

A Brief Cognitive Behavioural Therapy Alcohol Intervention Programme is an Effective  
Secondary Prevention Approach for New Employees Entering an Irish Workforce: A Pilot  
Evaluation.

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## Abstract

The prevalence of unhealthy drinking at all levels in Irish society poses serious issues in terms of the consequence to individuals concerned, as well as to society as a whole. The workplace offers a useful setting for early identification and intervention with new employees who may have pre-existing alcohol use disorder issues. This pilot study aimed to evaluate the effectiveness within the workplace of a brief Cognitive Behavioural Therapy (CBT) intervention in reducing participants binge and risky drinking behaviours. Twenty-six Irish Naval recruits volunteered to participate in this randomised controlled trial. The intervention was conducted over four consecutive one and a half hour weekly sessions. Participants completed four principle outcome measures at intake, termination of the intervention and at the two-month follow-up assessment. The Alcohol Use Disorders Identification Test (Babor, Higginis-Biddle, Saunders & Monterio, 2001) was used to measure participants' consumption levels and frequency of binge or risky drinking. A Readiness Ruler (Miller, Zweben, Diclemente, & Rychtarik, 1992) was used to measure participants' readiness to change drinking, while the Drinking Expectancy Questionnaire (Young & Oei, 1996) was used to measure participants' beliefs pertaining to alcohol, and their ability to refuse alcohol in high-risk social surroundings. There were preliminary data in support of the intervention. There were interaction effects that approached statistical significance for both a reduction in participants' binge drinking ( $p = .064$ ) and an increase in participants' ability to refuse alcohol in high-risk social settings ( $p = .059$ ). There was also a significant interaction effect ( $p < .05$ ) between time and group where participants lowered their alcohol expectancies on the Increased Confidence Factor of the Drinking Expectancy Questionnaire.

This thesis suggests that a large number of recruits currently enlisting in the Irish Navy have existing drinking patterns, which are a cause for concern. This study also indicates that within the workplace early intervention using CBT has the potential to assist new employees in reducing their risky drinking behaviour.

**Key words:** alcohol; cognitive behavioural therapy; risky drinking; binge drinking; workplace alcohol intervention; Irish Naval Service.

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## Introduction

In a recent European Comparative Alcohol Study Ramstedt and Hope (2005) found that Ireland had the highest reported alcohol consumption levels and associated adverse consequences of alcohol among 26 European countries studied. The drinking behaviours of new entrants to the Naval Service reflect contemporary drinking behaviours in Irish society. Young people's drinking in Ireland is now a serious social issue. The inspiration for this experiment is to try and discover can a brief Cognitive Behavioural Therapy (CBT) intervention contribute to minimising the potential for new members of the Naval Service progressing towards alcohol dependence.

On behalf of the Irish Health Research Board Mongan, Reynolds, Fanagan and Long (2007) carried out a detailed analysis of available current data on problematic alcohol use and associated alcohol related consequences in Ireland. Mongan et al. suggest the majority of people who drink alcohol experience its positive effects and drinking alcohol can be a highly pleasurable activity. Among the desires for alcohol's positive short-term effects, include increased enjoyment, euphoria, and the generation of an elevated positive mood. The combination of these effects is probably what motivates most people to drink alcohol in the first place (Mongan et al.).

Notwithstanding the positive effects of drinking alcohol, numerous studies (Hope, 2008; Mongan et al., 2007; Anderson & Baumberg 2006; Bondy et al., 1999) have detailed the association between high alcohol intake and adverse alcohol related problems. Anderson and Baumberg (2006) also caution that as stand-alone variables, the amount of



alcohol consumed, the frequency of drinking, the frequency and volume of episodic heavy drinking all independently increase the risk of violence.

The literature points to (Hope, 2008; Mongan et al., 2007; Molyneaux et al., 2006; Hope et al., 2005; Alcohol Action Ireland [AAI], 2006) a number of studies that highlight how problem drinking continues to be a major health concern in Ireland. Irish drinkers appear to have an alarmingly high frequency of binge drinking and alcohol-related harm (Ramstedt & Hope 2005). The prevalence of unhealthy drinking at all levels in Irish society poses serious issues in terms of the consequence to individuals concerned, as well as to society as a whole (Hope, 2008).

Mongan et al. (2007) argue that alcohol appears to be a central fabric of Irish society, which has become intrinsically linked, indeed a cornerstone, within many aspects of Irish social and cultural life. Glennon (2008) observed that alcohol use is an integral part of all-important Irish life events (ranging from rites of passage, christenings, first communions through to weddings and wakes) and it is thus deeply ingrained into the psyche of our national identity as a social norm. Ireland's recent economic prosperity has also coincided with a parallel increase in the amount of alcohol being consumed and drinking patterns that have become highly problematic. Mongan et al. suggest it has become quite obvious that alcohol is Ireland's favorite drug of choice. In 2006, the average rate of consumption of pure alcohol per adult in Ireland was 13.36 litres. This represents an increase of 17% compared to a rate of 11.38 litres in 1995. Alcohol consumption peaked in 2001 at 14.3 litres of pure alcohol per adult, but decreased in 2003

to 13.35 litres where the rate remains static to date. The Strategic Task Force on Alcohol (STFA, 2004) which is an Irish government task force note that two important detriments of alcohol related problems are the average per capita alcohol consumption as well as individual drinking patterns.

Mongan et al. (2007) also mentions how our culture contributes significantly in determining our drinking patterns behaviours and attitudes. In Mediterranean countries, the drinking culture generally does not endorse either binge drinking or drunkenness, while in contrast to other European countries, such as Ireland, binge drinking is more commonly tolerated and drunkenness is more readily an accepted outcome of drinking occasions (Mongan et al.). Within this cultural and social context, Mongan et al. also note the importance of remembering that alcohol is no ordinary commodity and caution how in fact alcohol is a toxic substance, an intoxicant and it is also a drug of dependence. Jackson (2006) conducted a study on drinking patterns in the Cork and Kerry area found alcohol to be still the predominant drug of misuse in terms of frequency and problem use. Mongan et al. attribute the high rate of alcohol consumption among young Irish people to a number of variables including increased affluence, loss of parental control and increased availability of and access to alcohol. Mongan et al. also caution that young peoples propensity for risk-taking, coupled with their inexperience with alcohol place our young adults of today at a particular risk for alcohol-related harm. However, as argued by Niknian, Linnian, Lasater, and Carleton (1991) young males in particular represented a population research has indicated to be the most resistant to change their drinking behaviour.

Given that alcohol is important in the lives of Irish people and in particular young Irish people, it is important to understand what factors lead to the onset of drinking. Hope, Dring and Dring (2005) found in a survey drawn from a student population from all third level institutions in Ireland that the average age of onset drinking was 15 years of age. These findings are consistent with an investigation I have previously done within the Naval Service (McCarthy, 2002). The American Medical Association (2002) warns that alcohol consumption during the adolescent years is associated with damage to the brain regions, which are essential for memory and learning capabilities as well as for decision-making and reasoning.

Alcohol use disorders exist along a problem-drinking spectrum, with risky drinking and alcohol dependence at opposite ends (Molyneux, Cryan, & Dooley, 2006). Risky drinking is considered as a pattern of drinking that increases the chances of harmful consequences for the individual or for others. Harmful drinking is termed as a pattern of drinking alcohol that results in physical and mental health consequences. While alcohol dependence is defined as a cluster of cognitive behavioural and physiological phenomena that may develop subsequent to a continued repeated pattern of alcohol use (Molyneux et al., 2006). Binge drinking is a term outside of the Alcohol Use Disorders spectrum. The literature offers a number of variations on the actual definition of binge drinking. Mongan et al (2007) define binge drinking as consuming seven or more drinks per drinking occasion. Taylor, Haddock, Poston and Talcott (2007) suggest binge drinkers are those who consume five or more drinks on one occasion, while the STFA (2004) view binge drinking as a term used to describe a single occasion of excessive drinking, that involves consuming six or more standard drinks. Notwithstanding the ambiguity as to what actually

constitutes a binge-drinking episode is, the STFA definition of binge drinking is adopted within this thesis.

Mongan et al. (2007) offers a definition of a regular binge drinker as somebody who engages in binge drinking on at least a once weekly basis and also suggest that those individuals are two to three times more likely to experience adverse consequences as a result of their drinking in contrast to individuals who drink healthily. Mongan et al. also outlined the associated detrimental health and social consequences specific to binge drinking. These consequences include accidents, suicide, violence, and the loss of productivity or absenteeism. Such adverse consequences affect both the individuals who partake in binge drinking and those around them. Ramstedt and Hope (2005) found that 58 of every 100 drinking events for Irish males ended up in a binge drinking occasion while the corresponding figure for females in Ireland was 30 of every 100 drinking events. This study also showed that males in Ireland reported 1.2 drink-related harmful consequences (out of a maximum of eight), which was nearly twice as high as the European average. Significantly, those aged 18–29 were the population most likely to experience such consequences. The literature also suggests (Dantzer et al., 2006; Ramstedt & Hope) that males do not have the monopoly on binge drinking in Ireland. Ramstedt and Hope observed that irrespective of gender both males and females in Ireland showed higher rates than other European countries with respect to “regretted things said or done after drinking”, “getting into a fight”, “been in an accident”, “adversely affecting work or studies” and “affecting friendships.”

Ramstedt and Hope (2005) also commented on the growing pattern of binge drinking and high levels of alcohol use disorders within the community. Conversely an interesting finding in this study was that a significant proportion of the Irish population (Approximately every fourth woman and every fifth man) did not drink alcoholic beverages during the past 12 months. These figures were roughly three times higher in comparison with other European countries and twice as high as Nordic countries (Ramstedt & Hope). It therefore follows that such findings suggest that the recent increase in per capita of alcohol consumption in Ireland could not be explained by a decline in abstention. Ireland paradoxically according to Ramstedt and Hope appear to be a nation that has a rather unique combination of a high reported drinking and high reported abstention rates. The implication of this scenario is that drinkers in Ireland drink more than in other western European countries and that many have risky drinking habits (Mongan et al., 2007).

Dantzer et al. (2006) also found in a recent survey taken from an international university student population in 21 countries that Ireland had the largest proportions of both genders for heavy and binge drinking. Hope (2008) cautions that the dramatic increase in alcohol related harm does not bode well for the future health and well being of the population in Ireland.

As a result of the reported increasing levels of binge drinking and alcohol related problems within Irish society it was important to investigate what the effective interventions for the array of alcohol use disorders that present within the workplace were. Roman and Blum (2004) define what constitutes a primary and secondary prevention

approach to alcohol. According to them primary prevention is any intervention that aims to stop alcohol problems from developing and secondary prevention as any intervention that attempts to reduce existing problems. Moyer and Finney (2004) argue that the contemporary wisdom (of those working in alcohol addiction arena) is that the negative effects associated with alcohol consumption are originating at a much lower drinking levels than was previously contemplated. Research shows that short-term interventions known as brief interventions or brief counselling can decrease alcohol consumption and are effective in a variety of populations such as younger and older adults and men and women (Whitlock et al., 2004; Ballesteros, Duffy, Querejeta, Arino, & Gonzalez-Pinto, 2004). Such interventions generally aim to moderate a person's alcohol consumption to sensible levels and to eliminate harmful drinking practices (such as binge drinking), rather than to insist on complete abstinence from drinking—although abstinence may be encouraged, if appropriate (Moyer & Finney). As a result brief interventions do not focus or target individuals whose consumption levels meet diagnostic criteria for alcohol dependence. However, occasionally such interventions may be used to motivate an alcohol dependent drinker to seek an assessment for dependency at an appropriate treatment centre (Ballesteros et al.).

The literature (Mongan et al., 2007; Babor et al., 2007; Jackson, 2006) robustly supports the concept of screening and brief interventions as a means of identifying and intervening with risky or harmful drinkers at an early stage, in an attempt to moderate individuals' consumption to sensible levels and to eradicate harmful drinking behaviours. This support however is not universal as Aalto et al. (2001) suggest that the effectiveness of brief interventions in research conditions do not transfer well to naturalistic settings

such as a GP's practice. However, Alto et al. cite selection bias and issues with randomisation as the reason why brief interventions may not have been effective within this study.

Brief treatment as defined by Babor et al. (2007) refers to the provision of at least a minimum two sessions of therapy by a trained mental health professional such as an addiction counsellor or social worker. Babor et al. suggests that while the goal of brief interventions is to motivate clients to change their alcohol use, the goal of brief therapy is to enable clients to develop the skills and resources to change. Brief therapy interventions are frequently based on motivational approaches (e.g., Motivational Enhancement Therapy, or behavioral approaches (e.g., Cognitive-Behavioral Therapy) or a combination of both (Babor et al.). Brief therapy typically includes a standardised assessment procedure, goal-setting, and rapid implementation of change strategies. Babor et al. argue that brief therapy should be characterised as an independent modality rather than fewer sessions of longer term or traditional therapy, or as an extension of a brief interventions. Moyer, Finney, Swearingen and Vergunet (2002) reported positive outcomes for the effectiveness of brief therapies especially among clients with less severe alcohol problems.

On behalf of the South Australian government, Breugem, Barnett, Commack, O'Keefe, and Bowshall (2007) conducted an extensive study into the impact of alcohol and other drugs on the workplace. A hundred and ten employers participated in this study. Breugem et al. stress that alcohol issues are a society-wide problem requiring society-wide responses where the workplaces are but one of many settings affected by the consequences

of alcohol use disorders. However, as argued in the literature (Hope, 2008; Richmond, Kehoe, Heather, & Wodak, 2000; Taylor, Haddock, Poston, & Talcott, 2007) the consequences of risky drinking represents a substantial cost to employers in terms of absenteeism, substandard work performance, tardiness, and workplace accidents. Barrientos-Gutierrez, Gimeno, Mangione, Harrist, and Amick, (2007) found that individuals employed in a non-alcohol enabling work environment are the least likely to drink excessively and frequently both at work and at home. Breugem et al. also note there was a paucity of quality evidence demonstrating what the actual impact of alcohol and other drug related harm really is. Roman and Blum (2002) highlighted how attention to alcohol related problems within the workplace had been declining and further endorsed the need for establishing and maintaining infrastructures for sustaining alcohol interventions outside of normal health care settings. Richmond et al. (1996) endorsed a workplace-based approach to alcohol use disorders. Such an approach offered access to a population who may otherwise prove difficult to reach, particularly young adult males who are unaware of the health risks and consequences of excessive alcohol consumption and are infrequent visitors to their own general practitioners (Richmond et al.).

Roman and Blum (2004) further outline how although workplace interventions to prevent and reduce alcohol related harm have considerable potential there appears to be a reluctance to develop and evaluate their potential. Breugem et al. (2007) also champions the utility of the workplace as an environment that is particularly capable of providing greater support for employees with alcohol issues.



Despite the strengths of these endorsements, there are certainly indications within the literature that the effectiveness of Employee Assistance Programmes to deal adequately with workplace alcohol interventions is questionable. Firstly, Richmond et al. (2000) note there is a paucity of large controlled studies available that have accurately assessed the impact of workplace interventions on employees' excessive alcohol consumption. Secondly, Breugem et al. (2007) also argue that the effectiveness of Employee Assistance Programmes in reducing alcohol and other drug related harm in the workplace remains largely unevaluated. Indeed in a trial (with a similar population type to a military population) reported in the literature points to an intervention that did not influence alcohol consumption in the Australian police force (Richmond et al., 1999). Globally the dearth of empirical evidence on the effectiveness of Employee Assistance Programmes in dealing with work related alcohol issues appears to be restricting progress in determining what if any type of intervention actually works.

