Drink Sensibly? Alcohol consumption and its relationship with physical and mental health.

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Submitted in partial fulfilment of the requirements of the BA Hons in Psychology / Higher Diploma in Psychology at Dublin Business School, School of Arts, Dublin.

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March 2015
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Acknowledgements

I would like to sincerely thank my supervisor Dr. Deaglan Paige for his contributions, patience, guidance and support throughout this research. Deaglan has been very helpful, supportive and quick to answers my many questions since the start.

I would like to acknowledge all the participants who contributed to this research. Their time and contribution was vital to the success of this project.

A very special thank you to my wife for her constant support, encouragement, patience, motivation and inspiration throughout this research and always.
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Abstract

The aim of this study was to examine how alcohol affects the physical and mental health of people. Considering how men consume more than women, and Irish consume more than non-Irish, the study will also examine the physical and mental health of these groups to see if there are any significant differences. This was done by distributing a questionnaire online, consisting of Amir’s general preventive health behaviours checklist, Snell’s Health Orientation Scale and Goldberg and Williams General Health Questionnaire. The results were then analysed, showing no significant difference in mental health results in any of the comparisons. Irish people consume significantly more alcohol than non-Irish people, and also scored worse on physical health behaviours and attitudes. Heavy consumers of alcohol do not score worse on Snell’s Health Orientation Scale, however do show lower scores on the behavioural checklist.
1.0 Introduction

Alcohol is the most abused drug throughout the world, according to Lieber (1995). Derek Byrne in the Irish Times refers to alcohol as “a serious problem...which ultimately poses a greater threat to the economic and social fabric of Irish life than any bank crisis or property collapse ever could” According to Crome, Ghodse, Gilvarry and McArdle (2004) adults may experience physical and psychological issues from consuming large quantities of alcohol at a young age. Alcohol has major effects not only on the individual, but also on society. According to a HSE report prepared by Sean Byrne in 2010, alcohol cost the Irish state 3.7 billion euro in 2007. This paper will examine the link between people’s alcohol consumption and their attitudes and behaviour in relation to their physical health, as well as looking at their mental health linked with levels of alcohol consumption of participants. It will also look at these traits in relation to Irish vs non-Irish and men vs women.

1.1 General overview of Alcohol in Ireland

The Alcohol Consumption in Ireland 2013 report states that 54% of drinkers in Ireland aged between 18 and 75 were classified as harmful drinkers. Slán in 2007 found that 6% of respondents were physically assaulted by someone who had consumed alcohol in the previous 12 months. 6% of people also reported marriage or family problems as a result of someone else’s drinking. According to the World Health Organisation report published this year, using data from 2010, Ireland is ranked twentieth in the world for alcohol consumption among people over the age of 15. Ireland consumed 11.9 litres per capita, which is almost double the worldwide average of 6.2. This differences drops but still exists when only regular drinkers are looked at with Irish people consuming approximately 50% more that the average. The international average is 10 litres per capita for every drinker versus 14.7 litres per capita for every drinker in Ireland. A leaflet entitled a quick question, which was published by the
Health Service Executive on the drugsandalcohol.ie website, states that low risk levels of alcohol consumption for men is 17 standard drinks per week, while for women it is 11. Increased risk is 18-40 standard drinks for men and 12-28 standard drinks per week for women. The high risk category is 41 or more standard drinks per week for men, and 29 or more for women. The HSE.ie website states “Having more than 5 standard drinks at a time can seriously increase the harmful effects of drinking.” Although the risk levels are higher for males, previous research conducted by Fillmore et al in 1997 shows that males consume more alcohol than females. As a result of this, they also are more likely to cross those risk levels. The Alcohol Consumption in Ireland survey conducted by Long and Mongan found that 33% of male respondents and 22% female respondents consumed more than the recommended level for low risk drinking. A report from the European Commission (Special Eurobarometer 331) published on the ec.europa.eu website in 2009 identifies Ireland as having the highest prevalence of frequent binge drinking, at 44% of people binge drinking once a week or more often. This looks bad, however it is positive when looked at in relation to other research. In a similar report published on the same website three years earlier (Special Eurobarometer 272b) this figure used to be at 54%. Recent evidence suggests that people who have friends that drink, are more likely to consume alcohol (Borsari and Carey, 2001). Those who frequently binge drink tend to have friends who also drink (Reifman, Barnes, Dintcheff, Farrell and Uhlig, 1998). Despite the fact that we have the highest prevalence of binge drinkers, we also have “a higher proportion of lifetime abstainers than almost any other country outside of the Islamic world.” according to O’Dwyer in 2001 (citing Malcolm 1986). There appears to be an all or nothing approach to alcohol adopted by Irish people. 23% of Irish people abstained from alcohol in the 12 months prior to a study by Ramstedt and Hope in 2004.
1.2 Risky Behaviours

