A Study of Cognitive Behavioral Therapy (CBT) Practices for Addiction

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Abstract

The prevalence of unhealthy drinking at all levels in Indian 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 rural and urban people who may have pre-existing alcohol use disorder issues. This pilot study aimed to evaluate the effectiveness within the workplace of a brief Cognitive Behavioral Therapy (CBT) intervention in reducing participants binge and risky drinking behaviors. One hundred volunteered to participate in this randomized 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 (SMAST & AUDIT) was used to measures 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 India (Rajasthan) 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 patient in reducing their risky drinking behavior.

Keywords: *Alcohol; Cognitive Behavioral Therapy; Risky Drinking; Binge Drinking; Workplace Alcohol Intervention.*

1. INTRODUCTION

Addiction is the most discussed and most talked about problem in modern times. With the changing world dynamics and fast-growing economies, the health outcomes are particularly negative. Addiction is a complex condition, a brain disease that is manifested by compulsive substance use despite harmful consequence. People with addiction (severe substance use disorder) have an intense focus on using a certain substance(s), such as alcohol or drugs, to the point that it takes over their life. They keep using alcohol or a drug even when they know it will cause problems. Yet a number of effective treatments are available and people can recover from addiction and lead normal, productive lives. People with a substance use disorder have distorted thinking, behavior and body functions. Changes in the brain's wiring are what cause people to have intense cravings for the drug and make it hard to stop using the drug. Brain imaging studies show changes in the areas of the brain that relate to judgment, decision making, learning, memory and behavior control. Approximately 10% of any population is addicted to drugs or alcohol. **Addiction is more common than diabetes**, which occurs in approximately 7% of the population. Addiction crosses all socio-economic boundaries. 10% of teachers, 10% of plumbers, and 10% of CEOs have an addiction. People with a substance use disorder have distorted thinking, behavior and body functions. Changes in the brain's wiring are what cause people to have intense cravings for the drug and make it hard to stop using the drug. Brain imaging studies show changes in the areas of the brain that relate to judgment, decision making, learning, memory and behavior control.These substances can cause harmful changes in how the brain functions. These changes can last long after the immediate effects

of the drug — the intoxication. Intoxication is the intense pleasure, calm, increased senses or a high caused by the drug. Intoxication symptoms are different for each substance. Alcoholism treatment experts are seeing some type of trauma in virtually every patient that they treat. There are many forms of trauma, but they all painful events where the victim didn't have an empathetic witness. For many, treating unresolved trauma is the key to their recovery.

The addiction may cause health problems as well as problems at work and with family members and friends. The misuse of drugs and alcohol is the leading cause of preventable illnesses and premature death.

<u>Symptoms of substance use disorder are grouped into four categories:</u>

- o **Impaired control**: a craving or strong urge to use the substance; desire or failed attempts to cut down or control substance use
- o **Social problems**: substance use causes failure to complete major tasks at work, school or home; social, work or leisure activities are given up or cut back because of substance use
- o **Risky use**: substance is used in risky settings; continued use despite known problems
- o **Drug effects**: tolerance (need for larger amounts to get the same effect); withdrawal symptoms (different for each substance)

The terms alcohol addiction, alcoholism, and dependence are all equivalent. Different terms have been used over time in an attempt to overcome the stigma of addiction.CBT is based on the concept that your thoughts, feelings, physical sensations and actions are interconnected, and that negative thoughts and feelings can trap you in a vicious cycle. Cognitive behavioral therapy aims to change our thought patterns, our conscious and unconscious beliefs, our attitudes, and, ultimately, our behavior, in order to help us face difficulties and achieve our goals. Psychiatrist Aaron Beck was the first to practice cognitive behavioral therapy. "This simple idea is that our unique patterns of thinking, feeling, and behaving are significant factors in our experiences, both good and bad. Since these patterns have such a significant impact on our experiences, it follows that altering these patterns can change our experiences" (Martin, 2016).

Behaviorism was formally established with the 1913 publication of John B. Watson's classic paper, "Psychology as the Behaviorist Views It." It is best summed up by the following quote from Watson, who is often considered the "father" of behaviorism:"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors."Simply put, strict behaviorists believe that all behaviors are the result of experience. Any person, regardless of his or her background, can be trained to act in a particular manner given the right conditioning.