The literature (Hawthorne, Garrard, & Dunt, 1995; Crombie, Irvine, Elliot, & Wallace, 2005) also indicates an opposing paradigm that alcohol education and health promotion have not been effective and can on occasion be even counterproductive. Larimer and Cronce (2002) outline how the strategy of delivering single one off lectures on alcohol is based on the premise that the intended recipients drink unhealthily because they are devoid of the necessary knowledge or awareness of the associated health risks of excessive alcohol consumption. In keeping with this rationale, it therefore follows that an increase in the recipients' knowledge would lead to a decrease in the recipients' excessive alcohol use. While acknowledging the essentiality of alcohol educational components of

successful interventions, Larimer and Cronce also argue that information on alcohol alone appears to be an ineffective intervention when delivered in isolation.

The workplace specific to this research piece is the Naval Service in Cork. The Defence Force Alcohol Policy (2002) primarily guides the Naval Service on all alcohol related policy matters. This current policy appears to support Defence Force initiatives at local levels that help address unhealthy drinking behaviours by military personnel. There is an observation within this policy of the difficulty of early detection of alcohol abusers. The necessity of differentiating between the habitual and binge drinkers is also highlighted. Other aims of the Defence Force Alcohol Policy include a means of identifying and dealing with alcohol related issues preferably in the earlier stages and providing a framework for the development of effective procedures in dealing with alcohol related issues. Additionally a specific reference is made towards Defence Force management ensuring that younger personnel are not to be facilitated in excessive drinking behaviours within the military environment. Delivering alcohol education lectures appears to be the primary method by which this policy attempts to meet its aims. The Defence Forces insists all appropriate training course syllabi should include lectures on the dangers of alcohol abuse (Defence Force Alcohol Policy).

As this research was carried out in a military workplace environment it was important to examine the literature on the historical and cultural aspects of drinking behaviours pertinent to military organisations. The aim of completing such a review was to uncover a realistic picture of the type of drinking environment that Irish Naval recruits potentially could be facing following completion of their basic training.

The literature points to a long-term association between alcohol consumption and those serving in the military (Wessely et al., 2007; Vellman, 2001). In fact Wessely et al. outlined how in the 19 and 20<sup>th</sup> centuries aspirations of young men in Great Britain and Europe to join the military was often driven by the availability of free liquor, financial security and a desire to escape poverty. Pack (1982) highlighted how alcohol consumption among the world's military, particularly navies, had a long history of tolerated drinking traditions and rituals, including the daily ration of grog. Vellman rated seafarers as well as those in the military as high-risk occupations for heavy drinking. Indeed up until the 1970's personnel in the Royal Navy were issued with their daily ration of rum to all trained seamen over the age of 20. Even today medical officers are still entitled to prescribe a routine ration of rum to naval sailors operating in whatever constitutes an arduous environment (Wessely et al.).

There is a dearth of research on any type of drinking behaviours and associated consequence of excessive alcohol use within the Irish Defence Force setting. As a result this review focuses primarily on research findings on the drinking behaviours of the armed forces of Great Britain and America. There is a body of literature attesting to the cost in terms of job performance, absenteeism, accidents and productivity because of alcohol related problems within military settings, for example Fernandez, Hartman and Olshaker, (2006); Taylor et al., (2007); Wessely et al., (2007). Bray et al. (2003) also notes that the amount of "heavy drinkers" in the US military remains relatively unchanged in the last quarter of a century and military personnel aged 18 to 25 were found to be significantly more likely to engage in heavy drinking than were their civilian counterparts. Bray et al. concluded that for most military personnel, binge drinking is indeed regarded as a social

occasion. Wessely et al. found that excessive consumption is more common in the United Kingdom's armed forces than in the general population. While Taylor et al. also mentions that individuals having their careers terminated early in the military as a result of their excessive drinking behaviours represents a significant financial loss to the taxpayer as a result of substantial money having being invested in hiring, training and replacing those personnel. Barker (2004) outlined the potential adverse effects of post-alcohol impairment (hangover) on performance, health and occupational consequences caused by impaired functioning the morning after following a typical nights drinking within the UK's armed forces.

There is a paucity of research on pre-enlistment drinking behaviours within the European military community. However in the United States Taylor et al. (2007) conducted research on the link between patterns of alcohol use and negative alcohol related consequences among U.S. Air Force recruits. Among the findings in this rather large survey ( $n = 37,858$ ) was that recruits who were classed as binge drinkers prior to enlistment were considerably more likely to report adverse consequences. Examples of such consequences included drinking in the morning, inability to stop drinking once started, experiencing blackouts, having been involved in fights or having injured or been injured as a result of their alcohol consumption. Taylor et al. concludes by suggesting that alcohol related problems are common among US Air Force recruits before their enlistment for military training and further suggests that screening for future problems may be useful.

Ames, Cunradi and Moore (2002) also highlight how harmful substance use patterns of new recruits in America that are established before or during military service

represent an important public health concern. The literature also refers to an invalidated self-selection theory, where some theorists on workplace drinking postulate that individuals with a propensity for heavier drinking patterns self-select into occupations where frequent and heavier drinking is more acceptable, while significantly others suggest that individuals adjust their drinking to existing cultural norms after entry (Ames & Janes, 1992).

Fernandez et al. (2006) postulated that military personnel as a result of newfound independence from home and family may have a tendency to test limits, often in settings and situations that involve alcohol. Wessely et al. (2007) highlight how drinking alcohol socially appears to be the fundamental component, which enables military personnel to bond together and create unit cohesion particularly while at sea for long periods of time. Ames et al. (2004) while acknowledging the proactive efforts by the military authorities to promote greater awareness of the adverse effects of excessive alcohol consumption, believe a perception that alcohol is part of the culture within the military may still exist. Ames et al. also found that there were established drinking rituals and routines as well as components of the work environment that enabled drinking at work both on land base and during deployment liberties (i.e., Shore leave).

Unfortunately, there are few studies that assess the effectiveness of brief counselling or workplace interventions of any kind for risky drinking within Military settings. However, in one study at the Naval Medical Center in Portsmouth, Storer (2003) conducted a retrospective review of all admissions in the fiscal year 2001 to determine the impact of brief interventions on substance abuse. The findings show that patients

receiving substance abuse related brief interventions had significantly lower readmission rates (12.6%) than those not receiving interventions (29.4%). It is important to note that this research was not an alcohol specific study.

Given that little work on alcohol interventions has been conducted in military settings I decided that an examination of interventions in civilian workplaces would be useful.

Breugem et al. (2007) when outlining the rationale for addressing alcohol issues in the workplace argue that the reality is that most people are in employment and many individuals consume drugs, particularly alcohol. Therefore, the workplace is likely to reflect the alcohol and other drug issues experienced in the general community (Breugem et al.). Roman and Blum (2004) conducted an extensive review on the effectiveness of workplace interventions aimed at reducing alcohol consumption. Findings suggest that interventions targeted individual employees only and ignored the organisational context. In particular, the cultural constraints imposed by the workplace environment concerning alcohol consumption were not addressed (Roman & Blum). The STFA (2004) advocated for the need for greater awareness among employers of workplace guidelines, which meet criteria for effective practice to reduce risks associated with alcohol in the workplace.

It was also necessary to explore the CBT literature relevant to effective interventions for individuals or groups with alcohol use disorders issues. Moos (2007) suggests CBT's primary focus when dealing with alcohol use disorders is on reducing client's positive expectancies about alcohol, enhancing their overall self-confidence and

increasing their self-efficacy to resist alcohol misuse in difficult social situations. Bandura (1977) defined self-efficacy as a self-perceived judgement in one's belief to perform tasks, make decisions and cope with situations, and further suggested that perceived self-efficacy influences behavioural aspects such as the acquisition of new behaviours, or the inhibition of behaviours already in existence. Alcohol expectancies as described by Goldman, Brown and Christiansen (1987) are the beliefs about the effects of alcohol on various aspects of behaviour and cognition and are used to predict drinking behaviour at all levels of the alcohol use disorders continuum. Vogel-Sprott and Fillmore (as cited in Valdivia & Sherry, 2005) explained that central to the expectancies concept is the view that expectancies can be either positive (i.e. an outcome of benefit) or negative (i.e. an outcome of detriment). Oei and Morawska (2004) outlined how the concept of alcohol expectancies stem from research indicating that the effects of alcohol are not simply a factor of alcohol's physiological effects but rather a function of the beliefs one holds regarding these effects.

Bandura (1977) also argued that within the context of his social learning theory, individuals would be more inclined to decide to engage in alcohol use if they held a high expectancy that a certain anticipated outcome would occur from drinking alcohol as well as if they also greatly desired that particular outcome. Fromme, Marlatt, Baer, and Kivalahan (1994) introduced the concept of valuations and defined it as a term used to describe the importance an individual placed on an expected outcome. Similar to expectancies, valuations can both be positive (i.e. an outcome that is important, enjoyed and or sought-after) and negative (i.e. an outcome that is unimportant, disliked and or avoided).

Accordingly Fromme et al. (1994) cautioned that despite the presence of a so-called negative expectancy there should be no automatic assumption of a cessation or moderation of drinking behaviour. In fact the key point is whether an individual deems a so-called negative outcome to be of importance to them that they should moderate their alcohol consumption. Fromme et al argued that it is naive to assume that cognitive or behavioural impairments are viewed negatively. Sometimes such impairments appeared to serve as incentives in particular for young people, thus emphasising the importance of assessing rather than jumping to conclusions about valuations of drinking outcomes.

Oei and Burrow (2000) suggest that the more specific Drink Refusal Self-Efficacy (DRSE) refers to one's ability in being able to resist or refuse alcohol at will in high risk drinking situations. In summary alcohol expectancies are an integral component in making a decision whether to drink or not, while drink refusal self-efficacy intervenes before the behavioural response of the individual occurs. As a result both alcohol expectancies and drink refusal self-efficacy are important predictors of alcohol consumption (Oei & Baldwin, 1994).

The literature refers to a strong evidence base for the use of CBT in addressing alcohol issues (Oei & Jackson, 1984; Finney & Monaghan, 1996; Longabaugh & Morganstern, 1999). As far back as three decades ago, Oei and Jackson (1984) indicated that there was early evidence showing that modification of alcohol-related beliefs through CBT was an effective approach to the treatment of alcohol problems. Walter, Bennet and Miller (2000) also argue that intervention programmes for alcohol abuse that focus on behavioural skills training methods appear to be a more effective intervention type in



reducing alcohol use and alcohol-related problems. Spooner, Mattick and Howard (1996) highlighted the importance of a readiness to change behaviour as an important predictor of successful treatment outcome. Spooner et al. argue that young people in general are considered to be an ambivalent population when it comes to substance abuse, which makes it difficult for health professionals to elicit change.

As indicated in the literature review young male drinking levels in Ireland are of particular concern and thus as new employees (within an organisation that has an upper age limit of 27 years for new entrants) represents a subpopulation within the Navy that was likely to be excessive alcohol drinkers. I chose a group rather than an individual format for the intervention. Pragmatically I wanted to maximise the potential of the intervention. Such a group CBT format would also provide participants with the opportunity to observe patterns of drinking objectively and subjectively. This environment would also allow participants to examine associated alcohol related cognitions and behaviours in others, to recognise their own biases and the negative impacts of their own excessive alcohol consumption and thereby gain personal insight. The group setting also provides a safe place to consider alternative, healthier cognitions associated with alcohol, as well as acquiring behavioural skills to refuse alcohol more easily when or where participants so desired.

It is evident that there is a gap in the existing literature on evaluating effective alcohol interventions by Employee Assistance Programmes globally within occupational settings. Specifically, this research piece contributes to filling this deficit of information regarding an important issue, i.e. alcohol consumption amongst predominantly young

males entering the Navy (or any other Irish workforce). This study was designed with due consideration given to encouraging new members of the Navy to participate in a pilot intervention programme that would promote healthy drinking behaviours as well as offering an unique examination of drinking attitudes and behaviours of individuals over the duration of a Naval recruit class training schedule.

As the literature review suggests Irish people have the highest reported drinking levels and related adverse consequences within the extended European Union. The literature also points to a high cost in terms of reduced performance levels for military personnel as a result of alcohol related problems within military settings. Alcohol expectancies and drink refusal self-efficacy are also essential predictors of alcohol consumption. As a result of such a social and occupational context the outcomes investigated in this research was, alcohol consumption (Risky Drinking and Binge Drinking), readiness to change drinking habits, alcohol expectancies, and ability to refuse alcohol in high-risk drinking situations.

The aim of this study will be to evaluate the effectiveness of a brief CBT alcohol intervention in reducing risky and binge drinking behaviours for new Naval recruits. This study will test the hypotheses that compared to those participants assigned to the control group; participants in the treatment group who completed the CBT intervention programme would at the follow-up screening assessment:

- (i) Show a reduction in their mean level of binge drinking and risky drinking behaviour

- (ii) Demonstrate an increase in their mean readiness to change their drinking behaviour
- (iii) Decrease their mean expectancies around alcohol
- (iv) Increase their mean ability to refuse alcohol in high-risk social situations

## Method

### *Participants*

Twenty-six new entrants from a class intake of 30 Naval recruits volunteered to participate in this experiment two weeks after enlistment at the Naval College in Cork. The sample consisted of 24 males and two females, with participants having a mean age of 21.46 (SD = 3.01; range: 18- 26) years.

### *Materials*

#### *Demographic Screening Questionnaire (see Appendix A)*

Participants were asked a number of biographical questions. This questionnaire contained items relating to exercise, weight gain or weight loss, diet, smoking, and educational qualifications.

*The Alcohol Use Disorders Identification Test [AUDIT]*, (Babor, Higgins-Biddle, Saunders, & Monterio, 2001).

Due to the sensitive nature of alcohol use as well as to reduce demand characteristics, AUDIT (see Appendix B) was also embedded within the Demographic Screening Questionnaire. AUDIT is considered a well-validated, reliable questionnaire and is the only screening instrument designed specifically to identify hazardous and risky drinking. The first edition of AUDIT was published in 1989 and was subsequently updated in 1992 by the World Health Organisation (Babor, et al., 2001). As a screening instrument AUDIT can be used for detecting alcohol related problems and can be used alone or embedded in a broader health risk or lifestyle assessment, (Saunders, Aasland, Babor, De la Fuente, & Grant, 1993; Fiellin, Reid, & O Connor, 2000). Originally designed for use in primary health care settings, AUDIT also can be used by non-health professionals including medics in a military setting, to identify alcohol dependence and a number of specific negative consequences of drinking (Babor et al., 2001). The ten AUDIT questions can be broken into three subcomponents: the first three screen for quantity and frequency, the next three look for signs of dependent drinking, and the last four probe for alcohol-induced problems (Saunders et al., 1993). Individual questions were scored using a five-point scale (0-4) with 40 as the maximum score.