Steele and Josephs in 1990 reported on alcohol myopia, stating “alcohol makes social responses more extreme, enhances important self-evaluations, and relieves anxiety and depression, effects that underlie ... the social destructiveness of alcohol” Alcohol myopia is a theory of behaviour under the influence of alcohol which implies that bad choices made are a result of the drunk person being over influenced by more immediate and obvious environmental cues, while being less influenced by less obvious cues. In short, alcohol limits people’s ability to plan ahead and think about the consequences of their actions. There is a large body of evidence relating to the effect alcohol has on behaviour, particularly aggression and high risk sexual behaviour. MacDonald, MacDonald, Zanna and Fong (2000) conducted a study which seems to support the alcohol myopia theory. They measured attitudes, thoughts and intentions of an all-male, college-aged sample. Intoxicated participants who were sexually aroused reported more favourable attitudes and intentions towards unprotected sex than either the sober or placebo group, as well as the inebriated group who were not sexually aroused. In this case, the sexually aroused inebriated participants were paying more attention to their more immediate environmental cues. Bonomo et al in 2001 looked at adolescents in Australia. They found that 17% of participants reported alcohol related violence, while 15% reported problems relating to sexual activity in the 12 months prior to the study being conducted. This includes having had unsafe sex, or having had sex under the influence of alcohol, and later regretting it. Ratliff and Burkhart’s (1984) study suggests that men expect to experience a greater degree of aggressive arousal and social deviance as a result of their drinking. Zeichner in 1970 found that men under the influence of alcohol are more likely to respond aggressively to external cues. As can be seen, a lot of research has been conducted in men and how they behave under the influence of alcohol. This may be because men in
general engage in more risky behaviours than women according to a 2006 study conducted by Harris, Jenkins and Glaser.

A study by Miller, Naimi, Brewer and Jones in 2007 looked at binge drinking in high school students in relation to other risky behaviours. They found that students who binge drink are more likely than non-drinkers and other drinkers to be involved in other risky activities. These include, but are not limited to, the use of illicit drugs, being a victim of dating violence and smoking. Vik et al in 2000 found that alcohol related problems develop along a continuum. Minor issues start and become more common, which can be followed by progressively more serious issues. For example, someone may start off missing work on a couple of occasions, and this will develop into getting arrested/divorce etc. Research suggests risky behaviours occur together. Alcohol use and other illicit drug use are both linked with more risky sexual behaviour (Parkes et al). McCabe in 2002 found that students who binge drink are more likely to engage in other risky behaviours or cause social problems. These results show a correlation between alcohol use and other risky behaviours. It is unclear whether their drunkenness encourages or motivates behaviour of this kind, or if people who binge drink are naturally attracted to risky behaviours.

1.3 Physical Health

Alcohol poses a major health problem and causes both direct and indirect deaths. Anderson and Baumberg in 2006 found that alcohol is a cause of 60 different diseases and conditions, including cancers, mental and behavioural disorders, gastrointestinal conditions, cardiovascular diseases, immunological disorders, lung diseases, skeletal and muscular diseases, reproductive disorders and pre-natal harm, including an increased risk of prematurity and low birth weight. Alcohol is a major cause of cancer. Peter Anderson
contributed to a World Health Organisation report entitled Alcohol in the European Union Consumption, harm and policy approaches. In this report he states:

with regard to female breast cancer, each additional 10 g of pure alcohol per day is associated with an increase of 7% in the relative risk of breast cancer, whereas regular consumption of approximately 50 g of pure alcohol increases the relative risk of colorectal cancer by 10–20% … the relationship of average consumption to cancer of the larynx, pharynx and oesophagus is markedly higher than the relationship to both breast and colorectal cancer (more than a 100% increase for an average consumption of 50 g pure alcohol per day).

When it comes to alcohol’s effect on the heart, there is some conflicting evidence. Light consumption of alcohol can have a preventative effect on certain ischaemic diseases (Roerecke & Rehm, 2010). However the same study states that a large part of this is due to confounders, and the benefits totally disappear if there is even one heavy session of alcohol consumption in the month. According to the alcoholireland website, 88 people die every month in Ireland as a result of alcohol. There are twice as many deaths in Ireland due to alcohol than all other drugs combined. The Alcohol Consumption in Ireland 2013 report states that 1 in 4 deaths suffered by people between 15 and 39 are related to alcohol. 10% of drinkers who responded to this report stated that drinking had harmed their health in the previous 12 months. Alcohol is a group 1 carcinogen, and the National Cancer Control Programme attributes 500 cancer deaths in Ireland each year to alcohol. That’s over 1 person each day. One in four people who attend accident and emergency departments have alcohol related injuries. 2,000 hospital beds each night are occupied because of alcohol. This information was published on the alcoholireland website. Engs and Aldo-Benson found that heavy alcohol consumption in college students can damage immune system and increases the
chance of contracting common illnesses. Overall, Taylor Rehm and Anderson (as cited by the World Health Organisation in 2010) show that the annual absolute risk of death from alcohol related disease for men who consume 10g of alcohol per day (approximately 1 drink) is over 7%. With all the health risks associated with alcohol, this should reflect in people’s perception of their health. This study aims to see if people’s perception of their physical health is affected by their consumption of alcohol. Seim and Fiola in 1990 show that women were five times more likely to be dissatisfied with their body image than men.

