

A comprehensive investigation of the relationship between anxiety,
alcohol misuse and alcohol expectancies.

Daragh Cox

Submitted in partial fulfilment of the requirements of the Bachelor of
Arts degree (Psychology Specialization) at DBS School of Arts,
Dublin.

Supervisor: Dr.Katriona O'Sullivan

Head of department: Dr.Sinead Eccles

April 2013

Department of Psychology

DBS School of Arts

Table of contents

1.0 Introduction.....	5
1.1 Overview of anxiety.....	5
1.2 The comorbid relationship between anxiety and alcohol misuse.....	6
1.3 The Self-Medication hypotheses.....	7
1.4 Alcohol expectancies.....	8
1.5 The nature of the anxiety disorder can affect its relationship with alcohol misuse.....	11
1.6 Negative affect.....	12
1.7 Purpose of the current study.....	13
1.8 Hypotheses.....	14
2.0 Methods.....	16
2.1 Participants.....	16
2.2 Design.....	16
2.3 Measures.....	18
2.4 Procedures.....	21
2.5 Statistical analysis.....	21
3.0 Results.....	23

3.1 Descriptive statistics.....	23
3.2 Inferential statistics.....	26
4.0 Discussion.....	31
4.1 Findings of the present study.....	31
4.2 Limitations.....	34
4.3 Implications of findings and a look to the future.....	37
4.4 Conclusions.....	38
5.0 References.....	40
6.0 Appendix.....	55
6.1 Tables and figures.....	55
6.2 Questionnaires.....	60
6.3 Debriefing.....	67

Acknowledgements

I would first like to thank my supervisor Dr. Katriona O'Sullivan for all of the support, guidance and help she gave to me while I was working on this project. I would also like to thank all of the final year project lecturing staff (Dr. Patricia Frazer, Margaret Quinn Walsh and Dr. Sinead Eccles) for all the support, guidance and help they gave me while I was working on this project.

I would like to thank all my family and friends for always being there for me and bringing me to where I am today. Finally I would like to especially thank my wonderful parents Brian & Bernadette as without them none of this would be possible.

Abstract

Anxiety, alcohol misuse and alcohol expectancies have been shown to all be positively linked to one another. In the current study participants (N=101) alcohol expectancies were expected to be influenced by the nature of their drinking and general and social anxiety were expected to be related to specific types of positive expectancies. General anxiety and negative affect were expected to predict problematic drinking and levels of alcohol consumption among participants were also examined in regards to their levels of social anxiety. The quasi-experimental portion of the study revealed that problematic drinkers and high alcohol consumers held significantly higher alcohol expectancies compared to less problematic or lower consumers. Participants levels of social anxiety wasn't shown to influence their alcohol consumption. General anxiety and negative affect were both found to share a significant weak relationship with problematic drinking. General anxiety and social anxiety were both shown to be significantly related to positive alcohol expectancies. Results are discussed in regards to possible limitations and future directions.

1.0 Introduction

1.1 Overview of anxiety

Anxiety is an affective state characterised by irrational, worrisome or fearful thoughts generally about anticipated events. Anxiety may also manifest into unpleasant symptoms such as heart palpitations, sweating, difficulty concentrating, or dizziness. It is very common for nearly everyone to experience anxiety every once in a while. Bennett (2011) notes that anxiety is an essential emotion as without it we would most likely lead irresponsible or dangerous lives. However excessive and prolonged presence of anxiety can make it hard for some people to lead a normal life as it can turn the average day of a person into a major ordeal (APA, 2000).

Generalized Anxiety Disorder (GAD) and Social Anxiety Disorder (SAD) are two very common forms of anxiety disorders. GAD is characterized by non specific constant worry or fear about every day normal events and is usually accompanied by typical physical symptoms of anxiety which we have just discussed such as heart palpitations and dizziness. The DSM-IV defines GAD as the constant presence of anxiety for 1 month or longer (APA, 2000). SAD is an anxiety disorder which is characterized by an intense fear of social situations, generally due to a fear of being embarrassed or being judged by others in a negative manner. SAD can consist of an array of fears about social situations or can be based on one specific fear e.g public speaking (Lietenberg, 1990, APA, 2000).

1.2 The comorbid relationship between anxiety and alcohol misuse

It is estimated that 1 in 5 people will experience some form of anxiety disorder at some point in their lives and also that 1 in 5 people will develop a substance abuse disorder at some point in their lives, with alcohol being the most common substance of abuse (Baker & Vellemen, 2007). Barlow (1997) states that between 25 and 45 % of people receiving treatment for an alcohol use disorder currently have an anxiety disorder or have had an anxiety disorder in the past. 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. Chambless, Cherney, Caputo & Rheinstein (1987) looked at a sample of 75 inpatient alcoholics and found that 40% of these alcoholics had been diagnosed with singular or multiple anxiety disorders over the course of their life.

Grant et al.(2005) state that 48 % of people who have been diagnosed with social anxiety disorder during their lifetime also meet the criteria for an alcohol use disorder. Randall, Thomas & Thevos (2001a) estimate that 20% of people being treated for social anxiety disorder and 15% of people being treated for alcoholism have both disorders. In a number of studies conducted by Brown Irwin & Schukit (1991) 50-67% of alcohol dependant males exhibited high scores on measures which looked at state anxiety and also showed symptoms which were typical of social phobia and generalized anxiety disorder. Weiss and Rosenberg (1985) found 23% of 66 inpatient alcoholics met criteria for one or more DSM-III anxiety disorders. There is no doubt about the strong relationship between alcohol misuse and anxiety as research has clearly shown. There is however some uncertainty about whether alcohol misuse precedes anxiety or anxiety precedes alcohol misuse. Kushner, Sher & Erikson (1999)

state that anxiety disorders and alcohol misuse play off one another irrespective of which one came first.

It is widely known and accepted that withdrawal from alcohol can result in anxiety symptoms such as shakiness, heart palpitations and panic attacks. Marshall (1997) notes that episodes of alcohol withdrawal can interfere with the workings of brain, such as causing an increase of activity in the limbic system and the norepinephrine system, two systems which are implemented in panic attacks. These symptoms can lead to a constant cycle of alcohol abuse as the individual may start to drink more regularly to avoid undesirable withdrawal symptoms (Kushner, Abrams & Borchardt 2000). Brown et al. (1991) found that individuals who had discontinued their alcohol misuse showed a decrease of anxiety symptoms. Therefore the logical and most basic assumption about the comorbid relationship between alcohol misuse and anxiety disorders would seem to be that alcohol misuse is what causes subsequent anxiety.

1.3 The Self-medication hypotheses

People who suffer from anxiety often do not receive appropriate treatment for their symptoms and will often encounter a lot of impairment in their day to day life due to anxiety (Grant et al. 2005; Kessler et al. 2001). According to the self-medication hypotheses anxiety precedes alcohol misuse because anxious individuals will consume alcohol in order to relieve their symptoms of anxiety. This attempt at relieving symptoms of anxiety is what causes the individual to develop problems with alcohol (Quitkin, Rifkin, Kaplan & Klein, 1972). High rates of self-medication have been found particularly within clinical populations (Bibb & Chambless, 1986; Thomas, Randall & Carrigan 2003). Findings by Grant et al. (2004) are in line with the self-medication hypotheses as they found that rates of anxiety disorders occurring subsequent to alcohol use disorders were very low. Criteria for these findings by

Grant et al. included that the anxiety disorder must be present independently of alcohol use and therefore it was required that the anxiety disorder must be observable 4 weeks after alcohol use had ceased.

Beidel, Turner & Morris (1999) state that even though socially anxious individuals feel apprehensive about situations such as meeting new people, engaging in friendships or engaging in romantic relationships they still very much long to be able to engage in these sort of interactions. However anxiety often stands in the way of these individuals being able to maintain a straightforward account of themselves when they are in any of these type of situations. This is what causes the socially anxious individual to abstain from any of these situations which may provoke anxiety. Therefore socially anxious individuals may consume alcohol as a coping mechanism to help them deal with their anxiety as they may lack the proper skills which are required to deal with social anxiety and other negative feelings (Colder, 2001). Thomas et al. (2003) found that socially anxious individuals drank alcohol for the purpose of coping with their fears during social situations as did Stewart, Morris, Mellings and Komar (2006).

Swendsen, Conway, Rounsaville and Merikangas (2002) conducted a diary based study in which they had moderate drinkers keep a daily record of their feelings and amount of alcohol they consumed. Participants in this study were required to do this over the duration of a month. This research found that feelings of anxiety generally came before and predicted an increase in alcohol consumption.

1.4 Alcohol expectancies

The fact that individuals with anxiety disorders may develop problems with alcohol because they find that alcohol helps ease their anxiety illustrates that beliefs a person holds about what they will experience from drinking can strongly influence the nature of the individuals

drinking. What an individual expects to gain or experience from consuming alcohol is referred to as their alcohol expectancies. Alcohol expectancies are generally described as either being positive or negative. This implies that a person either believes they will gain something positive from consuming alcohol (e.g. social assertiveness or tension reduction) or that they will gain something negative (e.g. cognitive impairment or aggression).

Cooper's (1994) model proposes that individuals consume alcohol for 4 different reasons: 1. To increase positive affect 2. To enhance experience in social situations 3. To fit in with peers and to conform with what others are doing. 4. To diminish or help them cope with feelings of anxiety or negative affect. A mounting body of research has found that these appear to be the main reasons why individuals consume alcohol.

Wood, Nagoshi & Dennis (1992) showed that consuming alcohol in order to avoid experiencing emotions such as anxiety was significantly associated with increased frequency of alcohol consumption and problematic consumption. Brown (1985) notes that tension reduction and relaxation expectancies share the strongest relationship with problematic drinking. Kushner, Abrams, Thuras and Hason (2000) note that alcohol expectancies are associated with drinking for self-medication purposes and Young and Oei (2000) also note that alcohol expectancies are linked to drinking in response to pre-existing anxiety.

Ham, Zamboanga and Bacon (2011) looked at how alcohol expectancies mediated links between dangerous consumption of alcohol and social anxiety in 3 different situations where participants consumed alcohol. These situations were coping contexts (e.g. when depressed), intimate contexts (e.g. when on a date) and sociable contexts (e.g. when at a party). Results from this experiment showed that alcohol expectancies about sociable contexts mediated the links between dangerous consumption of alcohol and social anxiety.

O'Hare (1990) and O'Hare & Sherrer (1997) note that social assertive and tension reduction expectancies are related to anxiety, social anxiety and general negative feelings. De Boer,

Schippers and Van Der Stakk (1994) found that socially anxious women who had positive alcohol expectancies stated that they experienced a reduction of anxiety after they had consumed alcohol compared to women who had negative or neutral alcohol expectancies.

