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# Co-Occurring Chronic Depression and Alcohol Dependence: A Novel Treatment Approach

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## 1. Introduction

Major depression and alcohol dependence are two of the most prevalent psychiatric disorders affecting the general population, resulting in significant consequences to society at large, including lost productivity, health care demands, psychosocial disruption, and even increased mortality rates [1]. Recent research suggests that excessive alcohol use and depression account for an estimated \$223.5 billion and \$83.1 billion, respectively, in economic costs to the United States alone [2,3]. In addition, prevalence rates of co-morbidity between alcohol dependence and depression are rising; 12-month prevalence rates of alcohol dependence among individuals with a 12-month *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* [4] diagnosis of major depression and dysthymia were 11.03% and 9.62%, respectively [5]. As a result of the deleterious psychological impact on the individual and the economic burden on society, there is a growing interest in increasing understanding of the co-occurrence of alcohol dependence and major depression, and development and implementation of effective treatments for these significant and prevalent disorders.

Multiple empirically supported behavioral treatments exist to treat chronic depression and alcohol dependence separately, but there is less research examining concomitant or integrated treatment for co-occurring chronic depression and alcohol dependence. Although there has been a modicum of research regarding the etiology, relationships, and treatment of chronic depression and alcoholism, the specific common mechanisms and effective treatments have been elusive. Of note, the majority of so-called “third wave” cognitive behavioral therapies have not yet been rigorously studied for this specific population of chronically depressed alcohol dependent individuals. Specifically, Cognitive Behavioral Analysis System of Psychotherapy (CBASP) has demonstrated effectiveness in treating

chronic depression [6,7], but has not yet been studied in a large trial with persons with co-occurring alcohol dependence and chronic depression. Therefore, the purpose of this chapter is to discuss the therapeutic model of CBASP and the rationale for its proposed use in treating chronic depression and alcohol dependence concurrently. The paper begins with a description of the characteristics of persons who suffer from chronic depression and alcohol dependence and how these characteristics contribute to a challenging therapeutic scenario. Theories behind the co-morbid development of the two disorders are then presented, followed by a brief review of the literature regarding treatment for co-occurring depression and substance use. The therapeutic model of CBASP and its adaptation for treating co-occurring disorders is then discussed. Finally, the paper concludes with the introduction of an ongoing research study using CBASP to treat chronic depression and alcohol dependence simultaneously.

## **2. Characteristics of Chronically Depressed Alcohol Dependent (CDAD) individuals and treatment challenges**

Chronically depressed alcohol dependent (CDAD) individuals possess unique characteristics, especially when compared to depressed-only individuals, and these characteristics present unique challenges for the therapist and for therapy. CDAD patients are often younger at their first psychiatric hospitalization, have experienced a greater number of major depressive episodes and suicide attempts, and have poorer physical and psychiatric outcomes [8,9]. Untreated alcoholism can exaggerate depressive states and enhance the chances of self-destructive behaviors, suicide attempts, and even suicide [10]. Thus, there is a greater possibility of early death in CDAD individuals. Individuals who suffer from co-occurring alcohol dependence and major depression are also more likely to relapse and prematurely dropout of treatment [8]. Individuals with CDAD typically report a high rate of adverse early home environments, a lifelong history of intrapersonal and interpersonal failure, and an earlier onset of disorders. They have higher rates of comorbidities, a more severe course of illness, and they demonstrate a predominant interpersonal style of avoidance and detachment [9,11,12]. Early abuse or trauma history impairs development of adequate interpersonal coping skills, resulting in depression, social isolation, or withdrawal for many in this population [13]. In addition, real-world and prolonged environmental stressors usually accompany CDAD individuals' presenting complaints. They are often skeptical or ambivalent about change, and the processes of change are often slow, irregular, and inconsistent. In fact, a pattern of success followed by a setback is common and periodic plateaus in progress occur.

Research suggests that poor treatment outcomes for CDAD individuals occur, in part, due to these complex characteristics which these individuals possess that make their treatment more challenging [9,10,14,15]. Chances of poor outcomes increase among individuals who (a) are diagnosed with both depression and alcohol dependence, compared to those diagnosed with a single disorder [10,14]; and (b) suffer from major depression during and/or after treatment of alcohol dependence. This second aspect is important because depressed

mood has been found to be an important trigger for alcohol relapse [5,14] Importantly, there is some evidence [16] that early intervention for alcohol dependence may improve not only problems with alcohol but also mood.

Challenges to treatment are numerous and the CBASP therapist must possess specific skills to be successful in administering therapy to this population. The CDAD patient may be ambivalent about changing either or both of the symptoms of alcoholism and/or depression and motivation for change is typically low for these patients, as is hope for the future. As stated, the processes of change are slow and irregular. The patient is typically interpersonally avoidant, and may lack effective interpersonal communication skills as well as problem-solving and coping skills. They may use alcohol as a maladaptive coping strategy, placing themselves at risk for alcohol-related injuries and negative consequences.

Thus the therapist must possess skills to help clarify the patient's ambivalence and increase motivation to change. These are the same skills a therapist may use in motivational enhancement therapies or motivational interviewing. In addition, the therapist must be patient and empathic, with an ability to be genuine and respond in a way that is judicious and self-disciplined. It is helpful if the therapist is aware of his or her own transference hypotheses and appreciative of his/her own interpersonal impact on others. Acquisition of such knowledge is formalized and is typically part of the required training for CBASP therapists. Such training and knowledge is conceptualized as crucial in helping CBASP therapists gain insight into their own interpersonal pulls and pitfalls that could inadvertently sabotage the therapeutic process and/or promote burnout in the therapist.

### **3. Theoretical explanations for co-morbid major depression and alcohol dependence**

The co-morbidity of chronic depression and alcohol dependence is prevalent and debilitating and warrants significant investigation regarding what predisposes the co-occurrence of these disorders. Research has found CDAD individuals to have several predisposing factors that increase the likelihood of experiencing co-morbid major depression and alcohol dependence. Research on twin studies suggests a shared genetic risk factor for depression and alcoholism, and recent findings suggest an association between the CLOCK gene and the co-morbid condition of alcohol misuse and depressive disorders. [17,18]. Data also supply evidence of overlapping neuroanatomical correlates for both disorders. For example, regions of the brain such as the ventromedial prefrontal cortex which are important for homeostasis, emotional regulation, and decision making, show dysfunction in both depression and alcohol dependence [19,20]. Other areas of the brain, such as the dorsolateral prefrontal cortex, the amygdala, and the insula have been reported to be important in both depression and alcohol dependence [21].

There are also psychological and behavioral correlates similar in both disorders. Brewer et al. [21] review the role of rumination and stress, which are both commonly seen in these two

disorders. They conclude that depression and substance use disorders including alcoholism, share several phenotypes such as stress vulnerability and rumination, which suggests possible mutual underlying neurobiological dysfunction. There is also evidence to support the claim that early childhood trauma plays an important role in comorbidity between the two disorders. Common scenarios reported by CDAD individuals include an early victimization or trauma (e.g., death of a loved one, parental divorce or separation, physical or sexual abuse) that leads to major depression and subsequent alcohol abuse, or experiencing negative consequences from abusing alcohol that leads to major depression [22]. Both scenarios are related to a third predisposing factor – that is, CDAD individuals have ineffective internal mechanisms to cope with negative psychological symptoms, such as depressive symptoms. As a result, CDAD individuals learn to use alcohol to alleviate depressive affect (e.g., via modeling or operant conditioning), a theory known as self-medication. In effect, individuals who suffer from major depression are at an increased risk for alcohol dependence and relapse [23].