Scoring an individual's consumption pattern can be measured in two ways. First, higher scores on AUDIT represent an increased likelihood and severity of alcohol disorders and the recommended cut off scores, as stated by Babor et al. (2001) are

presented in Box 1. Secondly, the total AUDIT score can be broken into its three subcomponents. The first subcomponent (AUDIT items 1-3) measures consumption at a risky level (defined as a score of 4+ for females and 5+ for males, Wessely et al., 2007). An important result also is that the third question in AUDIT, (“How often do you have 6 or more standard drinks on one occasion?”) concerning heavy episodic drinking can also be used as a single screening question for identifying binge drinkers (C.Nordqvist, personal communication, September 10, 2007).

AUDIT has a demonstrated reliability, validity, sensitivity and specificity indices that compare favorably or exceed those of other well-known alcohol screening measures (Allen, Reinert, & Volk, 2001). AUDIT has a sensitivity ranging from 51% to 97% and a specificity ranging from 78% to 96% (US Preventive Task Force, 2004). More than 30 controlled trials have reported the benefits of using AUDIT as a screening tool to aid brief interventions in reducing alcohol consumption in early problem drinkers (Wilk, Jensen, & Havighurst, 1997). A test-retest reliability study indicated high reliability ( $r = .86$ ) in a sample consisting of non-hazardous drinkers, cocaine abusers, and alcoholics (Sinclair, McRee, & Babor, 1992).

## BOX 1. AUDIT Scores and Risk Levels

AUDIT Score	Risk level
A score of less than 8	No problem
8 –15 (for a male) 5-15 (for a female)	Associated with risky or hazardous drinking and is suggestive of alcohol problems
16-19	Is likely to indicate a high level of alcohol problems
20-40	Indicates the need for a referral to a specialist for diagnostic evaluation and treatment

Because of the length of AUDIT, several shorter versions exist including AUDIT-C that uses only the first three questions of AUDIT. The sensitivity of using the first three questions in the AUDIT (also referred to as the AUDIT-3) has found to be 54-98% and the specificity 57-93% (Fiellin et al., 2000). Consumption levels in this research piece were assessed using AUDIT-3 questions.

### *Readiness Ruler*

A Readiness Ruler (see Appendix C) similar to the one devised by Miller, Zweben, Diclemente, and Rychtarik (1992) was used to assess participants' readiness to change their drinking behaviours. DiClemente et al., (1991) outlined how individuals experience a number of stages in the process of changing their behaviour and these stages were categorised as follows: (i) pre-contemplation; (ii) contemplation; (iii) preparation for action; (iv) action and (v) maintenance. Participants were asked to rate on a scale of 1 to 10 the following question:

“How important is it for you to change your drinking?” (With 1 being not important and 10 being very important).

In general, individuals who scored between 8-10 on the readiness scale are deemed ready to take action. Those who scored between 4-7 are considered unsure about change (contemplation) and those who scored between 1-3 are deemed not ready to change and may be unaware that their drinking behaviour is a problem (pre-contemplation) (Diclemente et al., 1991).

#### *Drinking Expectancy Profile (DEP)*

The DEP was designed as a means of assessing the two key cognitive constructs associated with the development of alcohol problems, alcohol expectancy, and drinking refusal self-efficacy (Young & Oei, 1996). Test–retest, content, criterion, and construct validities have confirmed the validity of the DEP (Allen & Wilson, 2003).

Part 1 of the DEP is “The Drinking Expectancy Questionnaire” (DEQ: Young & Oei, 1996; Lee, Oei, Greeley, & Baglioni, 2003). The DEQ (see Appendix D) was originally a 43-item scale in which participants were asked to disclose their personal beliefs about drinking, using a five–point scale. The DEQ was designed to measure stable trait-like expectations about outcomes of drinking (alcohol expectancies). The DEQ holds an advantage over other questionnaires in that it measures both positive and negative expectancies in the same questionnaire. However, a recent examination of the validity of the DEQ revealed a shorter form of the questionnaire consisting of five factors to be more

reliable (Lee et al., 2003). These factors are: negative consequences; increased confidence; sexual enhancement; cognitive change (e.g. drinking alcohol sharpens my mind); and tension reduction (with the last four classified as positive expectancies). This new revised scoring for the DEQ was found to withstand confirmatory factor analysis and had robust psychometric properties (that other scales may lack) that the original factor structure did not (Lee et al., 2003). Consequently the revised scoring of the DEQ was used in the current study.

The second part of the DEP, the “Drinking Refusal Self-efficacy Questionnaire”(DRSEQ) was originally developed as a 31 item self report scale assessing participants’ beliefs about their ability to refuse alcohol in certain drinking situations (Young & Oei, 1996). The DRSEQ (see Appendix E), measures self-reported confidence in resisting drinking when exposed to specific drinking cues on a 6-point scale with ‘1’ indicating “I am very sure I would drink” and ‘6’ reflecting “I am very sure I would not drink”. The DRSEQ has three primary factors: social pressure self-efficacy (e.g. ‘when I see others drinking’); emotional relief self-efficacy (e.g. ‘when I am uptight’); and opportunistic self-efficacy (e.g. ‘when I am watching TV’). Higher scores reflect stronger confidence in resisting alcohol (Young, O’Connor, Ricciardelli, & Saunders, 2006). Cronbach’s alpha and test-retest reliability (range from  $r = 0.84-0.93$ ) and internal consistency (range from  $\alpha = 0.87-0.94$ ) indicated that the three DRSEQ factors were reliably assessing the constructs (Young & Oei, 1996). As a result of establishing a new factor structure for the DRSEQ (DRSEQ-Revised; DRSEQ-R), a number of analyses were performed to establish the validity of the new structure. This analysis extracted the same three factors as reported in the original development of the questionnaire (social pressure,



emotional relief and opportunistic drinking self-efficacy). Correlations between the factors suggest that a total DRSEQ-R score may be used as a general indicator of refusal. The DRSE-Q has a possible score range from 19 to 186. A number of tests of validation have shown similar results to those that have been used previously to validate the original DRSEQ (Oei et al., 2004). Consequently the revised version (DRSEQ-R) was used in this study.

### *Customer Satisfaction Rating Scale*

The questionnaire I used in this research (see Appendix F) was modified from a “Client Satisfaction Questionnaire” originally used by Larsen, Attkisson, Hargreaves, and Nguyen (1979) in order to evaluate participants’ satisfaction with the intervention programme. The primary modification I made was to include individual questions on the participants’ perceived relevancy of three specific intervention components (psycho education, alcohol expectancies and drink refusal skills). All participants in the treatment group completed a 7-question post-intervention questionnaire using a 4-point Likert scale. Questions assessed participants’ views of areas such as their views on the relevance of the information presented, participants willingness to recommend the intervention programme to a friend or fellow INS recruit, enjoyment of the intervention, awareness of the negative consequence of alcohol, assessment of their own increase of knowledge on alcohol, belief in their own ability to have an increased confidence to refuse alcohol in high risk situations. Four response options ranging from “No, definitely not” to “Yes, definitely” were available.

The CSQ-8 has been extensively studied, and while it is not necessarily a measure of a client's perceptions of gain from treatment, or outcome, it does elicit the client's perspective on the value of services received (Larsen et al., 1979). This questionnaire has been reproduced with the permission of C. Clifford Attkisson.

### *Design*

A treatment and control pre-test, post-test and follow-up randomised experimental design was used in this research piece.

### *Procedure*

Participants were recruited in October 2007 from members of a recruit class who had enlisted in the Naval Service two weeks previously. One month prior to conducting baseline measurements, six pilot baseline questionnaires were administered to Naval personnel who were employed in the Naval Diving Section. The aim of the pilot exercise was to identify whether the questionnaire was unambiguous, unbiased, and easy to complete by the participants. The time taken to complete the questionnaires was approximately 40 minutes. Subsequent to feedback received from this procedure a number of minor practical adjustments were made prior to baseline measures being administered. These changes contributed to a high questionnaire completion rate with only a minimal amount of missing data or partially completed questionnaires.

I addressed the recruit class one week before the commencement of the intervention programme. In this first meeting I addressed such issues as what CBT is, the

anticipated benefits of participation and the context and purpose of the research project. An extensive questions and answers session followed where I clarified any potential participants' queries. In concluding this discussion I robustly re-emphasised to the participants the anonymous and confidential aspects pertaining to the experiment.

Voluntary participation by all recruits was important, so in order to reduce the sense of coercion, no military instructors were present during this discussion or at any stage of the subsequent experiment. The Informed Consent Sheet (see Appendix G) was then distributed. Participants were requested to either write "I Consent" or "I do not consent" on this sheet.

An examination of the completed consent sheets showed 26 recruits consented and one recruit declined consent to participate. Allocation to both groups then took place, prior to participants completing the pre-treatment baseline measures. Participants wrote their names on a sheet of paper and then placed the sheet into blank envelope, which was then sealed. A recruit not involved in the study administered randomisation by firstly mixing up the envelopes and then subsequently placing those envelopes alternatively into a box marked either Treatment Group (for assignment to treatment group) or Control Group (for assignment to control group). After the subsequent opening of the envelopes participants were randomly assigned to either a treatment or control condition ( $n = 13$  each).

Participants coded their questionnaires by using the first three letters of their mother's maiden name and the six digits of their dates of birth. This code maintained anonymity and facilitated the tracking of individuals in the study for future analysis.

Written contact details (mobile phone number or email address only to preserve anonymity and confidentiality) were also obtained in order to locate participants for follow-up measures to be taken.

In order to assist participants in completing AUDIT, a one-page handout explaining what is a standard drink was distributed. Alcohol intake is expressed in standard drinks (10g of ethanol is the equivalent of one standard drink, STFA, 2004). All questionnaires took approximately 40 minutes to complete. Every participant completed questionnaires again after the termination of the four-week intervention group in November 2007 and also at the two-month follow-up assessment in January 2008. All questionnaires were disseminated individually on all three-assessment occasions in the order outlined below:

(i) AUDIT (Babor et al., 2001); (ii) Readiness to Change Ruler, (Miller et al., 1992); (iii) DEQ (Young and Oei, 1996; Lee et al., 2003) (iv) DRSEQ-R, (Oei et al., 2004).

On completion of the final intervention session, participants (in the treatment group only) were requested to complete a seven-question Customer Satisfaction Questionnaire.

### *Facilitators*

As well as carrying out this research piece, I also facilitated the intervention programme. I am an accredited counsellor with the Irish Association of Counselling and Psychotherapy

(IACP) as well as being an accredited addiction counsellor with the Irish Association of Alcohol and Addiction Counsellors (IAAAC). I have ten years clinical experience and hold an honours degree in counselling as well as a diploma in addiction studies. I have an extensive background in conducting group facilitation including having facilitated alcohol relapse prevention groups for approximately three years for members of the Naval service. My co-facilitator (Mairead Phelan) is a civilian Occupational Social Worker employed within the INS on a full time basis. Mairead holds a Masters Level qualification in Social Work and has 7 years of clinical experience in case and group work in a number of various social work settings. CBT training involved reviewing training manuals that outlined specific administration guidelines, modelling and behavioural rehearsal. We (as facilitators) did not know any of the participants prior to conducting this intervention programme.

### *Treatment Procedure*

The treatment protocol used in this intervention (see Appendix H) was adapted from a similar treatment protocol used by Bailey, Baker, Webster, and Levin (2004). The Treatment Intervention programme commenced one week after baseline measures were administered and was conducted over 4 consecutive weeks. Groups were of one and a half hour duration with either cognitive restructuring or social skills training techniques being administered in each session. The Treatment Intervention was delivered in the Naval Base in Cork during normal working hours. All sessions began with a review of alcohol consumption and homework practice, as well the previous weeks subject matters. The four sessions contained the following input:

*Session 1:* I established boundaries pertaining to areas such as confidentiality, what attire to wear and time keeping at the commencement of the first session. An ice breaking activity was then conducted. Psycho education was imparted on a number of issues such as Healthy Drinking Limits, what is binge drinking, how many grams of pure alcohol in a standard drink and how to calculate a standard unit of alcohol. A one-page handout covering all this information was distributed to participants at the end of the session.

*Session 2:* The CBT model of mental health was introduced. Participants were familiarised with the thoughts, feelings and behaviour cycle. This framework enabled participants to access alternative cognitions, which in turn could help to adjust their feelings and behaviours.

The consequences of alcohol intoxication were reviewed where participants were requested to share what they perceived to be pleasant and unpleasant about alcohol intoxication. Participants were then encouraged to elaborate on each of their own personally elicited consequences as a result of their previous excessive alcohol consumption.

*Session 3:* Cognitive Restructuring was implemented by challenging participants to review their expectancies around alcohol (e.g., “What are some things you might not like so much about reducing or changing the way you use alcohol?”). Participants were also asked questions about the perceived benefits of change (e.g. “What are some good things about reducing or changing your alcohol intake?”). Similarly participants were asked to discuss

what positive and negative beliefs they have around what it meant to them to drink alcohol.

*Session 4:* I introduced behavioural skills training in how to refuse alcohol and develop safe drinking plans. Participants were asked to identify risky drinking scenarios such as a party or pub situations in order to formulate drinking plans for the various drinking situations. Drink refusal skills were then explained to group participants and then modelled by the facilitator while the participant acted the role of the person providing the pressure to drink. Participants then went into pairs and formulated their drink plans and role-played their alcohol refusal skills. On completion of this task, participants were then requested to reverse the roles in order to demonstrate their newly learned refusal techniques. This involved the facilitator acting in the role of the individual encouraging alcohol consumption and the participant displaying newly learnt refusal skills.

Across the duration of the intervention we (the facilitators) were keen to hear all participants' views and experiences of consuming alcohol prior to their enlistment in the INS. This information was viewed as an important part of the group process; as such information increased the group's collective knowledge. I included an activity such as "Celebrity Heads Games" (game of charades using predominantly famous Irish personalities who have/had a "colourful" relationship with alcohol) in an effort to encourage group interaction. Frequently participants were divided into smaller groups of twos or threes to complete activities. At the end of each group session, comprehensive psycho educative materials covering the content of each session as well as homework

exercises were distributed. The group was interactive throughout and participants' feedback was encouraged at the beginning and end of each session.

### *Ethical Considerations*

I adhered to the British Psychological Society's (2006) ethical guidelines for standards of protection for research participants while conducting this research project. Participants were informed that the Flag Officer Commanding Naval Service (FOCNS) had approved of and sanctioned permission for this research project to be undertaken. Also I explained to participants that ethical approval to undertake this experiment had been obtained by the Department of Applied Psychology's (University College Cork) Ethics committee. The Irish Defence Forces does not have a formal Research Ethics Committee. However, prior permission to undertake this project was sanctioned by the Defence Force Psychologist. The primary organisational requirement was that the Defence Forces maintains the right to decide if this thesis can be published in the public domain.

It is possible to enlist in the Navy at 17 years of age. However, the legal age for buying alcohol is 18, and therefore no individual below this age was recruited for this experiment. I deemed it unethical particularly in a government organisation to carry out research with participants who were not legally entitled to drink alcohol. Accordingly, three recruits did not meet the study eligibility requirements.



In facilitating the intervention programme, ethically I was conscious of holding a superior rank to the participants' rank (recruit is the lowest rank in the Navy) and thus there was a military rank imbalance between the participants and myself. In an effort to readdress this imbalance and reduce a sense of coercion or compliance by the participants, I always wore civilian attire and interacted with participants on a first name basis (as opposed to using a rank structure) throughout the entire experiment. Participants in the treatment group were requested to wear civilian attire while they attended the intervention programme. As my co-facilitator is a civilian social worker the issue of rank in that instance was irrelevant.