1.4 Alcohol and Mental Health

There appears to be a link between alcohol use and mental illness, in particular depression and anxiety. A report published by Dooley and Fitzgerald in 2012 which looked at Mental Health in Irish youth states “Excessive drinking has very negative consequences for the mental health and adjustment of young people”. Grant and Harford in 1995 found a link between major depression and alcohol abuse in young adults. Miller et al in 2007 also found that high school students who binge drink are more likely to attempt suicide. The World Health Organisation estimates that suicide is 8 times more likely by someone who is currently abusing alcohol than someone who is not. Even if the person stops abusing alcohol, there is still a link between the suicide and alcohol abuse. The Suicide in Ireland 2003-2008 report states that half of people who committed suicide had abused alcohol in the previous 12 months. Vesga-Lopez et al. (2008) conducted a population structured study and found that 32.8% of females and 65% of males that had been diagnosed with GAD in their lifetime had also been diagnosed with an alcohol use disorder. According to Kessler et al. (1997) a national comorbidity survey found that GAD was the most common anxiety disorder associated with alcohol misuse followed by agoraphobia and SAD. According to the Regier, Farmer, Rae, Locke, Keith, Judd and Goodwin in 1990, 37% of people with an alcohol disorder suffered with a comorbid mental disorder. Research shows that socially anxious
people consume more alcohol in order to ease apprehension (O’Hare 1990). A study shows that psychological distress could be predicted by engaging in 2 or more health risk behaviours including alcohol consumption. (Clark et al; 2007). Rohde, Lewinsohn and Seeley in 1996 found that 50% of participants who suffered with alcohol dependency also suffered with a depressive disorder. Lewinsohn Rohde and Seeley in 1998 found that women were more likely to suffer from depression than men. Specific to the GHQ which is used in this survey, David Madden on behalf of UCD writes that “A consistent pattern across countries is that women report lower levels of mental well-being, as measured by the GHQ.” It is shown that there are links between alcohol and depression, and men are known to consume more alcohol than women. Therefore these stats are contrary to what we might expect.

1.5 Purpose of Study

This study aims to analyse heavy and light levels of consumption and their influence on physical and mental health. It also aims to analyse the Irish patterns of alcohol consumption, and how these compare with the consumption levels of non-Irish people. These patterns will also be looked at in terms of physical and mental health. It will question people on aspects of their mental health, their attitudes and awareness about their physical health, and their everyday choices which will provide an insight into risky behaviours. Considering men consume more alcohol than women (Fillmore), we will look to see if there are any significant differences between men and women in terms of physical and mental health.

1.6 Hypotheses

Hypothesis 1: Irish people will consume more alcohol than non-Irish participants

Hypothesis 2: Nationality will predict amount of risky behaviours.

Hypothesis 3: General mental health will be affected by nationality.
Hypothesis 4: Attitudes towards health will be influenced by nationality.

Hypothesis 5: Males will consume more alcohol than females.

Hypothesis 6: Gender will predict amount of risky behaviours.

Hypothesis 7: General mental health will be affected by gender.

Hypothesis 8: Attitudes towards health will be influenced by gender.

Hypothesis 9: Levels of alcohol consumption will predict amount of risky behaviours.

Hypothesis 10: General mental health will be adversely affected by excessive drinking.

Hypothesis 11: Attitudes towards health will be influenced by level of alcohol consumption.
2.0 Method

2.1 Participants
The participants were chosen using a combination of snowball and opportunity sampling methods. There were a total of 90 participants. The snowball sampling method involved using social media and email. The survey was posted on Facebook, and people were asked to pass it on. It was also emailed through a very multi-national working environment, in the hopes of involving a diverse group of nationalities in the study. The opportunity sampling method involved targeting members of the Seventh Day Adventist church was for this research, specifically due to their beliefs. They do not consume alcohol. They were selected to provide a wider variety and larger collection of responses. A link to the online survey was emailed to the pastor of the church for dissemination. There were no incentives offered for participation. The only limitation on participation was that all participants needed to be over the age of 18, as the survey dealt with alcohol consumption. There were a total of 90 participants.

2.2 Design
This study was conducted using a part between groups, part correlational design. It is a between groups design, as I will be comparing people based on nationality, age, gender and consumption levels of alcohol. It is a correlational design, as it will look at the relationship between levels of alcohol consumption, nationality and gender, and compare these with health attitudes, health behaviours and mental health.

In hypothesis 1 (Irish people will consume more alcohol than non-Irish participants) nationality will be the independent variable, and level of consumption will be the dependent variable.
In hypothesis 2 (Nationality will predict amount of risky behaviours) the independent variable will be the participants nationality group, while the dependent variable will be the level of risky behaviour.

In hypothesis 3 (General mental health will be affected by nationality) the predictor variable is independent variable, and the dependent variable is the mental health status.

In hypothesis 4 (Attitudes towards health will be influenced by nationality) the predictor variable is once again the national group, while the dependent variable will be attitudes towards physical health.

In hypothesis 5 (Males will consume more alcohol than females) nationality will be the independent variable, and level of consumption will be the dependent variable.

For hypothesis 6 (Gender will predict amount of risky behaviours) the independent variable will be the participants gender, while the dependent variable will be the level of risky behaviour.

For hypothesis 7 (General mental health will be affected by gender) the independent variable is nationality, and the dependent variable is the mental health status.

In hypothesis 8 (Attitudes towards health will be influenced by gender) the independent variable is once again gender, while the dependent variable will be attitudes towards physical health.

In hypothesis 9 (Levels of alcohol consumption will predict amount of risky behaviours) the independent variable will be the level of alcohol consumption, while the dependent variable will be the level of risky behaviour.
In hypothesis 10 (General mental health will be adversely affected by excessive drinking) the independent variable is level of alcohol consumption, and the dependent variable is the mental health status.

In hypothesis 11 (Attitudes towards health will be influenced by level of alcohol consumption) the independent variable is once again level of alcohol consumption, while the dependent variable will be attitudes towards physical health.

2.3 Materials

Three questionnaires were used heavily in this research paper. These are Goldberg and William’s General Health questionnaire (1988), Snell’s Health Orientation Scale (1991) and Amir’s General Preventive Health Behaviours Checklist (1987). For classification of level of alcohol consumption, it was decided to use the HSE’s breakdown of low risk, increased risk and high risk criteria to assign participants into light, medium or heavy users of alcohol.