Gilles, Turk and Fresco (2005) found that socially anxious individuals who held positive alcohol expectancies were more likely to consume more alcohol than socially anxious individuals who didn't hold positive expectancies. Kidorf and Lang (1999) found that individuals who endorsed socially assertive expectancies consumed more alcohol when they were anticipating giving a speech compared to baseline conditions. Additionally Ham, Zamboanga, Bacon, and Garcia (2009) showed that consuming alcohol in order to conform with peers was significantly related to social anxiety.

Compared to positive expectancies negative expectancies about alcohol consumption appear to have a more complex relationship with alcohol misuse. It has been shown that negative alcohol expectancies appear to be involved in the cessation of problematic drinking among some individuals (Tucker & Sobell, 1992). Eastman and Norris (1982) looked at a sample of problematic drinkers that were in treatment and found that 77% of the sample who held positive alcohol expectancies relapsed compared to only 7 % that held negative expectancies. Lee, Greely and Oei (1999) found that although negative alcohol expectancies explained the greater proportion of variance among frequency of consumption, positive alcohol expectancies explained the greater proportion of variance among quantity consumed per drinking session. Furthermore McMahon and Jones (1993) suggest that as the positive alcohol expectancies of the individual rises so inevitably will the negative ones as higher levels of alcohol consumption increase the chance of experiencing something negative from drinking.

1.5 The nature of the anxiety disorder can influence its relationship with alcohol misuse

Research appears to suggest that the strength of the association between anxiety disorders and alcohol misuse varies depending on the nature of the anxiety disorder. Bolton, Cox, Clara and Sareen (2006) report that drinking for self medication purposes is more common among individuals with general anxiety as opposed to social anxiety as do Robinson, Sareen, Cox and Bolton (2009). 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.

Apart from general and social anxiety disorders another anxiety disorder called panic disorder has been shown to share a very strong relationship with alcohol misuse (Schuckit, Tipp, Smith & Bucholz, 1997; Regier et al. 1990). High rates of repetitive panic attacks have been observed among clinical patients in withdrawal from alcohol (Brown et al. 1991) so it would appear that association between panic disorder and alcohol misuse is a basic substance induced one, i.e excessive consumption leads to the experience of unpleasant withdrawal symptoms such as panic attacks.

Social anxiety appears to have a more complicated relationship with alcohol misuse in comparison to other anxiety disorders. It appears to be the anxiety disorder least associated with alcohol use but has still been associated with frequent and problematic consumption. Higgins & Marlatt (1975) found that higher levels of social anxiety share a stronger correlation with alcohol consumption as opposed to low levels of social anxiety. However contrary to Higgins et al. Lewis et al. (2008) found that individuals who were high in social anxiety were less likely to drink to excess as did Rohsenow (1982) and Holroyd (1978). These contradictory findings may be due to social anxiety causing individuals to be in less

situations where they are expected to drink alcohol. Socially anxious individuals may also have a misconception of the amount of drinking that their less anxious peers indulge in, and this may lead them to increase their own rate of drinking. Although socially anxious individuals may consume large amounts alcohol when they are faced with an anxiety inducing social situation they might actually overall consume less alcohol than their peers which leads to a lesser quantity frequency index (Norberg, Norton & Olivier, 2009).

1.6 Negative affect

Negative affect is a dispositional dimension and a term generally used to describe an individuals subjective experience of distress. It incorporates numerous negative emotional states such as anxiety, fear, anger and disgust. Individuals high in negative affect tend to perceive stimuli as being negative and are prone to experiencing negative emotions (Watson & Clark, 1984). Research has demonstrated that negative affect shares a significant correlation with anxiety e.g Tellegen (1985) and Watson, Clark and Carey (1988).

Similar to anxiety negative affect has been linked to relapse in alcoholics following a period of abstinence and has also been linked with the use of alcohol in order to help an individual cope (Witkiewitz & Villaroel, 2009; Cooper, Frone, Russell & Mudar 1995). Carpenter and Hassin (1999) note that drinking to cope with negative affect could be a causal factor in the development of alcohol dependence. Martens et al. (2008) found that college students who were high in negative affect and coping related drinking motives were more likely to experience problems with alcohol. Ostafin and Brooks (2011) conducted research whereby they examined whether negative affect would increase the strength of automatic alcohol-approach motivation associations in individuals who drink to cope with negative emotion. They found that negative affect increased the strength of participants approach motivated alcohol processes. This mounting body of evidence suggests that negative affect should be

considered as a third variable that might play a role in the relationship between anxiety and alcohol misuse.

1.7 Purpose of the current study

The current study had a number of aims. Firstly we wanted to examine whether general anxiety and negative affect would both be strong predictors of problematic drinking. We also wanted to establish whether the nature of our participants drinking would influence their alcohol expectancies and then examine what type of expectancies would be related to general anxiety and social anxiety. Finally we sought find out whether high socially anxious and low socially anxious individuals differed in terms of alcohol consumption.

Much research has demonstrated that anxiety disorders share a strong relationship with alcohol misuse and drinking for self-medication purposes. Negative affect is a construct which shares a strong relationship with anxiety and has also been linked to drinking for self-medication purposes. Given this we proposed that general anxiety and negative affect would both strongly predict problematic drinking. We were unable to find any previous studies which tried to establish whether general anxiety and negative affect would both be strong predictors of problematic drinking so therefore to our knowledge we were the first study doing so. We hoped that we would make a favourable contribution to future research by incorporating this unique element into our study.

Alcohol use and alcohol expectancies have both been shown to be strong predictors of one another and alcohol expectancies have been shown to be significantly related to general and social anxiety. By examining whether the nature of our participants drinking would influence their alcohol expectancies and investigating what type of expectancies are related to social and general anxiety we hoped to replicate what previous had found.

Furthermore research has shown alcohol consumption differences among high socially anxious individuals and low socially anxious individuals. The evidence we reviewed suggests that high socially anxious individuals are less likely to drink to excess than low socially anxious individuals. By investigating whether participants levels of alcohol consumption would differ depending on whether they were high or low in social anxiety we again hoped to replicate what previous research had found.

1.8 Hypotheses

1. Our first hypothesis predicted that negative affect and general anxiety would both be strong predictors of problematic drinking.
2. Our second hypothesis investigated whether the nature of participants drinking would influence their alcohol expectancies. We predicted that problematic drinkers would hold higher positive alcohol expectancies than non-problematic drinkers and non-problematic drinkers would hold higher negative alcohol expectancies than non-problematic drinkers. We also examined whether participants quantity and frequency of alcohol consumption alone would determine whether they held positive or negative alcohol expectancies. We predicted that high alcohol consumers would hold higher positive alcohol expectancies than low alcohol consumers and low alcohol consumers would hold higher negative alcohol expectancies than high alcohol consumers.
3. Our third hypothesis predicted that general anxiety would share a strong relationship with tension reduction alcohol expectancies.

4. Our fourth hypothesis predicted that social anxiety would share a strong relationship with socially assertive & positive affect alcohol expectancies.

5. Our fifth and final hypothesis looked at differences between high and low socially anxious individuals levels of alcohol consumption. We predicted that individuals high in social anxiety would consume less alcohol than individuals low in social anxiety.

2.0 Methods

2.1 Participants

Participants from this study were recruited online through social media websites such as Facebook and Twitter as part of a convenience sample. Overall we received 101 responses. The age of participants ranged from 18-66 and the average age was 22.02 (SD=5.846). We expected the young average age of our participants would influence our findings as people aged between 18-24 have the highest rates of binge drinking (Moore, Smith, and Catford, 1994). A 2012 report by the National Advisory Committee on Drugs (NACD) which looked at alcohol consumption and alcohol related harm among Irish nationals found that 18-24 year olds had the highest rates of consumption and harmful drinking when compared to all other age groups.

For our second and fifth hypotheses participants were assigned to groups depending on the nature of their alcohol consumption and their levels of social anxiety. For the purpose of our second hypothesis 64 participants were identified as non-problematic drinkers and 37 participants were identified as problematic drinkers and 72 participants were identified as high alcohol consumers with 29 being identified as low alcohol consumers. For the purpose of our fifth hypothesis we identified 63 participants as low in social anxiety and 38 as high in social anxiety.

2.2 Design

The current study was a mixed design. It was partly correlational and partly quasi-experimental. The quasi-experimental portion of the study was conducted between groups. For our first hypothesis our PV's (predictor variables) were general anxiety and negative affect and our CV (criterion variable) was problematic drinking. For our second hypothesis our IV's (independent variables) were problematic/non-problematic drinking and high/low

alcohol consumption and our DV's (dependent variables) were positive alcohol expectancies and negative alcohol expectancies. For our third hypothesis our PV was general anxiety and our CV was tension reduction alcohol expectancies. For our fourth hypothesis our PV was social anxiety and our CV was socially assertive & positive affect alcohol expectancies. For our fifth and final hypothesis our IV's were high/low social anxiety and our DV was alcohol consumption.

Given that our second hypothesis sought to examine differences between problematic and non-problematic drinkers levels of positive and negative alcohol expectancies and also examine differences between high and low alcohol consumers levels of positive and negative alcohol expectancies we had to decide on what the criteria for labelling participants drinking as either problematic or non-problematic would be and also decide on what the criteria would be for labelling participants consumption as either high or low.

According to the WHO(world health organisation) a total score of 8 or more on the AUDIT suggests harmful or hazardous use aswell as possible dependence. However by using a cut-off score of 8 it is likely that a large number of problematic drinkers will be found as a significant amount of the population will score above the cut-off point due to recording high scores on the first three questions which are based around quantity and frequency of consumption (Babor, Higgins-Biddle, Saunders & Monteiro, 2001). It is suggested that scores between 8-15 only represent a medium to mild level of problematic drinking, whereas scores of 16 or above indicate a high level of problematic drinking (Babor et al. 2001). After taking this information into consideration it was decided that anyone who scored below 16 would be labelled a non-problematic drinker and anyone who scored above 16 would be labelled as a problematic drinker.

The quantity and frequency of participants alcohol consumption was measured by the hazardous use subscale of the AUDIT. The WHO doesn't specify how to score the hazardous

use subscale of the AUDIT so therefore we had decide on what cut-off point we would use. The average of our participants scores on the hazardous use subscale was very high. These high average scores were most likely due to a characteristic of our sample that we expected to influence our results which we have already mentioned. This characteristic was that people between the ages of 18-24 have the highest rates of binge drinking (Moore et al.1994; NACD, 2012) and the average age of our participants was 22. Given this we decided to use a half way cut-off point of 6 as we felt that any lower of a cut-off point would have identified far too many participants as high consumers.

Furthermore given that our fifth hypothesis predicted that participants who were high in social anxiety would consume less alcohol than participants low in social anxiety we had to determine what the cut-off score would be for labeling participants as being either high or low in social anxiety. Watson et al. (1969) describe no cut-off score which separates socially anxious and non-socially anxious individuals, they only state that high scores on the SAD generally indicate high levels of social anxiety and low scores indicate low levels of social anxiety. Geist and Hamrick (1983) used a cut-off score of 11 to label individuals as being high or low in social anxiety and their research yielded significant findings score so we felt that this was a justification to use 11 as our cut-off score.

