Treating Youth Substance Use & Co-Occurring Disorders: A Closer Look at Effects on Mental Health Outcomes

ADAI | ALCOHOL & DRUG ABUSE INSTITUTE

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Introduction and Purpose

In December 2015, at the request of the Washington State Division of Behavioral Health and Recovery (DBHR), the University of Washington Alcohol & Drug Abuse Institute (ADAI) put forth an inventory of evidence-based programs and practices (EBPs) for treating substance use in adolescents and (12-17 years old) and young adults (18-20 years old). The analysis focused exclusively on substance use-related outcomes and relied on the definitions of "evidence-based," "research-based," and "promising practices" established in the Revised Code of Washington, RCW 71.24.02. In this update, we examined the **evidence for mental health outcomes** in four of the previously evaluated treatments, Adolescent Community Reinforcement Approach (ACRA), Motivational Interviewing (MI), Cognitive Behavioral Therapy (CBT), and Seeking Safety for adolescents (SSA). Two previously unevaluated treatments, Dialectical Behavior Therapy (DBT) and ENCOMPASS, were examined for inclusion in the inventory. The full inventory of all youth treatments (updated in December 2016) is online at: http://adai.uw.edu/pubs/pdf/2016youthtxsudmh_inventory.pdf

Definitions set forth in RCW 71.24.025 are described below:

- An **evidence-based** program or practice is one that has been 1) tested in heterogeneous or intended populations with 2) multiple randomized or statistically controlled evaluations, or one large multiple site randomized or statistically controlled evaluation, where 3) the weight of the evidence demonstrates sustained improvements in at least one outcome. "Evidence-based" also means a program or practice that 4) can be implemented with a set of procedures to allow successful replication and, when possible, is determined to be cost-beneficial.
- A **research-based** program or practice is one that has been 1) tested with a single randomized, or statistically controlled evaluation, 2) demonstrating sustained desirable outcomes; or where the weight of the evidence review supports sustained outcomes.
- A **promising** program or practice is one that, 1) based on statistical analyses or a well-established theory of change, 2) shows potential for meeting the evidence-based or research-based criteria.

Evidence-Based Practices

The **Adolescent Community Reinforcement Approach (ACRA)** is a behavioral treatment for adolescents and young adults 12 to 24 years old that seeks to increase the family, social, and educational/vocational reinforcement to support recovery. Sessions address individuals alone, caregivers alone, and individuals and caregivers together. Clinicians choose from a variety of procedures that address the individual's assessed needs, such as problem-solving skills, communication skills, and positive recreational activities, with the goals of eliminating substance use problems and improving life satisfaction. Practicing new skills during sessions and homework assignments are critical components of the treatment.

While ACRA was rated as evidence-based according to its substance use-related outcomes, it has shown mixed results on mental health-related outcomes in adolescents with SUD. In a study of 180 homeless adolescents, compared to treatment as usual (TAU), ACRA showed greater decreases in depression and internalizing behaviors and a greater increase in social stability (Slesnick et al., 2007). However, in a later study of 270 homeless adolescents and young adults, in which ACRA was compared to Motivational Enhancement Therapy, and case management, ACRA was no more effective than case management with regard to depressive symptoms, percent days of homelessness, coping behaviors, internalizing and externalizing behaviors, and likelihood of being victimized. These mixed results indicated

that more research is needed in adolescents with SUD to evaluate the benefit of ACRA for mental health-related outcomes.

Motivational Interviewing (MI) is "is a collaborative, person-centered form of guiding to elicit and strengthen motivation for change" (Miller and Rollnick, 2009). In MI, the counselor strategically listens for, elicits, and responds selectively to the client's own "change talk," which is the client's expressed motivation for a target behavior change. Conversely, the counselor seeks to diminish defenses of the status quo.

While MI was rated as evidence-based according to its substance use-related outcomes, at this time it has very little evidence for its effectiveness on mental health-related outcomes in adolescents with SUD. Virtually all of the relevant studies found for the inventory of EBPs that examined MI did not take anything other than substance use-related outcomes into account. One possible exception is a study by Slesnick et al. (2013) that compared MI to ACRA and Ecologically Based Family Therapy. A secondary analysis of this study by Guo et al. (2014) found that adolescents' depressive symptoms were significantly reduced in each treatment to 2 years post-baseline. However, Guo et al. described the intervention as Motivational Enhancement Therapy (MET) while Slesnick et al. had described it as MI. In the analysis by Guo et al., those receiving MI ("MET") showed a more rapid reduction in depressive symptoms but a quicker increase in symptoms compared with those receiving EBFT. These results are encouraging, but lack of clarity about the nature of the intervention and the lack of sustained outcomes suggests that more research is needed to substantiate the benefit of MI for mental health-related outcomes in adolescents with SUD.

Cognitive Behavioral Therapy (CBT) emphasizes coping skills, problem-solving, and changing problematic behaviors and thought processes. The primary goal of CBT for substance abuse is to master skills to maintain abstinence from alcohol and other drugs or to minimize the harm that comes from substance use. Identifying and coping with high-risk situations is a major emphasis. This type of treatment often employs role playing and homework practice exercises to help persons to develop, rehearse, and enact new skills to meet their own particular needs.