2.3.1 General Health Questionnaire

Goldberg and Williams’s General Health Questionnaire takes a measure of psychological well-being. It originally consisted of 60 items, however this was reduced to 30, 28 and then 12 (Del Pilar Sanchez-Lopez and Dresch, 2008). It was important to minimize the length of time it took to complete the questionnaire in order to maximise the number of participants. Because of this, the 12 Item questionnaire was used in this research. Gao, Luo, Thumboo, Fones, Li and Cheung in 2004 stated a 3-factor model developed by Graetz in 1991 fit the questionnaire best. According to Graetz, these three factors are anxiety and depression, social dysfunction and the loss of confidence. There are 4 questions linked with anxiety and depression, e.g. have you recently lost much sleep over worry. There are six
questions related with social dysfunction, e.g. have you recently felt capable of making
decisions about things. The final two questions are associated with loss of confidence, e.g.
have you recently been thinking of yourself as a worthless person. Bakhla in 2013 found that
the internal consistency as measured by Cronbach’s alpha coefficient was 0.7.

2.3.2 Snell’s Health Orientation Scale

Snell’s Health Orientation Scale looks at people’s attitudes and beliefs toward their
physical health. A Likert scale is used for scoring, with 5 options ranging from A – Not at all
characteristic of me to E – Very characteristic of me. The full survey consists of 10 subscales,
all with 5 questions each. Again, in an effort to minimise length of time it took to complete, a
smaller version was used. Only 4 of these subscales were examined. These are Personal
Health Consciousness (PHC), Health Image Concern (HIC), Health Expectations (HE) and
Health Status (HS). These four were chosen as they best represent what this study intends to
discover. PHC provides statements designed to measure the participant’s awareness of their
health and how much attention they pay to what their body tells them, E.G. “I am very aware
of how healthy my body feels”. HIC measures how aware participants are of other peoples’
reactions to their health. It provides statements such as “I'm very aware of what others think
of my physical health”. HE measures participant’s expectations for their future health with
statements like “I believe that the future status of my physical health will be positive”. Finally, HS measures the participant’s perception of their current physical health. This
includes statements such as “My body needs a lot of work to be in excellent physical shape”.

2.3.3 General Preventive Health Behaviours Checklist

Amir’s General Preventive Health Behaviours Checklist measures participant’s
behaviour in relation to everyday health and safety issues. Participants were provided with a
list of these everyday actions, and asked whether or not they do this. For example, “Wear a
seat belt in the car” or “Avoid crossing the street against the traffic lights”. Results are given
on a 3 point scale. No, do not do, Sometimes, Yes, always or almost always. Scores are
counted with 1 given to yes, always or almost always and 0 given to no, do not do and
sometimes. This scoring system was devised by Harris and Guten in 1979 to counter the
effects of social desirability response bias, where participants may say “sometimes” in stead
of “no”.

2.3.4 Consumption levels

Information relating to low, increased and high risk consumption, which was obtained
from the Health Service Executive will be used to classify participants as high, medium and
low drinkers. High level drinkers will be anybody who consumes more than 5 standard drinks
in one night or a male who consumes more than 41 standard drinks per week or female who
consumes more than 29 standard drinks per week. Males and females must consume 5 or less
standard drinks per night to qualify as medium or low consumers of alcohol. Medium
drinkers will be females who consume between 12 and 28 standard drinks per week, and
males who consume between 18 and 40 standard drinks per week. Low drinkers will be males
who consume 17 or less standard drinks per week, and females who consume less than 11
standard drinks per week.

2.4 Procedure

The questionnaire was created using Google docs, and a link to the survey was posted on
Facebook, as well as emailed to colleagues in a very multinational work environment. An
introductory message was provided with the link, stating that I am a final year psychology
student, and I am conducting research into alcohol and its effect. People were also
encouraged to send to link to other people in an attempt to maximise the number of
participants. The main body of the survey consisted firstly of a demographics page. Here
details such as age, gender, nationality and a measure of alcohol consumption were taken.
Page two consisted of Amir’s General Preventive Health Behaviours Checklist. Page three was Snell’s Health Orientation Scale and page four was Goldberg and William’s General Health questionnaire.

2.5 Ethical note

Dublin Business School ethical guidelines were strictly adhered to. A cover sheet provided participants with information relating to the project, and what the survey would examine. It explained the different types of questions participants would face. Participants were informed that their information would be confidential, and of their right to withdraw at anytime. People under 18 were asked not to continue with the survey. This seems to have worked, as the youngest age recorded was 19. The final page debriefed the participants, and offered contact details for various organisations, for example Alcoholics Anonymous and Aware. Participants were informed that by pressing submit, their responses would be uploaded and used as part of the study.
3.0 RESULTS

3.1 Descriptive Stats

90 people completed the questionnaire. No missing values were recorded as the survey was set up so that all questions must be answered before proceeding. The average age of the participants is 32.27, with a range of 52 (min 19, max 71). Figure 1 shows a histogram of the breakdown of participants’ ages. For analysis, nationality, gender and whether participants qualified as high or low drinkers was looked at. For ease of analysis, nationality will be split into Irish and non-Irish. Table 1 shows the breakdown of these three groups. The male female split is very even: 53% (N = 48) of respondents are male, 47% (N = 42) of respondents are female. There are 16 different nationalities represented in the survey results. The nationality split is quite even at 50 Irish people, 40 non-Irish people (54% vs. 46%). A little over half of the participants (52.2%) qualified as high risk consumers of alcohol.