2.3 Measures

Alcohol use measures: To obtain information on the nature of participants alcohol use we used the Alcohol Use Disorders Identification Test (AUDIT). This measure was developed by the WHO in order to identify individuals whose alcohol consumption has become dangerous or harmful. It consists of 10 questions with the lowest possible score on each question being 0 and the highest being 4. It contains three sub-scales all of which measure different aspects of problematic drinking. These sub-scales are; 1.Hazardous use (measures the quantity and frequency of consumption) 2.Dependence symptoms (measures symptoms

related to dependence), 3.Harmful use (Measures harmful aspects of drinking). Rubio, Bermejo, Caballero and Santo-Domingo (1998) report a Cronbach's alpha of 0.86 for the AUDIT and other literature also reports that it has been shown to be the best instrument for measuring problematic drinking when compared to other instruments due to its high internal consistency (Fiellin, Carrington & O'Connor, 2000; Fleming, Barry & Mac Donald, 1991).

Alcohol expectancie measures: To measure participants alcohol expectancies we used a revised version of the Comprehensive Alcohol Expectancies Questionnaire (CAEQ). The original version of the CAEQ was created by Demmel & Hagen (2003a). The revised version which we used for the present study was developed by Nicolai, Demmel and Moshagen (2010). It contains 41 items related to alcohol expectancies and each item on the questionnaire commences with the phrase "after I drink alcohol" and is then followed by another phrase such as "I can switch my mind off better". Below each of these phrases is a five-point Likert-Scale which ranges from 1(not at all) to 5(definitely). Nicolai et al. (2010) note that the revised version of the CAEQ provides a more accurate measure of alcohol expectancies than the original as they have removed 10 defective items from it. Nicolai et al. 2010 report that all subscales of the revised CAEQ show good to excellent internal consistency with Cronbach's alphas ranging from .78 to .92.

The revised version of the CAEQ contains five subscales of different alcohol expectancies, 3 of these subscales are related to positive alcohol expectancies and 2 of these subscales are related to negative alcohol expectancies. The positive subscales are social assertiveness & positive effect, tension reduction and sexual enhancement. The negative subscales Cognitive Impairment & Physical Discomfort and Aggression. However for the present study we didn't include the sexual enhancement subscale in our measure of positive expectancies for two reasons. Firstly certain research has shown that sexual enhancement expectancies are unrelated to alcohol consumption (Pabst, Baumeister & Kraus, 2010). Secondly irrespective

of whether sexual enhancement expectancies are related to alcohol consumption we felt that there were too many items related to positive expectancies and not enough related to negative expectancies. Overall the revised version of the CAEQ contains 27 questions related to positive expectancies and 14 related to negative expectancies so by omitting the sexual enhancement subscale this reduce the number of positive expectancy items to 22.

General anxiety measures: To measure levels of general anxiety among participants we used the Zung Self-rating Anxiety Scale (SAS) which was developed by William W.K Zung in 1971. Each item on the scale is rated on a 4 point basis. The four point scale consists of options which range from 1(A little of the time) to 4 (most of the time) .This scale consists of 20 questions 15 of which are increasing anxiety level questions and 5 of which are decreasing anxiety questions. High scores on the SAS most likely indicate high levels of anxiety (Zung, 1971). Zung (1971) reports a Cronbachs alpha of 0.80 for the scale as do Ramirez and Lukenbill (2008).

Social anxiety measures: Participants levels of social anxiety were measured by the Social Avoidance and Distress scale (SAD). This scale was developed by Watson & Friend (1969) and consists of 28 true or false items. Participnats get a score of 1 for each item they answer true and a score of 0 for each item they answer false. Watson & Friend (1969) report a cronbachs alpha of 0.77 for the scale and also note that it correlates well with other popular social anxiety measures such as the Fear of Negative Evaluation scale (FNE).

Negative affect measures: To measure levels of negative affect among participants we used the positive and negative affect scale (PANAS). This instrument was developed by Watson, Clark, and Tellegen (1988). It consists of two 10-item scales which measure both positive and negative affect. Each item on this instrument is rated on a 5 point scale which ranges from 1(slighty or not at all) to 5 (extremely).Watson et al. (1988) report cronbachs alpha values for

the PANAS ranging from .84 to .90. Given the fact that we were only interested in measuring participants levels of negative affect we didn't administer the positive affect half of the scale to them.

2.4 Procedures

Before beginning the study it was stated to participants that they were being invited to take in an undergraduate research project which contained a number of questions related to alcohol consumption, alcohol expectancies, general anxiety, social anxiety and negative affect. It was also made clear to them that must be over the age of 18 to take part in this study. They were then told that they had the right to withdraw from the study at any time if they wished to do so and also informed participation in this research was completely anonymous as no information which could make anyone's data identifiable was collected.

Before participants began answering questions related to the variables we were examining they were asked to state their gender, age and whether or not they consented to take part in this study. After participants had submitted their data they were thanked for their involvement in our research and also given a list of help-lines and websites which they could contact if they were in any way effected by issues which this questionnaire may have raised. They were also provided with an e-mail address to contact if they wanted to find out the results of this research or had any questions in relation to it.

2.5 Statistical analysis

To begin analyzing our data we computed the mean, standard deviation and a Cronbach's alpha for all of our scales and sub-scales. Based on participants overall scores on the AUDIT they were categorised as a problematic or non-problematic drinker and based on their scores on the hazardous use subscale of the AUDIT they were categorised as a high or low alcohol

consumer. Participants were also categorised as either being high in social anxiety or low in social anxiety based on their scores on the SAD scale.

Before we could run any statistical tests which would allow us to make inferences about our data we had to determine whether or not our data was normally distributed. To do this we constructed histograms for all our measures and examined their levels of skewness and kurtosis. After doing so we determined that the majority of our data wasn't normally distributed.

We wanted to use all of the data which we had collected as we felt that the size of our sample (N=101) was small because we had hoped for over 150 responses. Therefore we decided against removing any participants data in order to make our data normally distributed. We then tried to log transform our measures which weren't normally distribute in order to make them normal. For reasons unknown to us the log transformation only worked for a small number of our measures. Given this we decided that we would have to run non-parametric tests in order to examine our hypotheses. To test our first, third and fourth hypotheses we used a Spearman's rho correlation and to test our second and fifth hypotheses we use a Mann-Whitney U test.

3.0 Results

3.1 Descriptive statistics

Table 1. Means, standard deviations, and Cronbach's alpha of all scales and subscales.

Measures	Mean	SD	Cronbach's alpha
AUDIT	14.00	7.37	0.85
<i>-AUDIT Subscales</i>			
Hazardous use	6.93	2.51	0.75
Dependence symptoms	3.29	2.69	0.86
Harmful use	3.79	3.27	0.54
CAEQ Revised Positive expec.	117.43	21.93	0.94
CAEQ Revised Negative expec.	37.02	9.56	0.89
<i>-CAEQ Revised subscales</i>			
Social assertiveness & positive affect	56.16	11.68	0.94
Tension Reduction	24.21	6.89	0.92
Cognitive impairment & physical discomfort	28.72	7.23	0.88
Aggression	8.30	4.04	0.91
SAD scale	9.35	7.90	0.94
Zung SAS	37.34	9.44	0.86
PANAS NA	21.75	7.63	0.89

Table 1 which is shown above illustrates the means, standard deviations and a Cronbach's alpha value for of all the scales and sub-scales which we used. All of our scales and subscales showed good to excellent internal consistency apart from the harmful use subscale of the AUDIT which had a Cronbach's alpha value of 0.54. However we weren't using this subscale on its own to test any of our hypotheses so we didn't consider this a problem as the AUDIT scale as a whole showed good internal consistency with a Cronbach's alpha of 0.85.

Below figures 1 and 2 illustrate the number of non-problematic/problematic drinkers and high/low alcohol consumers we found based on participants AUDIT scores. And also below

figure 3 illustrates the number of high and low socially anxious individuals we identified based on their SAD scores.

Figures 1 and 2. *Non-problematic/problematic drinkers & High/low alcohol consumers*

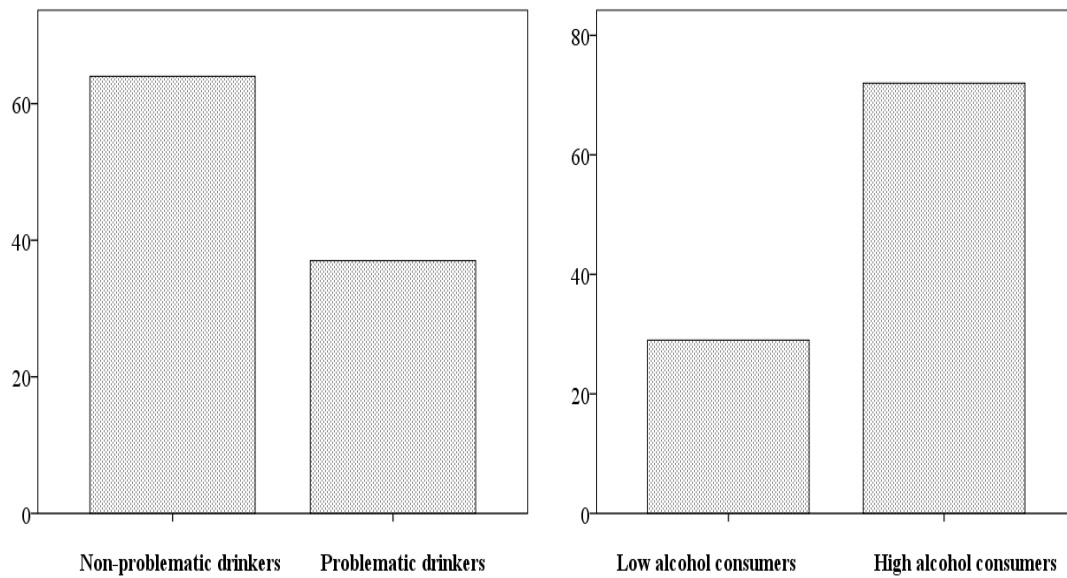
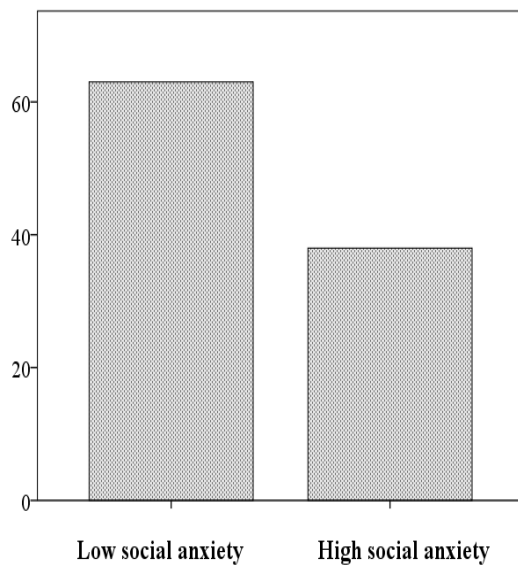


Figure 3. *High & Low socially anxious individuals.*



Before we decided on what were the appropriate inferential statistics to use we had to examine whether data for our scales and sub-scales were normally distributed. In order to do so we examined the skewness and kurtosis values of our data. Below table 2 illustrates the skewness, standard error, kurtosis and standard error of kurtosis for all of our scales and sub-scales.