McHugh, Hearon, and Otto's (2010) meta-analysis review of the efficacy of CBT interventions used to treat drug abuse and dependence also found that CBT-based programming resulted in longer periods of sobriety and sustained remission over time when compared to treatment as usual (TAU). A meta-analysis of randomized controlled trials conducted by Magill and Ray (2009), revealed that most CBT-based programs focus on recognizing triggers that precipitate drug use or cravings to use, teaching coping skills that one can employ in place of relapse, drug and alcohol refusal skills training, comprehensive assessment of one's substance use and functional impairment, and expanding non-use related activities and social support networks. Additionally, CBT techniques have been tested in Stage III research and have shown promising results for their utility, efficacy, and sustainability using a "real world" framework

2. COGNITIVE DISTORTIONS

Many of the most popular and effective cognitive behavioral therapy techniques are applied to what psychologists call "**cognitive distortions**," inaccurate thoughts that reinforce negative thought patterns or emotions (Grohol, 2016). There are 15 main cognitive distortions that can plague even the most balanced thinkers.

1. Filtering
2. Polarized Thinking / Black-and-White Thinking
3. Overgeneralization
4. Jumping to Conclusions

5. Catastrophizing / Magnifying or Minimizing
6. Personalization
7. Control Fallacies
8. Fallacy of Fairness
9. Blaming
10. "Should"
11. Emotional Reasoning
12. Fallacy of Change
13. Global Labeling / Mislabeling
14. Always Being Right
15. Heaven's Reward Fallacy

3. METHOD

The aim of this study will be to evaluate the effectiveness of a brief CBT alcohol intervention in reducing risky and binge drinking behaviors for younger's. This study will test the hypothesizes that compared to those participants assigned to the control group; participants in the treatment group who completed the CBT intervention program me would at the follow-up screening assessment:

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

(ii)   Demonstrate an increase in their mean readiness to change their drinking behavior

(iii) Decrease their mean expectancies around alcohol

(iv)   Increase their mean ability to refuse alcohol in high-risk social situations

Participants

Sixty new entrants from a class intake of 128 volunteered to participate in this experiment two weeks after enlistment at the rehabilitation center. The sample consisted of 60 urban and rural, with participants having a mean age of 21.46
(SD = 3.01; range: 18- 26) years.

Materials

Demographic Screening Questionnaire

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.

*   A self-administerted Short Michigan Alcoholism Screening Test[SMAST],(Selzer ML,et al. J Stud Alcohol,1975).
*   The Alcohol Use Disorders Identification Test [AUDIT], (Babor, Higgins-Biddle, Saunders, & Monterio, 2001).

Design

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

4. 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. 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 center. 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 participants allocated to the treatment group, 29 completed the entire four sessions, while one participant missed session three (due to illness) thus completing three sessions only. 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	Indian(n=60)
Mean Age	21.46 years (n=60)
No formal education	8% (n=2)
Junior Cert or equivalent	16% (n=4)
Leaving Cert or equivalent	65% (n=17)
Third Level	12% (n=3)
Treatment for alcoholism in the family	23% (n=6)
Frequency of drinking (AUDIT item 1)	
Never consumed alcohol:	0%
Monthly or less:	19.2% (n=5)
2-4times a month:	46.2% (n=12)
2-3times a week:	30.8% (n=8)
4 or more times a week:	3.8% (n=1)
Number of Alcoholic drinks consumed per drinking occasion (AUDIT item 2, median category "5 or 6 drinks")	73.01% (n= 19)
Frequency of binge drinking (AUDIT item 3)	
Never binged:	11.5% (n=3)
Binged less than monthly:	38.5% (n=10)
2-4 times a month:	26.9% (n=7)
2-3 times a week:	19.2% (n=5)
4 or more times a week:	3.8% (n=1)
AUDIT (10 Questions) and Associated Risk Level	
0-7: No problem	30.8% (n=8)
8-15: Risky drinking and suggestive of alcohol problem:	30.8% (n=8)
16-19: Likely to indicate high-level alcohol problems:	19.2% (n=5)
20-40: Indicates need for referral for specialist assessment:	19.2% (n=5)