All participants were informed of the boundaries relevant to confidentiality within the Personnel Support Service in the Navy. I also elaborated on areas such as data protection, participants' right not to answer any question they did not want to. Equally all participants were informed of their entitlement to withdraw at any stage from this experiment without explanation. Participants were further reassured that any subsequent withdrawal would not have any negative consequences or career implications of any kind now or in the future while participants were members of the Naval service.

All participants were further informed that there were no "disguised" procedures in this study and if they had any concerns about their personal use of alcohol for the duration of the experiment, they could contact other members the Naval Personnel Support Service [PSS] (Naval Employee Assistance Service) who were not involved in the study.

Questionnaires and consent forms were stored securely in a locked filing cabinet in my office in the Naval Base. Information was entered onto a password-protected computer, which prevented unauthorised persons access to the computerised research files. It was agreed with the participants that all experimental data would be either deleted or destroyed one year subsequent to the completion of this experiment.

Participants in the control group were given the opportunity of completing the four-week intervention programme at the end of the experiment. In January 2008, one week after the follow-up measures were taken all participants attended an Experimental Debriefing session. Participants received a written De-briefing (see Appendix I) statement, which explained what the purpose of the experiment was, the hypothesis tested and the rationale behind why two groups were used. I explained how AUDIT was scored and the recommendations associated with each score grouping (see Box 1.). I then facilitated a questions and answers session, in order to identify any unforeseen harm, discomfort, or ambiguity, participants may have had as a result of having undertaken this experiment. I further clarified any participants' queries. In May 2008, I contacted all participants and informed them that a copy of the research outcomes was available for their perusal. I was conscious that five participants in particular had AUDIT scores in excess of 20. All participants who called to view the findings were asked if they wished to know their individual baseline AUDIT scores and the associated recommendations of this score. I reiterated to participants that this discussion was confidential.

## Results

Demographic characteristics and features of pre-treatment drinking levels are shown in Table 1. As can be seen all participants were current drinkers with the vast majority of the sample being male (92%) and of Irish nationality (92%). Current drinkers were defined as those who reported consuming at least one alcoholic drink (i.e. 1 short, 1 glass or bottle of beer, 1 glass of wine) during the last 12 months. Higher scores on AUDIT indicate an increased likelihood and severity of alcohol use disorder (Babor et al., 2001). A large proportion of the entire sample were classified at the minimum of being risky drinkers with another 19.2% indicating a score that showed a high level of alcohol problems and a further 19.2% scored in excess of 20 which indicated a need for a further comprehensive alcohol addiction assessment.

Binge drinking at least once on a monthly basis was reported by 65.4% of the sample. While 24% of participants were classified, regular binge drinkers and binge drank at least on a twice-weekly basis, before joining the Navy. In answer to AUDIT question 9, 30.8% of participants reported either they or someone else having been injured because of their alcohol consumption during the last year. Of the 13 participants allocated to the treatment group, 12 completed the entire four sessions, while one participant missed session three (due to illness) thus completing three sessions only. In all analyses, males and females were not separately analysed primarily as there was only one female per treatment condition. In order to assess the effectiveness of the intervention on reducing alcohol consumption, the following dependent variables were established to assess change

in alcohol consumption levels over time: (i) The mean frequency score of binge drinking (Question 3, AUDIT), (ii) Mean risky drinking score (AUDIT-3, items 1-3).

Table1. Demographic Characteristics and Pre-Treatment Drinking Features

Nationality	92% Irish ( <i>n</i> =24)
Mean Age	21.46 years ( <i>n</i> =24)
No formal education	8% ( <i>n</i> =2)
Junior Cert or equivalent	16% ( <i>n</i> =4)
Leaving Cert or equivalent	65% ( <i>n</i> =17)
Third Level	12% ( <i>n</i> =3)
Treatment for alcoholism in the family	23% ( <i>n</i> =6)
Frequency of drinking (AUDIT item 1)	
Never consumed alcohol:	0%
Monthly or less:	19.2% ( <i>n</i> =5)
2-4times a month:	46.2% ( <i>n</i> =12)
2-3times a week:	30.8% ( <i>n</i> =8)
4 or more times a week:	3.8% ( <i>n</i> =1)
Number of Alcoholic drinks consumed per drinking occasion	73.01% ( <i>n</i> = 19)
(AUDIT item 2, median category “5 or 6 drinks”)	
Frequency of binge drinking (AUDIT item 3)	
Never binged:	11.5% ( <i>n</i> =3)
Binged less than monthly:	38.5% ( <i>n</i> =10)
2-4 times a month:	26.9% ( <i>n</i> =7)
2-3 times a week:	19.2% ( <i>n</i> =5)
4 or more times a week:	3.8% ( <i>n</i> =1)
AUDIT (10 Questions) and Associated Risk Level	
0-7: No problem	30.8% ( <i>n</i> =8)
8-15: Risky drinking and suggestive of alcohol problem:	30.8% ( <i>n</i> =8)
16-19: Likely to indicate high-level alcohol problems:	19.2% ( <i>n</i> =5)
20-40: Indicates need for referral for specialist assessment:	19.2% ( <i>n</i> =5)

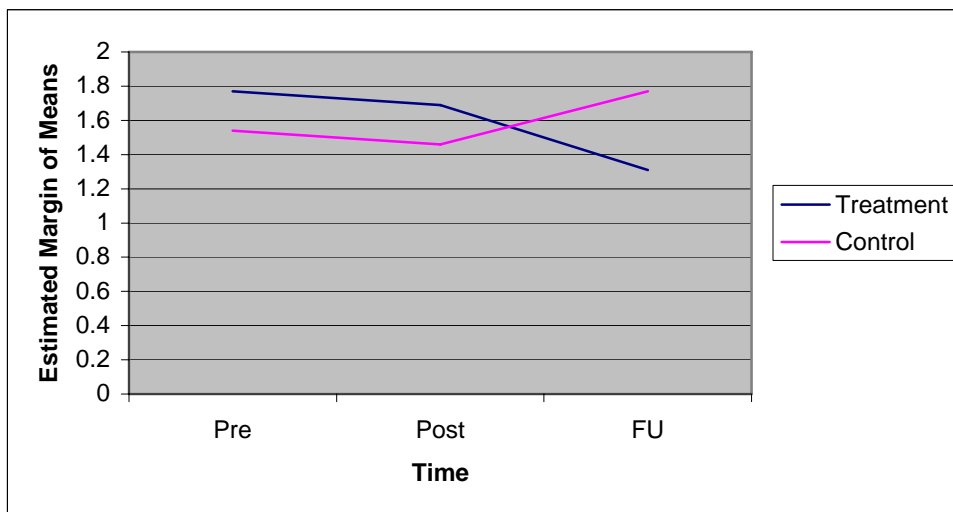
The data was analysed using a split plot analysis of variance and the findings are presented in the following section. The first results to be examined were participants' mean binge-drinking scores. The comparisons scores between groups and across time for binge drinking behaviours are displayed in Table 2.

Table 2. Means and Standard Deviations of Binge Drinking Behaviours at Pre-Post and Follow-up Assessment.

Outcome variable	Time	Treatment Group	Control Group
		( <i>n</i> =13)	( <i>n</i> =13)
		Mean (SD)	Mean (SD)
Frequency of binge drinking (Range 0-4)	Pre	1.77 (1.17)	1.54 (.97)
	Post	1.69 (.75)	1.46 (1.12)
	FU	1.31 (.95)	1.77 (.83)

There was not a statistically significant main effect for time,  $f(2, 48) = .252, p > .05$ . Also there was not a significant main effect for group,  $f(1,24) = 91.797, p > .05$ . There was an interaction effect between time and group for participants' binge drinking that approached statistical significance,  $f(2,48) = 2.919, p = .064$ . There was a moderate effect size ( $d = .108$ ; Cohen, 1988). The patterns of these results are displayed in Figure 1.

Figure 1. Mean Changes in Binge Drinking Behaviour



The binge drinking behaviours of the treatment group was not significantly less than that of the control group. However, it is important to note that this result approached statistical significance ( $p = .064$ ). An examination of the trend of the means indicates at the follow-up assessment, participants' binge drinking behaviours in the treatment group were lower than at pre or post test assessment, indicating that the effect of the intervention became more pronounced as time progressed.

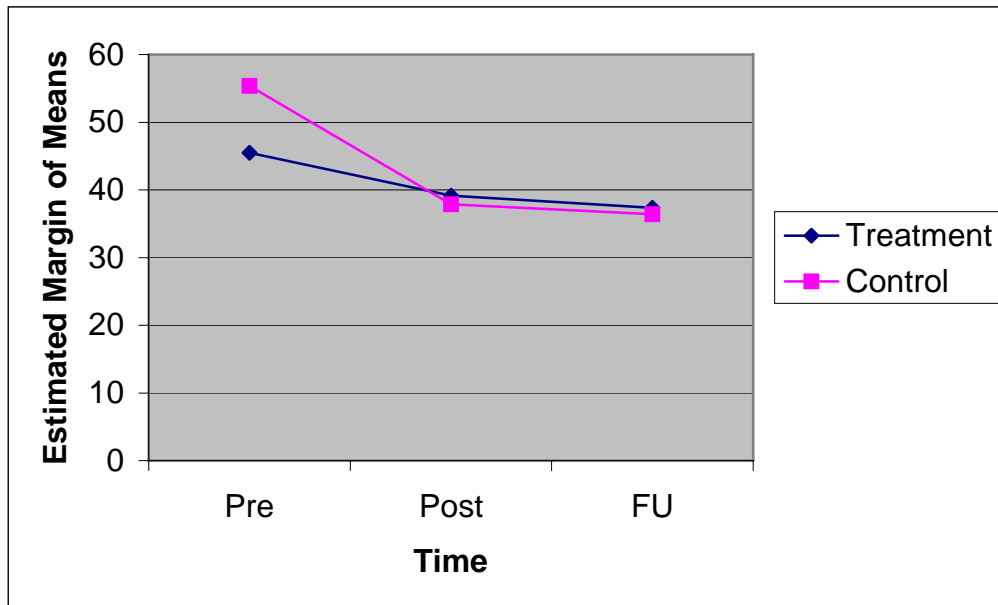
Next results for participants' alcohol expectancies on the Increased Confidence Factor on the Drinking Expectancy Questionnaire were examined. The means and standard deviations for the Increased Confidence Factor of the Drinking Expectancies Questionnaire (DEQ) between groups and across time are presented in Table 3.

Table 3. Means and Standard Deviations of the Increased Confidence Factor (DEQ) at Pre-Post and Follow-up Assessment.

Outcome variable	Time	Treatment Group	Control Group
		( <i>n</i> =13)	( <i>n</i> =13)
		Mean (SD)	Mean (SD)
Increased Confidence	Pre	45.50 (3.01)	55.38 (9.98)
	Post	39.17 (3.01)	37.85 (7.98)
	FU	37.33 (7.06)	36.38 (6.36)

There was a significant main effect of time,  $f(2, 46) = 49.154, p < .05$ . There was a large effect size ( $d = .681$ ; Cohen, 1988). There was not a main effect of group  $f(1,23) = 1.127, p > .05$ . There was a main time by group interaction effect,  $f(2,46) = 9.059, p < .05$  with a large effect size ( $d = .284$ ; Cohen, 1988). The pattern of these results for Increased Confidence is displayed in Figure 2.

Figure 2. Mean Score Changes For Alcohol Expectancies: Increased Confidence



Participants in the control group had higher alcohol expectancies concerning the ability of alcohol to increase their confidence when compared to participants' scores in the treatment group at the baseline measure. It is noted at follow-up that the treatment group's alcohol expectancies for the Increased Confidence Factor was significantly less ( $p < .05$ ) than at Pre or Post Test assessment, indicating that the effect of the intervention also became more pronounced as time progressed. Interestingly it is also worth noting that both treatment conditions at the follow-up assessment had decreased their alcohol expectancies on this factor to approximately the same level. These results indicate that participants in the treatment group lowered their beliefs about the potential of alcohol to increase their confidence over the three assessment occasions



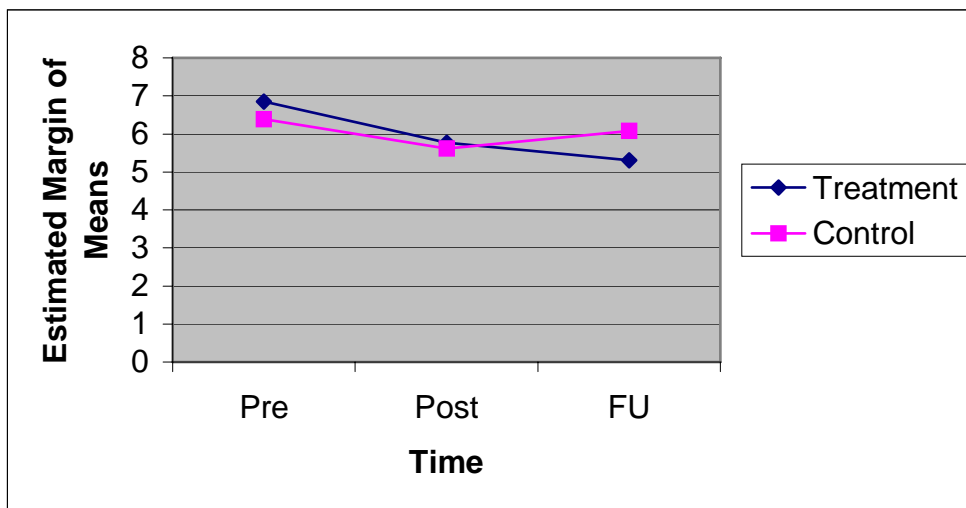
Next participants' risky drinking behaviours were examined. The comparisons scores between groups and across time for risky drinking behaviours are displayed in Table 4.

Table 4. Means and Standard Deviations of Risky Drinking Behaviours at Pre-Post and Follow-up Assessment.

Outcome Variable	Time	Treatment	Control
		Mean (SD)	Mean (SD)
Risky Dinking Behaviour Rang (0-12)	Pre Score	6.85 (3.08)	6.38 (2.72)
	Post Score	5.77 (1.83)	5.62 (2.90)
	Follow-up Score	5.31 (2.60)	6.08 (2.25)

There was a significant main effect of time,  $f(2,48) = 3.829, p < .05$ . There was a moderate effect size ( $d = .138$ ; Cohen, 1988). There was not a statistically significant main effect of group,  $f(1,24) = 171.358, p > .05$ . There was not a significant interaction effect of time and group as  $f(2,48) = 1.383, p > .05$ . The pattern of the results for risky drinking behaviour by participants is displayed in Figure 3.

Figure 3. Mean Score Changes on Risky Drinking Behaviour



A follow-up analysis was conducted to explore the main effect of time. A one-way ANOVA with post-hoc comparison was carried out. Results from this show there was not a significant difference ( $p > 0.05$ ) among the treatment group in their scores between Time 1 and Time 2 or between Time 1 and Time 3.

As can be seen from Figure 3, the risky drinking behaviours at follow-up assessment for participants in the treatment group was significantly lower ( $p < .05$ ) suggesting that the effect of the intervention programme increased as time progressed. It is also noted that the risky drinking behaviour for the control group reduced at post assessment but participants did not manage to maintain this decrease at the follow-up assessment. There was not a statistically significant interaction between time and group ( $p > .05$ ). However, an examination of the trend of the means showed that participants in the treatment group reduced their mean risky drinking behaviours

(Range 0-12) from 6.85 at baseline to 5.31 at follow-up. This indicates that there was a reduction in participants' risky drinking behaviours over the three assessment occasions.