Table 2. *Skewness & Standard error of skewness of all scales and subscales.*

Measures	Skewness	Std. Error of Skewness	Kurtosis	Std.error of Kurtosis
AUDIT	.573	.240	.534	.476
<i>AUDIT-subcales</i>				
Hazardous use	-.506	.240	-.378	.476
Dependence symptoms	.642	.240	-.020	.476
Harmful use	.931	.240	.862	.476
CAEQ Revised Positive expectancies	-.407	.240	.851	.476
CAEQ Revised Negative expectancies	.281	.240	.505	.476
<i>-CAEQ Revised-subcales</i>				
Socially assertiveness & positive affect	-.763	.240	1.013	.476
Tension Reduction	-.449	.240	-.216	.476
Cognitive impairment & physical discomfort	.119	.240	.305	.476
Aggression	.919	.240	.429	.476
SAD scale	.737	.240	-.644	.476
Zung SAS	.699	.240	-.416	.476
PANAS NA	.484	.240	-.304	.476

To determine whether our skewness and kurtosis values meant that our data wasn't normally distributed we compared each of the skewness and kurtosis values to twice the standard error of skewness and twice the standard error of kurtosis. Values of skewness that were within plus or minus of double the standard error of skewness were considered normally distributed

and values of skewness which weren't within this range weren't considered normally distributed.

After applying this rule we found that majority of skewness values for our measures weren't within the plus or minus range of double the standard error of skewness. We found that the majority of our kurtosis values were within the plus or minus range of double the standard error of kurtosis. Given this we decided to run non-parametric tests to examine our correlations.

3.2 Inferential statistics

Table 3. *Spearman's Rho Correlations between variables.*

	General anxiety	Social anxiety	Negative affect	Pos. alc. Expec.	Neg. Alc. Expec.	Social.Assert. Alc. Expec.	Tens. Reduc. Alc expec.
Problematic alcohol use	.22*	-.03	.23*	.29*	.24*	.17	.28*
Hazardous alcohol use	.04	-.14	.11	.14	.10	.11	.16
General Anxiety			.79*	.32*	.31*	.14	.27*
Social anxiety			.48*	.30*	.10	.31*	.26*
Negative affect				.26*	.25*	.13	.21*

Significant results marked with * P is significant at < 0.05.

Our first hypothesis predicted that general anxiety and negative affect would be strong predictors of problematic drinking. Because data from our measures of general anxiety, negative affect and problematic drinking weren't normally distributed we were unable to

carry out a multiple regression model to test this hypotheses so instead we compared Spearman's rho correlations between these variables. A Spearman's rho carried out between general anxiety and problematic drinking found a weak significant positive relationship between the two ($r_s(101) = .22, p < 0.031$). After squaring the correlation coefficient we concluded that the amount of variance among problematic drinking that could be explained by general anxiety was 4.8%. A Spearman's rho correlation out between negative affect and problematic drinking also found a weak significant positive relationship between the two ($r_s(101) = .23, p < 0.020$). After squaring the correlation coefficient we concluded that the amount of variance among problematic drinking that could be explained by negative affect was 5.3%. These results only partially support our hypotheses. This is because we found that both general anxiety and negative affect were both significantly related to problematic drinking the relationship was found to be weak and we had predicted a strong one. We feel that even though our first hypothesis wasn't supported it is worth noting that a Spearman's rho found that general anxiety shared a very strong significant positive relationship with negative affect ($r_s(101) = .79, p < .000$).

Our third hypothesis predicted that general anxiety would share a strong relationship with tension reduction alcohol expectancies. A Spearman's rho correlation carried out among general anxiety and tension reduction alcohol expectancies found a weak significant relationship among these two variables ($r_s(101) = .27, p < 0.007$). After squaring the correlation coefficient we concluded that the amount of variance among tension reduction expectancies that could be explained by general anxiety was 7.3%. Although we found that general anxiety and tension reduction alcohol expectancies were significantly related to one another our hypothesis was only somewhat supported as we predicted a strong relationship between these two variables.

Our fourth hypothesis predicted that social anxiety would share a strong relationship with socially assertive & positive affect alcohol expectancies. A Spearman's rho correlation found a moderate significant relationship among these two variables ($r_s(101) = .31, p < .001$). After squaring the correlation coefficient we concluded that the amount of variance among socially assertive & positive affect alcohol expectancies that could be explained by social anxiety was 9.6%. Therefore in this case our hypothesis was supported but not to the extent we hoped as we predicted a strong relationship between these two variables.

Table 4. *Mann-Whitney U table displaying the differences of alcohol expectancies among problematic and non- problematic drinkers and high and low alcohol consumers*

Variable	Groups	Mean rank	U	P
Positive alcohol Expectancies	Problematic drinkers (N=37)	59.97	-2.341	.019 *
	Non-problematic drinkers (N=64)	45.81		
	High alcohol consumers (N=72)	54.67	-1.982	.047*
	Low alcohol consumers (N=29)	41.90		
Negative alcohol expectancies	Problematic drinkers	58.28	-1.901	.057
	Non-problematic drinkers	46.79		
	High alcohol consumers	52.27	-.687	.492
	Low alcohol consumers	47.84		

P is significant at <0.05 , significant values marked with *

A Mann-Whitney U test was used to examine our second hypothesis which examined whether the nature of participants alcohol consumption would influence their alcohol expectancies. We predicted that problematic drinkers would hold higher positive alcohol expectancies than non-problematic drinkers and non-problematic drinkers would hold higher negative alcohol expectancies than problematic drinkers. We also predicted that high alcohol consumers would hold higher positive alcohol expectancies than low alcohol consumers and low alcohol consumers would hold higher negative alcohol expectancies than high alcohol consumers. When looking at positive alcohol expectancy differences among problematic and non-problematic drinkers it was found that problematic drinkers had a mean rank of 59.97 compared to non-problematic drinkers who had a mean rank of 45.81. A Mann-Whitney revealed that the two groups did differ significantly in this case ($U = -2.341$, $p = .019$). When looking at negative alcohol expectancy differences among problematic and non-problematic drinkers it was found that problematic drinkers had a mean rank of 58.28 and non-problematic drinkers had a mean rank of 46.79. A Mann-Whitney revealed that the two groups didn't differ significantly in this case ($U = -1.901$, $p = .057$)

When looking at positive alcohol expectancy differences among high and low alcohol consumers we found that high alcohol consumers had a mean rank of 54.67 and low alcohol consumers had a mean rank of 41.90. A Mann-Whitney revealed that the two groups did differ significantly in this case ($U = -1.982$, $p = .047$). When looking at negative alcohol expectancy differences among high and low alcohol consumers we found that high alcohol consumers had a mean rank of 52.27 and low alcohol consumers had a mean rank of 47.84. A Mann-Whitney revealed that the two groups didn't differ significantly in this case ($U = -.687$, $p = .492$). These results partially support our hypothesis as they found significant positive alcohol expectancy differences among problematic and non-problematic drinkers and also found significant positive alcohol expectancy differences among high and low alcohol

consumers. However although problematic drinkers had a higher mean rank than non-problematic drinkers in regards to negative alcohol expectancies these differences weren't found to be significant. Also surprisingly it was found that high alcohol consumers had a higher mean rank than low alcohol consumers in regards to negative alcohol expectancies, however this difference wasn't found to be significant.

Table 5. *Mann-Whitney U table displaying the differences of levels of alcohol consumption among high socially anxious individuals and low socially anxious individuals*

Variable	Groups	Mean rank	U	P
Alcohol consumption	High social anxiety(N=38)	44.28	-1.807	.071
	Low social anxiety(N=63)	55.06		

P is significant at 0.05 significant values marked with *

A Mann-Whitney U was used to examine our fifth hypothesis which predicted that individuals high in social anxiety would consume less alcohol than individuals low in social anxiety. We found that the high social anxiety group had a mean rank of 44.28 compared to the low social anxiety group which had a mean rank of 55.06. A Mann-Whitney revealed that the two groups didn't differ significantly in this case (U= -1.807, p = .071). Although individuals high in social anxiety had a lower mean rank than individuals high in social anxiety the difference wasn't enough to be significant so therefore our hypothesis wasn't supported in this case.

4.0 Discussion

4.1 Findings of the present study

The current study set out to comprehensively investigate the relationship between anxiety, alcohol misuse and alcohol expectancies. Our first hypothesis predicted that general anxiety and negative affect would both strongly predict problematic drinking. Negative affect is the name given to a construct which subsumes a number of adverse mood states and has been shown to share a strong relationship with anxiety (Tellegen, 1985; Watson et al. 1988). We also found that negative affect shared a strong relationship with anxiety. Like anxiety negative affect has been linked to problematic drinking and drinking to alleviate unwanted emotions (Cooper et al. 1995; Carpenter et al. 1999; Martens et al. 2008). No previous research to our knowledge had tried to establish whether general anxiety and negative affect would both predict problematic drinking. Our results showed that general anxiety and negative affect were both significantly related to problematic drinking however this relationship was only found to be a weak one. We feel the fact that both general anxiety and negative affect shared a very similar relationship to problematic drinking means that our hypothesis was somewhat supported, however we are somewhat limited in the conclusion we can draw here as we had to use correlations to test this hypothesis rather than the regression model which we had hoped to use. This is something we will further discuss in the limitations section of our discussion.

Our second hypothesis set out to examine the influence that alcohol misuse has on alcohol expectancies. We predicted that problematic drinkers would hold higher positive alcohol expectancies than non-problematic drinkers and that non-problematic drinkers would hold higher negative alcohol expectancies than problematic drinkers. We also predicted that high alcohol consumers would hold higher positive alcohol expectancies than low alcohol

consumers and low alcohol consumers would hold higher negative alcohol expectancies than high alcohol consumers. This hypothesis was partially supported. We found significant positive alcohol expectancy differences among problematic and non-problematic drinkers and also found significant positive alcohol expectancy differences among high and low alcohol consumers. However we failed to find significant negative alcohol expectancy differences among these groups. Unexpectedly we found that high alcohol consumers had higher average scores than low alcohol consumers on negative alcohol expectancies, although this wasn't significant finding it is still worth noting.

