ASAM American Society *of* Addiction Medicine

Impact Assessment of Cognitive Behavioral Therapy on Co-Occurring Substance Use & Depressive Disorders

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Cc: Voices of Hope, Association of Recovery Community Organizations

CBT & Comorbidity: Impact Assessment of Cognitive Behavioral Therapy on Co-Occurring Substance Use & Depressive Disorders

Introduction

In 2015, the American Society of Addiction Medicine (ASAM) recommended that "pharmacotherapy in conjunction with psychosocial treatment should be considered for patients with opioid use disorder and a co-occurring psychiatric disorder" [1]. Furthermore, ASAM also determined that more research was needed to determine "which concurrent psychosocial treatments are most effective for different patient populations" [1]. To these ends, this paper seeks to answer the following question: Among patients with co-occurring substance use and depressive disorders (CSUDDs), what is the effect of integrating cognitive behavioral therapy with pharmacology (ICBT+P) – in comparison to integrating Twelve-Step Facilitation (TSF+P) – on depression and substance use outcomes?

Background

The presence of patients with CSSUDs is common nationwide, with nearly half of all individuals with a substance use disorder (SUD) reporting some lifetime experience with depression [5]. As "the most common comorbid psychiatric disorder among [individuals who use illicit substances]," major depressive disorder (MDD) has been a long-standing subject of study within the field of addiction medicine [5][7]. While pharmacotherapy is effective in treating MDDs and SUDs separately, studies have shown that the co-occurrence of these disorders can

complicate and hinder a patient's treatment – "regardless of whether the intervention address[es] the substance use or the depression" [4]. Simply put, a relapse can lead to a depressed mood, and a depressed mood can lead to a relapse [1][5]. These cyclical characteristics make identifying a comprehensive treatment and integrating it with pharmacotherapy critical to the long-term health and recovery of patients with CSUDDs [3].

To this end, researchers have identified ICBT+P as a potential treatment for CSUDDs. Cognitive behavioral therapy is best described as a set of psychiatrist-led therapy sessions during which patients identify cognitive factors that negatively and unconsciously influence their thoughts and behaviors [1][6]. Ultimately, supporters of CBT assert that it is through the conscious recognition and change of these factors that undesired behaviors can be stymied – and that ICBT+P can comprehensively meet the physical and psychological needs of a treatment for CSUDDs [6].

To determine the treatment's efficacy, ICBT+P has been compared with the well-established practice of TSF+P in treatments of CSUDDs. Twelve-Step Facilitation is an evidence-based model of group therapy which uses a concrete set of steps (i.e.: acceptance, surrender, etc.) to improve the substance use outcomes (SUOs) of its participants [3]. TSF has been also shown to significantly improve the depression outcomes (DOs) of its participants, which is likely a result of the model's emphasis on community-based recovery both during and after clinical treatment [4][7].

Despite the widespread practice of TSF+P treatments, there is evidence to show that ICBT+P treatments can be more effective in treating CSUDDs – with improved substance use outcomes and comparable depression outcomes. Studies have concluded that ICBT+P results in improved and stabilized SUOs, whereas TSF+P treatments consistently project significantly

greater usages of illicit substances following the end of the treatment period [Figure 1] [4][7]. The TSF+P model relatively improves on the DOs of the ICBT+P treatment, which researchers have hypothesized is the result of consistent access to community and social support systems [Figures 2 & 3B] [4][7]. However, researchers have concluded that DOs for both models of treatment are "ultimately comparable," and – even if they were not – TSF's improvements in DOs would appear to be at the cost of participants' SUOs, which eliminates any real advantage for its use as a treatment of CSUDDs [4].

Additionally, ICBT+P has been shown to have an improved impact among CSUDD patients with serious neurological impairments. A recent study led by Dr. Eric Granholm found that – a year after completing a 6-month treatment – patients with poor neuropsychological functioning who received ICBT+P over TSF+P had the best SUOs of any other group in the study and were the only group projected to ultimately improve on their percentage of days abstinent [Figure 3A] [4]. All ICBT+P groups saw their mean PDA improve over some point in the study, whereas the average SUOs of TSF+P participants did not improve over any point during or following treatment [4]. For these reasons, ICBT+P can serve as a treatment for CSUDDs that is comparable – and sometimes superior – to the long-standing practice of TSF+P [4].