Next results for participants' readiness to change drinking behaviours were examined. The means, standard deviations and effect sizes for participants' readiness to change drinking behaviours are presented in Table 5.

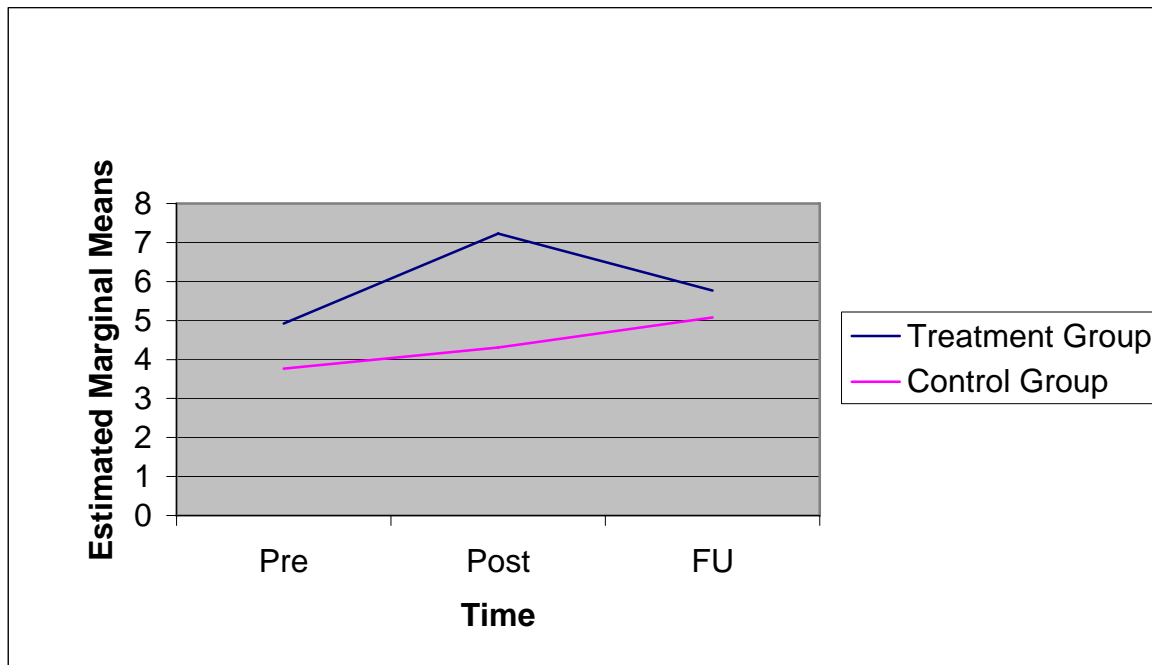
Table 5. Means and Standard Deviations of Readiness to Change Drinking Behaviours at Pre-Post and Follow-up Assessment.

Outcome variable	Time	Treatment Group	Control Group
		( <i>n</i> =13) Mean (SD)	( <i>n</i> =13) Mean (SD)
Readiness to Change Drinking Behaviour	Pre	4.92 (2.90)	3.77 (2.24)
	Post	7.23 (2.86)	4.31 (2.66)
	FU	5.77 (3.27)	5.08 (2.69)

There was a statistically significant main effect of time,  $f(2,48) = 3.448$ ,  $p < .05$ , with a large effect size ( $d = .287$ ; Cohen, 1988). There was not a significant main effect of group,  $f(1,24) = 139.421$ ,  $p > .05$ . There was not a significant interaction effect of time and group

$f(2,48) = 2.170, p > .05$ . The patterns of these results are presented in Figure 4.

Figure 4. Readiness to Change Drinking Behaviour



A follow-up analysis was conducted to explore the main effect of time. A one-way ANOVA with post-hoc comparisons was carried out. Results show that although there was not a statistically significant difference ( $p > 0.05$ ) among the treatment group in scores from Time 1 and Time 2 there was a statistically significant difference ( $p < 0.05$ ) between Time 1 and Time 3.

It is interesting to note the pattern of these results as presented in Figure 3. Participants in the treatment group's mean score for readiness to change at post testing is much higher than the control group's score. However, the treatment group's score decreased over time such that by follow-up their

mean scores decreased again to a score similar to participants in the control group. An examination of the effect of time on participants' readiness to change their drinking behaviours between baseline and follow-up assessment was statistically significant indicating that the intervention was effective over the three assessment occasions.

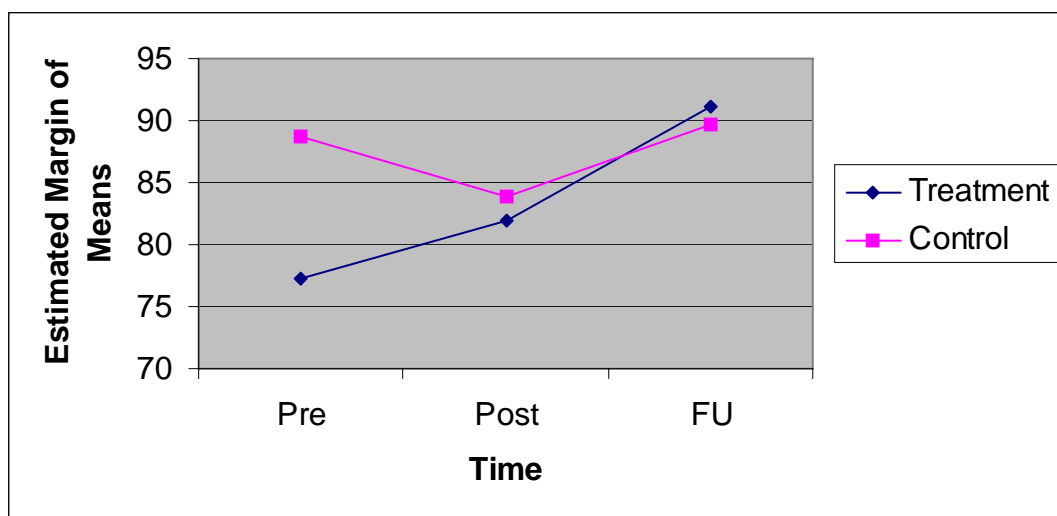
Next results for participants' ability to refuse alcohol in high risk social settings were examined and the means, standard deviations and effect sizes for participants' ability to refuse alcohol in high-risk social situations are presented in Table 6.

Table 6. Means and Standard Deviations of Drink Refusal Self-Efficacy at Pre-Post and Follow-up Assessment.

Outcome variable	Time	Treatment Group (n =13) Mean (SD)	Control Group (n =13) Mean (SD)
Drink Refusal	Pre	77.23 (11.28)	88.69 (13.19)
Self-Efficacy	Post	81.92 (14.84)	83.85 (21.20)
	FU	91.08 (13.63)	88.31 (15.67)

There was a main effect for time that approached statistical significance,  $f(2,48) = 3.010$ ,  $p = .059$ . There was also a moderate effect size ( $d = .111$ ). There was not a significant main effect for group,  $f(1,24) = 1294.464$ ,  $p > .05$ . The interaction effect of group and time was not statistically significant ( $p > .05$ ). The patterns of these results are displayed in Figure 5.

Figure 5. Comparisons Between Groups and Across Time of Mean Drink Refusal Self-Efficacy Scores



A follow-up analysis was also conducted to explore the main effect of time. Results from a one-way ANOVA show that although there was not a significant difference among the treatment group in their scores from Time 1 and Time 2 there was a significant difference ( $p < 0.05$ ) from Time 1 and Time 3.

Participants in the control group had higher mean Drink Refusal Self-Efficacy scores at baseline in comparison to participants' scores in the treatment group. An examination of the trend of the means for participants in the treatment group showed that over time participants'

ability to refuse alcohol in high-risk social settings increased. It is worth noting that over the duration of the experiment the changes in scores almost approached statistical significance ( $p = .059$ ), suggesting that the effect of the intervention became more pronounced as time progressed. The trend of the means for the control group indicated that participants' mean scores actually decreased at post-testing but subsequently returned to almost the original baseline score at the follow-up assessment. These results suggest that there was an increase for participants in the treatment group on their ability to refuse alcohol in high-risk social settings over the three assessment occasions.

The remaining four factors (Negative Consequences of Alcohol; Increased Sexual Interest; Cognitive Enhancement and Tension Reduction) of the DEQ were the last results to be examined in this analysis. Participants' mean scores for these four factors are presented in Table 7. There were no significant main effects for time or group (all  $p$ s  $> 0.05$ ) or interaction effects between time and group (all  $p$ s  $> 0.05$ ) for the Negative Consequences of Alcohol; Increased Sexual Interest; Cognitive Enhancement and Tension Reduction factors of the DEQ.

Table 7. Means and Standard Deviations for Negative Consequences of Alcohol; Increased Sexual Interest; Cognitive Enhancement; and Tension Reduction of the DEQ at Pre-Post and Follow-up Assessment.

Outcome variable	Time	Treatment Group ( <i>n</i> =13) Mean (SD)	Control Group ( <i>n</i> =13) Mean (SD)
Negative Consequences of Alcohol	Pre	27.62 (6.05)	25.69 (6.07)
	Post	32.69 (5.80)	28.62 (5.36)
	FU	31.15 (6.53)	30.30 (9.86)
Increased Sexual Interest	Pre	12.62 (2.40)	12.46 (1.71)
	Post	12.15 (1.72)	12.23 (1.54)
	FU	11.77 (1.83)	12.38 (2.14)
Cognitive Enhancement	Pre	6.30 (1.60)	4.77 (1.79)
	Post	5.54 (1.71)	5.15 (1.90)
	FU	6.77 (2.24)	5.46 (1.61)
Tension Reduction	Pre	8.08 (2.99)	7.62 (2.37)
	Post	7.15 (2.19)	7.38 (2.60)
	FU	7.69 (2.81)	7.46 (2.72)



Finally, it was important to evaluate the four-week intervention programme. In an effort to gauge what participants actually thought about the intervention all participants in the treatment group completed a 7-question Customer Satisfaction Questionnaire, the significant results of which are presented in Table 8. Participants also had an opportunity to write unsolicited feedback at the end of the Customer Satisfaction Questionnaire regarding any aspect related to the intervention programme. All participants used this opportunity to provide significant feedback, the vast majority of which was extremely positive. A content analysis of the statements indicated strongly that the intervention was well received and participants considered the programme to be beneficial. Overall there was a strong endorsement for the inclusion of this type of intervention programme on future Naval Recruit Training Syllabi. A closer examination of some of the comments revealed the following:

- Five participants stated, “They would recommend the intervention as it was very good and such an intervention would be beneficial for future recruit classes”.
- Two participants said it was “useful, although they had a laugh they also took it seriously.”
- Two participants said it was “cool to know the measures of drink as well as being a very knowledgeable course.”
- One participant said, “I can drink more sensibly and enjoy alcohol a lot better now”.
- One participant stated, “ I understand what is been done here but it would not interest me” while another said, “It opened my eyes but I am not ready to change YET”.

One participant stated, “As I do not drink very much anyway I do not want to change my drinking but I see the merits and benefits of this course”.

Table 8. Participants’ Evaluation of the Intervention

Question	Yes Definitely	Yes generally	No not really	No definitely not
Has this programme been personally beneficial	7.7% (n=1)	76.9% (n=10)	15.4% (n=2)	
Would you recommend this programme to a Fellow recruit	7.7% (n=1)	76.9% (n=10)	15.4% (n=2)	
Has the psycho-education part of the programme been personally relevant	23.1% (n=3)	69.2% (n=9)	7.7% (n=1)	
Has the programme helped you to refuse alcohol in previously personal high risk drinking situations		53.8% (n=7)	46.2% (n=6)	
Has the programme helped you to challenge personal alcohol expectancies	7.7% (n = 1)	46.2% (n=6)	30.8% (n=4)	15.4% (n=2)
Is there merit in including this programme on all future INS Recruit Training Syllabi	53.8% (n=7)	46.2% (n=6)		

In summary as can be seen from the previous tables and figures these result have provided some statistically significant findings. There were interaction effects between time and group that approached statistical significance for both a reduction in binge drinking ( $p = .064$ ) and an increase in ability to refuse alcohol in high-risk social settings ( $p = .059$ ) by those participants who completed the intervention programme. There was

also a significant interaction effect ( $p < .05$ ) between time and group where participants in the treatment group lowered their alcohol expectancies on the Increased Confidence Factor of the DEQ. There was also a significant main effect of time ( $p < 0.05$ ) for those participants who completed the intervention programme on their readiness to change their drinking behaviour.

All significant findings as well as the limitations of these findings will be further discussed in the next section. Although these results do offer encouragement they should also be interpreted with caution. As a result of having a relatively small sample size coupled with a short-term follow-up no conclusions should be drawn about the process of change.

## Discussion

This present pilot study aimed to examine the effectiveness of a brief four-session CBT alcohol intervention for young recruits who had recently enlisted in the Navy. Standardised measures were used to assess alcohol consumption and frequency (AUDIT), alcohol expectancies and ability to refuse alcohol in risky drinking settings (DEP). As noted by Breugem et al. (2007) the workplace can not be immune to the consequences of alcohol use disorder issues as most people are in employment and many people (young and old) in Ireland drink alcohol excessively (Ramstedt & Hope, 2005).

Overall, the results of the present pilot project lend support to the proposition that a brief CBT group intervention programme can have positive benefits in reducing excessive alcohol consumption for new entrants within the workplace. Although this was a small feasibility study there was a significant reduction in binge drinking and risky drinking at follow-up by participants who had completed the programme. Such a reduction is a cause for cautious optimism.

As the results indicate the intervention seems to have reduced the frequency of binge drinking over the duration of the experiment for participants in the treatment group. In contrast participants in the control group actually increased the levels of their binge drinking from their original baseline scores. These results suggest that the intervention programme may encourage young employees to reduce their binge drinking levels when socialising.

A similar trend occurred also in relation to the results of participants' risky drinking behaviours in the treatment group. Participants in the control group reduced their risky drinking at post treatment but their results at follow-up demonstrated participants were not able to maintain this decrease. One explanation for this initial short-term decrease may be found in the fact that participants had just enlisted in the Navy. All participants' liberty to socialise and drink alcohol freely would have been restrained between the pre and post assessment periods. It is noted that the follow-up assessment occurred in the first week in January 2008. Such liberty restrictions would not have been as pronounced as participants had just returned from two weeks leave over the Christmas. In Ireland as in many other countries the festive season is associated with heavy drinking.

Also this was the first time participants were allowed home for a considerable time period. A plausible explanation is that a combination of these factors may account for the reason why participants in the control group increased their binge and risky drinking at the follow-up assessment. As the results show there was a change in risky drinking behaviours by participants in the treatment group at post and follow-up assessment.

As encouraging as the reduction in the treatment group's binge and risky drinking on both assessment occasions is, it is important to recognise that all participants in this experiment were still drinking alcohol at a risky level. However, the reduction by participants in the treatment group in binge and risky drinking behaviours suggests that the intervention may have been effective in curtailing participants' unhealthy drinking practices.