Many authors such as Cooper (1994) incorporate positive alcohol expectancies into their models which try to account for why individuals consume alcohol and research has found that positive alcohol expectancies are linked to frequent and problematic consumption (Wood et al. 1992, Brown, 1985). So therefore our findings which showed that problematic drinkers held higher positive alcohol expectancies than non-problematic drinkers and high alcohol consumers held higher positive alcohol expectancies than low alcohol consumers didn't come as a surprise to us. Negative alcohol expectancies have been linked to the cessation of alcohol consumption and lower levels of consumption (Tucker & Sobell 1992; Kilbey, Downey & Breslau 1998; Eastman & Norris, 1982). Therefore we were surprised that no significant negative expectancy differences were found among these groups. What was even more surprising was that although not significant high alcohol consumers had higher average scores than low alcohol consumers in regards to negative expectancies. A reason for this may be that as individuals with positive alcohol expectancies are likely to consume more alcohol they may also then be more likely to experience negative expectancies (e.g aggression or cognitive impairment) as the quantity of their drinking increases. This explanation has been suggested by authors such as McMahon and Jones (1993). McMahon and Jones (1993) and McMahon, Jones and O'Donnell (1994) also note that measures of alcohol expectancies fail to

incorporate distal expectancies (expectancies about negative consequences the day after drinking) and instead focus too much on proximal expectancies (expectancies about negative consequences while drinking). This is another point we will further discuss in the limitations section of our discussion.

Alcohol expectancies and more specifically tension reduction expectancies have been associated with drinking in response to pre-existing anxiety (Young et al. 2000; O'Hare, 1990; O'Hare et al. 1997) and people suffering from anxiety don't often receive adequate treatment (Grant et al. 2005; Kessler et al. 2001) which can lead to individuals consuming alcohol in an attempt to ease their anxiety. Swendsen et al (2002) found that feelings of anxiety generally preceded participants alcohol consumption in a diary based study. Given this evidence we expected that general anxiety would share a strong relationship with tension reduction alcohol expectancies for our third hypothesis. Similar to what previous research our results showed that general anxiety was significantly related to tension reduction expectancies. However we only found a weak relationship so our hypothesis was only partially supported as we had predicted that we would find a strong relationship.

Our fourth hypothesis predicted that social anxiety would share a strong relationship with socially assertive & positive affect alcohol expectancies as individuals who suffer from social anxiety may consume alcohol in order to help them cope with their social anxiety. Research has demonstrated that socially anxious individuals often consume alcohol in order to ease their apprehension about social situations (O'Hare, 1990; O'Hare et al. 1997; Thomas et al. 2003; Stewart et al. 2006). Similar to previous research our findings showed that social anxiety was significantly related to socially assertive & positive affect alcohol expectancies. Because the relationship was shown to be moderate we felt we could say here that our hypothesis was supported but not the extent we hoped it would be.

Our fifth and final hypothesis wanted to find out whether social anxiety would influence the quantity and frequency of individuals alcohol consumption. We predicted that individuals high in social anxiety would consume less alcohol than individuals low in social anxiety. Research suggests that individuals who are high in social anxiety are less likely to drink excessive amounts of alcohol (Lewis et al. 2008; Rohsenow, 1982; Holroyd, 1978). These findings may be due to the fact that alcohol is often consumed in sociable contexts so therefore socially anxious individuals may consume less alcohol because their social anxiety causes them to avoid sociable environments where alcohol may be consumed. Based on these findings our fifth hypothesis predicted that high socially anxious individuals would consume less alcohol than low socially anxious individuals. However our results weren't in line with what previous research had found as they failed to find a significant difference between these two groups in relation to alcohol consumption so in this case our hypothesis wasn't supported.

4.2 Limitations

Before drawing any conclusions from our results we should first consider a number of limitations within this study. The first limitations which we will discuss are in regards to our sample. It should be noted that the majority of research which all of our hypotheses were based around has used clinical sample to obtain their significant findings (e.g Eastman et al.1982, Chambless et al.1987, Brown et al.1991, Vesga lopez et al.2008, Thomas et al.2003, Cooper et al.1995; Lewis et al.2008). Participants in this study were part of a convenience sample which recruited through various social media web sites, therefore it was likely that very few, if any of our participants actually had an alcohol use or anxiety disorder. Therefore we believed that the nature of our sample was a limitation for all of our hypotheses as we felt that it was one of the reasons that we didn't find as strong relationships among our measures

as we had hoped for and also why we didn't find as much significant differences among groups as we had hoped for.

The next limitations we will discuss are in regards to our methods. Firstly it should be noted that the criteria we used to identify problematic and non-problematic drinkers and high and low alcohol consumers could be considered non-stringent for two reasons. Firstly it hasn't been explicitly stated what the criteria should be when trying to distinguish participants scores on the AUDIT. Babor et al.(2001) note that a score of 8 or more usually indicates problematic drinking, but they also note that this score could result in finding far too many problematic drinkers so they suggest only interpreting scores of 16 or more as problematic when administering the AUDIT. They also note that the majority of people that score above the cut-offs may do so almost solely based on their hazardous use sub-scale scores. This means that some participants scores may only be indicative of large or frequent consumption and may not be a good overall representation of problematic use.

Secondly it hasn't been explicitly stated what the recommended cut-off scores for the hazardous use sub-scale of the AUDIT should be. The highest possible score that participants could get on the hazardous use subscale was 12. Given this we made an arbitrary decision to label participants that scored 6 or above as high alcohol consumers and participants who scored below 6 as low alcohol consumers. We felt that this was the lowest cut-off point we could use as a cut-off score of 6 identified 29 low consumers and 72 high consumers, so any lower cut-off point would have resulted in us being unable to make any inferences about our results. Bush, Kivlahan, McDonell, Fihn & Bradley (1998) state that a score of four or more for males on the hazardous use subscale and a score of 3 or more for females means hazardous consumption. However the WHO doesn't give any guidelines in regards to how the hazardous use subscale should be scored nor does it recommend any scoring differences

for men and women, only recommending different interpretation of scores for participants aged 65 or over (Babor et al.2001).

The non-stringent criteria for separating participants into different categories based on the nature of their alcohol consumption was particularly a limitation in regards to our second hypothesis. Although we are confident that the methods we used to obtain information about the nature of participants drinking were empirically valid we feel that the non-stringent criteria we used to separate participants based on their AUDIT scores somewhat lessens the empirical validity of our results.

As our fifth hypothesis failed to find significant differences between high and low socially anxious individuals alcohol consumption we feel that we should note that the criteria we used to label individuals as high or low in social anxiety could also be considered non-stringent as the SAD scale which measures social anxiety has no specific cut-off score to determine high socially anxious individuals from low socially anxious individuals. The only suggestions made about how to interpret the scale are that high scores will indicate high social anxiety and low scores will indicate low social anxiety (Watson & Friend, 1969). We based our cut-off score of 11 on research by Geist and Hamrick (1983) who also used a cut-off score of 11. Again although we're confident that our measures of social anxiety were empirically valid we feel that the non-stringent criteria we used to determine whether participants were high or low in social anxiety somewhat lessens the empirical validity of our method. We feel that this non-stringent criteria for separating high and low socially anxious individuals

It is also worth mentioning that we were limited in terms of what types of tests we could use to make inferences about our data as we found that the majority of data from our measures wasn't normally distributed. Due to the fact that we only gathered 101 responses we decided against eliminating any participants data in order to make our data fit a normal distribution.

This meant that we were forced to run non-parametric tests to investigate our hypotheses. The fact that we had to use a non-parametric test was considered a particular limitation in regards to our first hypotheses as we had hoped to test these hypotheses by using a multiple regression model whereby general anxiety and negative affect would both be predictors of problematic drinking and could not do so due to the non-normal distribution of our data.

4.3 Implications of our findings and a look to the future

Research has found that both general anxiety and negative affect are both linked to problematic drinking. We found that general anxiety and negative affect both shared a very similar weak relationship with problematic drinking. Even though the relationship was weak we feel the fact that they have both previously been strongly linked to problematic drinking and the fact we found that they were both related to problematic drinking in a similar manner warrants that further research should be conducted which investigates the potential role that negative affect may have in the relationship between general anxiety and problematic drinking. Future research could incorporate negative affect as a moderating variable in the relationship between general anxiety and problematic drinking.

Our findings which showed significant differences between problematic/non-problematic and high and low drinkers levels of positive alcohol expectancies illustrates as previous research has found that alcohol expectancies play an important role in the nature of an individual's alcohol consumption. In addition similarly to previous research, our findings which showed that social anxiety and general anxiety were significantly related to socially assertive & positive affect alcohol expectancies again highlight how alcohol expectancies play an important role in the nature of an individual's consumption. We failed to show that the nature of our participants drinking would influence their negative alcohol expectancies therefore our findings weren't in line with previous research which suggested that negative

alcohol expectancies shared a negative relationship with alcohol consumption alcohol consumption. Consequently we feel that more research needs to be conducted to gain a better understanding of negative alcohol expectancies as they appear to work through a more complex mechanism than positive expectancies. Furthermore future research measuring negative alcohol expectancies should include measures of distal expectancies rather than just proximal ones as expectancies about negative experiences the day after drinking are more likely to influence the nature of an individuals drinking.

We failed to find any significant differences between high and low socially anxious individuals level of alcohol consumption, therefore we didn't replicate what previous research had suggested which was that individuals high in social anxiety would consume less alcohol than individuals low in social anxiety. Consequently we feel that future research could try to draw comparisons between a clinical and on non-clinical population when looking for differences among high and low socially anxious individuals.

4.4 Conclusions

The current study had a number of aims related to anxiety, alcohol misuse and alcohol expectancies. We wanted to investigate whether negative affect (a construct which shares a strong relationship with anxiety that has also been linked to alcohol misuse) and general anxiety would both predict problematic drinking. We were limited in terms of what conclusions we could draw about the role negative affect may play in the relationship between general anxiety and alcohol misuses. We were however able to suggest that negative affect deserves to be considered as a point of interest for future research which examines the relationship between general anxiety and problematic drinking.

Alcohol use and alcohol expectancies have both been shown to be strong predictors of one another and alcohol expectancies have been shown to be significantly related to general and

social anxiety. Like previous research had illustrated we found that the nature of our participants drinking influenced their levels of positive alcohol expectancies and found that general anxiety and social anxiety were both significantly related to specific types of positive alcohol expectancies. As we found that the nature of our participants alcohol consumption didn't significantly influence their negative expectancies we suggested that future research needs to use different measures to examine negative expectancies as they work through a more complex mechanism than positive expectancies.