Table 1: Demographic breakdown of participants

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nationality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irish</td>
<td>50</td>
<td>55.6</td>
</tr>
<tr>
<td>Non-Irish</td>
<td>40</td>
<td>44.4</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>53.3</td>
</tr>
<tr>
<td>Female</td>
<td>42</td>
<td>46.7</td>
</tr>
<tr>
<td><strong>Consumption Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“High”</td>
<td>47</td>
<td>52.2</td>
</tr>
<tr>
<td>“Low”</td>
<td>43</td>
<td>47.8</td>
</tr>
</tbody>
</table>
Figure 1: Age distribution of participants.

The three health related questionnaires were used to gauge health behaviours, attitudes towards physical health and level of mental health. The overall average statistics for these three health measures can be viewed in Table 2 below.

Table 2: Descriptive Statistics of health levels

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health Behaviours</td>
<td>12.21</td>
<td>4.44</td>
</tr>
<tr>
<td>Attitudes Towards Physical Health</td>
<td>42.73</td>
<td>12.5</td>
</tr>
<tr>
<td>Mental Health</td>
<td>11.82</td>
<td>5.60</td>
</tr>
</tbody>
</table>

Average alcohol consumption on a night out is almost 7 (6.96), with a standard deviation of 6.12. This means the average person falls into the high risk category. An interesting point to note is that the only people who crossed into the high level consumption category did so as a
result of binge drinking. Figure 2 shows how many Irish people versus non-Irish people participated in the survey. Figure 3 shows the national group split of heavy drinkers, while Figure 4 provides the same information for light users. Figure 4 shows a graphical representation of the consumption habits of Irish people versus non-Irish people on nights out with friends.

Figure 2: Data split by National Group

Figure 3: Heavy drinkers split by national group
Figure 4: Light drinkers split by national group

Figure 5: Bar graph showing the national split of consumption habits
3.2 Nationality

A t-test will be used to examine the national group in relation to alcohol consumption, physical health attitudes, physical health behaviours and mental health. This study shows that Irish people consume more than twice the amount of alcohol on a night out as our international counterparts. There was a significant difference between Irish and non-Irish people on two of the health scales - Amir’s General Preventive Health Behaviours Checklist and Snell’s Health Orientation Scale. Please see Table 2 below for further details.

Hypothesis 1: Irish people (mean = 9.37, SD = 6.76) were found to consume more on a night out with friends than non-Irish people (mean = 3.95, SD = 3.36). The 95% confidence limits show that the population mean difference of the variables lies somewhere between 3.23 and 7.60. An independent samples t-test found that there was a statistically significant difference between the consumption levels of Irish people and non-Irish people (t(75.02) = 4.95; p = >.001). Therefore the null can be rejected.

Hypothesis 2: Irish people (mean = 10.4, SD = 3.75) were found to have lower scores on Amir’s General Preventive Health Behaviours Checklist than non-Irish people (mean = 14.48, SD = 4.23). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -5.75 and -2.39. An independent samples t-test found that there was a statistically significant difference between the scores on Amir’s General Preventive Health Behaviours Checklist (t(88) = -4.83; p = >.001). Therefore the null can be rejected.

Hypothesis 3: General mental health will be affected by nationality. Irish people (mean = 11.36, SD = 5.69) scored slightly lower on the general mental health scale than non-Irish people (mean = 12.4, SD = 5.5). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -3.4 and 1.3. An independent
samples t-test found that there was no statistically significant difference between the scores on Goldberg’s General Health Questionnaire (t(88) = -.873; p = .385). Therefore the null cannot be rejected.

Hypothesis 4: Attitudes towards health will be influenced by nationality. Irish people (mean = 40.30, SD = 12.87) were found to have lower scores on Snell’s Health Orientation Scale than non-Irish people (mean = 45.78, SD = 11.46). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -10.64 and -.30. An independent samples t-test found that there was a statistically significant difference between the scores on Snell’s Health Orientation Scale (t(88) = -2.10; p = .038). Therefore the null can be rejected.

A breakdown of the 4 subsections shows that there is a significant difference between Irish people and non-Irish people regarding health expectations. Irish people (mean = 10.22, SD = 3.98) were found to have lower scores on Health Expectations than non-Irish people (mean = 12.35, SD = 3.55). The 95% confidence limit shows that the population mean difference of the variables lies somewhere between –3.73 and -.527. An independent samples t-test found that there was a statistically significant difference between the scores on Health Expectations (t(88) = -2.64; p = .01). Therefore the null cannot be rejected.
Table 3: *Independent t-test shows nationality gap in the health scores.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Mental Health</td>
<td>Irish</td>
<td>11.36</td>
<td>5.69</td>
<td>-873</td>
<td>88</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td>Non-Irish</td>
<td>12.40</td>
<td>5.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Behaviour Score</td>
<td>Irish</td>
<td>10.40</td>
<td>3.75</td>
<td>-.48</td>
<td>88</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Non-Irish</td>
<td>14.48</td>
<td>4.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Attitudes Score</td>
<td>Irish</td>
<td>40.30</td>
<td>12.87</td>
<td>-2.10</td>
<td>88</td>
<td>.038</td>
</tr>
<tr>
<td></td>
<td>Non-Irish</td>
<td>45.78</td>
<td>11.46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 Gender

Gender will be looked at in relation to alcohol consumption, physical health attitudes, physical health behaviours and mental health. Men were found to consume a lot more alcohol than women, however there were no significant differences between males and females on any of the health scales. Table 4 below has more information on this.