Follow-up scores indicated that participants in the treatment group did not decrease their alcohol expectancies on four of the five factors of the DEQ (Negative Consequences of Drinking; Increased Sexual Interest; Cognitive Enhancement; Tension Reduction). It is unclear why there were no changes on these measures. In discussion with participants in the treatment group during the intervention, all participants freely expressed both their positive and negative alcohol expectancies. Some participants throughout the intervention also seemed to place a positive valuation (Fromme et al., 1994) on acknowledged negative consequences of their drinking. This lack of change in findings may be attributable to the possibility that a single module on alcohol expectancies may have been insufficient to trigger a decrease in participants' alcohol expectancies. I

would suggest that additional time to challenge alcohol expectancies and valuations more comprehensively would be more advantageous.

Interestingly participants in both treatment conditions showed a significant decrease in their alcohol expectancies on the “Increased Confidence” factor. This 12-item factor contained questions such as “I have more self-confidence when drinking” and “If I’m drinking it’s easier to express my feelings.” One possible explanation for this decrease amongst treatment group participants is that there was a specific presentation, discussion and homework assignment on assertiveness in session two of the intervention. An increase in participants’ awareness on assertiveness may have helped participants increase their confidence.

Participants in the control group also showed a reduction in their expectancies on this factor at the two-month follow-up. One plausible explanation is that this reduction may have been caused by a therapeutic effect of the assessment procedure. Participants in the control group possibly may have become sensitised to their alcohol expectancies after completing an extensive questionnaire on their own alcohol expectancies over the three assessment occasions.

An examination of the Customer Satisfaction questionnaire pertaining to alcohol expectancies shows that (similar to feedback on the behavioural skills element to the intervention) a slight majority (53.9%;  $n=7$ ) of participants answered affirmatively as to how the intervention helped them challenge personal alcohol expectancies. Future interventions designs may need also to allocate more time to this area in order for a greater

amount of participants to experience the benefits of challenging their own expectancies and valuations on alcohol.

As indicated in the literature review Spooner et al. (1996) noted the relevance of individual motivation for change as an important variable for a successful treatment outcome. Participants' scores on the Readiness Ruler in the treatment group at post treatment increased. This shift in scores from a low ambivalence state to an approximate readiness to change their drinking behaviours is important as Spooner et al argued that in general young people are viewed as an ambivalent population when it comes to making changes around the misuse of alcohol. However, at the two-month follow-up participants in the treatment group were unable to maintain this increase. One strategy that could address this decline in motivation over time would be the use of regular booster sessions in order to maintain individual changes in readiness to change drinking behaviours from the initial intervention programme. The US Preventative Services Task Force's (2004) recommended that brief behavioural counselling interventions with follow-up produce small to moderate reductions in alcohol consumption. The answer to how many booster sessions and what format (e.g. group or individual) such sessions should be delivered will be best served by future research.

Participants in the treatment group increased their ability to refuse alcohol in high-risk social situations at post and follow-up assessments. These scores were statistically significant over time suggesting that the intervention was effective in arming participants with skills to reduce alcohol in social settings. However, an examination of the Customer Satisfaction Questionnaire reveals that 53.9% ( $n = 7$ ) of participants in the

treatment group found the intervention effective in high-risk social settings where previously participants felt pressurised to remain drinking.

As mentioned earlier in the literature review by Walter et al. (2000) interventions containing behavioural skills training have been shown to be effective in reducing excessive alcohol consumption. No participant in the course evaluation indicated they had insufficient time to gain an increase in their drink refusal skills. However, in order to maximise the potential for more participants to gain benefit in this area, future study designs may warrant the consideration of extending the time allocated to behavioural skills or reducing the size of the group.

Oei and Baldwin (1994) suggested for any changes to occur in alcohol consumption, changes, and beliefs concerning alcohol needs to occur alongside drink refusal skills. Facilitating individuals into realising the dangers of holding positive alcohol expectancies such as drinking alcohol leads to an increase in assertiveness or relieves tension appears to have much merit (Oei & Baldwin). I would argue that such an increase in awareness for individuals might be more effective than solely relying on imparting “scare tactic” information on the many negative consequences associated with excessive alcohol consumption. Young et al. (2005) endorse the combination of positive expectancy elements with suitable behavioural skills to bolster drink refusal self-efficacy. Young et al. conclude that such a combination may form the foundation of a novel and efficient means of a group intervention programmes to reduce alcohol related harm.



There is a paucity of research into the evaluation of workplace intervention programmes that devote attention to the possibility of addressing alcohol problems (STFA, 2004). From a clinical perspective these results support the idea that a group CBT programme aimed at reducing problematic alcohol consumptions can be an effective intervention. Findings from this research study are consistent with other studies drawn from an Irish population (Hope, 2008; Ramstedt & Hope, 2005; Molyneux et al., 2006; Jackson, 2006) regarding the nature of alcohol use disorders and binge drinking behaviours in Ireland. The effectiveness of having a skills-based element to an intervention programme in reducing alcohol use is consistent with earlier findings by Walters et al. (2000) who also found that interventions that focused on alcohol psycho education and behavioural skills training showed the most promise in reducing alcohol consumption and alcohol-related problems. There is little research on pre-enlistment drinking within the European military community. These results are also reflective of similar findings on pre-enlistment alcohol abuse in US recruits (Taylor et al., 2007; Ames et al., 2002).

This present research piece has practical implications for the Navy, the broader Defence Force organisation, as well as for any future employers in contemporary Ireland. Overall this thesis has enhanced organisational knowledge by presenting an overview of the drinking behaviours of new employees as well as outlining the extent of the consequences associated with such behaviours. Such knowledge, which was not previously available, may help Naval management in targeting resources for future intervention strategies.

As noted by Ames et al. (2002) workplace culture in the military can be a risk factor for excessive alcohol consumption. It would be foolhardy to expect any new recruits who may be drinking unhealthily (particularly when they are released from the strict regime of their basic training programme) to decrease their alcohol consumption without an appropriate intervention. Taylor et al. (2007) in a study of US Air force recruits pre-enlistment drinking postulated that if anything individuals' alcohol consumption is likely to increase after completion of basic training.

As mentioned by Wessely et al. (2007) drinking in the military seems to be a central component of unit cohesion and good morale. The difficult part for Naval management will be to strike a balance between encouraging social drinking and managing a non-alcohol enabling workplace. It is recognised that the focus of this research was on young recruits' drinking behaviours before enlistment in the Navy. It is also important to remember that the literature points (Ames et al., 2004) to empirical evidence that a culture of heavy drinking exists within international military organisations.

Nonetheless, within the context of the current recruitment procedure, Richmond et al. (1996) noted that a workplace based approach provided immediate access to youthful populations who may be otherwise difficult to reach, particularly young adult males. Such a population may be unaware of the risks associated with excessive alcohol consumption or may choose to ignore previous general public health announcements. This research piece has shown that a CBT approach to alcohol use disorders for new employees can act as a novel workplace intervention. A recruit class offers a target population who could be made available to address a problem that originated prior to individuals joining the Navy.

It should be noted that the study design featured participants who volunteered to partake in the experiment irrespective of their positioning on the alcohol use disorders continuum. AUDIT scores at baseline ranged from 2-25. A total of 30.8% of participants ( $n = 8$ ) had an AUDIT score of less than eight indicating a non-problematic drinking behaviour. At the other end of the alcohol use disorders continuum five participants had an AUDIT score of 20 or more. Such a score indicates the need for a more comprehensive alcohol dependence assessment (Molyneux et al. 2006). I felt obliged not to exclude the latter participants from my study. To do so would have highlighted those individuals as being particularly heavy drinkers to their Military Instructors. The consequence for participants being earmarked with such a tag could have had potential career implications for those involved. In making this decision I was conscious that reported AUDIT scores were based on pre-enlistment drinking behaviours. Equally I was also cognisant that in accordance with the Defence Force Alcohol Policy (2002) (subsequent to members of the military being assessed as alcohol dependent following screening) treatment for alcohol dependence is only offered to those who voluntarily seek it. However, ethically I was also conscious of imparting this information to participants at the experimental debriefing session. Here I explained to participants that an AUDIT score of twenty or more indicates signs of alcohol dependency and it is recommended that any individual with such a score should seek a full alcohol dependency assessment. I further informed participants of the importance of contacting either the Personnel Support Service or the Naval doctor if they wished to seek further help for their drinking. Also each participant was contacted individually and informed that the research findings were available for their perusal. All participants who came to view the thesis were afforded the opportunity to discuss the implications of their AUDIT scores in confidence. Future study designs will need to

decide how best to cope with potential participants who show signs of alcohol dependency within organisational settings.

As mentioned in the literature review (Hope, 2008; Mongan et al., 2007) there appears to be a high interest levels in Irish society at the moment concerning the issues of the consequences of inappropriate alcohol misuse by Irish people. Yet there is little if any research done previously in Ireland on effective interventions to address individuals with alcohol use disorder problems. In choosing a young study population I was aware that this grouping type generally reflects individuals who were also most likely to be excessive drinkers as well as being a population in all probability to be the most healthy and least likely to be in need of a lifestyle intervention (Niknian et al., 1991).

However, within this particular research I would argue that I met with very little resistance from participants. In fact there was a 100% completion rate by participants throughout the three assessment occasions. There were no natural class wastage (Anecdotally normally at least one recruit per class decides against a career in the Navy during training and subsequently leaves) or study dropouts. In a study with a similar type population, Richmond et al. (1999) postulated that high participation rates might mirror a strong organisational culture of compliance with a superior's directive. Nevertheless, it is posited that another possible explanation for not having any study dropouts as well as having promising intervention results might be found in an examination of the Customer Satisfaction Questionnaire. It is evident from the overall intervention evaluation that participants enjoyed undergoing the four-week programme. All participants evaluated the quality of instruction received at a minimum rating of good. Also all participants agreed

that this programme should be included on future Naval Recruit training syllabi and 92.3% ( $n=12$ ) would recommend the intervention to a fellow recruit.

This research piece is not devoid of limitations. First, obtaining data within a military setting from participants who were of the lowest Naval rank possible may have compounded the issue of validity. Participants repeatedly were assured of confidentiality and anonymity. However, despite these reassurances some participants may have been afraid to reveal their pre-enlistment alcohol consumption levels, alcohol expectancies or behaviours. Indeed participants may have been tempted to under report their alcohol consumption levels throughout the experiment because of the fear of potential career consequences. The implications of possible under reporting of alcohol consumption are that participants may have painted a false picture of what they actually consumed throughout the experiment. The literature points to divergent views on the accuracy of measuring alcohol consumption based solely on the use of self-report questionnaires. Wessely et al. (2007) suggests that the practice by both civilian and military samples of routinely underreporting alcohol use in self-report questionnaires was a common occurrence. In contrast, Del Boca and Noll (2000) found self-report alcohol use to be as accurate as or more accurate than other measures if collected carefully. An addition to the study in this area would have been to recruit an outside independent assessor to administer the measures used over the assessment occasions.

However, I implemented the following strategies in order to limit the effects of demand characteristics within this experimental military setting. I embedded AUDIT within a general health questionnaire. I further informed participants that this is a research

project where absolute frankness and honesty with their answers was requested. Also participants were asked not to try and please me with the answers they anticipated I would like to see. All participants were further assured that their completed questionnaires would not be placed on their personal Naval administration files. Also I intentionally choose a civilian co-facilitator as opposed to using one of my military colleagues from the Personal Support Service.

A second limitation is the issue of treatment fidelity. No audio or videotapes of the intervention sessions were recorded and hence it is impossible to determine if we as facilitators adhered to the treatment protocol. As a result there was no way of checking on the quality of the CBT sessions delivered and this may have limited the effect of the intervention. As facilitators we agreed that to video or audiotape our sessions with this particular population in light of the first mentioned limitation could possibly have restricted participants in being totally honest and therefore we decided against doing so. However, we both attended supervision on a weekly basis for the duration of the intervention programme.

Thirdly the present study contained only short-term follow-up data to determine change in alcohol consumption. Naval recruit training has a 16-week duration and subsequently naval recruits will be dispersed to their various branches and onwards to complete their initial sea rotation. It would not have made pragmatic sense to try and conduct a longer follow-up measure. Unfortunately as a result of only having a two-month post-treatment follow-up, it is difficult to examine and reach conclusions about the process of change.

Finally the outcome improvements might be explained by factors other than the intervention programme. Naval recruit training in essence is an intensive probationary period where participant's liberty to socialise and drink alcohol particularly during the week would have been restricted. All participants for the duration of their recruit training were required to reside in the Naval base. Participants may have been "street wise" in knowing that their class instructor would not have tolerated any participant returning to the Naval base after a typical night out drinking in a drunken state. It is reasonable to speculate that some participants as a result may have not engaged in their normal drinking behaviours for the duration of this experiment.

Despite these considerations it should be noted that this was a randomised controlled trial where the same environmental conditions applied to both treatment conditions over a short time period. There was a significant change by those in the treatment group in alcohol consumption and risky drinking behaviour over the duration of the experiment. The content analysis in the programme evaluation also supports the notion that the intervention was very well received where 84.6 % ( $n = 11$ ) of participants found the programme to be personally beneficial.

In conclusion, this small-randomised control trial offers preliminary data that a brief CBT programme showed positive affects on alcohol consumption reduction amongst new Naval recruits. It is important to note that this is the first ever study to have evaluated a workplace alcohol intervention within the Navy or for that matter any workplace in Ireland. This study implemented a CBT intervention that challenged unhealthy drinking behaviours amongst new employees. It is evident from the literature review that

work-related alcohol harms are under-researched and there is no one sole intervention to address this issue. As a result of the evidence presented by these research findings the treatment model used for the intervention will offer an essential foundation for the basis of any future alcohol intervention programmes. Among the interesting findings were that there was a significant decrease over the duration of the experiment by participants who completed the intervention in their binge and risky drinking behaviours. Participants overall seemed to have gained skills to refuse alcohol in high risk social settings as well as lowering their expectancies concerning the ability of alcohol to increase their confidence. An examination of the participants' evaluation of the intervention shows that the vast majority found the psycho education component to be personally relevant.

It is without doubt that the potential of this brief CBT model, as a means of secondary alcohol prevention in the workplace, should be actively investigated further. In addition, further work is needed on items such as extending the treatment programme to maybe six sessions before firm recommendation may be arrived at about the role of CBT in addressing unhealthy workplace drinking. Further research is also required to identify the need or frequency of booster sessions following the administration of brief interventions or counselling to targeted groups or individuals. From the perspective of the Naval Service future research is also required to strengthen Defence Force policies by incorporating primary and secondary prevention strategies.

The quantity of alcohol being consumed particularly amongst young people in Ireland has dramatically increased in recent decades and is now a serious social issue (Hope, 2008). This thesis indicates that there are now a sizeable amount of recruits



entering the Navy whose drinking is a cause for concern. Such pre-enlistment drinking behaviours may have future organisational implications.

As noted in the literature review (Taylor et al., 2007; Wessely et al., 2007; Ames et al., 2002) a culture of heavy drinking exists within military organisations and it may be naive to consider the Irish Navy does not in part reflect that culture. I would endorse a multidisciplinary response by relevant stakeholders within the Naval Service to address this problem. A Naval recruit class represents an accessible population that is engaged in the education process. Consideration needs to be given to screening with appropriate interventions for alcohol use disorders for new entrants at the commencement of their Naval careers. Early intervention (in particular for new entrants irrespective of rank) appears to be a valid occupational health approach. This study also suggests that AUDIT or AUDIT-3 is feasible, accurate and easy to administer screening instrument. Screening has potential positive benefits for the Navy due to its cost effectiveness as screening negates the need for more intensive, specialised treatment at a later time (Mongan et al., 2007).