5.0 References

APA. (2000). *Diagnostic and statistical manual of mental Disorders*, (4th ed., text revision). Washington,DC:AmericanPsychiatric Association. DOI :10.1176/appi.books.9780890423349

Babor T. F., Higgins-Biddle J. C., Saunders J. B., &Monteiro M. G. (2001). *AUDIT. The Alcohol Use Disorders Identification Test*. Geneva: Department of Mental Health and SubstanceDependence,WorldHealthOrganization.http://whqlibdoc.who.int/hq/2001/who_msd_msb_01.6a.pdf

Baker, A., & Velleman, R. (2007). *Clinical handbook of co-existing mental health and drugand alcohol problems*. London: Routledge. ISBN 9781583917763

Barlow, D. H. (1997). Anxiety disorders, comorbid substance abuse, and benzodiazepine discontinuation: Implications for treatment: *NIDA research Monograph*, 172, 33-51. <http://www.ncbi.nlm.nih.gov/pubmed/9154264>

Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). The psychopathology of childhood social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 643-650. <http://www.ncbi.nlm.nih.gov/pubmed/10361781>

Bennett, P. (2011). *Abnormal and clinical psychology : an introductory textbook*. 3rd editionn. Open university press. ISBN: 0335239153

Bibb, J. L., & Chambless, D. L. (1986). Alcohol use and abuse among diagnosed agoraphobics. *Behaviour Research & Therapy*, *24(1)*, 49–58. [http://dx.doi.org/10.1016/0005-7967\(86\)90149-X](http://dx.doi.org/10.1016/0005-7967(86)90149-X),

Bolton, J., Cox, B., Clara, I., Sareen, J. (2006). Use of alcohol and drugs to self-medicate anxiety disorders in a nationally representative sample. *Journal of Nervous and Mental Disease*, 818–25. <http://www.ncbi.nlm.nih.gov/pubmed/17102705>

Brown, S. A. (1985). Expectancies versus background in the prediction of college drinking patterns. *Journal of Consulting and Clinical Psychology*, *53(1)*, 123– 130. doi=10.1037/0022-006X.53.1.123

Brown, S. A., Irwin, M., & Schukit, M. A., (1991). Changes in anxiety among abstinent male alcoholics. *Journal of Studies on Alcohol* 52, 55-61. <http://www.ncbi.nlm.nih.gov/pubmed/1992124>

Bush, K., Kivlahan, D.R., McDonell, M.B., Fihn, S.D. & Bradley, K.A. (1998). The AUDIT Alcohol Consumption Questions (AUDIT-C). *Archives of Internal Medicine*, *158(16)*, 1789-1795. doi:10.1001/archinte.158.16.1789.

Carpenter, K. & Hasin, D. (1999). Drinking to cope with negative affect and DSM-IV alcohol use disorders: a test of three alternative explanations. *Journal of Studies on Alcohol* 60,694-704. <http://www.ncbi.nlm.nih.gov/pubmed/10487740>

Chambless, D. L., Cherney, J., Caputo, G. C., & Rheinstein, B. J. G. (1987). Anxiety disorders and alcoholism: A study with inpatient alcoholics. *Journal of Anxiety Disorders*, 1, 9-40. DOI: 10.1016/0887-6185(87)90020-X,

Colder, C. R. (2001). Life stress, physiological and subjective indexes of negative emotionality, and coping reasons for drinking: Is there evidence for a self medication model of alcohol use? *Psychology of Addictive Behaviors*, 15, 237- 245. DOI: 10.1037/0893-164X.15.3.237

Cooper, M. L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment*, 6, 117-128. DOI: 10.1037/1040-3590.6.2.117

Cooper, M.L., Frone, M.R., Russell, M., Mudar, P. (1995). Drinking to regulate positive and negative emotions: A motivational model of alcohol use. *Journal of Personality and Social Psychology*, 69, 990–1005. DOI: 10.1037/0022-3514.69.5.990

de Boer, M., Schippers, G.M. & van der Staak, C.P.F. (1994). The effects of alcohol, expectancy, and alcohol beliefs on anxiety and self-disclosure in women: Do beliefs moderate alcohol effects? *Addictive Behaviors*, 19(5), 509-520.
<http://www.ncbi.nlm.nih.gov/pubmed/8506782>

Demmel, R. & Hagen, J. (2003a). The Comprehensive Alcohol Expectancy Questionnaire: Scale development. *SUCHT - Zeitschrift für Wissenschaft und Praxis*, 49, 292-299.
<http://www.psycontent.com/content/c61877j73h45xhnp/>

Eastman, C. & Norris, H. (1982). Alcohol dependence, relapse, and self-identity. *Journal of Studies on Alcohol*. 43, 1214- 1231.

http://www.jsad.com/jsad/article/Alcohol_Dependence_Relapse_and_SelfIdentity/3206.html

Fiellin, D.A., Carrington, R.M. & O'Connor, P.G. (2000). Screening for alcohol problems in primary care: a systematic review. *Archives of Internal Medicine* 160: 1977-1989, 2000
DOI:10.1001/archinte.160.13.1977

Fleming, M.F., Barry, K.L., & MacDonald, R. (1991). The Alcohol Use Disorders Identification Test (AUDIT) in a College Sample. *International Journal of Addictions*, 26, 1173-1185. <http://www.ncbi.nlm.nih.gov/pubmed/1743817>

Geist, C.R., & Hamrick, T.J. (1983). Social Avoidance and Distress: Its Relationship to Self-Confidence and Needs for Affiliation Change, Dominance, and Deference. *Journal of Clinical Psychology, 39*, 727-730. DOI: 10.1002/1097-4679

Gilles, D. M., Turk, C. L., & Fresco, D. M. (2006). Social anxiety, alcohol expectancies, and self-efficacy as predictors of heavy drinking in college students. *Psychology of Addictive Behaviors, 31*, 388–398. DOI: 10.1016/j.addbeh.2005.05.020

Grant, B. F., Hasin, D. S., Stinson, F. S., Dawson, D. A., Ruan, W. J., Goldstein, R. B., Smith, S. M., Saha, T. D., & Huang, B. (2005). Prevalence, correlates, co-morbidity, and comparative disability of DSM-IV generalized anxiety disorder in the USA: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychological Medicine, 35*, 1747–1759. DOI: 10.1017/S0033291705006069.

Grant, B. F., Stinson, F. S., Dawson, D. A., Chou, S. P., Dufour, M. C., & Compton, W. (2004). Prevalence and Co-occurrence of Substance Use Disorders and Independent Mood and Anxiety Disorders. *Archives of General Psychiatry, 61*(8), 807-816. DOI:10.1001/archpsyc.61.8.807.

Ham, L. S., Zamboanga, B. L., Bacon, A. K., & Garcia, T. A. (2009). Drinking motives as mediators of social anxiety and hazardous drinking among college students. *Cognitive Behaviour Therapy, 38*(3), 133-145. DOI: 10.1080/16506070802610889

Ham, L. S., Zamboanga, B. L., & Bacon, A. K. (2011). Putting thoughts into context: Alcohol expectancies, social anxiety, and hazardous drinking. *Journal of Cognitive Psychotherapy, 25*, 47-60. DOI: 10.1891/0889-8391.25.1.47

Higgins, R. L. & Marlatt, G. A. (1975). Fear of interpersonal evaluation as a determinant of alcohol consumption in male social drinkers. *Journal of Abnormal Psychology, 84*, 644-651. DOI: 10.1037/0021-843X.84.6.644

Holroyd, K.A. (1978). Effects of social anxiety and social evaluation on beer consumption and social interaction. *Journal of Studies on Alcohol, 39*, 737-744. http://www.jsad.com/jsad/article/Effects_of_Social_Anxiety_and_Social_Evaluation_on_Beer_Consumption_and_Soc/2672.html

Kessler, R. C., Crum, R. M., Warner, L. A., Nelson, C. B., Schulenberg, J., & Anthony, J. C. (1997). Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the national comorbidity survey. *Archives of General Psychiatry, 54*, 310-321. DOI:10.1001/archpsyc.1997.01830160031005

Kessler, R. C., Soukup, J., Davis, R. B., Foster, D. F., Wilkey, S. A., Van Rompay, M. I., & Eisenberg, D. M. (2001). The use of complementary and alternative therapies to treat anxiety and depression in the United States. *American Journal of Psychiatry*, *158*(2), 289-294. DOI: 10.1176/appi.ajp.158.2.289

Kidorf, M., & Lang, A. R. (1999). Effects of social anxiety and alcohol expectancies on stress-induced drinking. *Psychology of Addictive Behaviors*, *13*(2), 134 – 142. DOI: 10.1037/0893-164X.13.2.134

Kilbey, M.M., Downey, K., & Breslau, N. (1998). Predicting the emergence and persistence of alcohol dependence in young adults: the role of expectancy and other risk factors. *Experimental and Clinical Psychopharmacology*, *6*, 149–156. DOI: 10.1037/1064-1297.6.2.149

Kushner MG, Abrams K, Borchardt C (2000): The relationship between anxiety disorders and alcohol use disorders: A review of major perspectives and findings. *Clinical Psychology Review*, *20*:149–171. DOI: 10.1016/S0272-7358(99)00027-6,

Kushner, M. G., Abrams, K., Thuras, P., & Hanson, K. (2000). Individual differences predictive of drinking to manage anxiety among non-problem drinkers with panic disorder. *Alcoholism: Clinical and Experimental Research*, *24*, 448-458. DOI: DOI: 10.1111/j.1530-0277.2000.tb02011.x

Kushner, M. G., Sher, K. J., & Erickson, D. J. (1999). Prospective analysis of the relation between DSM-III anxiety disorders and alcohol use disorders. *American Journal of Psychiatry*, 156, 723–732. <http://www.ncbi.nlm.nih.gov/pubmed/10327905>

Lee, N. K., Greeley, J. & Oei, T. P. S. (1999), The relationship of positive and negative alcohol expectancies to patterns of consumption of alcohol in social drinkers. *Addictive Behaviors*, 24, 359–369. <http://www.ncbi.nlm.nih.gov/pubmed/10400275>

Leitenberg, H. (Ed.). (1990). *Handbook of social and evaluation anxiety*. New York: Plenum. ISBN: 9780306434389

Lewis, M. A., Hove, M. C., Whiteside, U., Lee, C. M., Kirkeby, B. S., Oster-Aaland, L., & Larimer, M. E. (2008). Fitting in and feeling fine: Conformity and coping motives as mediators of the relationship between social anxiety and problematic drinking. *Psychology of Addictive Behaviors*, 22(1), 58-67. DOI: 10.1037/0893-164X.22.1.58

Marshall, J. R. (1997). Alcohol and substance abuse in panic disorder. *Journal of Clinical Psychiatry*, 58, 46-50.