In defense of CBT, it is important to document and recognize the weaknesses of the treatment model. Firstly, as a model of psychotherapy, CBT cannot be the subject of a double-blind study, as both the patients and their supervising counselors must be aware of the treatment's protocol [2]. This may lead to results influenced by placebo effects, which should be counteracted through research which compares ICBT+P to solely pharmacological research [2]. Secondly, researchers led by Dr. Sarah Hunter have hypothesized that CBT be less effective for

non-white and non-male participants among patients for CSUDDs, as they collected data which indicates ethnic disparities in SUOs for CBT treatment [5]. However, issues pertaining to ethnic identity may not be inherent to the model, but may instead stem from an insensitive implementation of the CBT model, as the researching team failed to identify potential lapses in their treatment of non-white participants and instead substituted race to "serve as a proxy for socioeconomic status" [5]. Regardless, additional research is necessary to determine what changes – if any – should be implemented in the clinical model of ICBT+P for CSUDDs.

Recommendations

Based on the research collected, we have demonstrated that ICBT+P improves and stabilizes the SUOs and DOs of participants with CSUDDs in ways that are respectively superior and comparable to the results of TSF+P treatments. ICBT+P prioritizes the long-term psychological recovery of its participants by addressing the neurological nature of CSUDDs and by teaching participants self-actualization and self-management skills in relation to their diseases [1][6]. Therefore, we conclude that the skills taught by CBT are critical to the long-term recovery of patients diagnosed with CSUDDs and recommend that ICBT+P is nationally implemented as a clinical treatment for CSUDDs and that ASAM recognize ICBT+P as a treatment for CSUDDs that is superior to TSF+P.

Clinical implementations of the ICBT+P model have projected depression outcomes for participants that are either comparable – or insignificantly inferior – to those of the TSF+P model [4][7]. Furthermore, researchers have hypothesized that the ICBT+P model disfavors non-white and non-male participants, although such conclusions overlook human bias as a factor of the treatment's implementation [6]. As a result, we recommend that ICBT+P be simultaneously subject to clinical research for the purposes of identifying and rectifying weaknesses within the

existing model. We also recommend that relevant psychosocial concepts (e.g.: interpersonal relationships, cognitive bias, communal recovery) are discussed and prioritized during CBT modules in order to counteract participant conclusions that are unconsciously racialized or overtly self-dependent [4][6][7]. Following treatment, patients should be encouraged to actively attend a support group – either digitally or locally – for the purposes of accountability during long-term recovery [4].

Additionally, we have demonstrated that cognitive behavioral therapy teaches self-reflective skills to high-risk CSUDD patients that would likely not be learned through usual care or Twelve-Step Facilitation [4]. Furthermore, ICBT+P has been shown to drastically improve SUOs and DOs of CSUDD patients with neurological impairments – significantly more than similar patients in TSF+P treatments [4]. Therefore, we also recommend that ICBT+P be offered to CSUDD patients with severe neurological impairments in favor of TSF+P.

Conflicts of Interest: None.