The data was analyzed 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 behaviors 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 (*n*=30)	GroupControl Group (*n*=30)
		Mean (SD)	Mean (SD)
Frequency of bingePre drinking (Range 0-4)	Post FU	1.77 (1.17) 1.69 (.75) 1.31 (.95)	1.54 (.97) 1.46 (1.12) 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 Behavior
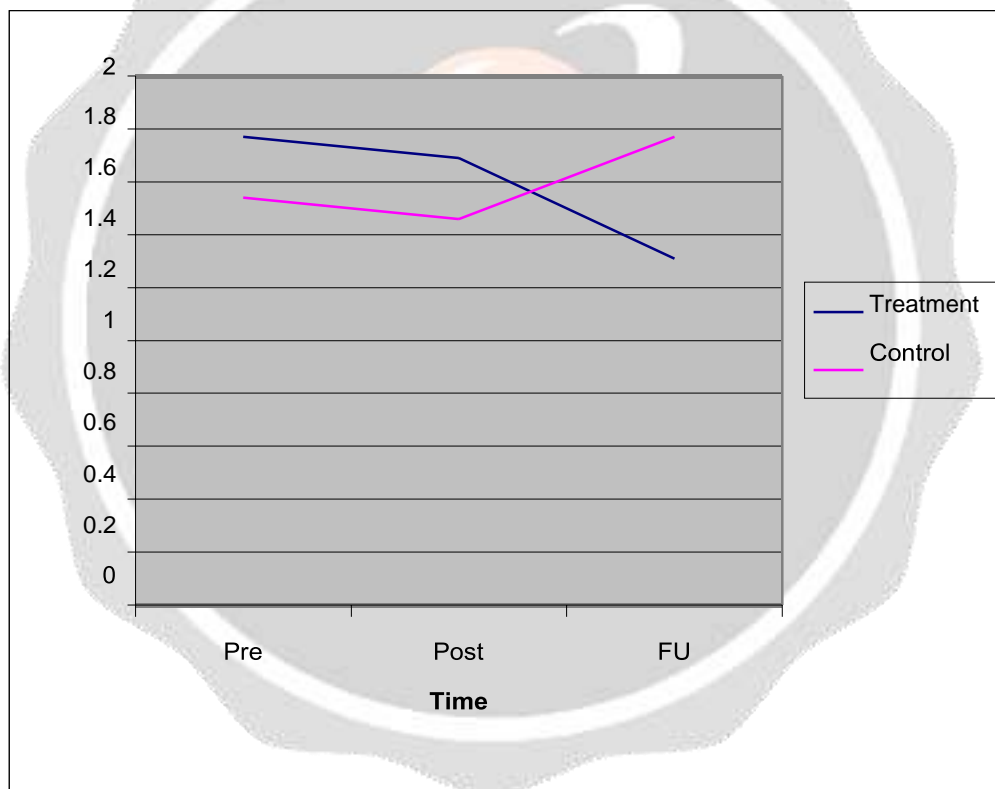
The binge drinking behaviors of the treatment group was not significantly less than that of the control group. However, it is important to note that this result approached statistical significance (p = .064). An examination of the trend of the means indicates at the follow-up assessment, participants' binge drinking behaviors 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**

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.

Outcome variable	Time	Treatment Group	Control Group
		_____	_____
		(n=30)	*(n=30)*
Increased Confidence	Pre	Mean (SD)	Mean (SD
	Post FU	45.50 (3.01)	55.38 (9.98)
		39.17 (3.01)	37.85 (7.98)
		37.33 (7.06)	36.38 (6.36)