Finally, Merrill and Read [24] have assessed multiple pathways leading to alcohol drinking. They found a difference between individuals who drink to cope and specific problem domains. In their study, individuals who used alcohol as a way to cope with negative affect also had a direct association with academic/occupational difficulties and risky behaviors, as well as poor self-care. Nelson, Little, Heath, and Kessler [25] noticed that when role impairment and poor self-care in individuals who consume alcohol is present, it predicts future progression to more severe symptoms such as dependence. Thus, those individuals who drink and display negative affect and depressive symptoms may be at additional risk for an increased severity of disease.

#### **4. Treatment of co-occurring depression and substance related problems: A comparison of approaches**

The shared characteristics and etiological underpinnings of two of the more prevalent forms of psychopathology have resulted in an increased interest in the co-occurrence of these disorders. Despite the recognition of a need for an integrated treatment approach for mood disorders and substance abuse – and chronic depression and alcohol dependence more specifically – empirical examination of such interventions is limited. Data from The National Survey on Drug Use and Health indicate that of adults experiencing co-occurring significant psychological distress and a substance use disorder, a majority did not receive treatment for either disorder [26]. Only approximately 12% were treated for both disorders. This shortfall is likely the result of a lack of availability of empirically supported integrated treatments for comorbidities of this type.

While there are currently multiple empirically supported behavioral treatments for depression and alcoholism as individual disorders, knowledge about effective integrated treatment options is far from complete. Carroll [8] and others [27,28] acknowledge that there have been few well-specified behavioral therapies with an integrated approach (versus parallel) to treating symptoms of both disorders. Integrated treatment models are those in

which treatment for both the mood disorder and the substance use disorder is delivered at the same time, in the same program, by the same staff. This is in contrast to sequential treatment where the addiction is treated prior to the depression, or parallel treatment, in which patients are treated for mental illness in one system and for the substance use disorder in another [29].

Carroll [8] reviewed the most common evaluated types of behavioral therapies for co-occurring disorders and included cognitive behavioral therapy (CBT), motivational interviewing (MI), and contingency management (CM). Cognitive behavioral therapy (CBT) and coping skills strategies have been shown to be effective across a wide range of substance use and psychiatric disorders, including alcohol dependence and depression [30-32], but controlled trials for co-occurring alcoholism and depression are limited, both in supply and design. In a qualitative review, Hides and colleagues [33] concluded that while CBT is more efficacious than no treatment control conditions, there is limited evidence to suggest that CBT is better suited for treating co-occurring depression and substance use compared to other psychotherapeutic interventions. In part, they cite poor heterogeneity between existing studies as a key reason why the evidence is inconclusive.

Conversely, a more recent quantitative review of the literature highlights the effectiveness of CBT to reduce depressive symptoms and alcohol use [34]. In one study a moderate effect on alcohol use and/or depressive symptoms with Cognitive Behavior Therapy- Depression (CBT-D) was demonstrated, but included only patients with elevated depression (Beck Depression Inventory  $\geq 10$ ), not diagnosed depressive disorders [14]. Another study found that adding CBT-D for alcoholics with significant depressive symptoms was more effective on mood and alcohol use measures than standard treatment alone within an individual, but not a group treatment modality [35]. However, it is possible that treatment effects were due to the added therapist contact in the individual condition.

More systematic investigations have also been conducted in recent years. One randomized clinical trial compared the effectiveness of computer versus therapist delivered CBT with MI components [36]. All patients had comorbid depression with substance misuse, a substantial portion of which was alcohol misuse, and each received a single session of integrated CBT/MI before being randomized to a no treatment control condition, or nine sessions of CBT/MI delivered by a psychotherapist or a computer. As hypothesized, treatment conditions were associated with significant reductions in alcohol use and symptoms of depression, with long-term intervention having a greater impact. A similar RCT performed by Baker and colleagues [37] sought to determine the effectiveness of CBT/MI that is single-focused or integrated. Results found integrated treatment to be associated with greater improvement in alcohol use as well as depressive symptoms when compared to single-focus interventions. Similar support has been found in adolescent samples, which highlight treatment gains even at two years post-treatment [38].

Although there is good empirical support for the effectiveness of MI in substance use disorders and related behavioral domains [39-41], well-controlled evaluations of MI as a stand-alone treatment or MI adapted for co-occurring disorders are rare, and demonstrate



improvements in treatment engagement/retention, motivation, and satisfaction, but not improvements in mood or decreased substance use [42-44]. In one small sample study ( $N = 5$ ), MI was integrated with CBT for bipolar patients with comorbid substance use [45]. Modest reductions in both mood symptoms and substance use were observed.

Contingency Management (CM) has demonstrated more robust findings when used in depressed cocaine addicted populations [46,47]. In a pilot study which employed an integrated CM approach, opioid dependent patients experienced decreases in depressive symptoms, but decreases in usage were not significant. However, it has not been implemented with CDAD individuals and CM is not always logistically or financially feasible.

In addition to those interventions highlighted by Carroll [8], mindfulness training (MT) and behavioral activation have seen more limited attention in the treatment of co-occurring disorders. Brewer and colleagues [21] reviewed the evidence for a shared mechanism in depression and substance abuse that might allow MT to reduce substance use and improve psychiatric symptoms. Another treatment study focused on inner-city substance users with mild to moderate depression and found that a modified version of behavioral activation was successful at reducing depressive symptoms of patients during residential substance abuse treatment [48]. Interpersonal psychotherapy has also seen moderate support in the reduction of depressive symptoms, but less so for days abstinent from alcohol with the converse being the case for brief supportive therapy [49]. Another study comparing integrated CBT with twelve-step facilitation (TSF) found both to be effective, with TSF producing slightly better improvements in depression and abstinence [50]. The aforementioned findings appear to support the hypothesis that an integrated therapy possessing components of motivational enhancement, cognitive and behavioral therapy, as well as management of reinforcements, would be most ideal when targeting co-occurring depression and alcoholism.

## **5. CBASP for chronically depressed alcohol dependent individuals**

Despite the aforementioned similarities found among individuals dealing with chronic depression and alcohol dependence, investigation of more synthesized treatment approaches has occurred in a limited fashion. “Third wave” cognitive behavioral therapies represent one underexplored subset of treatment approaches. Specifically, the Cognitive Behavioral Analysis System of Psychotherapy (CBASP) [51, 52] has demonstrated effectiveness in treating chronic depression, demonstrating effects equal to antidepressant medications as well as enhancing the effects of pharmacotherapy [6,7]. CBASP has yet to be studied in a large trial with persons with co-occurring alcohol dependence and chronic depression. However, in a case report from clinical practice, CBASP has been effective in reducing symptoms of chronic depression and significantly reducing alcohol intake to healthy drinking levels in CDAD individuals [53]. CBASP is particularly proficient for use with the early onset variety of unipolar mood disorders. Its etiological premise is that chronic depression arises as a result of a developmental history characterized by significant

interpersonal trauma (e.g., physical/sexual abuse) or low grade, but continuous stream of psychological insults (e.g., punishment/rejection of some form); both lead to a preoperational form of thinking about one's social world. This derailment is particularly characterized by a lack of causal awareness and egocentrism in the depressive patient. This often results in a presentation of poor functioning and/or low motivation for change [51].