Motivational Enhancement Therapy and Cognitive Behavioral Therapy (MET/CBT) is usually composed of 2 individual sessions of Motivational Enhancement Therapy (MET) and 3, 5 or10 weekly group sessions of CBT (called MET/CBT5, MET/CBT7, and MET/CBT12, respectively). MET sessions focus on factors that motivate participants who abuse substances to change and usually involve assessment and personal feedback on substance use.

Results of studies of CBT and MET/CBT on mental health-related outcomes in adolescents with SUD have been mixed. An adaptation of individual CBT called Individual Cognitive Problem Solving Therapy (ICPST) by Azrin et al. (2001) tested in adolescents with symptoms of conduct disorder plus substance use disorder or symptoms of oppositional defiant disorder plus substance dependence showed improvements in conduct, problem-solving, depression, satisfaction with life, school performance, and employment. An adaptation of CBT for substance disorder integrated with CBT for suicidality (I-CBT) developed by Esposito Smithers et al. (2011) included individual adolescent, family, and parent training sessions. Compared to enhanced treatment as usual, I-CBT demonstrated favorable outcomes for general impairment, anxiety, suicide attempts, psychiatric hospitalizations, emergency department evaluations, and arrests.

A group form of CBT developed by Kaminer and Burleson (1999) demonstrated no significant effects for mental health-related outcomes compared to an interactional group process treatment. A later study by the same authors (Kaminer et al., 2002) comparing CBT to group psychoeducational therapy found short-term benefits for CBT in male clients but not female clients with regard to school problems and family problems. CBT was no better than PET with regard to peer problems, legal problems, or psychological problems. A group form of CBT integrated with family therapy (IFCBT) developed by Latimer et al. (2003) showed favorable outcomes for rational problem solving and learning strategy skills and lower levels of problem avoidance compared to a psychoeducation curriculum. Parents exposed to IFCBT exhibited better scores on measures of communication, involvement, control, and values/norms.

A study by Waldron et al. (2001) that compared individual MET/CBT12 to psychoeducational group treatment found no significant effects of treatment on either the Internalizing or the Externalizing Scale of the Child Behavior Checklist or in the adolescent or primary caregiver family conflict scores. A study by Stanger et al. (2009) compared group MET/CBT12 with and without contingency management. Adolescents in both conditions improved on measures of internalizing and externalizing psychopathology, and parents in both conditions showed parenting improvements.

A quasi-experimental study by Ramchand et al. (2011) compared 12-month outcomes for adolescents who received MET/CBT5 in studies by Dennis et al. (2004) to those of treatment programs at three community-based programs selected for evidence of efficacy. While results favored MET/CBT5 for substance use-related outcomes, there were no differences in outcomes between MET/CBT5 and the community-based outpatient programs with respect to emotional problems.

Research-Based Practices

Dialectical Behavior Therapy (DBT) is a comprehensive cognitive-behavioral treatment originally developed as an outpatient treatment for chronically suicidal individuals with borderline personality disorder (BPD). In its standard form, outpatient DBT consists of four components: (1) group skills training in mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation; (2) individual therapy to enhance motivation and successful skills implementation; (3) phone coaching on skills implementation; and (4) a therapist consultation team. Standard DBT is considered evidence based for mental health-related outcomes in this population. It has been adapted or modified by the treatment developers to address substance use disorders among those with BPD (**DBT-S**). DBT has separately been adapted for use with adolescents (**DBT-A**) with suicidality or self-harm but not substance use disorders.

A randomized controlled trial of standard DBT among women with BPD in the Netherlands did not show changes in substance use-related outcomes for women with co-occurring BPD. No other randomized controlled trials of standard DBT examining substance use-related outcomes were found. Thus, standard DBT is not supported for SUD among adult women with BPD, and there is little reason to believe standard DBT would be effective for substance use disorders in adolescents. Two small randomized controlled trials of DBT-S showed sustained desirable substance use-related outcomes from DBT-S among adult women (aged 18 and older) with BPD; thus, DBT-S is considered evidence-based in this population. A small trial of DBT-S showed positive effects among adult women with ED and SUD, but the failure of the control condition to retain participants precluded experimentally controlled analysis; thus, DBT-S is considered promising among adult women with SUD and co-occurring disorders other than BPD. Notably, DBT-S has not been tested in adolescents, with male participants, or with those without co-occurring disorders; however, there is reason to believe that DBT-S may be effective in adolescents as well as adults, men as well as women, and those without as well as those with co-occurring disorders; thus, DBT-S is considered promising in these populations. The research on DBT among adolescents has focused on adolescents with suicidality and/or symptoms of BPD without examining SUD. Only one completed randomized controlled trial was found (Mehlum et al., 2014, 2016), and it showed sustained favorable outcomes for self-harm, suicidal ideation, hopelessness, and depressive or borderline symptoms and for global level of functioning among adolescents with suicidality and/or features of borderline personality disorder. Thus, DBT-A is considered research based for mental health-related outcomes.

