drinking most of the time. Countless advertisements are aimed at young adults and teenagers to drink responsibly, and so why is there still a dangerous amount of alcohol still being consumed? This data is extremely important, and could possibly be used by educators and university student services to plan new initiatives in order to curb dangerous drinking. Now that it is clear, from this study anyway, that students will engage in more alcohol consumption while studying abroad, perhaps student services in universities and colleges can look at what they can do to encourage foreign students to be able to enjoy themselves without having to depend on 'Erasmus pub-crawls' and 'Newcomers Bring Your Own Alcohol Bowling' as sources of meeting new people and enjoying their new environment. Perhaps focusing on non-alcoholic activities could encourage a healthier and safer attitude towards responsible enjoyment. Sex differences need to be looked at also, and perhaps both males and females need more education in 'responsible' drinking, but more importantly, they need to look at why they are drinking. If both males and females drink more due to false knowledge about their drinking capacity, perhaps this should be considered as an intervention, with more information about alcoholic units being presented by student services. It was thought that there would be a correlation between two variables, as similar to alcohol consumption while away, students are freer to have sex with whomever they choose, now that they are away from home and in a new environment where they may know nobody. It was thought that perhaps having not had

the chance to engage in sex before they studied abroad, this new opportunity has left them with new ideologies. Surprisingly, O' Reilly et al (2010, 2015) do not mention excessive alcohol or unsafe sex being negative consequences of studying abroad, which as the present research and past literature have shown are very realistic outcomes of studying abroad (and home). As there is no correlation between sexual attitudes and alcohol consumption, perhaps one could conduct further research to see if there is an interaction between sexual attitudes and various aspects of studying abroad.

With regard to the limitations of this study, one must ask why there were not many more participants. Unfortunately, due to the nature of the questions regarding alcohol consumption and sexual attitudes, many people may not have felt comfortable enough to discuss their own opinions and levels of consumption. Regardless of the anonymity of the survey, certain things may be too personal to answer questions about. Also, with the time of the survey initially distributed, just before the Christmas break, many people may not have had time to go on Facebook and fill out the survey due to oncoming exams or lack of interest. Of course students want to enjoy themselves just before flying home or during the break, and so filling out surveys may not fit their agenda. In order to control for this in the future, perhaps the survey could have been sent out in earlier in the academic year, or at a time in which exams were not close. Another limitation of the study is the nature of the questioning, or rather the lack of types of questions asked. It was not asked of the students to state if they had already completed their time abroad and were now at home, or if they were currently studying, and so due to this the answers may be inaccurate. Time 1 asked the students to indicate how much they drank 'While Studying Abroad', and Time 2 asked them to do the same for 'The Last Week'. Although it is indicated that the students are now at home, it is wrong to take this for granted. Further research could integrate this factor into a new study if it were to be

replicated. This research failed to look at the level of education the students were enrolled in, for example, an undergraduate degree, MA or PhD. It also failed to look at which particular courses and modules the students had taken. Research conducted by Luo & Jamieson- Drake (2015) has looked at three time periods, 2005, 2006 and 2007, and have found that the majority of students who have studied abroad have been enrolled in natural sciences; 29.6%, 30.5% and 30.3% respectively, compared to engineering; 19.3%, 17.2% and 16.8% respectively. Perhaps more research can be conducted regarding if alcohol consumption levels in students are correlated with their choice of academic field.

There were not many gaps found in past literature. However, research by White et al (2003, 2005) which asked students to pour certain measurements of alcohol could be looked at, and incorporated into a similar study like the present one. The sex of participants can be accounted for, and so one can examine which sex are pouring more alcohol than originally thought, as well as which nationalities are doing so too. This can then go onto look at the reasons why each sex and nationality pours more and so consumes more. Is it due to the wish to get drunk faster and have a more fulfilling time, or is it simply due to a lack of understanding exactly a shot of vodka is when pouring into a large glass? As Citron (1996) suggests, American students will flock together while studying abroad, which can result in drinking buddies. Perhaps more initiatives must be done to ensure students of all cultures and nationalities get to integrate, and so this novel move may decrease the level of alcohol consumption.

Reference must be made to the differences between the present study and research conducted by ACHA (2012) in which they reported that just over 50% of college students use contraception. Yet the present study provides a different view, where the majority of the

participants were in favour of both sexes being in charge of contraception. So why is it that there is such a huge contrast between the majority of students agreeing it is important to use contraception, but the evidence shows that is merely just not happening? Safe sex interventions must be introduced into third level education establishments, and not just for teenagers. Doctors on and off campus should also benefit from this information, and perhaps place more leaflets about safe sex in their waiting rooms. Perhaps the cost of contraception is just too much for a student, and so contraception might be made cheaper to avoid the spread of STIs as well as many unplanned pregnancies.