<http://serials.unibo.it/cgi-ser/start/it/spogli/df>

[s.tcl?prog_art=443520&language=ITALIANO&view=articoli](http://serials.unibo.it/cgi-ser/start/it/spogli/df)

Martens, M., Neighbors, C., Lewis, M., Lee, C., Oster-Aaland, L., & Larimer, M. (2008). The roles of negative affect and coping motives in the relationship between alcohol use and alcohol-related problems among college students. *Journal of Studies of Alcohol and Drugs*, 69, 412-419. <http://www.ncbi.nlm.nih.gov/pubmed/18432384>

McMahon, J., & Jones B.T. (1993). The Negative Alcohol Expectancy Questionnaire. *Journal of the Association of Nurses in Substance Abuse*, 12, 17. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.55.1604&rep=rep1&type=pdf>

McMahon, J., Jones, B.T., & O'Donnell P (1994). Comparing positive and negative alcohol expectancies in male and female social drinkers. *Addiction Research*, 1, 349–365. DOI: 10.3109/16066359409005202

Moore, L., Smith C., & Catford, J. (1994). Binge drinking: prevalence, patterns and policy. *Health Promotion Wales. Health Education. Research*, 9 (4), 497-505. DOI: 10.1093/her/9.4.497

National Advisory Committee on Drugs and Public Health Information and Research Branch. (2011). *Drug use in Ireland and Northern Ireland. First results from the 2010/2011 Drug Prevalence Survey*. Dublin & Belfast: NACD & PHIRB. <http://www.drugsandalcohol.ie/16353/>

Nicolai, J., Demmel, R., & Moshagen, M. (2010). The Comprehensive Alcohol Expectancy Questionnaire: Confirmatory factor analysis, scale refinement, and further validation. *Journal of Personality Assessment*, 92, 400-409. <http://www.ncbi.nlm.nih.gov/pubmed/20706926>

Norberg, M. M., Norton, A. R., & Olivier, J. (2009). Refining measurement in the study of social anxiety and student drinking: Who you are and why you drink determines your outcomes. *Psychology of Addictive Behaviors*, 23(4), 586-597. DOI: 10.1037/a0016994

O'Hare, T. M. (1990). Alcohol expectancies and social anxiety in male and female undergraduates. *Addictive Behaviors*, 15, 561 – 566. DOI: 10.1093/swr/22.1.44

O'Hare, T., & Sherrer, M. V. (1997). Drinking problems, alcohol expectancies, and drinking context in college first offenders. *Journal of Alcohol and Drug Education*, 43(1), 31 – 45. <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=170439>

Ostafin, B.D., & Brooks, J.J. (2011). Drinking for relief: negative affect increases automatic alcohol motivation in coping-motivated drinkers. *Motivation Emotion*, 35, 285–295. DOI: 10.1007/s11031-010-9194-5

Pabst, A., Baumeister, S. E. & Kraus, L. (2010). Alcohol-expectancy dimensions and alcohol consumption at different ages in the general population. *Journal of Studies on Alcohol and Drugs*, 71, 46–53. <http://www.ncbi.nlm.nih.gov/pubmed/20105413>

Quitkin, F. M., Rifkin, A., Kaplan, J., & Klein, D. F. (1972). Phobic anxiety syndrome complicated by drug dependence and addiction. *Archives of General Psychiatry* 27, 159–162. DOI:10.1001/archpsyc.1972.01750260013002.

Ramirez, S., & Lukenbill, J. (2008). Psychometric Properties of the Zung Self-Rating Anxiety Scale for Adults with Intellectual Disabilities (SAS-ID). *Journal of Developmental and Physical Disabilities*, 20(6) , 573-580. DOI: 10.1007/s10882-008-9120-x

Randall, C. L., Thomas, S., & Thevos, A. K. (2001). Concurrent alcoholism and social anxiety disorder: a first step toward developing effective treatments. *Alcoholism: Clinical & Experimental Research*, 25(2), 210–220. DOI: 10.1111/j.1530-0277.2001.tb02201.x

Reiger, D., Burke, J., & Burke, K. (1990). Comorbidity of affective and anxiety disorders in the NIHM Epidemiologic Catchment Area programme. In: Maser, J., Cloninger, R. (1990) *Comorbidity of Mood and Anxiety Disorders American Psychiatric Press*, Washington, DC. ISBN: 9780880483247

Robinson, J. A., Sareen, J., Cox, B. J., & Bolton, J. M. (2009). Correlates of self-medication for anxiety disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Nervous and Mental Disease*, 197, 873–878. DOI: 10.1097/NMD.0b013e3181c299c2.

Rohsenow, D.J. Social anxiety, daily moods, and alcohol use over time among heavy social drinking men. *Addictive Behaviors*, 7, 311–315. DOI: 10.1016/0306-4603(82)90062-4

Rubio, G., Bermejo, J., Caballero, M. C., & Santo Domingo, J. (1998). Validación de la prueba para la identificación de trastornos por uso de alcohol (AUDIT) en atención primaria (Spanish validation of AUDIT in primary health care). *Revista Clínica Española* 198, 11–14. <http://www.ncbi.nlm.nih.gov/pubmed/9534342>

Schuckit, M. A., Tipp, J. E., Smith, T. L. & Buchholz, K. K. (1997). Periods of abstinence following the onset of alcohol dependence in 1853 men and women. *Journal of Studies on Alcohol* 58, 581–587.
http://www.jsad.com/jsad/article/Periods_of_Abstinence_Following_the_Onset_of_Alcohol_Dependence_in_1853_Me/460.html

Stewart, S.H., Morris, E., Mellings, T., & Komar J. (2006). Relations of social anxiety variables to drinking motives, drinking quantity and frequency, and alcohol-related problems in undergraduates. *Journal of Mental Health*. 15, 671–682. DOI:10.1080/09638230600998904

Swendsen, J.D., Conway, K.P., Rounsaville, B.J., & Merikangas, K.R., (2002). Are personality traits familial risk factors for substance use disorders? Results of a controlled family study. *American journal of psychiatry*, 159, 1760–1766. DOI:10.1176/appi.ajp.159.10.1760

Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma and J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681-706). Hillsdale, NJ: Erlbaum. DOI :10.1017/S0033291700010564

Thomas, S.E., Randall, C.L., & Carrigan, M.H. (2003). Drinking to cope in socially anxious individuals: A controlled study. *Alcoholism Clinical and Experimental Research*, 27, 1937–1943. DOI: 10.1097/01.ALC.0000100942.30743.8C

Tucker, J. A. & Sobell, L. C. (1992). Influences on help-seeking for drinking problems and on natural recovery without treatment. In: Cox, W. M. and Klinger, E. (eds) (2004) *Handbook of Motivational Counseling: Concepts, Approaches, and Assessment*. Wiley, Chichester, UK. DOI: 10.1002/9780470979952

Vesga-Lopez, O., Schneier F.R., Wang, S., Heimberg, R.G., Liu, S.M., Hasin D.S., & Blanco, C. (2008). Gender differences in generalized anxiety disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). *Journal of Clinical Psychiatry*, 69, 1606-1616 . DOI: 10.4088/jcp.v69n1011

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465-490. DOI: 10.1037/0033-2909.96.3.465

Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology, 97*, 346-353. DOI: 10.1037//0021-843X.97.3.346

Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology 33*, 448-457. DOI: 10.1037/H0027806

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070. DOI: 10.1037//0022-3514.54.6.1063

Weiss, K. J., & Rosenberg, D. J. (1985). Prevalence of anxiety disorders among alcoholics. *Journal of Clinical Psychiatry, 46*, 3–5. <http://www.ncbi.nlm.nih.gov/pubmed/3965441>

Witkiewitz, K., & Villarroel, N. (2009). Dynamic association between negative affect and alcohol lapses following alcohol treatment. *Journal of Consulting and Clinical Psychology, 77*, 633-644. DOI: 10.1037/a0015647

Wood, M. D., Nagoshi, C. T., & Dennis, D. A. (1992). Alcohol norms and expectations as predictors of alcohol use and problems in a college student sample. *American Journal of Drug and Alcohol Abuse, 18*, 461–476. DOI: 10.3109/00952999209051042

Young, R.M. & Oei, T. P. (2000). The Predictive Utility Of Drinking Refusal Self-Efficacy And Alcohol Expectancy: A Diary-Based Study Of Tension Reduction. *Addictive Behaviors*, 25 3: 415-421. DOI: 10.1016/S0306-4603(99)00004-0

Zung, W.K. (1971) A rating instrument for anxiety disorders. *Psychosomatics. Journal of Consultation Liaison Psychiatry*, 12(6), 371-379.

<http://psycnet.apa.org/index.cfm?fa=search.displayRecord&UID=1972-25209-001>

6.0 Appendix

6.1 Tables and figures

Table 1. Means, standard deviations, and Cronbach's alpha of all scales and subscales.

Measures	Mean	SD	Cronbach's alpha
AUDIT	14.00	7.37	0.85
<i>-AUDIT Subscales</i>			
Hazardous use	6.93	2.51	0.75
Dependence symptoms	3.29	2.69	0.86
Harmful use	3.79	3.27	0.54
CAEQ Revised Positive expec.	117.43	21.93	0.94
CAEQ Revised Negative expec.	37.02	9.56	0.89
<i>-CAEQ Revised subscales</i>			
Social assertiveness & positive affect	56.16	11.68	0.94
Tension Reduction	24.21	6.89	0.92
Cognitive impairment & physical discomfort	28.72	7.23	0.88
Aggression	8.30	4.04	0.91
SAD scale	9.35	7.90	0.94
Zung SAS	37.34	9.44	0.86
PANAS NA	21.75	7.63	0.89

Table 2. *Skewness & Standard error of skewness of all scales and subscales.*

Measures	Skewness	Std. Error of Skewness	Kurtosis	Std.error of Kurtosis
AUDIT	.573	.240	.534	.476
<i>AUDIT-subscales</i>				
Hazardous use	-.506	.240	-.378	.476
Dependence symptoms	.642	.240	-.020	.476
Harmful use	.931	.240	.862	.476
CAEQ Revised Positive expectancies	-.407	.240	.851	.476
CAEQ Revised Negative expectancies	.281	.240	.505	.476
<i>-CAEQ Revised-subscales</i>				
Socially assertiveness & positive affect	-.763	.240	1.013	.476
Tension Reduction	-.449	.240	-.216	.476
Cognitive impairment & physical discomfort	.119	.240	.305	.476
Aggression	.919	.240	.429	.476
SAD scale	.737	.240	-.644	.476
Zung SAS	.699	.240	-.416	.476
PANAS NA	.484	.240	-.304	.476

P is significant at < 0.05, significant values marked with *

Table 3. Spearman's Rho Correlations between variables.

	General anxiety	Social anxiety	Negative affect	Pos. alc. Expec.	Neg. Alc. Expec.	Social.Assert. Alc. Expec.	Tens. Reduc. Alc expec.
Problematic alcohol use	.22*	-.03	.23*	.29*	.24*	.17	.28*
Hazardous alcohol use	.04	-.14	.11	.14	.10	.11	.16
General Anxiety			.79*	.32*	.31*	.14	.27*
Social anxiety			.48*	.30*	.10	.31*	.26*
Negative affect				.26*	.25*	.13	.21*

Significant results marked with * P is significant at < 0.05.