Table 4: *Gender difference in alcohol consumption*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Consumed on Average Night Out</td>
<td>Male</td>
<td>8.77</td>
<td>7.35</td>
<td>67.44</td>
<td>3.28</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.89</td>
<td>3.33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 5: Males will consume more alcohol than females. Males (mean = 8.77, SD = 7.35) were found to consume more on a night out with friends than females (mean = 4.89, SD = 3.33). The 95% confidence limits show that the population mean difference of the variables lies somewhere between 1.52 and 6.23. An independent samples t-test found
that there was a statistically significant difference between the consumption levels of males and females. \(t(67.44) = 3.28; p = .002\) Therefore the null must be rejected. Considering the high risk level for a single occasion is 5, males consume quite a lot more than the risk level, while females are just below the high risk level on average.

Hypothesis 6: Gender will predict amount of risky behaviours. Men (mean =11.75, SD = 4.33) were found to have lower scores on Amir’s General Preventive Health Behaviours Checklist than women (mean = 12.74, SD = 4.57). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -2.85 and .879. An independent samples t-test found that there was not a statistically significant difference between the scores on Amir’s General Preventive Health Behaviours Checklist \((t(88) = -1.05; p = .296)\). Therefore the null cannot be rejected.

Hypothesis 7: General mental health will be affected by gender. Males (mean = 11.08, SD = 5.08) scored slightly less on the general mental health scale than females (mean = 12.67, SD =6.1). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -3.92 and .76. An independent samples t-test found that there was no statistically significant difference between the scores on Goldberg’s General Health Questionnaire for males and females \((t(88) = 1.34; p = .183)\). Therefore the null cannot be rejected.

Hypothesis 8: Attitudes towards health will be influenced by gender. Males (mean = 41.63, SD = 12.73) scored slightly less on Snell’s Health Orientation Scale than females (mean = 44, SD = 12.25). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -7.63 and 2.88. An independent samples t-test found that there was no statistically significant difference between the scores on Snell’s Health Orientation Scale \((t(88) = -.898; p = .372)\). Therefore the null cannot be rejected.
3.4 Consumption Levels

Originally, it was planned to split participants into 3 groups of high, medium and low, in line with the HSE advisory list of low risk, increased risk and high risk consumption levels. This was not done, as on analysis it was found that only one participant would qualify for the medium group. One person would not provide enough data to comment on how medium drinkers behave. As the medium drinker was closer to the low group than the high group (average consumption was 14 standard drinks over the week, with no binging habits), the low and medium groups were combined. Although an ANOVA test was originally planned, as there are now only two groups, an independent samples t-test will be done. There was a significant difference in behaviour between high and low consumers of alcohol, however both mental health and attitudes to physical health were insignificant. There is a huge difference between the average consumption levels when looked at in the heavy vs light split. Heavy drinkers consume on average 11.1 standard drinks on an average night out with friends, while light drinkers consume an average of 2.3.

Hypothesis 9: Levels of alcohol consumption will predict amount of risky behaviours. People with high levels of alcohol consumption (mean = 10.74, SD = 3.72) were found to have lower scores on Amir’s General Preventive Health Behaviours Checklist than people with low levels of alcohol consumption (mean = 13.81, SD = 4.65). The 95% confidence limits show that the population mean difference of the variables lies somewhere between 1.31 and 4.82. An independent samples t-test found that there was a statistically significant difference between the scores on Amir’s General Preventive Health Behaviours Checklist (t(88) = 3.46; p= .001). Therefore the null can be rejected.

Hypothesis 10: General mental health will be adversely affected by excessive drinking. People with high levels of alcohol consumption (mean = 11.70, SD = 5.48) were
found to have slightly lower scores on the general health questionnaire than people with low levels of alcohol consumption (mean = 11.95, SD = 5.79). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -2.11 and 2.61. An independent samples t-test found that there was an insignificant difference between the scores of heavy and light consumers of alcohol on the general health questionnaire (t(88) = .211; p = .83). Therefore the null cannot be rejected.

Hypothesis 11: Attitudes towards health will be influenced by level of alcohol consumption. People with high levels of alcohol consumption (mean = 41.02, SD = 12.77) were found to have lower scores on Snell’s Health Orientation Scale than people with low levels of alcohol consumption (mean = 44.60, SD = 12.06). The 95% confidence limits show that the population mean difference of the variables lies somewhere between -1.63 and 8.8. An independent samples t-test found that there was an insignificant difference between the scores on Snell’s Health Orientation Scale (t(88) = 1.36; p = .17). Therefore the null cannot be rejected.

Table 5: Heavy and light consumers of alcohol, and their results on the health measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Mental Health</strong></td>
<td>Heavy</td>
<td>11.70</td>
<td>5.48</td>
<td>88</td>
<td>.211</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>11.95</td>
<td>5.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Behaviour Score</strong></td>
<td>Heavy</td>
<td>10.74</td>
<td>3.72</td>
<td>88</td>
<td>3.46</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>13.81</td>
<td>4.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Attitudes Score</strong></td>
<td>Heavy</td>
<td>41.02</td>
<td>12.77</td>
<td>88</td>
<td>1.36</td>
<td>.176</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>44.60</td>
<td>12.06</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.0 DISCUSSION

The aim of this study was to examine alcohol and its effect on the behaviours and attitudes towards health, while also looking at mental health in this area. These results support five out of the original eleven hypotheses, while the remaining six were not supported by this research. Irish people’s relationship with alcohol is known to be very close, and Irish people are known to be high consumers. Prior research also indicated that men consume more alcohol than women. The study wanted to compare trends in the behaviour and attitudes towards health displayed by Irish people and non-Irish people in general, and men and women, to see if Irish people and men’s health suffers as a result of their high consumption of alcohol. As the results show, there are some similarities between heavy drinker’s behaviour regarding their physical health, and Irish people, however none between men and the heavy drinkers. An interesting point to note is that there were no significant differences between any of the groups in terms of their mental health.