**Figure 2. Mean Score Changes for Alcohol Expectancies: Increased Confidence**
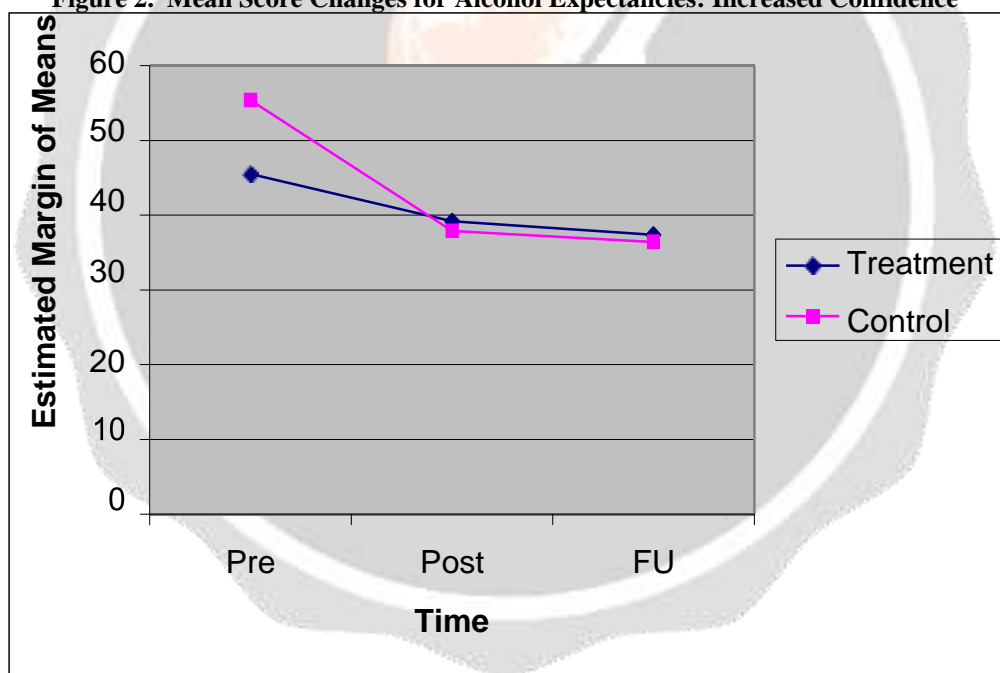
Participants in the control group had higher alcohol expectancies concerning the ability of alcohol to increase their confidence when compared to participants' scores in the treatment group at the baseline measure. It is noted at follow-up that the treatment group's alcohol expectancies for the Increased 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	Pre Score	6.85 (3.08)	6.38 (2.72)
Rang (0-12)	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
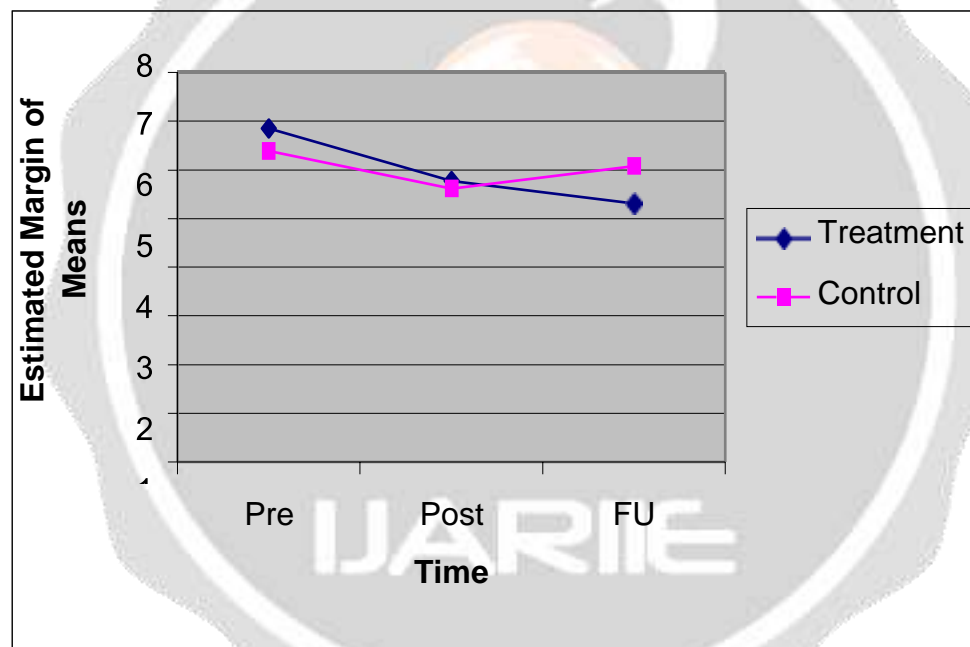
A follow-up analysis was conducted to explore the main effect of time. A one-way ANOVA with post-hoc comparison was carried out. Results from this show there was not a significant difference (p > 0.05) among the treatment group in their scores between Time 1 and Time 2 or between Time 1 and Time 3.