Additionally, a lack of awareness for their interpersonal impact and poor interpersonal problem-solving skills is prevalent [51,52,54,55]. CBASP takes a person-by-environment perspective in modifying depressive symptoms by raising a patient's awareness about their interpersonal impact on others [51,56,57]. This is done by highlighting the interpersonal interaction as it occurs in the therapeutic setting. Recognizing one's own stimulus value in the interpersonal context allows the chronic depressive to amend how he or she presents and copes with stressful interpersonal situations. CBASP holds that the interpersonal fear that drives avoidance, the central theme in many interpersonal failures, must be counter-conditioned. This is done by aiding the patient in discriminating their experience with the therapist, from those experiences with harmful significant others to create a sense of felt interpersonal safety that can then be generalized outside of the therapy setting [57].

Another major component of CBASP is Situational Analysis (SA). SA is an interpersonal problem-solving tool that is used in-session to help a patient actively re-experience an interpersonal encounter [51,56,57]. The goal of SA is to elicit the original cognitions and emotions during the target situation. This involves having the client first isolate an event, describe it in exclusively behavioral terms, and identify the situational outcome. The goal of this exercise is to help the client identify alternative ways of behaving and thinking that would lead to more desirable consequences. New ways of behaving interpersonally are often met with obtaining desirable outcomes, reinforcing effective problem-solving skills, and allowing the patient to perceive his or her contingent relationship with the environment. Through these means the patient may acquire "perceived functionality" – that is, the patient's ability to recognize and begin to change the interpersonal consequences of their behavior.

CBASP has demonstrated effectiveness in treating chronic depression, and is more effective than antidepressant monotherapy in individuals with early trauma or adversity [7,58-60]. Moreover, both the therapeutic relationship and the ability of the patient to learn SA effectively have been shown to independently contribute to a reduction in depressive symptoms [61]. Additionally, there is some evidence to support the notion that CBASP may be efficacious for individuals who do not respond to a trial of antidepressant medications initially [62]. CBASP has also been shown to outperform interpersonal psychotherapy in treating chronic depression [63], suggesting it may offer more when treating co-occurring chronic depression and alcoholism. Strong support for CBASP has been tempered by recent results [64], which found that neither CBASP nor Supportive psychotherapy was more effective than medication alone for chronically depressed treatment resistant patients. The lack of positive findings in that study were hypothesized to be related to the small number of CBASP sessions (mean = 12.5 sessions) and the effect of an aspect of the study design



which focused on pharmacological switching and augmentation that may have had a negative impact on patients' interests in and expectations of, psychotherapy [65]. CBASP has been used to treat chronically depressed pregnant smokers and was found to be more effective than standard treatment at increasing abstinence and decreasing depressive symptoms six months post treatment. CBASP was more effective in women with higher levels of baseline depressive symptoms [66]. CBASP has also proven useful in a small sample study demonstrating that increases in positive affect and a decrease in depressive symptoms are associated with greater likelihood of prolonged abstinence from cigarette smoking [67].

## 6. Rationale for and adaptations of CBASP for CDAD individuals

Those entering substance abuse treatment programs with co-occurring disorders report using multiple drugs, having more recent admissions to psychiatric and medical facilities, and experiencing more severe medical, social, and family problems compared to those diagnosed solely with a substance use disorder [23]. These characteristics are unique in nature, suggesting the need for specialized treatment addressing depression and alcoholism simultaneously. The Substance Abuse and Mental Health Services Administration (SAMSA) in the USA [26] has come to similar conclusions in their recommendations for Center for Substance Abuse Treatment (CSAT) treatment improvement protocols with co-occurring disorders, suggesting individualized, integrated dual primary diagnosis-specific treatment interventions matched to diagnoses, phase of recovery, stage of change, and severity. Interestingly, no studies have evaluated the use of a behavioral treatment approach that can address these specific mood and addiction symptoms that characterize the CDAD individual.

CBASP is a behavioral treatment that addresses the unique characteristics of chronically depressed individuals, most of which are highly relevant for alcohol dependent individuals as well. CBASP is designed for persons who may (a) be less functional and less motivated to change; (b) have traumatic or impoverished developmental or reinforcement histories; and (c) lack awareness of their interpersonal impact or have poor interpersonal problem-solving skills. Thus, CBASP appears to be a plausible behavioral approach for use with CDAD individuals who may report traumatic developmental histories, manifest impoverished interpersonal relations, interactions and coping skills, and demonstrate additional chronic under-functioning [59,61,67]. Because of its structured but individualized and collaborative design, emphasis on teaching effective coping strategies, and employment of motivational, cognitive, behavioral, and interpersonal techniques, CBASP is uniquely suited for use in treating alcoholism in the context of chronic depression [7,67].

The major goals of CBASP are (a) to enable patients to feel increased emotional safety, thus allowing them to more fully approach and engage in treatment and reduce avoidance behavior, including drinking; and (b) to allow patients to recognize how they contribute to their own interpersonal psychopathology (perceived functionality) and begin to learn how to negotiate interpersonal situations successfully and without the use of alcohol.

Importantly, CBASP provides an empirical method to facilitate and measure exactly what and how much is being learned during the course of therapy [57]. Both felt emotional safety in the therapeutic dyad and learned acquisition of perceived functionality are hypothesized to be related to the outcome of treatment and, over time, to the maintenance of the therapeutic gains. These skills can be measured in multiple correlated ways, including evaluation of learning in session via achievement of therapeutic interpersonal tasks, performance on psychological tests of prediction of interpersonal response, and fMRI assessment of the neurobiological correlates of perceived functionality that have been identified in chronic depressives [68].

In sum, treatment for CDAD individuals must be targeted or personalized for the underlying interpersonal issues and skill deficits of the individual in order to be most effective. CBASP is a behavioral treatment which can be adapted to comprehensively address these issues and deficits to successfully treat both alcohol dependence and chronic depression simultaneously.

## **7. Current research with CBASP to treat co-occurring chronic depression and alcohol dependence**

We have developed an enhanced integrative CBASP for use in reducing both depressive symptoms and alcohol intake in CDAD patients. The augmented CBASP includes all the aspects of traditional CBASP and adds coping skills training for reducing alcohol intake. One of the most important components of successfully conducting CBASP with this population is helping the patient discover the causal connections between their mood symptoms and drinking behavior and ultimately change the functional linkages between their depression and drinking. The drinking behavior is conceptualized as a maladaptive coping strategy that is often an outcome of interpersonal situations for this patient population. Drinking behavior is also conceived of as avoidance behavior, which interferes with learning and practicing effective interpersonal problem solving and coping. Further augmentations include additional assessment and monitoring of stage of change and motivation levels for both depressive symptoms and alcohol use. During the middle phase of treatment and in session after the Coping Survey Questionnaire (Situational Analysis) has been remediated, alcohol reduction coping skills are identified and taught in the same manner that traditional CBT is conducted. Significant adaptations for use with this population involve setting and assessing alcohol consumption goals in addition to depressive symptoms and quality of life/level of functioning goals for treatment. A harm reduction approach, similar to that utilized in CBT for alcohol dependence, is used to address alcohol consumption. Thus, patients do not need to be abstinent when in treatment and do not necessarily have to set abstinence as their goal, although it is preferred. The overall approach to symptom change is compatible with the CBASP essence of treatment, which allows the patient to establish how the therapy session will proceed and enables the patient to do the work of change.