4.1 Nationality

The findings show that Irish people, men in particular consume too much alcohol when looked at in relation to the HSE guidelines on low risk, increased risk and high risk. Irish people overall consume almost double the high risk level, with 5 standard drinks on a night out, while non-Irish on average stay below the high risk level. O’Dwyer’s theory that Irish people adopt an extreme view on alcohol (abstinent or drunk) was supported by this research, where only one person fitted the model of a medium consumer. Irish people also come off significantly worse than non-Irish in terms of physical health in both behaviour and attitude towards health. The results of this imply that alcohol does have a serious effect on the health of Irish people. Most previous research shows that people who consume higher volumes of alcohol tend to have more problems with their mental health. Considering Irish people consume so much more alcohol than non-Irish, it was quite surprising to find that
there were no significant differences in terms of mental health. However Irish people, who demonstrated significant differences between the levels of consumption, also scored lower overall on Snell’s scale, and in particular with regards to future health expectancies. This implies that the Irish are, at least on some level, aware of how unhealthily they live.

4.2 Gender

This research supported previous research conducted by Fillmore et al in 1997 which states that men consumed significantly more alcohol than women. However it is interesting to note that women are much more likely to drink. Out of 42 female participants, only one (2.38%) said she hadn’t drunk in the 12 months prior to the survey being conducted. This is compared with eight males out of 49(16.32%). While this may appear to be good news for men, when only male drinkers are considered, their average consumption on a night out jumps from 8.7 up to 10.52, which is more than double the high risk limit. This information goes against prior research from Long & Mongan, which showed that females are more likely than males to abstain from alcohol.

4.3 Consumption Level

High level users of alcohol score significantly lower than low level users in physical health behaviour, similar to the Irish people. However, high level drinkers seem to be more optimistic about their health than Irish people, scoring higher on Snell’s Health Orientation Scale. There was no significant difference between high level and low level consumers of alcohol interns of Snell’s scale. As a result of all the health issues alcohol can cause, significant differences in Snell’s Scale were expected between high and low level users. This however was not case. People who consume more alcohol do tend to be engaged in more risky behaviours. This was supported by the current research, with high level consumers of alcohol scoring significantly higher on Amir’s checklist than low level consumers.
4.4 Strengths and Weaknesses

As discussed, the current research has gone against previous research on a number of issues. There are some limitations with this study. All questionnaires were completed on a self-report basis, so results provided may not be entirely accurate. Despite confidentiality, participants may be embarrassed to provide honest answers about their current fitness, and how they live their life. There may be issues with people’s responses in relation to level of alcohol consumption, with some people underestimating or overestimating the amount they consume.

The study found a lot of people from different nationalities, and a lot of people not from Ireland, which helped to run the research on Irish versus non-Irish. The nationality and gender split of the study was really nice, and offered sufficient numbers to stand by the research. The seventh day adventist church was targeted in order to provide a nice number of people who do not drink alcohol. This was not entirely successful however, as the split in this study actually provided less abstainers than exists in general population, according to previous research on the matter. This may be because of the snowball sampling method, as Borsari and Carey found in 2001, people who drink are more likely to have friends who drink. As a result of this the split was skewed in this research.

Irish people and high level users have similar results in terms of poor performance on the health behaviours checklist. This may be because a large number of participants were in both groups, and so there would be a lot of crossover in the answers given in both groups. However, the disparity between scores in terms of attitudes towards physical health refutes this. A within groups design experiment could be employed in future research to make sure this is not an issue.
None of the tests showed any significant difference between the groups in terms of mental health as measured on the GHQ 12. Although time was an issue, maybe the original complete version of the GHQ could reveal more detailed responses, leading to significant differences.

4.5 Possible Future Research

There are a number of ways future research could build upon the findings discovered here. Due to the sampling method, the majority of participants, even the non-Irish participants are more than likely to live in Ireland and so are part of the same society and environment. Considering this, it appears that the environment has very little effect on alcohol consumption habits of adults. Irish people appear to be either genetically predisposed to high risk alcohol consumption, or it is instilled in us by the environment in our development. It would be really interesting to see if Irish people out of the country still consume significantly more than non-Irish people. The research could look at emigrants to see if the results transfer. Do Irish people abroad still consume more than non-Irish? This would help to show if Irish people are actually heavier drinkers, or if there is something else happening here. For example maybe immigrants consume less alcohol than natives, and it has very little to do with the actual nationality of the person. If the study shows similar results, it would imply that, whether it’s genetics or environment growing up, Irish people would consume more. The study would also examine 2nd and 3rd generation Irish people who have been born abroad, for example in America. These participants would not have been subjected to the same alcohol soaked media and environment during development. Any significant results here could help to determine if Irish people are genetically predisposed to alcoholism.
4.6 Applications

The research here has shown that Irish people lead significantly more unhealthy lives while having poor attitudes towards their health when compared to non-Irish participants. Many people in Ireland use the excuse of ‘there’s nothing better to do’ to explain their overindulgence in alcohol. This research implies that people of different nationalities even when in the same environment have different drinking habits, thus refuting this claim. This could be used in marketing campaigns to tackle the idea of “nothing better to do” being an excuse for excessive drinking. The result that Irish people scored lower on health expectancies shows that they are aware that they are not living healthy lives. They may not however be fully aware of the link between that and alcohol. An advertising campaign based on the facts and figures about alcohol’s effect on health, and at what level of consumption it takes effect could be used to help reduce consumption.