Promising Practices

Seeking Safety is a counseling model to help people attain safety from trauma and/or substance abuse that directly addresses both trauma and addiction, maintaining a focus on the present rather than requiring clients to delve into the trauma narrative. Often used as a general model to teach coping skills, Seeking Safety can be conducted with adolescents or adults; in group or individual format; in outpatient, inpatient, or residential settings; and for any length of treatment, type of trauma, or type of substance. The Seeking Safety curriculum includes 25 topics that can be presented in any order and covered as time allows: Introduction/Case Management, Safety, PTSD: Taking Back Your Power, When Substances Control You, Honesty, Asking for Help, Setting Boundaries in Relationships, Getting Others to Support Your Recovery, Healthy Relationships, Community Resources, Compassion, Creating Meaning, Discovery, Integrating the Split Self, Recovery Thinking, Taking Good Care of Yourself, Commitment, Respecting Your Time, Coping with Triggers, Self-Nurturing, Red and Green Flags, Detaching from Emotional Pain (Grounding). Life Choices, and Termination.

Seeking Safety is well-supported with research evidence for adults with PTSD and substance abuse. We could find only one small RCT examining Seeking Safety for Adolescents . In this study of 33 adolescent girls with PTSD, significant benefits were found for substance use-related outcomes (effects from drug use, social benefits of drug use, polydrug use, psychological benefits drug use, transitional drug use preoccupation with drugs, loss of control, reasons for using, and substance use disorder) as well as mental health-related outcomes (anorexia, somatization, major

depression, sexual concerns, and sexual distress). While these results are encouraging, more studies are needed to substantiate the effectiveness of Seeking Safety for this population.

ENCOMPASS is an integrated 16-week treatment for adolescents and young adults with co-occurring mental health and substance use disorders. It is an adaptation and hybridization of individual CBT and contingency management. Psychiatric medication is incorporated as deemed appropriate. In ENCOMPASS, an initial standardized clinical and diagnostic evaluation and clinical assessment is conducted by a psychiatrist or other qualified physician or prescribing nurse practitioner with a CBT therapist. The assessment examines a range lifetime and current substance use and use disorders and psychiatric diagnoses. Urine drug screening is performed throughout treatment. Weekly individual CBT sessions may be combined with up to 2-4 family sessions as clinically indicated, targeting substance abuse and addressing psychiatric symptoms that are often triggers for substance use/relapse. ENCOMPASS utilizes contingency management in the form of motivational incentives to reinforce both treatment compliance and abstinence.

ENCOMPASS also seeks to involve patients in pro-social activities that enhance self-esteem and mastery and strengthen affiliation with non-drug using peers and positive adult role models, e.g., activities offered through community recreation centers, etc. An ENCOMPASS Consulting Team provided by the treatment developers works closely with treatment programs to identify existing resources offering a variety of appropriate activities in the local community and to review cases, medication management issues, and implementation issues. The clinic medical director and the CBT therapists meet in a brief separate weekly review of all cases. The CBT therapists receive additional monthly clinical supervision and fidelity adherence from the ENCOMPASS Consultant Team CBT trainer/supervisor.

There have, as yet, been no published, randomized controlled trials examining the efficacy or effectiveness of ENCOMPASS. According to the treatment website, ENCOMPASS is supported based on the results of three (unpublished, non-randomized) controlled clinical trials led by the developer, for which methodological details are not provided. 498 adolescents and young adults (ages 13-21) who participated in these studies had an average of 3 substance abuse or dependence diagnoses and 2-3 co-occurring psychiatric disorders (conduct disorder, depression, anxiety, ADHD). 75%-85% of participants completed the studies. Reduction in drug use was reportedly comparable or greater than that reported for other evidence-based substance treatments in young people with less severe substance abuse and psychopathology. Rates of remission or reduction in psychiatric symptoms were > 50% for conduct/behavior problems, > 45% for ADHD, and > 60% for depression. These rates are reportedly comparable to or greater than those reported for pharmacotherapy or psychotherapy interventions for these disorders in youths who do not have substance use disorders. A one-year post-treatment follow-up study reportedly showed sustained treatment gains or continued improvement in conduct problems, psychiatric symptoms including depression, and reduction in drug use during the year following treatment.

Summary and Conclusions

While there is a substantial body of literature examining treatments in adolescents with substance use disorders on the one hand and adolescents with mental health disorders on the other hand, relatively few studies have looked at co-occurring disorders in adolescents or mental health outcomes in adolescents with substance use disorders, and results of these studies have been mixed. Treatments that are considered evidence-based for substance use disorders in adolescents generally showed mixed results for mental health-related outcomes and, thus, would probably be best considered promising, pending more research to substantiate their effectiveness for mental health-related outcomes. As is the case with DBT, while there may be literature that exists for adults for co-occurring disorders, such results do not necessarily to adolescents and young adults, who have different needs and circumstances than adults over the age of 21 years. More studies are needed to demonstrate the effectiveness of treatment approaches in adolescents and young adults with co-occurring disorders.

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