A twenty-session pilot study examining the use of our augmented CBASP for persons with co-occurring chronic depression and alcohol dependence is currently underway at the

University of Virginia School of Medicine in the Department of Psychiatry and Neurobehavioral Sciences in Charlottesville, Virginia. Sessions were individually administered weekly for one hour by two trained Ph.D. level clinical psychologists with extensive experience in addictions treatment and depression. Sessions were audio taped to be rated for adherence, and follow up data regarding alcohol intake and depressive symptoms collected at one month and three months post termination. Preliminary results from this small study indicate that this patient population exists and is willing to seek and participate in such extensive and intensive treatment. Below are brief descriptions of the course of treatment for two participants in our current study.

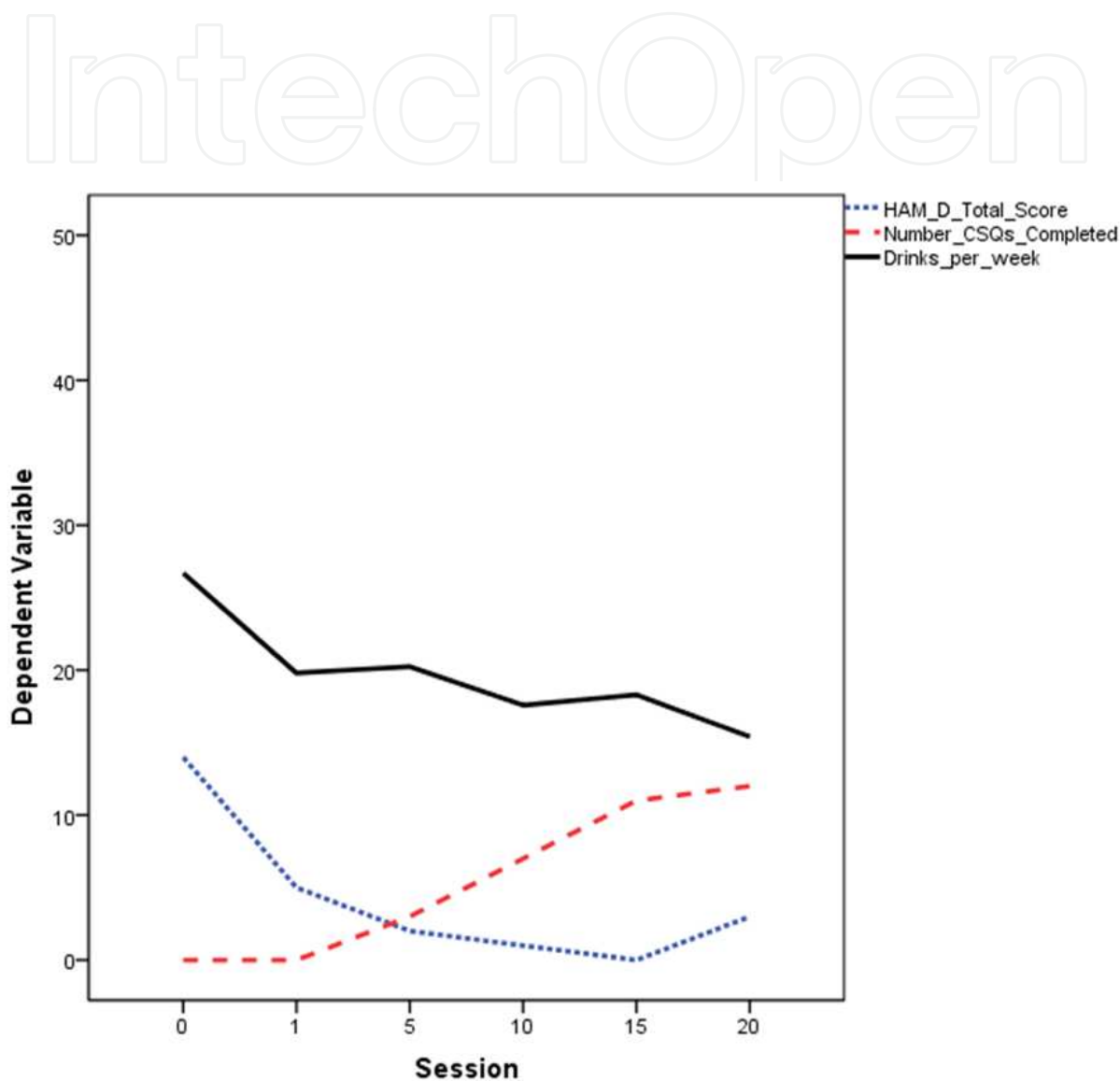
Participant 01, "Denise" is a 54-year-old, Caucasian female who is divorced and lives alone. She works full-time as a nurse. At intake, she was diagnosed with Dysthymia, early onset, Major Depressive Disorder, recurrent, in partial remission, and Alcohol Dependence. She reported that she had been on vacation for three weeks prior to intake and that her symptoms of depression and alcohol use had reduced as a result. Denise noted that interpersonal stress at work and with family members was a primary trigger for her depression. She recognized that she drank to avoid her negative emotions and interpersonal problems. At intake, stage of change data indicated that Denise had already begun to reduce her alcohol intake and that she was ready to reduce her symptoms of depression. Her stated goals for treatment were to learn how to manage her mood so that she no longer used alcohol to cope with depression, and to drink at a reduced level because she enjoys the taste of alcohol. As shown in Figure 1, at session 1, she was drinking 28 drinks per week and her score on the Hamilton Depression Rating Scale was 14. In her final session, she was drinking 17 drinks per week and her score on the Hamilton Depression Rating Scale was 3. In session 10, Denise began effectively using Situational Analysis to solve interpersonal problems. As can be seen in Figure 1, she continued to practice Situational Analysis using the coping survey questionnaire on a weekly basis. By session 16, she reported that she no longer needed to drink to manage her mood. She noted, "For the first time in my life, I am finally taking control of situations and facing my demons." Much of her ability to take control of situations in her life involved learning through Situational Analysis to set boundaries with others. Setting boundaries with others was difficult for her due to fear of interpersonal rejection. Her difficulty setting boundaries often caused her to feel taken advantage of by others which led to depression and subsequent drinking behavior. Her fear of interpersonal rejection was also related to fear of making mistakes. Denise's transference hypothesis was "If I make a mistake with my therapist, I will disappoint her and she will think I am not good enough." This fear of interpersonal rejection was addressed in treatment using the Interpersonal Discrimination Exercise, and by session 7 the participant was able to discriminate between the feedback from the therapist and feedback from significant others when she made a mistake. As such, she reported an increased sense of safety and she demonstrated an increased ability to assert herself with the therapist. Across the final weeks of treatment Denise's learning generalized and she was regularly setting appropriate boundaries with significant others in her life. At termination, the participant stated that she no longer felt fear or guilt about expressing her limits to others and setting boundaries.

