Addictive Behaviors Reports 3 (2016) 21–27

Contents lists available at ScienceDirect

Addictive Behaviors Reports

journal homepage: www.elsevier.com/locate/abrep

Pilot outcome results of culturally adapted evidence-based substance use disorder treatment with a Southwest Tribe

Kamilla L. Venner [a,b,*], Brenna L. Greenfield [c], Kylee J. Hagler [a,b], Jeremiah Simmons [a], Donna Lupee [d], Everett Homer [d], Yvette Yamutewa [d], Jane Ellen Smith [a]

[a] University of New Mexico, Department of Psychology, 1 University of New Mexico, MSC 03 2220, Albuquerque, NM 87131, United States
[b] Center on Alcoholism, Substance Abuse, and Addictions, 2650 Yale Blvd. SE, Albuquerque, NM 87106, United States
[c] University of Minnesota, Duluth, 1049 University Dr, Duluth, MN 55812, United States
[d] Anonymous Tribal Agency, United States

ARTICLE INFO

Article history:
Received 14 July 2015
Received in revised form 16 November 2015
Accepted 17 November 2015
Available online 18 November 2015

Keywords:
Substance use disorder
Treatment
American Indian
Cultural adaptation
Motivational interviewing
Community reinforcement approach

ABSTRACT

Introduction: Although American Indians/Alaska Natives (AI/ANs) have exhibited high rates of alcohol and drug use disorders, there is a paucity of substance use disorder treatment outcome research. In addition, there exists controversy about whether evidence-based treatments (EBTs) are culturally appropriate given that they were derived mainly by and for non-Hispanic White populations and do not explicitly include aspects of AI/AN culture and worldview.

Methods: In this pilot study, we collaboratively culturally adapted two EBTs, Motivational Interviewing and Community Reinforcement Approach (MICRA), and evaluated substance use and psychological outcomes at 4- and 8-months post-baseline assessment. In preparation for a larger randomized clinical trial (RCT), eight tribal members (75% male) participated in this pilot treatment study. Measures included substance use, urine screens, self-efficacy, psychological distress, and hopelessness. All participants completed follow-up assessments at 4- and 8-months. Due to small sample size, effect sizes were calculated to evaluate outcomes pre- and post-treatment.

Results: Despite high rates of abstinence at baseline, percent days abstinent (PDA) increased at the 8-month time point for the most commonly used substances (alcohol, Hedges's $g = 0.59$, and marijuana, $g = 0.60$) and for all substances combined (excluding tobacco, $g = 0.56$). Improvements in psychological distress ($g = -0.66$) and 5 of the 7 Addiction Severity Index domains (range of $g = -0.42$ to -0.98) also emerged.

Conclusions: Results suggest that culturally adapted EBTs yield significant improvements in alcohol use, psychological distress, and legal problems among AI/ANs. Future research using RCT methodology is needed to examine efficacy and effectiveness.

1. Introduction

American Indian/Alaska Native (AI/AN) individuals report high rates of past-month illicit drug use (12.3% vs. 9.5% non-Hispanic Whites; Substance Abuse and Mental Health Services Administration (SAMHSA), 2014) and past year substance use disorder (SUD; 14.9% of AI/ANs vs. 8.4% of non-Hispanic Whites; Substance Abuse and Mental Health Services Administration (SAMHSA), 2014). Furthermore, the rate of alcohol-induced deaths among AI/ANs is 5.2 times that of the general population (Indian Health Service (IHS), 2014), and AI/AN evidence the highest rates of drug-induced deaths of all racial/ethnic populations (Centers for Disease Control and Prevention (CDCP), 2013). One way to address these health status disparities is to partner with AI/AN tribes to identify and make available efficacious SUD treatments. The current study presents prospective results from a small feasibility pilot trial ($n = 8$) of two evidence-based treatments (EBTs) with a rural Southwest AI tribe.

