Short Communication

Dialectical behavior therapy with American Indian/Alaska Native adolescents diagnosed with substance use disorders: Combining an evidence based treatment with cultural, traditional, and spiritual beliefs

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HIGHLIGHTS

• The first investigation of the use of DBT with this population (AI/AN)
• 96% of adolescents were recovered using clinical significant change criteria.
• The effect size of treatment was large, using Cohen’s d (d = 1.315).
• Paired, two-tailed T-Test yielded a P value that was less than 0.0001.
• Significant positive outcomes blending cultural, traditional practice with DBT

ARTICLE INFO

Article history:
Received 29 May 2015
Received in revised form 7 July 2015
Accepted 22 July 2015
Available online 26 July 2015

Keywords:
Dialectical Behavior Therapy
Substance use disorders
American Indian
Alaska Native
Outcome research
Clinical significance
Youth Outcome Questionnaire

ABSTRACT

This pilot study examined pre to post-change of patients in a substance use residential treatment center that incorporated Dialectical Behavior Therapy with specific cultural, traditional and spiritual practices for American Indian/Alaska Native adolescents. Specifically, the incorporation of cultural, spiritual and traditional practices was done while still maintaining fidelity to the evidence based treatment (DBT). 229 adolescents participated in the study and were given the Youth Outcome Questionnaire-Self-Report version at pre-treatment and post-treatment and the total scores were compared. The results of the research study showed that 96% of adolescents were either “recovered” or “improved” using clinical significant change criteria. Additionally, differences between the group’s pre-test scores and post-test scores were statistically significant using a matched standard T-test comparison. Finally, the effect size that was calculated using Cohen’s criteria was found to be large. The results are discussed in terms of the implication for integrating western and traditional based methods of care in addressing substance use disorders and other mental health disorders with American Indian/Alaska Native adolescents.

1. Introduction

Due to a multiplicity of factors, there has been a paucity of research that has been able to look at the efficacy of evidence based treatment (EBT) with American Indian/Alaska Native (AI/AN) adolescents in all therapeutic settings including substance use. Adding to the difficulty, EBTs have often lacked the ability to incorporate traditional AI/AN beliefs that are critical and central in working with this population, yet maintain fidelity to the EBT manual. In a review of mental health treatment efficacy with Al/AN up to 2012, Gone and Trimble (2012) report that “although a large subset of publications on AI/AN mental health is devoted to psychosocial interventions with these populations, these are almost exclusively review, reflection, and advocacy pieces rather than systematic empirical investigations of therapeutic processes and practices with AI/AN participants.”

Adding to the complexity, many providers believe that they already have an understanding of what works with the AI/AN population by...
utilizing traditional interventions and just need more funding to demonstrate efficacy. Equally vocal are the providers in AI/AN communities who argue that EBTs foster accountability and require claims of efficacy to meet the more rigorous scientific standards (Gone & Alcántara, 2007).

Proposed in this research is a possible bridge to these two seemingly divergent views through the use of Dialectical Behavior Therapy (DBT). DBT is an EBT that teaches a core skill called mindfulness. Multiple research studies have noted that mindfulness is a concept that is found in most cultures throughout history (Siegel, 2007). Many traditional and spiritual practices have at their core a mindfulness component (Linehan, 2015a, 2015b). Consequently, mindfulness can be the vehicle to incorporate traditional and spiritual practices into an evidence-based approach to mental health that utilizes mindfulness as part of a personalized treatment.

As an example, Dr. Linehan, the developer of DBT reviewed several American Indian traditional practices to include the sweat lodge ceremony, talking circle, and smudging as described to her by a practicing medicine man. She determined that they met the mindfulness, manualized goals of DBT and thus would allow a provider to deliver DBT personalized treatment while incorporating traditional interventions.

DBT is well established as an evidenced-based treatment for co-morbid disorders that include borderline personality disorder (Linehan et al., 1999, 2002, 2009) as well as substance use (Neacsiu and Linehan, 2014). Additionally, recent research found DBT to be effective in decreasing the severity of substance use alone when compared to treatment as usual (Whiteside, 2011). Overall, at least 25 randomized control trials (RCTs) have been conducted on DBT. More recent randomized controlled trials (RCTs) support DBT's efficacy with youth (Miller & Rathus, 2012).

DBT targets the behaviors of substance use hierarchically by first addressing behaviors that may be seen as life threatening (suicidal behavior that increase with substance use) and secondly, behaviors that may interfere with treatment (using while in treatment). Thirdly, it targets substance use behaviors that interfere with quality of life (probation, suspension, loss of employment) and lastly increases behavior skills. In addition to the core DBT skills, DBT also has specific skills for the treatment of addictions.