Participant 02, "Paul" is a 45-year-old, Caucasian male who is divorced and lives alone. He works part-time as a food vendor and also receives monthly social security disability benefits. At intake, he was diagnosed with Major Depressive Disorder, Recurrent and Alcohol Dependence. Paul reported an extensive drug and alcohol use history, further noting how his substance use helped him to avoid negative emotions and interpersonal problems. At intake, stage of change data indicated that he was planning to reduce both his alcohol intake and symptoms of depression. His stated goals for treatment were to learn how to better manage his mood so that he no longer used alcohol to cope with depression (he reported no drug use for the past five years), and to drink at a reduced level because he enjoys drinking alcohol. As shown in Figure 1, at session 1, he was drinking 48 drinks per week and his score on the Hamilton Depression Rating Scale was 16. In his final session, Paul was drinking 15 drinks per week and his score on the Hamilton Depression Rating Scale was 3. As can be seen in Figure 1, he continued to practice Situational Analysis using the Coping Survey Questionnaire on a weekly basis and began to gain an understanding of the importance of communicating to others to achieve socially desirable outcomes. This was especially true with regard to expressing negative affect to others. Paul's transference hypothesis was "If I express negative affect, emotions, or feelings to my therapist, then he will be angry or upset with me, and reject me." This fear of interpersonal rejection was addressed in treatment using the Interpersonal Discrimination Exercise. Despite the participant's difficulty discriminating between feedback from the therapist and feedback from significant others when he expressed negative affect, he reported an increased sense of self-confidence to assert himself with the therapist and others. In addition, Paul stated that whereas he was more concerned with others' reactions to his assertiveness in the past, across the final weeks of treatment he was more concerned with obtaining socially desirable outcomes than with what others' reactions were to him.

CBASP has been successfully augmented and implemented with a new and challenging patient population in much need of effective treatment options. Although neither patient set abstinence as their drinking goal, instead opting to cut back or reduce their alcohol intake to a less risky level, they made progress on these goals and remained engaged in treatment. Both patients reduced their depressive symptoms dramatically over the course of twenty weeks. More importantly, both patients were able to gain insight into the negative impact of their transference hypotheses and avoidance behaviors upon their mood and drinking behavior, and begin to implement causal thinking to approach and solve interpersonal problems. Indeed, preliminary investigations of this pilot study data suggest that treatment is most effective when tailored or personalized to the underlying interpersonal issues and skill deficits of the patient as presented in the Transference Hypothesis.

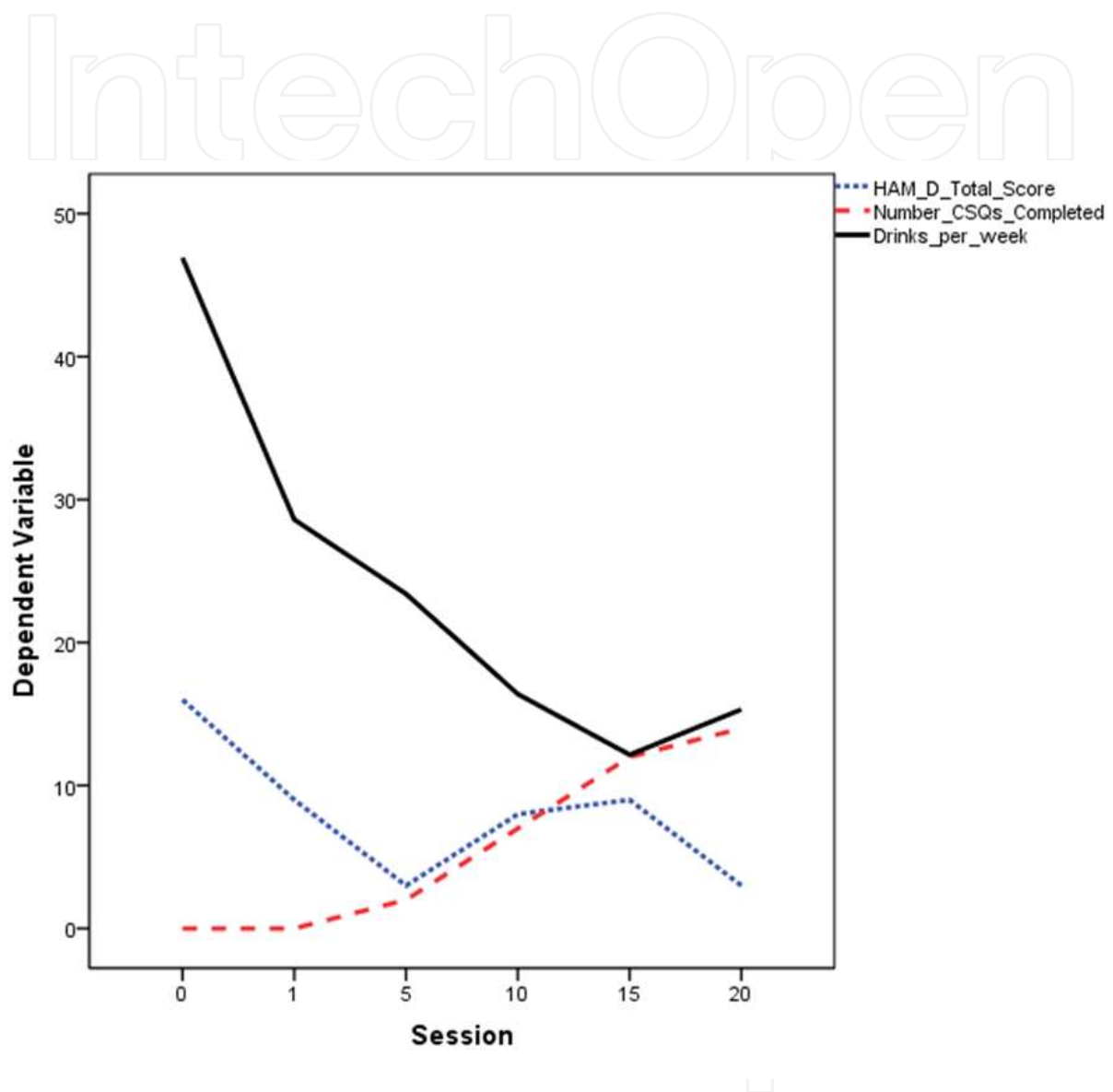
Preliminary results from the research examining CBASP for CDAD outpatients in individual therapy are presented in Figures 1, 2, and 3 below, but should be interpreted with caution due to the very small sample size ( $N = 2$ ). However, the results are promising, as both participants showed reductions in their drinking measured via the Timeline Followback Calendar [69] and depressive symptoms measured via the Hamilton Rating Scale for Depression [70], as the number of completed Coping Survey Questionnaires increased.

Additional completed study participants are necessary to confirm these preliminary findings and additional data collection is underway.