Applying EBTs with racial/ethnic minorities engenders controversy. A review of EBT outcome studies indicates an underrepresentation of racial/ethnic minority participants, leading several researchers to argue that EBTs do not have evidence of efficacy with racial/ethnic minority participants (e.g., Eap & Hall, 2007; Hall, 2001; Miranda et al., 2005; U.S. Department of Health and Human Services (DHHS), 2001). In considering treatment for AI/ANs, Calabrese (2008) argued against EBTs because they are secular and dyadic in nature, compared to AI/AN traditional healing that focuses on sacred aspects of well-being in the community, often with a collective worldview. Gone (2008) interviewed a Native American elder who believed that EBTs do not

* Corresponding author at: 1 University of New Mexico, MSC03 2220, Albuquerque, NM 87131, United States.
E-mail address: kamilla@unm.edu (K.L. Venner).

http://dx.doi.org/10.1016/j.abrep.2015.11.002

acknowledge or value indigenous ways of healing but rather "brain-wash me to be a Whiteman" (p. 381). Similarly, Moore, Aarons, Davis, and Novins (2015) found that treatment administrators and providers were concerned as to whether EBTs have cultural relevance. Yet, it would seem unjust to deny ethnic minority populations access to EBTs that have been shown to ameliorate SUDs in other racial/ethnic groups (Miller, Villanueva, Tonigan, & Cuzmar, 2007). Similar to mainstream non-Hispanic White populations (Moos & Moos, 2006; Witkiewitz, Dearing, & Maisto, 2014), there are likely many paths to resolving substance use problems among AI/ANs, and one such way is through EBTs.

Dissemination of EBTs from research to practice has been slow (McLellan, 2006). In a survey of privately funded SUD treatment agencies ($n = 67$ rural programs; $n = 238$ urban), the percentage of programs that reported EBT adoption ranged from 36%–55% (Knudsen, Johnson, Roman, & Oser, 2003). Many barriers to dissemination have been documented: lack of clinician knowledge and skills for implementation, cost of training, distrust of research, and different values between researchers and clinicians (Addis & Krasnow, 2000; Garner, 2009; Miller, Sorensen, Selzer, & Brigham, 2006; Moore et al., 2015). Despite SUD program reports of using EBTs, researchers have found little correlation between counselor self-report and independent observer report of EBT fidelity (Levin, Owen, Stinchfield, Rabinowitz, & Pace, 1999; Miller & Mount, 2001). There is a clear need for effectiveness trials in community settings to decrease the research-to-practice gap; this study is a first step in implementing evidence-based, behavioral SUD treatments with AI/ANs in a community setting.

To date, only two randomized controlled SUD treatment studies employing EBTs with AI/ANs have been published (Greenfield & Venner, 2012). One study was a randomized controlled trial (RCT) comparing a manualized job skills-based intervention delivered in the participants' Native language to a 40-minute informational video ($N = 120$; Foley et al., 2010). At 3 month follow-up, there were no between group differences for employment or substance use outcomes. However, there were small improvements in job outcomes and significant improvements in substance use in both groups. The other published study was a pharmacological RCT with 101 rural Alaskans ($n = 68$ Alaska Natives [AN]; O'Malley et al., 2008). Participants were randomized to one of three arms: 1) placebo, 2) naltrexone plus placebo, and 3) naltrexone plus sertraline, and were followed for up to 68 weeks. Those in the naltrexone only and in the naltrexone plus sertraline group evidenced significantly higher rates of total abstinence and percent days abstinent (PDA) than did those in the placebo group. These patterns of findings were similar in the AN only analyses but did not reach statistical significance. In sum, two AI/AN communities were receptive to EBTs and participants evidenced improved substance use outcomes, though no differential improvement between non-behavioral treatment (pharmacological or employment) and control conditions was found.