Notwithstanding the limitation of this research, this pilot study, which has a real world value, contributes to the understanding of the prevailing drinking culture amongst young Irish people now entering the workforce in Ireland. This thesis also highlights the potential of CBT as a secondary workplace intervention approach for new employees with existing unhealthily drinking behaviours.

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Appendix A

**Demographic Screening Questionnaire**

ID NUMBER: \_\_\_\_\_: Date: \_\_ / \_\_ /200 \_\_\_\_\_

Gender: M/F  
Male 1.   
Female 2

Age: \_\_\_\_\_: Date of Birth: \_\_ \_\_ / \_\_ \_\_ /19 \_\_

Place of Birth: \_\_\_\_\_

Mobile Phone Number: \_\_\_\_\_

Current email address: (if you have one). Please print below.

\_\_\_\_\_

The following contain questions relating to your hobbies, smoking, drinking and exercising behaviours. Again to reassure you, the answers you provide will remain completely confidential so please be honest. Place an X in one box that best describes your answer to each question.

1. How often do you have a drink containing alcohol last 12 months?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week
2. How many standard drinks containing alcohol do you have on a typical day when you are drinking?  
1 or 2  3 or 4  5 or 6  7 to 9  10 or more
3. How often do you have 6 or more standard drinks on one occasion?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week
4. How often during the last year have you found that your were not able to stop drinking once you had started?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week

5. How often during the last year have you failed to do what was normally expected from you because of your drinking?  
 Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
6. 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  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
7. How often during the last year have you had a feeling of guilt or remorse after drinking?  
 Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?  
 Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
9. Have you or someone else been injured as a result of drinking?  
 No  Yes, but not in the last year  Yes during the last year
10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?  
 No  Yes, but not in the last year  Yes during the last year
11. How often have you smoked a cigarette in the last 12 months?  
 Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
12. How often have you engaged in physical exercise (going to gym, brisk walking, jogging, etc) in the last year?  
 Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
 Less a month a week times a week
13. What is the highest educational qualification you have obtained?  
 No formal educational qualification.  Junior Cert (or equivalent) or  Leaving Cert (or equivalent) or  Third Level.
14. How would you describe your normal weekly diet in the last 12 months?  
 Very healthy or  Healthy or  Unhealthy or  Very unhealthy
15. Have you participated in a team sport in the last 12 months?  
 No  Yes, but not in the last year  Yes during the last year

16. Has any member of your immediate family (to include grandparents) ever been treated for alcoholism?

No  Yes

17. Have you been actively involved/participated in a hobby or pastime in the last 12 months?

No  Yes

If yes please describe \_\_\_\_\_

18. Did you understand all the questions?

No  Yes

Appendix B

**ALCOHOL USE DISORDER IDENTIFICATION TEST (AUDIT)**

Because excessive alcohol use can affect your health, it is important we ask some questions about your own use of alcohol. Your answers will remain confidential so please be honest. Place an X in one box that best describes your answer to each question.

1. How often do you have a drink containing alcohol?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less Less a month a week times a week
  
2. How many standard drinks containing alcohol do you have on a typical day when you are drinking?  
1 or 2  3 or 4  5 or 6  7 to 9  10 or more
  
3. How often do you have 6 or more standard drinks on one occasion?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less Less a month a week times a week
  
4. How often during the last year have you found that your were not able to stop drinking once you had started?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less Less a month a week times a week
  
5. How often during the last year have you failed to do what was normally expected from you because of your drinking?  
Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less Less a month a week times a week

6. 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  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week
7. How often during the last year have you had a feeling of guilt or remorse after drinking?
- Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
- Never  Monthly or  2 to 4 times  2 to 3 times  4 or more   
Less a month a week times a week
9. Have you or someone else been injured as a result of drinking?
- No  Yes, but not in the last year  Yes during the last year
10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?
- No  Yes, but not in the last year  Yes during the last year

Appendix C

Readiness to Change Ruler

ID Number: \_\_\_\_\_

Using the ruler shown below, please indicate

**How important is it for you to change your drinking?**

If you were *not at all* ready to make a change, you would circle the 1

If you are already trying hard to make a change, you would  
Circle the 10.

If you are unsure whether you want to make a  
Change, you would circle 4, 5, or 6.

**Not Ready** | **Ready** | **Trying to change**  
**Unsure to change**

**1 2 3 | 4 5 6 7 8 | 9 10**

Appendix D

DEP Part 1

**DRINKING EXPECTANCY QUESTIONNAIRE REVISED:**

ID NUMBER# \_\_\_\_\_

Directions: This questionnaire is in two parts. Part I contains 37 statements describing the effects that drinking alcohol may have on you. The purpose of this questionnaire is to find out about your thoughts, feelings and beliefs about drinking. There are no right or wrong answers.

Please circle the number beside each statement which best describes how strongly you agree or disagree with that statement, using the following key.

**KEY:**

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

Remember to respond to each statement as it applies to you. Do not spend too much time on each item and try to answer them all. When you have completed Part I please go on to Part II. All your answers will be confidential so please try to answer as honestly as you can. To ensure confidentiality please do not place your name on this booklet.

**KEY:**

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

RESPOND TO THESE ITEMS ACCORDING TO YOUR BELIEFS ABOUT DRINKING

2.*	I do not drink alcohol to help me unwind after a hard day or week's work	1	2	3	4	5
3.	Little things annoy me less when I'm drinking	1	2	3	4	5
4.	Drinking makes me feel outgoing and friendly	1	2	3	4	5
5.	Drinking alcohol makes me tense	1	2	3	4	5
6.	I have more self-confidence when drinking	1	2	3	4	5
8.	Drinking makes me more sexually responsive	1	2	3	4	5
9.*	When I am anxious or tense I do not feel a need for alcohol	1	2	3	4	5
10.	Drinking makes the future brighter	1	2	3	4	5
11.	I drink alcohol because it's a habit	1	2	3	4	5
12.	Drinking makes me bad tempered	1	2	3	4	5

13.	I am more aware of what I say and do if I'm drinking alcohol	1	2	3	4	5
14.	I feel that drinking hinders me in getting along with other people	1	2	3	4	5

<u>KEY:</u>						
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
	1	2	3	4	5	
15.	I feel restless when drinking alcohol	1	2	3	4	5
16.	I am more sullen and depressed when I'm drinking alcohol	1	2	3	4	5
18.	I cannot always control my drinking	1	2	3	4	5
19.	I am less concerned about my actions when I'm drinking	1	2	3	4	5
20.	If I'm drinking it's easier to express my feelings	1	2	3	4	5
22.	I often feel sexier after I've been drinking	1	2	3	4	5
23.*	Drinking does not help to relieve any tension I feel about recent concerns and interests	1	2	3	4	5
24.	Drinking increases my aggressiveness	1	2	3	4	5
25.	Drinking makes me feel like a failure	1	2	3	4	5
26.	Drinking helps me to be more mentally alert	1	2	3	4	5
27*.	Drinking alcohol removes most thoughts of sex from my mind	1	2	3	4	5
28.	I tend to adopt a "who cares" attitude when drinking	1	2	3	4	5
30.	I am addicted to alcohol	1	2	3	4	5
31.	Drinking brings out the worst in me	1	2	3	4	5
32.	I feel less shy when drinking	1	2	3	4	5
33.	Drinking makes me feel more violent	1	2	3	4	5
34.	I am less discreet if I drink alcohol	1	2	3	4	5
35.	When I am drinking it's easier to open up and express my feelings	1	2	3	4	5
36.	I am powerless in the face of alcohol	1	2	3	4	5
37.	When I'm drinking I avoid people or situations for fear of embarrassment	1	2	3	4	5



38.	Drinking alcohol sharpens my mind	1	2	3	4	5
39.	I feel disappointed in myself when drinking	1	2	3	4	5
41.*	I tend to avoid sex if I've been drinking	1	2	3	4	5
42.*	I lose most feelings of sexual interest after I've been drinking	1	2	3	4	5
43.	I am clumsier when drinking alcohol	1	2	3	4	5

Appendix E

**DRINKING EXPECTANCY PROFILE  
PART II**

**DRINKING REFUSAL SELF-EFFICACY QUESTIONNAIRE REVISED**

ID: \_\_\_\_\_

The following items ask you to describe your ability to handle drinking situations. Your answers will be completely confidential, so please try to answer as honestly as you can.

The following page contains a list of situations in which people may find themselves drinking alcohol. Most people find it easier to resist drinking in some of these situations than others. Please circle the number beside each statement, which best describes how much you could resist drinking in each case.

1	2	3	4	5	6
I am very sure I Would drink	I most likely Would Drink	I probably Would drink	I probably would NOT drink	I most Likely Would NOT drink	I am very Sure I Would NOT drink

Example:

HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL?

When your spouse or best friend is drinking. .... 1 2 3 4 5 6

If you think that you would most likely would drink, then circle the number 2, or the number (1 through 6) of the best answer for you.

1	2	3	4	5	6
I am very sure I Would drink	I almost likely Would Drink	I probably Would drink	I probably would NOT drink	I most Likely Would NOT drink	I am very Sure I Would NOT drink

**HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL?**

- 1. When you are out at dinner. 1 2 3 4 5 6
- 3. When you are watching TV. 1 2 3 4 5 6
- 6. When you are angry. 1 2 3 4 5 6
- 8. When someone offers you a drink. 1 2 3 4 5 6
- 13. When you are at lunch. 1 2 3 4 5 6
- 17. When you feel frustrated. 1 2 3 4 5 6
- 19. When you are worried. 1 2 3 4 5 6
- 20. When you feel upset. 1 2 3 4 5 6
- 21. When you feel down. 1 2 3 4 5 6
- 22. When you feel nervous. 1 2 3 4 5 6
- 23. When you are on the way from work. 1 2 3 4 5 6
- 24. When you feel sad. 1 2 3 4 5 6

**HOW SURE ARE YOU THAT YOU COULD RESIST DRINKING ALCOHOL?**

- 25. When you spouse or partner is drinking. 1 2 3 4 5 6
- 26. When you are listening to music or reading. 1 2 3 4 5 6
- 27. When your friends are drinking. 1 2 3 4 5 6
- 28. When you are by yourself. 1 2 3 4 5 6
- 29. When you are just finished playing a sport. 1 2 3 4 5 6

30. When you are at a pub or club. 1 2 3 4 5 6

31. When you first arrive home. 1 2 3 4 5 6

## Appendix F

### Customer Satisfaction Questionnaire

We would be obliged if you could help us improve our programme by answering some questions about the course you participated in. We welcome an honest opinion, whether it is positive or negative. Please answer all of the questions. Any comments and suggestions about the programme would also be appreciated. This questionnaire will be anonymous. Thank you very much for your participation.

PLEASE CIRCLE YOUR ANSWER

1. In your opinion how would you rate the quality of facilitation in the programme you received.

4	3	2	1
<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>

2. Has this programme personally been beneficial for you?

4	3	2	1
<i>No, definitively not</i>	<i>No, not really</i>	<i>Yes, generally</i>	<i>Yes, definitively</i>

3. If a friend or fellow recruit enquired about the programme, would you recommend our programme to him or her?

4	3	2	1
<i>No, definitively not</i>	<i>No, not really</i>	<i>Yes, generally</i>	<i>Yes, definitively</i>

4. In an overall, general sense, how satisfied were you with the 4-week programme you received?

4	3	2	1
<i>Very satisfied</i>	<i>Mostly satisfied</i>	<i>Indifferent or mildly dissatisfied</i>	<i>Quite dissatisfied</i>

5. Has the programme helped you to be able to assert yourself in “high risk drinking” situations where previously you would have felt pressurised to stay drinking?

4	3	2	1
<i>No, definitively not</i>	<i>No, not really</i>	<i>Yes, generally</i>	<i>Yes, definitively</i>



## Declaration of Informed Consent

**ID Number** \_\_\_\_\_

I give informed consent to participate in this study of the impact of Cognitive Behaviour Therapy on alcohol consumption. I understand that although a record will be kept (**by the researcher only**) of my having participated in the experiment; a number will identify any experimental data collected from my participation. I have been informed of the following information contained below.

1. My participation in this study may involve joining a group for four weeks, on a one and a half-hour weekly basis. I also understand that I may be part of a group who will not receive any intervention. However I will be offered the four-week intervention at the end of the research period. Irrespective of what group I am in I understand that I will be requested to fill out a number of brief questionnaires concerning alcohol at a number of intervals over the next six months.
2. There are no known risks or “disguised” procedures in this study.
3. If I have any concerns about my personal relationship with alcohol during the experiment, I can contact the Personnel Support Service (PSS) in the Naval Base @ 0214864922.

4. I am free to withdraw from the study at any time, without giving any reason or having negative consequences or career implications of any kind now or in the future while I am a member of the Irish Naval Service.

Concerns about any aspects of this study may be referred to Paul Mc Carthy Mobile 0872373322.

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**(Facilitator)**

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**(Participant)**

Date: \_\_\_\_\_

**Thank you for agreeing to participate in the study**



## Appendix H

### Intervention Manual

#### Session 1: Psycho education

**Aim 1:** For participants to know the number of standard drinks considered “low-risk” levels of drinking for adults of their gender.

**Aim 2:** For participants to know how to calculate what is a standard drink, as well as what is meant by “binge drinking.”

Commence the group with the following icebreaking exercise.

#### **Celebrity “Colourful Relationship” with Alcohol Charades:**

Divide the group into two and ask them to play charades from a list below of famous people past and present whom have/had a “colourful relationship” with alcohol. Refer to the list of names below:

Paul Mc Grath (Footballer)

Shane Mc Gowan (Singer)

Pete Doherty (Singer)

Lindsay Loochan (Actress)

Ami Whinehouse (Singer)

George Best (Footballer)

- Commence the group by showing the “Alcohol Education” Power Point presentation. At each slide attempt to create, a discussion by exploring with participants questions such as “What is a low risk level of drinking and when does it becomes harmful. Do this by asking an open-ended question, such as, “When you are at a party, in the pub, or with friends, how do you drink?”

## **Binge Drinking Behaviours**

- Discuss the following with the participants.
  - \* Ask the group “What is binge drinking?”
  - \* “How many standard drinks is considered to be the minimum in a binge?”
  - \* “Are there gender differences in the quantities of alcohol consumed when engaging in binge drinking behaviours?”
- When the PowerPoint presentation is complete, discuss why the group have their particular beliefs around alcohol. Again, ask open-ended questions about drinking practices with their friends and family members. Use reflective listening to elaborate and amplify these practices and then ask them “How does their own drinking fit into these practices?”

- Distribute empty alcohol cans, beer bottles, etc around to the group members; direct them to calculate the number of standard drinks on the container. This is a useful exercise in measuring standard drinks from container to container.