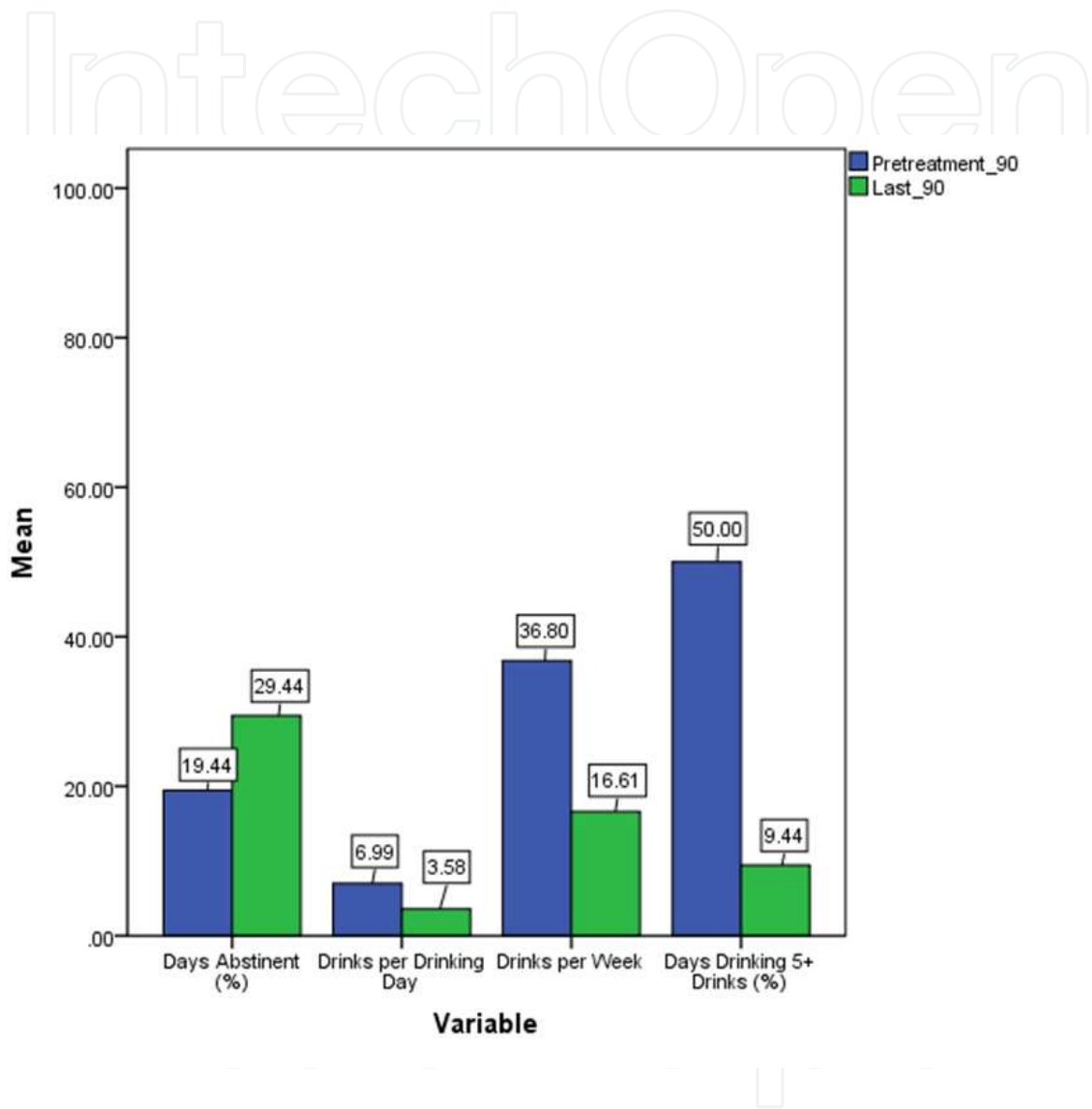


**Figure 1.** Number of Coping Survey Questionnaires completed, Hamilton Rating Scale for Depression scores, and drinks per week by session for Participant 01. Session 0 refers to the participant’s scores at baseline.





**Figure 2.** Number of Coping Survey Questionnaires completed, Hamilton Rating Scale for Depression scores, and drinks per week by session for Participant 02. Session 0 refers to the participant's scores at baseline.



**Figure 3.** Differences between 90 days pretreatment (blue) and last 90 days in treatment (green) on four drinking variables for the study participants.

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## 8. References

- [1] Goetzel RZ, Hawkins K, Ozminkowski RW, Wang S. The Health and Productivity Cost Burden of the "Top 10" Physical and Mental Health Conditions Affecting Six Large U.S. Employers in 1999. *Journal of Occupational and Environmental Medicine* 2003;45(1) 5-14.
- [2] Bouchery EE, Harwood HJ, Sacks JJ, Simon CJ, Brewer RD. Economic Costs of Excessive Alcohol Consumption in the United States, 2006. *American Journal of Preventive Medicine* 2011;41(5) 516-524.
- [3] Greenberg PE, Kessler RC, Birnbaum HG, Leong SA, Lowe SW, Berglund, PA, et al. The Economic Burden of Depression in the United States: How Did it Change Between 1990 and 2000? *Journal of Clinical Psychiatry* 2003;64(12)1465-1475.
- [4] Spitzer RL., editor. *Diagnostic and Statistical Manual of Mental Disorders* (4<sup>th</sup> ed., text revision). Washington, DC: American Psychological Association; 2000.
- [5] Grant BF, Stinson FS, Dawson DA, Chou P, Dufour MC, Compton W, et al. Prevalence and Co-Occurrence of Substance Use Disorders and Independent Mood and Anxiety Disorders. *Archives of General Psychiatry* 2004;61(8) 807-816.
- [6] McCullough JP. Treatment For Chronic Depression Using Cognitive Behavioral Analysis System of Psychotherapy (CBASP). *Journal of Clinical Psychology* 2003;59(8) 833-846.
- [7] Keller MB, McCullough JP, Klein DN, Arnow B, Dunner DL, Gelenberg AJ, et al. A Comparison of Nefazodone, Cognitive Behavioral Analysis System of Psychotherapy, and Their Combination for the Treatment of Chronic Depression. *New England Journal of Medicine* 2000;342(20) 1462-1470.
- [8] Carroll KM. Behavioral Therapies for Co-Occurring Substance Use and Mood Disorders. *Biological Psychiatry* 2004;56(10) 778-784.
- [9] Sher L, Stanley BH, Harkavy-Friedman JM, Carballo JJ, Arendt M, Brent DA, et al. Depressed Patients with Co-Occurring Alcohol Use Disorders: A Unique Patient Population. *Journal of Clinical Psychiatry* 2008;69(6) 907-915.