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 behaviors

(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
		(*n*=30)	(*n*=30)
		Mean (SD)	Mean (SD)
Readiness to Change Drinking Behaviour	Pre Post FU	4.92 (2.90) 7.23 (2.86) 5.77 (3.27)	3.77 (2.24) 4.31 (2.66) 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 Behavior
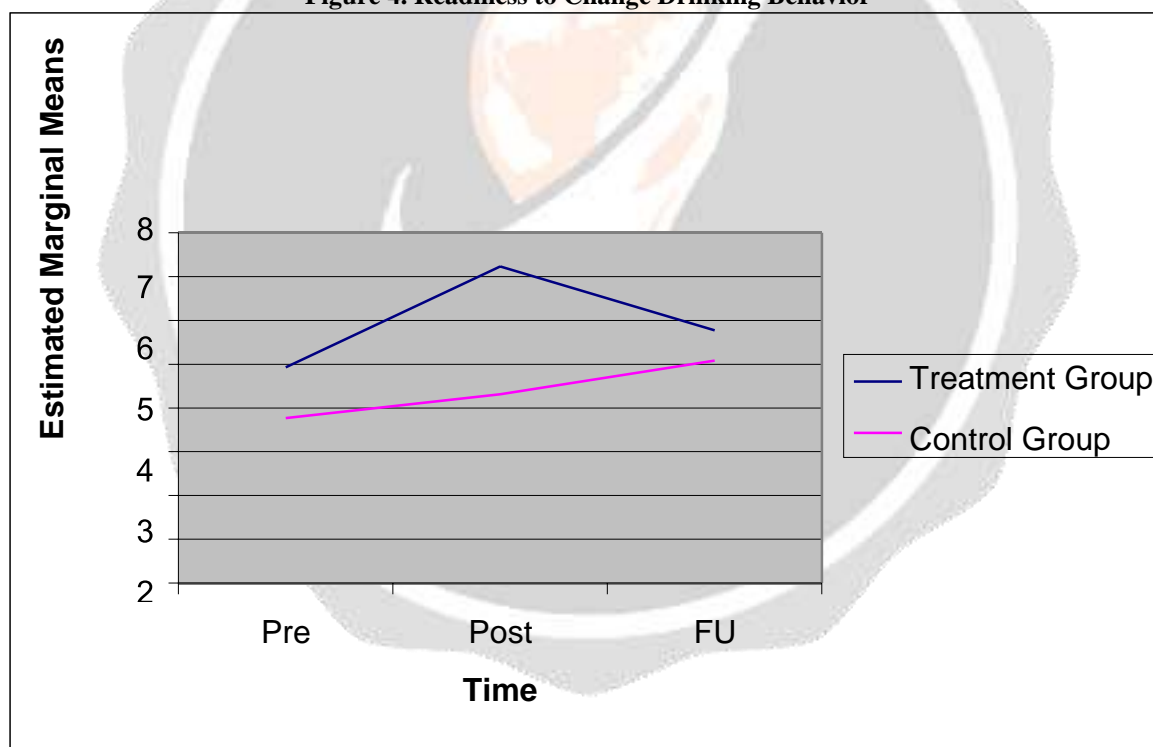
A follow-up analysis was conducted to explore the main effect of time. A one-way ANOVA with post-hoc comparisons was carried out. Results show that although there was not a statistically significant difference (p > 0.05) among the treatment group in scores from Time 1 and Time 2 there was a statistically 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 behaviors 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		Control Group	
		————		————	
		(*n* =30)		(*n* =30)	
Drink Refusal Self-Efficacy	Pre Post FU	Mean (SD) 77.23 (11.28) 81.92 (14.84)		Mean (SD) 88.69 (13.19) 83.85 (21.20)	
		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
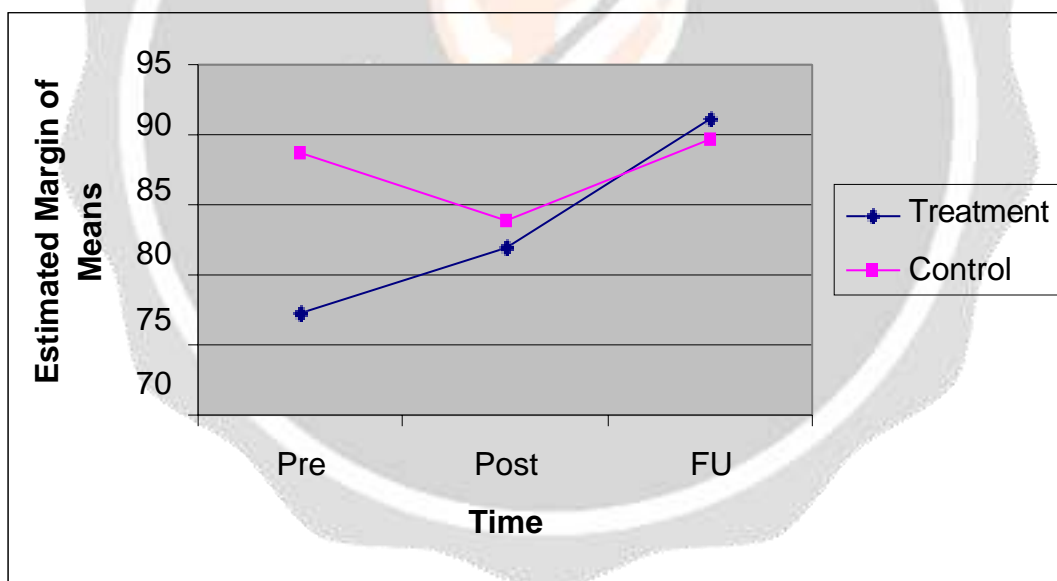
A follow-up analysis was also conducted to explore the main effect of time. Results from a one-way ANOVA show that although there was not a significant difference among the treatment group in their scores from Time 1 and Time 2 there was a significant difference (p < 0.05) from Time 1 and Time 3.Participants 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 nothing 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 ps > 0.05) or interaction effects between time and group (all ps > 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 (n =30)	Control Group (n =30)
		Mean (SD)	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.