4.7 Conclusion

This study has arguably provided more of an insight into the current state of Irish health as opposed to the effects of alcohol on health. There are a number of facts which I think would surprise people, and could be used to promote awareness of how many is too many. Information found here could be used to challenge the perception that there is nothing to do in Ireland except get drunk.
5.0 References:

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adolescence. *Journal of Adolescent Health*. 36(1), 82-86


Madden, D., 2008 *Gender Differences in Mental Well-Being: A Decomposition Analysis*. Retrieved from [https://www.ucd.ie/economics/research/papers/2008/WP08.03.pdf](https://www.ucd.ie/economics/research/papers/2008/WP08.03.pdf)


6.0 Appendix

General Health Questionnaire

Please read the following statements and underline the answer that you think most relates to you over the last few weeks:

Have you recently:

Been able to concentrate on whatever you’re doing?
- Better than usual
- Same as usual
- Less than usual
- Much less than usual

Lost much sleep over worry?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Felt that you are playing a useful part in things?
- More so than usual
- Same as usual
- Less useful than usual
- Much less useful

Felt capable of making decisions about things?
- More so than usual
Same as usual
Less so than usual
Much less capable

Felt constantly under strain?
Not at all
No more than usual
Rather more than usual
Much more than usual

Felt you couldn’t overcome your difficulties?
Not at all
No more than usual
Rather more than usual
Much more than usual

Been able to enjoy your normal day to day activities?
More so than usual
Same as usual
Less so than usual
Much less than usual

Been able to face up to your problems?
More so than usual
Same as usual
Less able than usual
Much less able
Been feeling unhappy and depressed?
   Not at all
   No more than usual
   Rather more than usual
   Much more than usual

Been losing confidence in yourself?
   Not at all
   No more than usual
   Rather more than usual
   Much more than usual

Been thinking of yourself as a worthless person?
   Not at all
   No more than usual
   Rather more than usual
   Much more than usual

Been feeling reasonably happy, all things considered?
   More so than usual
   About same as usual
   Less so than usual
   Much less than usual
Amir’s General Preventive Health Behaviours Checklist

Which of the following activities do you generally undertake or engage in? Please respond by underlining the number which best represents the extent to which you undertake or engage in each activity.

0= No, do not do 1= Sometimes 2= Yes, always or almost always

1. Avoid drinking and driving
2. Wear a seat belt when in the car
3. Do things in moderation
4. Get enough relaxation
5. Check safety of electrical appliances
6. Avoid overworking
7. Fix broken things around the home
8. Eat sensibly
9. Maintain contact with friends and relatives
10. Destroy old or unused medicines
11. Regularly eat breakfast
12. Practice safe sex
13. Avoid crossing the street against the traffic lights
14. Keep a first-aid kit in the home
15. Get enough sleep
16. Keep emergency phone numbers
17. Avoid over-the-counter medicines
18. Spend time out of doors everyday
19. Do not smoke
20. Get enough exercise
21. Pray or live by the principles of religion
22. Avoid letting things get me down
23. Avoid eating snacks
24. Limit alcohol intake
25. Limit certain foods, e.g. fat, sugar
26. Control my weight
27. Get a regular medical check-up
28. Get a regular dental check-up
29. Take dietary supplements or vitamins
Snell’s Health Orientation Scale

Instrument Title: The Health Orientation Scale (HOS)

Instrument Author: Snell, W. E., Jr., Johnson, G., Lloyd, P. J., & Hoover, W.

INSTRUCTIONS: The items listed below refer to people's health. Please read each item carefully and decide to what extent it is characteristic of you. Give each item a rating of how much it applies to you by using the following scale:

A = Not at all characteristic of me.
B = Slightly characteristic of me.
C = Somewhat characteristic of me.
D = Moderately characteristic of me.
E = Very characteristic of me

1. I am very aware of how healthy my body feels.
2. I sometimes wonder what others think of my physical health.
9. I expect that my health will be excellent in the future.
10. I am in good physical health.
11. I notice immediately when my body doesn’t feel healthy.
12. I’m very concerned with how others evaluate my physical health.
19. I believe that the future status of my physical health will be positive.
20. My body is in good physical shape.
21. I’m sensitive to internal bodily cues about my health.
22. I’m very aware of what others think of my physical health.
29. I do not expect to suffer health problems in the future.
30. I am a well-exercised person.
31. I know immediately when I’m not feeling in great health.
32. I’m concerned about how my physical health appears to others.
39. I will probably experience a number of health problems in the future.
40. My body needs a lot of work in be in excellent physical shape.
41. I'm very aware of changes in my physical health.

42. I'm concerned about what other people think of my physical health.

49. I anticipate that my physical health will deteriorate in the future.

50. My physical health is in need of attention.
Information page

This study aims to investigate alcohol consumption and its link with physical and mental health. As part of this, there will be three sections to this questionnaire, measuring physical health behaviours, attitudes towards physical health and a measure of general mental health.

Please answer each section as honestly as you can. Do not spend too long thinking about each question as there are no right or wrong answers.

Any information that you give will remain strictly confidential. Please do not write your name anywhere on this survey. You have the right to withdraw from the study at any time, if you wish to do so.

I hope you find this interesting, and I would like to thank you in advance for your time and cooperation.

All participants must have reached the minimum age of 18. If you are under 18, please do not continue.