- [10] Thase ME, Salloum IM, Cornelius JD. Comorbid Alcoholism and Depression Treatment Issues. *Journal of Clinical Psychiatry* 2001;62(20) 32-41.
- [11] Riso LP, Miyatake RK, Thase ME. The Search for Determinants of Chronic Depression: A Review of Six Factors. *Journal of Affective Disorders* 2002;70(2) 103-115.
- [12] Sartor CE, Lynskey MT, Heath AC, Jacob T, True W. The Role of Childhood Risk Factors in Initiation of Alcohol Use and Progression to Alcohol Dependence. *Addiction* 2007;102(2) 216-25.
- [13] Hayden EP, Klein DN. Outcome of Dysthymic Disorder at 5-year Follow-Up: The Effect of Familial Psychopathology, Early Adversity, Personality, Comorbidity, and Chronic Stress. *American Journal of Psychiatry* 2001;158(11) 1864-1870.
- [14] Brown RA, Evans DM, Miller IW, Burgess ES, Mueller TI. Cognitive-Behavioral Treatment for Depression in Alcoholism. *Journal of Consulting and Clinical Psychology* 1997;65(5) 715-726.
- [15] Sullivan LE, Fiellin DA, O'Connor PG. The Prevalence and Impact of Alcohol Problems in Major Depression: A Systematic Review. *American Journal of Medicine* 2005;118(4) 330-341.
- [16] Petrakis IL, Gonzalez G, Rosenheck R, Krystal JH. Comorbidity of Alcoholism and Psychiatric Disorders. *Alcohol Research & Health* 2002;26(2) 81-89.
- [17] Davis L, Uezato A, Newell J, Frazier E. Major Depression and Comorbid Substance Use Disorders. *Current Opinion in Psychiatry* 2008;21(1) 14-18.
- [18] Nurnberger JL, Foroud T, Flury L, Su J, Meyer ET, Hu K, et al. Evidence for a Locus on Chromosome 1 that Influences Vulnerability to Alcoholism and Affective Disorder. *American Journal of Psychiatry* 2001;158( ) 718-724.
- [19] Drevets WC, Price JL, Furey ML. Brain Structural and Functional Abnormalities in Mood Disorders: Implications for Neurocircuitry Models of Depression. *Brain Structure and Function* 2008;213(1-2) 93-118.
- [20] Everitt BJ, Robbins TW. Neural Systems of Reinforcement for Drug Addiction: From Actions to Habits to Compulsion. *Nature Neuroscience* 2005;8(11) 1481-1489.
- [21] Brewer JA, Bowen S, Smith JT, Marlatt GA, Potenza MN. Mindfulness-Based Treatments for Co-Occurring Depression and Substance Use Disorders: What Can We Learn From the Brain? *Addiction* 2010;105(10) 1698-1706.
- [22] Nikulina V, Widom CS, Brzustowicz LM. Child Abuse and Neglect, MAOA, and Mental Health Outcomes: A Prospective Examination. *Biological Psychiatry* 2012;71(4) 350-357.
- [23] Gil-Rivas V, Grella C, Prause J. Substance Use After Residential Treatment Among Individuals with Co-Occurring Disorders: The Role of Anxiety/Depressive Symptoms and Trauma Exposure. *Psychology of Addictive Behaviors* 2009;23(2) 303-314.
- [24] Merrill JE, Read JP. Motivational Pathways to Unique Types of Alcohol Consequences. *Psychology of Addictive Behaviors* 2010;24(4) 705-711.
- [25] Nelson CB, Little RJ, Heath AC, Kessler RC. Patterns of DSM-III-R Alcohol Dependence Symptom Progression in a General Population Survey. *Psychological Medicine* 1996;26(3) 449-460.

- [26] Substance Abuse and Mental Health Services Administration. SAMHSA: Adults with Co-Occurring Serious Mental Illness and a Substance Use Disorder. <http://www.oas.samhsa.gov/2k4/coOccurring/cooccurring.pdf> (accessed 1 February 2012).
- [27] Moak DH, Anton RF, Latham PK, Voronin KE, Waid RL, Durazo-Arvisu R. Sertraline and Cognitive Behavioral Therapy for Depressed Alcoholics: Results of a Placebo-Controlled Trial. *Journal of Clinical Psychopharmacology* 2003;23(6) 553-562.
- [28] Myrick H, Brady KT. Current Review of the Comorbidity of Affective, Anxiety, and Substance Use Disorders. *Current Opinion in Psychiatry* 2003;16(3) 261-270.
- [29] Pettinati HM, Dundon WD. Comorbid Depression and Alcohol Dependence: New Approaches to Dual Therapy Challenges and Progress. *Psychiatric Times* 2011;28(6) 1-8.
- [30] Morgenstern J, Longabaugh R. Cognitive-Behavioral Treatment for Alcohol Dependence: A Review of the Evidence for its Hypothesized Mechanisms of Action. *Addiction* 2000;95(10) 1475-1490.
- [31] Rupke SJ, Blecke D, Renfrow M. Cognitive Therapy for Depression. *American Family Physician* 2008;73(1) 83-86.
- [32] Wampold BE, Minami T, Baskin TW, Callen-Tierney S. A Meta-(re)Analysis of the Effects of Cognitive Therapy Versus "Other Therapies" for Depression. *Journal of Affective Disorders* 2002;68(2-3) 159-165.
- [33] Hides L, Samet S, Lubman D I. Cognitive Behaviour Therapy (CBT) for the Treatment of Co-Occurring Depression and Substance Use: Current Evidence and Directions for Future Research. *Drug and Alcohol Review* 2010;29(5) 508-517.
- [34] Baker AL, Thornton LK, Hiles S, Hides L, Lubman DI. Psychological Interventions for Alcohol Misuse Among People with Co-Occurring Depression or Anxiety Disorders: A Systematic Review. *Journal of Affective Disorders* 2011;Doi:10.1016/j.jad.2011.08.004.
- [35] Turner RW, Wehl CK. Treatment of Unipolar Depression in Problem Drinkers. *Advances in Behavior Research & Therapy* 1984;6(2) 115-125.
- [36] Kay-Lambkin FJ, Baker AL, Lewin TJ, Carr VJ. Computer-Based Psychological Treatment for Comorbid Depression and Problematic Alcohol and/or Cannabis Use: A Randomized Controlled Trial of Clinical Efficacy. *Addiction* 2009;104(3) 378-388.
- [37] Baker AL, Kavanagh DJ, Kay-Lambkin FJ, Hunt SA, Lewin TJ, Carr VJ, et al. Randomized Controlled Trial of Cognitive Behavioural Therapy for Coexisting Depression and Alcohol Problems: Short-Term Outcome. *Addiction* 2010;105(1) 87-99.
- [38] Cornelius JR, Douaihy A, Bukstein OG, Daley DC, Wood SD, Kelly TM, et al. Evaluation of Cognitive Behavioral Therapy/Motivational Enhancement Therapy (CBT/MET) in a Treatment Trial of Comorbid MDD/AUD Adolescents. *Addictive Behaviors* 2011;36(8) 843-848.
- [39] Burke BL, Arkowiz H, Menchola M. The Efficacy of Motivational Interviewing: A Meta-Analysis of Controlled Clinical Trials. *Journal of Consulting and Clinical Psychology* 2003;71(5) 843-861.
- [40] Dunn C, Deroo I, Rivara FP. The Use of Brief Interventions Adapted from Motivational Interviewing Across Behavioral Domains: A Systematic Review. *Addiction* 2001;96(12) 1725-1742.