Table 4. Mann-Whitney U table displaying the differences of alcohol expectancies among problematic and non- problematic drinkers and high and low alcohol consumers

Variable	Groups	Mean rank	U	P
Positive alcohol Expectancies	Problematic drinkers (N=37)	59.97	-2.341	.019 *
	Non-problematic drinkers (N=64)	45.81		
	High alcohol consumers (N=72)	54.67	-1.982	.047*
	Low alcohol consumers (N=29)	41.90		
Negative alcohol expectancies	Problematic drinkers	58.28	-1.901	.057
	Non-problematic drinkers	46.79		
	High alcohol consumers	52.27	-.687	.492
	Low alcohol consumers	47.84		

P is significant at 0.05 significant results marked with *

Table 5. Mann-Whitney U table displaying the differences of levels of alcohol consumption among high socially anxious individuals and low socially anxious individuals

Variable	Groups	Mean rank	U	P
Alcohol consumption	High social anxiety(N=38)	44.28	-1.807	.071
	Low social anxiety(N=63)	55.06		

P is significant at 0.05 significant results marked with *

Figures 1 and 2. Problematic/ non-problematic drinkers, High/low alcohol consumers

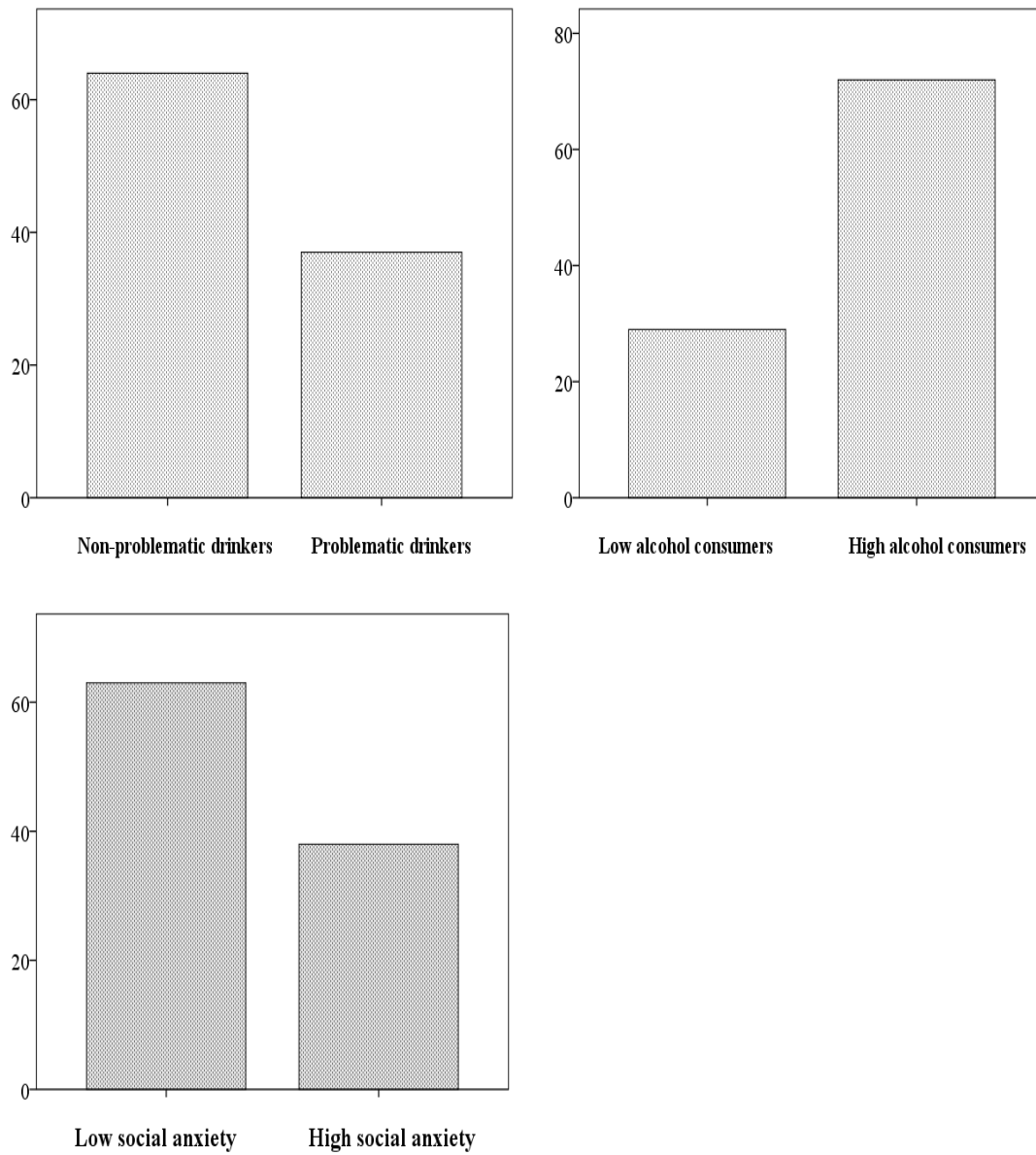


Figure 3. High and low socially anxious participants

6.2 Questionnaires

AUDIT (Alcohol use disorders identifications test)

Questions	Scoring system					Your score
	0	1	2	3	4	
How often do you have a drink containing alcohol?	Never	Monthly or less	2 - 4 times per month	2 - 3 times per week	4+ times per week	
How many units of alcohol do you drink on a typical day when you are drinking?	1 -2	3 - 4	5 - 6	7 - 9	10+	
How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you failed to do what was normally expected from you because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
How often during the last year have you been unable to remember what happened the night before because you had been drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
Have you or somebody else been injured as a result of your drinking?	No		Yes, but not in the last year		Yes, during the last year	
Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested that you cut down?	No		Yes, but not in the last year		Yes, during the last year	

CAEQ(Comprehensive Alcohol expectancy questionnaire) Revised

Participants responses to the items below were scored the following way

1=Not at all 2= Unlikely 3=Maybe 4=Quite likely 5=Definitely

Above each is a statement saying “After I consume alcohol”

POSITIVE EXPECTANCY ITEMS

Social Assertiveness & Positive Affect subscale

1. I am more relaxed and more at ease socially
2. I am not so shy anymore
3. It’s easier for me to approach other people
4. Somehow I think everything is funnier – at any rate, I laugh more
5. I am more likely to come out of my shell
6. My self-confidence increases
7. I am more daring
8. I am more talkative
9. I am less self-conscious
10. I can get to know people more easily
11. I am more likely to flirt
12. I can have more fun at parties
13. I am full of energy and thirsting for action
14. I am funnier
15. It doesn’t matter as much anymore what people think of me

Tension Reduction subscale

16. I can switch my mind off better
17. I am not so tensed up anymore
18. I can forget about my problems and worries

19. Any pain that I have eases greatly
20. I am not as tense anymore
21. I can bear pain more easily
22. I no longer feel so rushed or under time pressure

NEGATIVE EXPECTANCY ITEMS

Cognitive Impairment And Physical Discomfort subscale

23. I have difficulty concentrating
24. I can no longer follow a conversation very well
25. I become sluggish
26. I can't think clearly anymore
27. I behave clumsily
28. I react more slowly than usual
29. I have difficulty judging situations correctly
30. I feel dazed and dizzy
31. it is harder for me to think about knotty problems

32. I feel sick to my stomach

Aggression subscale

33. I am irritable and hotheaded
34. I get aggressive more quickly
35. I am more likely to pick a fight
36. I lose my temper more quickly and fly into rages

ZUNG SAS(Self rating anxiety scale)

Participants responses to the items below were scored in the following way:

1=A little of the time 2=Some of the time 3=Good part of the time 4=Most of the time

*indicates reverse scored items

1. I feel more nervous and anxious than usual.
2. I feel afraid for no reason at all.
3. I get upset easily or feel panicky.
4. I feel like I'm falling apart and going to pieces.
5. I feel that everything is all right and nothing bad will happen.*
6. My arms and legs shake and tremble.
7. I am bothered by headaches neck and back pain.
8. I feel weak and get tired easily.
9. I feel calm and can sit still easily.*
10. I can feel my heart beating fast.
11. I am bothered by dizzy spells.
12. I have fainting spells or feel like it.
13. I can breathe in and out easily.*
14. I get feelings of numbness and tingling in my fingers & toes.
15. I am bothered by stomach aches or indigestion.
16. I have to empty my bladder often.
17. My hands are usually dry and warm.
18. My face gets hot and blushes.
19. I fall asleep easily and get a good night's rest.*
20. I have nightmares.

SAD (Social Avoidance and Distress) Scale

Scoring: Every true answer=1 Every false answer=2 *Indicates reverse scored items

1. I feel relaxed even in unfamiliar social situations*.....T F
2. I try to avoid situations that force me to be very sociable.....T F
3. It is easy for me to relax when I am with strangers*..... T F
4. I have no particular desire to avoid people*.....T F
5. I often find social occasions upsetting.....T F
6. I usually feel calm and comfortable at social occasions*.....T F
7. I am usually at ease when talking to someone of the opposite sex*.....T F
8. I try to avoid talking to people unless I know them well.....T F
9. If the chance comes to meet new people, I often take it*.....T F
10. I often feel nervous or tense in casual get-togethers in which both sexes are present.....T F
11. I am usually nervous with people unless I know them well.....T F
12. I usually feel relaxed when I am with a group of people*.....T F
13. I often want to get away from people.....T F
14. I usually feel uncomfortable when I am in a group of people I don't know*.....T F
15. I usually feel relaxed when I meet someone for the first time*.....T F
16. Being introduced to people makes me tense and nervous.....T F
17. Even though a room is full of strangers, I may enter it anyway*.....T F
18. I would avoid walking up and joining a large group of people.....T F
19. When my superiors want to talk with me, I talk willingly*.....T F
20. I often feel on edge when I am in a group of people.....T F

21. I tend to withdraw from people.....T F
22. I don't mind talking to people at parties or social gatherings*.....T F
23. I am seldom at ease in a large group of people.....T F
24. I often think up excuses in order to avoid social engagements.....T F
25. I sometimes take the responsibility for introducing people to each other*...T F
26. I try to avoid formal social occasions.....T F
27. I usually go to whatever social engagements I have*.....T F
28. I find it easy to relax with other people*.....T F

PANAS(Positive and negative affect scale)

Negative affect

Above each item is a statement saying "I feel"

Scoring: 1= Slightly or not at all 2 = A little 3= Moderately 4= Quite a bit 5= Extremely

1.Distressed

2.Upset

3.Guilty

4.Scared

5.Hostile

6.Irritable

7.Jittery

8.Ashamed

9.Afraid

10.Nervous

6.3 Debriefing

Thank you very much for taking your time to partake in our research. If you were in anyway affected by issues which these questionnaires may have raised we have listed some websites and help-lines below which you can contact. Also if you have any questions related to the current research we have listed an e-mail address below which you can contact.

Thanks again, Daragh Cox.

*Samaritans:1850 60 90 90 <http://www.samaritans.org> *Alcoholics
Anonymous:01 8420700 *<http://www.drinkaware.ie>