Referenced Figures

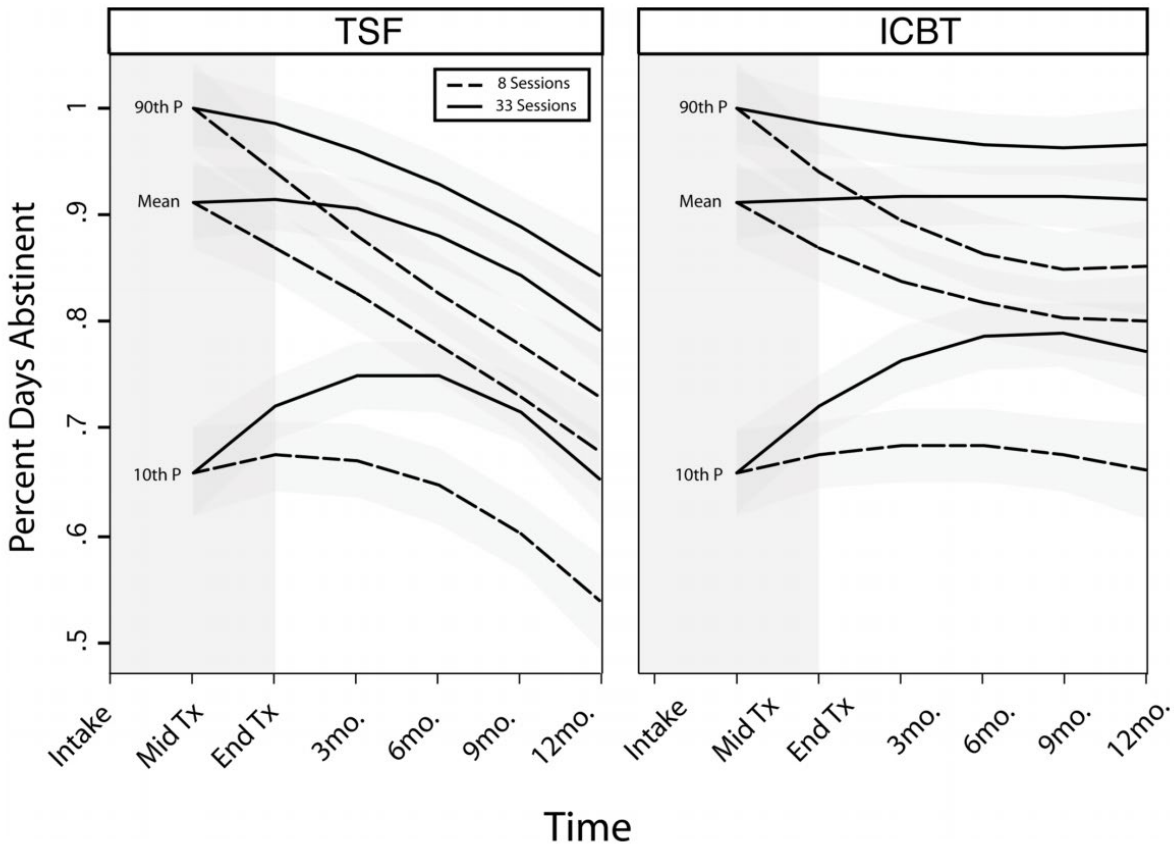

Figure 1: Lydecker, et. al.: Clinical Outcomes of Integrated Treatment for CSUDDs [7]

Modeled Substance Use Trajectories Based on Group Attendance, Early Treatment Response. (The three sets of lines represent predicted PDA when Phase I PDA is at the ninetieth, fiftieth and tenth percentile, respectively.) [7]