From a historical and cultural perspective, sex and alcohol consumption is becoming more and more accepted. Blacking out drunk and availing of the morning after pill is becoming common practice. Ireland, a once extremely Catholic and repressed nation, junior discos, where alcohol can be easily hidden and consumed by underage individuals are also becoming popular, and could possibly lead on to students in third level education making similar risky decisions regarding alcohol consumption. Sexual activity among minors is also encouraged among peers. Seeing as how risky sexual and drinking behaviours are more and more common, the majority of literature used in this study was post 2002. Some studies and research prior to 2002 has been used just as reference.

The present study, relevant to perhaps students everywhere, has shown that alcohol levels increase while given the chance to study abroad, sometimes to dangerous levels. The relevant findings have been discussed in terms of nationality and sex differences, leading one to believe that those from Ireland and the UK engage in a higher level of alcohol consumption, which is seemingly higher among males in most of the conditions than females in both nationalities. Implications of the present research may lead to enforcing safer sex and alcohol

consumption awareness on and off campus; encouraging general practitioners and student services personnel to act on this information. Limitations of this research has served some possible future research topics, such as bringing in a wider variety of variables, such as looking at majors of the students. It is hoped that this study has raised some important issues among the risky behaviours of students, and found possible means of preventing these from happening in the future.

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## 6.0 Appendix

### TFLB: (A)

For the first TLFB questionnaire, please give an estimate of how many alcoholic drinks you would have consumed in a typical week when STUDYING ABROAD.

Perfect recall is not expected, but please try to be as accurate as possible.

Scoring key:

- 1- 0 drinks
- 2- 1-2 drinks
- 3- 3-4 drinks
- 4- 5-6 drinks
- 5- 7-8 drinks
- 6- 9-10 drinks
- 7- More than 10 drinks

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

For the second TLFB questionnaire, please answer in regard to how many alcoholic drinks you have drank IN THE LAST WEEK. Please be as accurate as possible.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

### **BRIEF SEXUAL ATTITUDES SCALE (B)**

Listed below are several statements that reflect different attitudes about sex. For each statement fill in the response on the answer sheet that indicates how much you agree or disagree with that statement. Some of the items refer to a specific sexual relationship, while others refer to general attitudes and beliefs about sex. Whenever possible, answer the questions with your current partner in mind. If you are not currently dating anyone, answer the questions with your most recent partner in mind. If you have never had a sexual relationship, answer in terms of what you think your responses would most likely be.

For each statement of the BSAS, please tick which answer most applies to you:

1. = Strongly agree with statement 2.

- 2. = Moderately agree with the statement
- 3. = Neutral - neither agree nor disagree
- 4. = Moderately disagree with the statement
- 5. = Strongly disagree with the statement

1. I do not need to be committed to a person to have sex with him/her	
2. Casual sex is acceptable	
3. I would like to have sex with many partners	
4. One-night stands are sometimes very enjoyable	
5. It is okay to have ongoing sexual relationships with more than one person at a time	
6. Sex as a simple exchange of favours is okay if both people agree to it	
7. The best sex is with no strings attached	
8. Life would have fewer problems if people could have sex more freely	
9. It is possible to enjoy sex with a person and not like that person very much	
10. It is okay for sex to be just good physical release	
11. Birth control is part of responsible sexuality	
12. A woman should share responsibility for birth control	
13. A man should share responsibility for birth control	
14. Sex is the closest form of communication between two people	
15. A sexual encounter between two people deeply in love is the ultimate human interaction	
16. At its best, sex seems to be the merging of two souls	
17. Sex is a very important part of life	
18. Sex is usually an intensive, almost overwhelming experience	
19. Sex is best when you let yourself go and focus on your own pleasure	
20. Sex is primarily the taking of pleasure from another person	
21. The main purpose of sex is to enjoy oneself	

22. Sex is primarily physical	
23. Sex is primarily a bodily function, like eating	

The BSAS includes the instructions shown at the top. The items are given in the order shown. The BSAS is usually part of a battery with items numbered consecutively. For purposes of analyses, we have A=1 and E=5. (The scoring may be reversed, so that A = strongly disagree, etc.) A participant receives four subscale scores, based on the mean score for a particular subscale (i.e., we add up the 10 items on Permissiveness and divide by 10). An overall scale score is really not useful.

<b>Items</b>	<b>Scoring Key</b>
1-10	Permissiveness
11-13	Birth Control
14-18	Communion
19-23	Instrumentality