As a homework assignment ask participants to give three examples of how their drinking could affect them in the following areas

- \*Socially (affect on friendships, etc)
- \* Physiologically (affects on their bodies)
- \* Psychologically (emotional affects)

## **Session 2**

**Aim 1:** For participants to know the basic model of Cognitive Behavioural Therapy (CBT)

**Aim 2:** For the participants to become aware of the various ways their drinking affects them.

*Begin this group session by reviewing standard drinks. Ask the group what are the recommended low risk levels of drinking for males and females. Explore this by asking an open-ended question such as “Does anyone remember from our last meeting what the low risk level of drinking is for their gender?”*

Introduce the basic model of CBT and demonstrate how within our environment our thoughts feelings behaviours and physiology are all interdependent.

Then introduce the Effects of Alcohol.

## Effects of Alcohol

1. Ask the members to break up into three smaller groups. Using their notebooks and pens allocate one of the three categories below to each group. Direct the group to brainstorm and list their (or other's experiences) of the effects of alcohol on their allocated category. After 10 minutes, re-group and review each list together. At the end of each category list, add other affects not reported and that are appropriate for that group. Ask the group as a whole how relevant are these effects to them? Explore the short-term affects further with the view of developing discrepancy about current drinking behaviours and any undesired effects.

\* Socially (affect on friendships, etc)

\* Physiologically (affects on their bodies)

\* Psychologically (emotional affects)

Do this by asking open-ended questions about each category. For example, with the Social category, ask questions such as "How has alcohol affected your friendship?" "Have your friends made comments about your behaviour when drinking? What comments have they made?"

## Signs of Dependence

Once the discussion on the effects of alcohol has finished, ask group members “How would they know if they or someone else has become dependent upon alcohol?” “What signs or behaviours would they look for?” Write their responses on the white board or butcher’s paper. Next to this list, write up the signs of dependence as defined by the **Diagnostic and Statistical Manual of Mental Disorders [DSM-IV-TR], (2000)**. Then make connections between their list and the official criteria. Draw arrows linking same ideas of tolerance, withdrawal (etc) to draw on (and affirm) group member’s knowledge. Take the opportunity to dispel any myths around dependence (some people may not connect tolerance with dependence).

Three or more of the following manifestations should have occurred together for at least 1 month or, if persisting for periods of less than 1 month, should have occurred together repeatedly within a 12 month period according to the DSM IV-TR criteria:

1. Tolerance (which is the need for more alcohol to be consumed in order for the person to gain the same effects they use to have).
2. Time spent thinking about alcohol/drinking.
3. Withdrawal (shakes nausea, headaches, vomiting, anxiety, crankiness, and fits)
4. Drinking more or over a longer period of time.
5. Unsuccessful attempts to stop.
6. Social, work/school, or other activities are given up for drinking.

7. Continue same drinking pattern despite knowledge of having a physical or psychological problem resulting from drinking.

- Explain the above seven points to the group and ask them to think how this is for them (or someone that they know).
- Distribute DSM IV-TR Criteria for Alcohol Dependence, and Effects of Alcohol Handout
- Collaborate to design homework assignment for next session

## **EFFECTS OF ALCOHOL HANDOUT**

### **Social and Behavioural Effects**

- Not attending work/school
- Unemployment
- Money problems
- Problems with the law - including violence, vandalism, and traffic offences (e.g., car accidents and DUI)
- Acts of violence and crime towards others or towards you
- Life revolves around drinking
- Child abuse
- Relationship problems
- Fighting with family, friends, or others
- Withdrawal from activities once participated in (e.g., sport, social occasions, etc)

- Risky sexual behaviours, such as having sex when you don't want to, or not using condoms.

## **Physical Effects**

### **Short-Term**

- Nausea and vomiting
- Headache
- Hangover
- Bad coordination, clumsy
- Blurred vision
- Pass out
- Shakiness
- Burping
- Stop breathing
- Coma

### **Long-Term**

- Poor diet
- Frequent infections
- Heart and blood problems
- Stomach problems (including problems digesting food, peptic ulcers, and cancer)
- Damage to reproductive organs
- Liver problems, such as scarring of the liver and cancer

- Nerve problems
- Dementia
- Gout
- Breathing problems
- Skin problems (acne and spider veins)

### **Psychological/Emotional Effects**

#### Immediate Effects

- Feeling very happy and excited
- Feel relaxed
- Weird behaviour
- Do or say things that you would not ordinarily do
- Slurred speech
- Loud voice
- Irritable and cranky (get angry)
- Feeling tired
- Feel dizzy
- Antisocial behaviour (such as arguing, fighting with other people, or destroying property)
- Impulsive behaviour (do things without thinking about the consequences)

#### **Other Effects**

- Depression
- Thoughts of suicide or attempts
- Anxiety
- Jealousy (and beliefs about partner being unfaithful)



- Feelings of guilt and shame
- Paranoid or very sensitive
- Destructive behaviour
- Periods of memory loss
- Devious or manipulative behaviour
- Alcoholic blackouts (memory loss while intoxicated, usually in heavy drinkers)
- Vitamin deficiencies (particularly thiamine deficiency) that can lead to Korsakoff's Syndrome
- Head injury
- Alcoholic hallucinosis (withdrawal)

### **SESSION 3**

#### **Alcohol Expectancies.**

**Aim 1:** For participants to become aware of their positives and negatives expectancies towards their own alcohol consumption.

**Aim 2:** For participants to be aware of their drinking pattern and ways they can change it by cognitive challenges.

**Aim 3:** For participants to be aware that in relation to drinking, that they do have a choice.

*Begin the group session by briefly reviewing the signs of dependence on alcohol and some of the effects of alcohol use. Do this by encouraging group members to volunteer the signs of dependence covered in the previous session, by asking an open-ended question.*

## 1. Positives and Negatives Expectancies around Drinking

Introduce what Alcohol Expectancies are and then break the group into two groups. As a group encourage the members to discuss and explore both their own Positive and Negative Expectancies. Whilst implementing this strategy, you will need to ask the following questions about drinking. Explore the good things and less good things about drinking with participants without expressing any disapproval or judgment. Write all group members responses on the white board or flip chart, in table format. That is, with a line down the middle of the page separating the Positive Expectancies and Negative Expectancies responses.

- “What are the good things (Positive Expectancies) about drinking, why do you like it?” (e.g., think that it is cool, to be part of a group, makes the future look brighter, I have more self-confidence when drinking, its easier to express my feelings and open up, I feel more attractive, I adopt a who cares attitude and am less concerned about my actions, It helps me unwind, It helps me to be more mentally alert, I tend to be more sexually active, etc). Explore the good things further by asking “What else is good about drinking alcohol for you?”
- “What are the less good things (Negative Expectancies) about drinking?” (e.g., I become tense, Its just a habit, I become bad tempered and it prevents me from getting along with people, I can not always control what I drink, drinking brings out the worst in me, I feel disappointed in myself after drinking, when I am drinking I avoid other people because of fear and embarrassment). Explore this further by asking, “Is there anything else?”

- Once you have the list on the board, summarise the good things versus the less good things using a double-sided reflection. “On the one hand the good things about drinking is to have fun, relax (etc) while on the other hand you have become tense, bad tempered, and feel disappointed in yourself (etc).” Follow (if appropriate) with an open-ended cognitive challenge, such as “What do you make of this?” or “where does that leave you.”

Other additional questions that may help to develop discrepancy with current drinking behaviours include:

- “What tells you when you have had too much alcohol - what are your signs?”
- Ask the participants what tells them that they may have a problem with alcohol?
- “What are the dangers in drinking too much?”

Proceed to explain the concept of choice by outlining to the group that there are questions in life where there are no set answers and that this includes work, relationships, and alcohol. Ask the group what the word ‘choice’ means to them. Discuss what choice means. Ask them if they have a choice in the following scenarios:

- Do you have a choice about being born and where you were born;
- Do you have a choice in who your parents and grand parents are;
- Do you have a choice in who your friends are; and
- Do you have a choice about drinking alcohol?

With the last question, ask them to discuss situations in which alcohol is included. Explore with them (using open-ended questions and reflective listening) this situation further to establish their decision making process to the point where they feel that they don’t have a

choice about drinking. It is also important at this time to explore when people did not want to drink and they chose to what led them to this decision. Useful questions may include:

- “What would decide for you if you were going to drink alcohol?” (Or “What would decide for you where going or not going to do something?”)
- “How would you know when alcohol would affect you?”
- “How do you experience pressure in your life?”
- “How do you respond to that influence?”
- “What risks would I take for that?”
- “What is it about alcohol that can make it dangerous?” “How come?”
- “At your age, what are you responsible for?”

If time, briefly discuss how they experience influence on their drinking and how they respond to it.

Collaborate to devise homework assignment for next session.

## **SESSION 4**

### **Drink Refusal Skills.**

**Aim 1:** For participants to be aware of the difference between aggressive, assertive and submissive behaviour

**Aim 2:** For participants to have more confidence in refusing alcohol offered to them, (when they chose not too drink).

**Aim 3:** For participants to be aware of some of the ways they can refuse alcohol.

**Aim 4:** For participants to complete Client Satisfaction Questionnaire

*Begin the group session by briefly reviewing what alcohol expectancies are. Do this by encouraging group members to volunteer various examples of their own positive and negative alcohol expectancies. Also, review the Homework Task from the previous week.*

1. Introduce the group to a brief power point presentation on Assertiveness. Use each slide to generate a discussion on how participants view their own aggressive, assertive and submissive behaviour

**2. Drink refusal skills** (Monti et al., 1989)

Ask the group to identify what are the “high risk” drinking situations they have found themselves in. Elicit ideas from group members on how to refuse a drink. Ask them to think of a situation in which they were offered alcohol and how they could decline the offer. Whilst exploring this, ensure that the following points are covered.

1. Look the person in the eye.
2. Firm voice (not shy, aggressive, or hesitating).
3. Say NO.
4. Ask the person to stop asking you to have a drink.
5. Suggest a non-alcohol drink.
6. Rehearse refusal statements that were thought of (previously prepared) before the party, etc.

Direct group members to pair up and role-play their refusal plans, with one person pushing alcohol and the other refusing. After 5 minutes, ask them to switch roles.

Re-group group members and in the remaining time discuss what worked and what did not (and why - time permitting).

Distribute Client Satisfaction Questionnaire and if time ascertain some verbal feedback from participants on their experience of the intervention.

After this discussion, distribute Handouts on Setting Limits on Drinking and How to say NO to a Drink.

## ***Setting Limits on Drinking Handout***

The following tips may be of benefit for you

1. Set a limit on the number of alcoholic drinks before going to party, pub etc. 1 drink every hour (pacing); bring only set amount of money. Start with non-alcoholic drink as your first drink
2. Don't gulp - smaller sips and slowly.
3. Don't refill glass until it is empty. Leave glass down (out of your hand) in between drinks
4. Alternate drinks, e.g., coke/lemonade etc.
5. Count drinks.
6. Drink low alcohol beverages.
7. Dilute drinks (e.g. coke with spirits, juice and wine).
8. Don't drink alcohol to quench thirst.
9. Have smaller drinks.
10. Don't drink your favorite drink all the time.

11. Say NO.
12. Delay drinking by  $\frac{1}{2}$  to 1 hour (Make your first drink non alcoholic)
13. Drink only on a full stomach.

*Quick Thought: How is this different from the way you drink? What would get in the way of changing y our drinking behaviours?*



## HOW TO SAY NO to a DRINK HANDOUT

1. Look the person in the eye.
2. Firm voice (not shy, aggressive, or hesitating).
3. Say NO.
4. Ask the person to stop asking you to have a drink.
5. Suggest a non-alcohol drink.
6. Rehearse refusal statements that were thought of before the party, etc.

Some other suggestions that may be helpful if other people will not take no for an answer:

- Ignore the request/comment and talk to someone else.
- Reply, you may be right? That's your opinion.

Appendix I:  
**Experimental Debriefing Form**

The purpose of this study was to further our understanding about Cognitive Behaviour Therapy (CBT) and alcohol consumption. The hypothesis tested by the experiment was that the group exposed to CBT would lower their attitudes and alcohol consumption by having developed skills, such as assertiveness training, and Drink Refusal Skills Training.

Two groups participated in this experiment. Both groups were randomly assigned after filling a number of baseline questionnaires. One group was assigned to undergo a four-week course of CBT; the remaining group did not undergo any intervention for the duration of the experiment. The purpose of using the two groups is to see if CBT is an effective intervention for reducing alcohol consumption, and beliefs around alcohol expectancies and abilities to refuse alcohol in individuals identified as unhealthy drinkers.

Alcohol consumption levels were measured before the CBT course started, at the end of the four- weeks course and at the one and three-month follow up. It is expected that the CBT group will reduce their alcohol consumption levels and alter their beliefs around alcohol.

All participants in both groups were offered alternative interventions at the end of the experiment. If you have any questions, please feel free to ask them of the facilitators. If you would like a summary of the results when the research is completed please leave your name and email address with the experimenters named below.

Thank you for participating.

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**PAUL MC CARTHY BA, DIP. ADDICTION**

(Facilitator)

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**MAIREAD PHELAN MSW**

**(Facilitator)**

## Appendix J

### Glossary of Terms

*Alcohol dependence* can be said to exist in a person experiencing three or more of the following in a 12-month period:

- Strong desire or sense of compulsion to take the substance
- Impaired capacity to control substance-taking behaviour in terms of onset, termination, or levels of use
- Physiological withdrawal state when substance use is reduced or stopped, or use of the substance to relieve or avoid withdrawal symptoms
- Evidence of tolerance to the effects of the substance
- Other pleasures or interests being given up or reduced because of the substance use
- Persistent substance use despite clear evidence of harmful consequences

*Binge drinking* can be difficult to define but, in simple terms, it can be described as drinking a large quantity of alcohol in a short period of time, usually with the specific aim of getting drunk. In Ireland, the Strategic Task Force on Alcohol (2004) defined binge drinking as consuming six or more drinks per drinking occasion.

*Brief alcohol intervention* is a relatively new concept and includes a number of different approaches that aim to support drinkers in reducing consumption. The duration is often 5–20 minutes.

*Harmful drinking* can be described as a pattern of use that is already causing damage to health. This damage may be physical or mental.

*Moderate drinking* may be defined as drinking that does not cause harm to the drinker or to society. Drinking in moderation is defined as having no more than two drinks per day for men and no more than one drink per day for women.

*Primary prevention* of alcohol problems is measures to prevent drinking at all or above recommended levels in order to prevent the negative effects of alcohol, for example giving information to young people in schools and increasing taxes on alcohol.

*Risky drinking* is defined by the WHO as a pattern of alcohol use that increases the risk of harmful consequences for the user. The term describes drinking over the recommended limits by a person with no apparent alcohol-related health problems.

*Screening* is a test method to rapidly identify a medical condition or risk factor. The method can be biological, technical or questions. The goal in alcohol screening is detection of risky drinking as early as possible in order to address the problem.

*Secondary prevention* of alcohol problems is measures to support risky drinkers to reduce drinking to a level below risky drinking. Secondary prevention mostly includes screening.

*Sensible drinking* is drinking below recommended risk levels.

A *standard drink* in Ireland contains 10 grams of pure alcohol. This corresponds to a half pint of beer or a single measure of spirits or a small glass of wine (100ml). The amount of pure alcohol in a standard drink differs between countries; for example, in the USA a standard drink contains 12 grams of alcohol, while in the UK a standard drink contains just 8 grams of alcohol.

The recommended *weekly limits* for alcohol are 21 standard drinks for men and 14 standard drinks for women, and this is a general guide for low-risk drinking. These drinks should be spread out over the course of the week, with at least 2–3 alcohol-free days.

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