In an effort to introduce an evidence based practice (DBT) into a traditional AI/AN Youth Residential Treatment Center (RTC), DBT was selected as the core milieu treatment at an Indian Health Service operated youth RTC for substance use. The impact of incorporating DBT, on the overall outcome of the residents, was assessed by using the Youth Outcome Questionnaire-Self Report edition (YOQ-SR) pre and post-treatment. We hypothesized that treatment would be associated with clinically significant change (Jacobson & Truax, 1991) for the individual patient and statistically significant group differences from pre-test to post-test. Approval for this study was obtained by the Phoenix Area Office, of the Indian Health Service, Institutional Review Board.

2. Method

2.1. Participants

Patients were 229 American Indian/Alaska Native youth aged 12–18 years of age (x = 16, sd = 1.34) admitted and discharged from the RTC between January 2010 and July 2013 (average length of stay, x = 120 days). The patients came from 39 unique tribes. Approximately 10% of the patients had been admitted in the past to inpatient services and 80% had received outpatient services, 77% of patients had a primary diagnosis of cannabis and alcohol use. Other substances used included amphetamine (5%), opiates (5%), cocaine (5%), inhalants (3%) and hallucinogens (1%). 75% of patients had co-occurring diagnoses with 65% classified as mood disorders, 25% as ADHD, 5% as Eating Disorders and 5% as Psychotic disorders.

Treatment included all aspects of comprehensive DBT (Linehan, 1993a, 1993b) with the DBT addiction skills added. Counselor Aide staff provided daily coaching on the use of DBT skills throughout the day in order to strengthen skill acquisition and improve generalization. Prior to the beginning of the study, mental health and substance abuse counselors were required to attend the 2 week Dialectical Behavior Therapy Intensive Training™ through Behavioral Tech, LLC. Moreover, twice yearly, on-site training and monthly consultation for all staff was provided by a Behavioral Tech, LLC trainer. All counselors/counselor aides were required to attend a weekly DBT adherence group. The milieu schedule also included school, recreational therapy, health education, and Alcoholic Anonymous 12 step groups.

Additionally, in consultation with tribal leaders from the RTC governing body, a medicine man/spiritual counselor from a local tribe was credentialed to provide traditional practices of weekly sweat lodge ceremonies, smudging ceremonies and talking circles. In an effort to improve fidelity, the spiritual counselor attended two on-site trainings (7 total days) in the implementation of DBT and instruction on mindfulness. The spiritual counselor helped explain the traditional practices as they related to the mindfulness skill being taught in group. Adolescents participated in traditional activities provided by the medicine man once a week, throughout the entire day.

2.2. Measures

The YOQ-SR is a 64 item, self-report measure that takes approximately 10–15 min to complete. Each question is scored on a 5 point Likert scale with 0 of the items scored negatively and then summed to obtain the total score. The total score is an indication of distress in an adolescent’s life and the range is −16 to 240. The Y-OQ was developed was normed with a Native American sample (n = 110) and the statistical analysis showed that there was no difference between races on the total score (Y-OQ-SR Administration and Scoring Manual, 2003). The Y-OQ has a four-week test–retest reliability of .83 and an internal consistency reliability of .97. The concurrent validity of the Y-OQ with the Child Behavior Checklist (CBCL; Achenbach, 1991) and the Conners’ Parent Rating Scale (CPRS; Conners, Sitarenios, Parker, & Epstein, 1998) ranges from the .80s to the low .90s. Sensitivity and specificity for distinguishing clinical from community normal samples is high and it has been widely accepted for tracking treatment outcome and assessing psychosocial distress (Burlingame, Wells, Lambert, & Cox, 2004).

The cut off score that establishes the difference between normal and clinical populations is 47. A patient’s total score over 47 would be considered in the clinical range and a score below 47 would be considered in the community normal range. The Reliable Change Index (RCI) is a score that indicates the minimal amount of change needed to be 95% confident that the two scores (pre- and post-treatment) are different. The RCI for the YOQ-SR is 18.

2.3. T-test and Cohen’s d data analysis

The statistical significance of change from pre-test to post-test was based on a paired T-test using a critical value of .05. Cohen’s d was used to estimate the effect size of treatment by subtracting the post-treatment Y-OQ mean from the pre-treatment mean and dividing by the pooled standard deviation of the two time periods.

2.4. Clinically significant and reliable change on the YOQ-SR

The clinical significance of change was estimated by the use of formulas recommend by Jacobson and Truax (1991) by using the cut score and the RCI for the YOQ-SR. In order for an individual’s change to be considered clinically significant (CS) the patient’s post-test score must cross below the cutoff score of 47 and have an RCI greater than