Cognitive behavioral therapy (CBT) is one EBT that has demonstrated positive outcomes for some ethnic minority populations for several diagnoses (Voss Horrell, 2008). For example, culturally adapted CBT for depression in a primary care setting resulted in good outcomes for a sample comprised of a majority of racial/ethnic minorities, both for prevention and treatment (Muñoz & Mendelson, 2005). Another research team focused on low-income, ethnic minority women with mild to moderate depression and found better outcomes for CBT than treatment as usual (TAU) when outreach efforts, childcare, and transportation were provided (Miranda et al., 2003). One review of two clinical trials did not find ethnic differences in substance use outcomes for CBT substance use disorder treatment between African American and non-Hispanic White populations (Milligan, Nich, & Carroll, 2004), but there is little research with Asian populations and no RCTs of CBT with AI/ANs. The only published effort to test a CBT approach with AI/AN was an adaptation of the Community Reinforcement Approach (CRA; Meyers & Smith, 1995) used in an inpatient setting that incorporated other cultural healing approaches such as the Sweatlodge (Miller, Meyers, & Hiller-Sturmhöfel, 1999). They reported preliminary findings of improved substance use outcomes at 6 months, including many participants with continuous abstinence and some who were drinking with few or no related problems. The flexibility of the CRA framework and its extensive menu of treatment options were found to be easily adaptable for use with AI/ANs.

Another EBT, motivational interviewing (MI), has yielded promising evidence suggesting that it may be appropriate for AI/ANs. A meta-analysis that collapsed across various behavioral health outcome measures (e.g., substance use, eating disorders, HIV risk reduction, and water purification) determined that the effect size for MI was twice as large for ethnic minority samples as it was for non-Hispanic White samples (Hettema, Steele, & Miller, 2005). There are also applicable data from Project MATCH, a large multi-site trial examining efficacy of Motivational Enhancement Therapy (MET), CBT, and Twelve Step Facilitation approach (Project MATCH Research Group, 1997). AIs who received MET, consisting of MI plus personalized feedback (Miller, Zweben, DiClemente & Rychtarik, 1995b), had lower drinking intensity at follow-up than AI/ANs in the Twelve-Step Facilitation approach or CBT (Villanueva, Tonigan, & Miller, 2007). MET has also been employed as part of an enhanced case management prevention approach for Plains AI women of child-bearing age (May et al., 2008). For those who were drinking, 6-month follow-ups revealed significant decreases in the number of heavy drinking days, albeit it was no longer significant at the 12-month follow-up. A feasibility study of brief MI in an urban, Aboriginal primary care setting reported MI to be culturally appropriate (Brady, Sibthorpe, Bailie, Ball, & Sumnerdodd, 2002). Positive outcomes evidenced in these studies indicate the acceptability of MI for at least some AI/AN clients.

In the present study, our reservation-based tribal partner requested that MI and CRA be adapted to be more culturally congruent and acceptable. While the scientific process would encourage testing the original EBT with fidelity, Burlew, Copeland, Ahuama-Jonas, and Calsyn (2013) cite several reasons to consider adapting EBTs when transporting an EBT to a new population. Four of the six reasons apply to our tribal partner: (1) an unadapted EBT would be unacceptable; (2) an adaptation would increase attractiveness, engagement, retention, and outcomes; (3) cultural traditions influence behavior; and (4) it is more respectful to the group's knowledge and worldview. From an ecological system perspective (Bronfenbrenner, 1979), behavioral health problems such as SUDs are understood as arising not only from individual factors (psychosocial), but also from social factors (e.g., poverty, discrimination, & historical trauma) and institutional factors (e.g., inherent oppression, lack of equal access to resources and power). Experts in cultural adaptations recommend changes to reflect cultural worldviews and values, social determinants of health, language and idioms, communication style adaptations, and spirituality and traditional practices (e.g., Calabria, Clifford, Shakeshaft, & Doran, 2012; Hall, 2001).

The present study is a small pilot trial of MI and CRA (MICRA) adapted by a team of university and reservation-based partners for treatment seeking participants residing in a rural Southwest reservation. This feasibility trial was the first phase of a larger, on-going RCT comparing adapted MICRA to standard outpatient treatment at the tribal recovery center. The goal was to pilot recruitment and assessment procedures while testing the adapted MICRA intervention with 8 participants. During this process, treatment counselors worked to gain competency in MI and certification in CRA independently, as rated by MI and CRA experts. The research assistant achieved certification on substance use outcome measures. Here we examine the baseline characteristics of this sample and report on the outcomes of adapted MICRA at 4- and 8-month follow-ups.

2. Material and methods

2.1. Sample

Inclusion criteria included a DSM-IV-TR (American Psychiatric Association, 2000) SUD diagnosis, tribal enrollment, active seeking of SUD treatment, and the ability to participate in English (although all