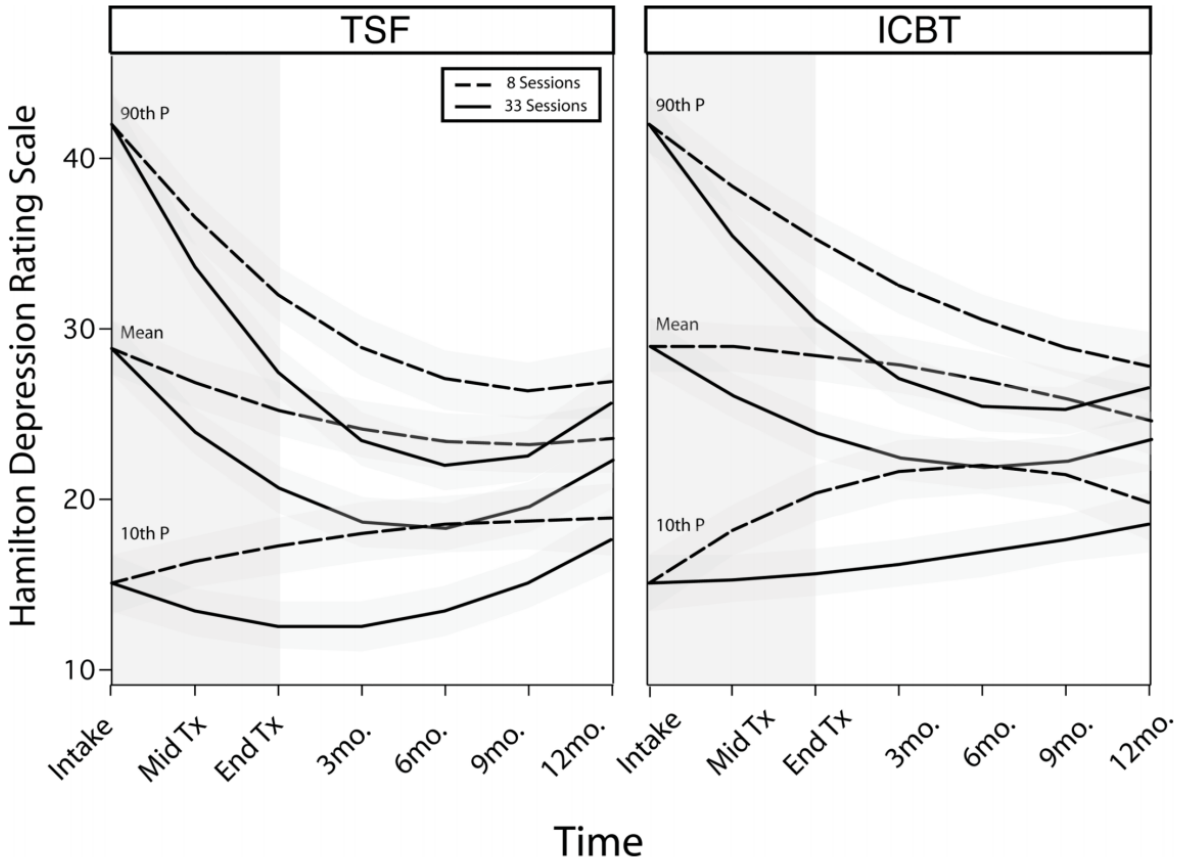

Figure 2: Lydecker, et. al.: Clinical Outcomes of Integrated Treatment for CSUDDs [7]

Modeled Depression Trajectories Based on Group Attendance, Intake Levels of Depression. (The three sets of lines represent predicted PDA when Phase I PDA is at the ninetieth, fiftieth and tenth percentile, respectively.) [7]

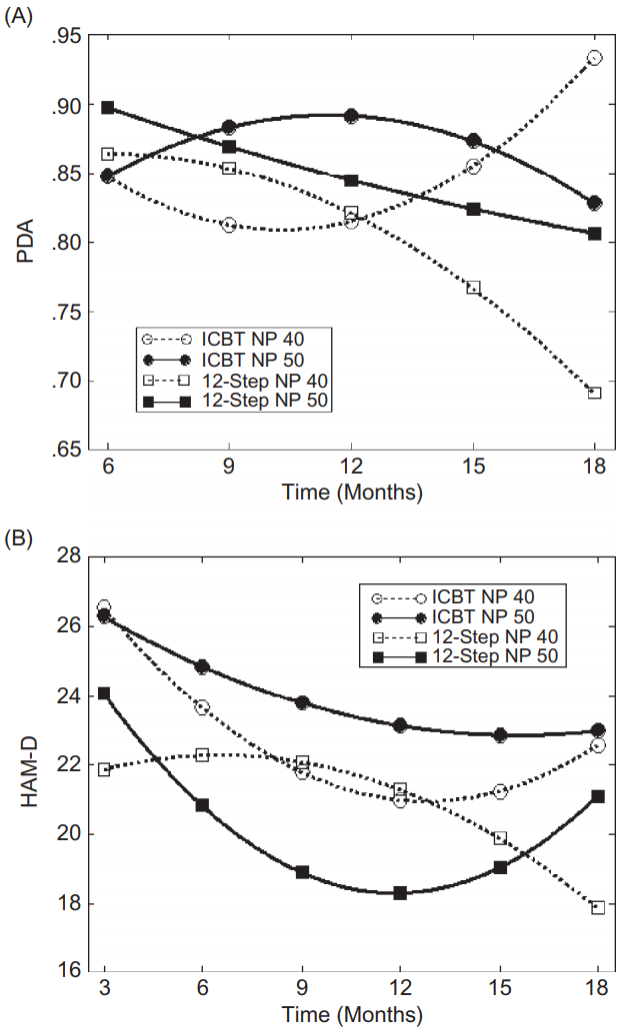

Figure 3: Graham, et. al.: Neuropsychological Functioning, Treatment Outcomes for CSUDDs [4]

"Model-derived trajectories…for: A, percent days abstinent in the past 30 days (PDA); and B, Hamilton Depression Rating Scale total (HAM-D) across all assessments (treatment ended at 6 months) for participants with a global neuropsychological (NP) T-score of 40 and 50 in each therapy group, with baseline HAM-D score set at the mean level of 28 and mid-treatment PDA score set at the mean level of .90" [4].

References

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