Table 8. Participants' Evaluation of the Intervention

Question	Yes Definitely	Yes generally	No not really	No definitely not
Has this program me been personally beneficial	7.7% (*n*=1)	76.9% (*n*=10)	15.4% (*n*=2)	

Would you recommend this program me to a	7.7% (*n*=1)	76.9% (*n*=10)	15.4% (*n*=2)
Fellow recruit			
Has the psycho-education part of the	23.1% (*n*=3)	69.2% (*n*=9)	7.7% (*n*-1)
programme been personally relevant			
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	7.7% (*n* =1)	46.2% (*n*=6)	30.8% (*n*=4) 15.4% (*n*=2)
personal alcohol expectancies			
Is there merit in including this programme on	53.8% (*n*=7)	46.2% (*n*=6)	
all future INS Recruit Training Syllabi			

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 program me. 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 program me on their readiness to change their drinking behavior.

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. Because of having a relatively small sample size coupled with a short-term follow-up no conclusions should be drawn about the process of change.

5. DISCUSSION

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 and home. 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 program me may encourage new candidates to reduce their binge drinking levels when socializing. A similar trend occurred also in relation to the results of participants' risky drinking behaviors 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 center. All participants' liberty to socialize 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 June 2018. Such liberty restrictions would not have been as pronounced as participants had just returned from two weeks. 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 behaviors by participants in the treatment group at post and follow-up assessment.

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 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.

In conclusion, this small-randomized control trial offers preliminary data that a brief CBT program me showed positive effects on alcohol consumption reduction amongst new recruits. It is important to note that this is the first ever study to have evaluated a home and workplace alcohol intervention . This study implemented a CBT intervention that challenged unhealthy drinking behaviors amongst young peoples. 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 program me. 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 behaviors. 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.

6. REFERENCES

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