- [41] Miller WR, Wilbourne PL. Mesa Grande: A Methodological Analysis of Clinical Trials of Treatments for Alcohol Use Disorders. *Addiction* 2002;97(3) 265-277.
- [42] Barrowclough C, Haddock G, Tarrier N, Lewis SW, Moring J, O'Brien R. Randomized Controlled Trial of Motivational Interviewing, Cognitive Behavioral Therapy and Family Intervention for Patients with Comorbid Schizophrenia and Substance Use Disorders. *American Journal of Psychiatry* 2001;158(10) 1706-1713.
- [43] Carey KB. Substance Use Reduction in the Context of Outpatient Psychiatric Treatment: A Collaborative, Motivational, Harm Reduction Approach. *Community Mental Health Journal* 1996;32(3) 291-306.
- [44] Grothues JM, Bischof G, Reinhardt S, Meyer C, John U, Rumpf H.-J. Differences in Help Seeking Rates After Brief Intervention for Alcohol Use Disorders in General Practice Patients With and Without Comorbid Anxiety or Depressive Disorders. *International Journal of Methods in Psychiatric Research* 2008;17(1) S74-S77.
- [45] Jones SH, Barrowclough C, Allott R, Day C, Earnshaw P, Wilson I. Integrated Motivational Interviewing and Cognitive-Behavioural Therapy for Bipolar Disorder with Comorbid Substance Use. *Clinical Psychology & Psychotherapy* 2011;18(5) 426-437.
- [46] Drake RE, Mercer-McFadden C, Mueser KT, McHugo GJ, Bond GH. Review of Integrated Mental Health and Substance Abuse Treatment for Patients with Dual Disorders. *Schizophrenia Bulletin* 1998;24(4) 589-608.
- [47] Gonzalez G, Feingold A, Oliveto A, Gonsai K, Kosten TR. Comorbid Major Depressive Disorder as a Prognostic Factor in Cocaine-Abusing Buprenorphine-Maintained Patients Treated with Desipramine and Contingency Management. *The American Journal of Drug and Alcohol Abuse* 2003;29(3) 497-514.
- [48] Daughters SB, Braun AR, Sargeant MN, Reynolds EK, Hopko DR, Blanco C, et al. Effectiveness of a Brief Behavioral Treatment for Inner-City Illicit Drug Users with Elevated Depressive Symptoms: The Life Enhancement Treatment for Substance Use (LETS Act!). *Journal of Clinical Psychiatry* 2008;69(1) 122-129.
- [49] Markowitz JC, Kocsis JH, Christos P, Bleiberg K, Carlin A. Pilot Study of Interpersonal Psychotherapy Versus Supportive Psychotherapy for Dysthymic Patients with Secondary Alcohol Abuse or Dependence. *Journal of Nervous and Mental Disease* 2008;196(6) 468-474.
- [50] Glasner-Edwards S, Tate SR, McQuaid JR, Cummins K, Granholm E, Brown SA. Mechanisms of Action in Integrated Cognitive-Behavioral Treatment Versus Twelve-Step Facilitation for Substance-Dependent Adults with Comorbid Major Depression. *Journal of Studies on Alcohol and Drugs* 2007;68(5) 663-672.
- [51] McCullough JP. *Treatment for Chronic Depression - Cognitive Behavioral Analysis System of Psychotherapy (CBASP)*. New York: Guilford Press; 2000.
- [52] McCullough JP. *Skills Training Manual for Diagnosing and Treating Chronic Depression - Cognitive Behavioral Analysis System of Psychotherapy (CBASP)*. New York: Guilford Press; 2001.

- [53] Penberthy JK. CBASP for Co-Occurring Chronic Depression and Alcohol Dependence. In: Belz, Caspar, Schramm (Eds). CBASP in Practice - Basic Concepts and New Developments. New Jersey: John Wiley & Sons; 2012
- [54] McCullough JP. Patient's Manual for CBASP. New York: Guilford Press; 2003.
- [55] McCullough JP. Treatment for Chronic Depression: Cognitive Behavioral Analysis System of Psychotherapy (CBASP). *Journal of Psychotherapy Integration* 2003;13 241-263.
- [56] McCullough JP. Treating Chronic Depression with Disciplined Personal Involvement. New York: Springer Science + Business Media; 2006.
- [57] McCullough JP, Lord BD, Conley KA, Martin AM. A Method for Conducting Intensive Psychological Studies with Early-Onset Chronically Depressed Patients. *American Journal of Psychotherapy* 2010;64(4) 317-337.
- [58] Hirschfeld RMA, Dunner DL, Keitner G, Klein DN, Koran LM, Kornstein SG, et al. Does Psychosocial Functioning Improve Independent of Depressive Symptoms? A Comparison of Nefazodone, Psychotherapy, and their Combination. *Biological Psychiatry* 2002;51(2) 123-133.
- [59] Manbe R, Arnow BA, Blasey C, Vivian D, McCullough JP, Blalock JA, et al. Patient's Therapeutic Skill Acquisition and Response to Psychotherapy, Alone, and in Combination with Medications. *Journal of Psychological Medicine* 2003;33(4) 693-702.
- [60] Nemeroff CB, Heim CM, Thase ME, Klein DN, Rush AJ, Schatzberg AF, et al. Differential Responses to Psychotherapy Versus Pharmacotherapy in the Treatment of Patients with Chronic Forms of Major Depression and Childhood Trauma. *Proceedings of the National Academy of Sciences* 2003;100(24) 14293-14296.
- [61] Santiago NJ, Klein DN, Vivian D, Arnow BA, Blalock JA, Koscis JH, et al. The Therapeutic Alliance and CBASP-Specific Skill Acquisition in the Treatment of Chronic Depression. *Cognitive Therapy & Research* 2006;29(6) 803-817.
- [62] Schatzberg AF, Rush AJ, Arnow BA, Banks PLC, Blalock JA, Borian FE, et al. Chronic Depression: Medication (Nefazodone) or Psychotherapy (CBASP) is Effective When the Other is Not. *Archives of General Psychiatry* 2005;62(5) 513-520.
- [63] Schramm E, Zobel I, Dykieriek P, Kech S, Brakemeier E-L, Külz A, et al. Cognitive Behavioral Analysis System of Psychotherapy Versus Interpersonal Psychotherapy for Early-Onset Chronic Depression: A Randomized Pilot Study. *Journal of Affective Disorders* 2011;129(1-3) 109-116.
- [64] Kocsis JH, Gelenberg AJ, Rothbaum BO, Klein DN, Trivedi MH, Manber M, et al. Cognitive Behavioral Analysis System of Psychotherapy and Brief Supportive Psychotherapy for Augmentation of Antidepressant Nonresponse in Chronic Depression: The REVAMP Trial. *Archives of General Psychiatry* 2009;66(11) 1178-1188.
- [65] Schramm E, Reynolds CF. Where Do We Go From Here? Response to REVAMP. Electronic letter, *Archives of General Psychiatry* 2010.
- [66] Cinciripini PM, Blalock JA, Minnix JA, Robinson JD, Brown VL, Lam C, et al. Effects of an Intensive Depression-Focused Intervention for Smoking Cessation in Pregnancy. *Journal of Consulting & Clinical Psychology* 2010;78(1) 44-54.

- [67] Blalock JA, Fouladi RT, Cinciripini PM, Markowitz JC, Klein DN, Rothbaum BO, et al. Cognitive and Behavioral Mediators of Combined Pharmacotherapy and Psychotherapy of Chronic Depression. *Cognitive Therapy & Research* 2008;32(2) 197-211.
- [68] Walter H, Berger M, Schnell K. Neuropsychotherapy: Conceptual, Empirical, and Neuroethical Issues. *European Archives of Psychiatry & Clinical Neuroscience* 2009;259 S173-S182.
- [69] Sobell LC., Sobell MB. Timeline Follow-Back: A Technique for Assessing Self-Reported Alcohol Consumption. In Litten R, Allen J. (Eds.) *Measuring Alcohol Consumption - Psychosocial and Biochemical Methods*. Totowa, NJ: The Humana Press; 1992. p41-72.
- [70] Hamilton M. A Rating Scale for Depression. *Journal of Neurology, Neurosurgery, & Psychiatry* 1960;23 56-62.