Substance Use Disorders
Center of Excellence

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Integrated Treatment for Co-occurring Mental Health and Substance Use Disorders

Research Brief

Introduction

An estimated 21.5 million U.S. adults experienced co-occurring mental health and substance use disorders (SUDs), hereinafter referred to as co-occurring disorders, in the past year, yet 40% received no treatment for either condition (Substance Abuse and Mental Health Services Administration [SAMHSA], 2023). Compared to those with a single diagnosis, individuals with co-occurring disorders often face more serious functional challenges, higher mortality, and elevated risks of homelessness, incarceration, and suicide (SAMHSA, 2021; Tweed et al., 2022). Despite clear recommendations for integrated care, most people still receive treatment for only one condition (71.6% of adolescents and 59.1% of adults) in the past year (SAMHSA, 2023). Historically, mental health and SUD services have been delivered separately, leading to fragmented care, inconsistent treatment messages, and poor coordination among providers, factors that increase the risk of relapse and dropout of treatment (Padwa et al., 2015; Yule & Kelly, 2019). Integrated care models, which aim to address both conditions through coordinated, multidisciplinary teams, offer a more comprehensive approach. However, research on these models remains somewhat limited and mixed, especially when it comes to substance use outcomes, treatment fidelity, and medication management (Yule & Kelly, 2019; Wüsthoff et al., 2014). Therefore, this research brief aims to synthesize current findings on integrated treatment for co-occurring disorders, with attention to what works, where gaps remain, and how the field can move forward in supporting this high-need population.

Literature Search Method

Research databases including PsycINFO, Medline and CINAHL were searched in March 2024 using terms related to co-occurring disorders, integrated treatment and outcomes. The search was limited to publications from 2015 and on, yielding to a total of 686 results. These results were exported to an online review program called Rayyan, which de-duplicated the articles, yielding 460 studies. Review articles were identified and screened for their relevance to the integrated treatment for co-occurring disorders. Nine review articles were eligible for inclusion. The Cochrane Library database was also searched, resulting in one relevant review article, and leading to a total of 10 articles.

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Findings

1. Overall Effectiveness of Integrated Treatment for Co-occurring Disorders

Four reviews examined the effectiveness of integrated treatment (Hunt et al., 2019; Chetty et al., 2023; Horton, 2020; Karapeddy, 2019) and one examined the effectiveness of co-located care for co-occurring disorders (Glover-Wright et al., 2023). Another review (Fantuzzi & Mezzina, 2020) focused on the organization of community health services for individuals with co-occurring disorders but also discussed the effectiveness of specific integrated treatment models including Integrated Dual Disorder Treatment (IDDT) and Assertive Community Treatment (ACT).

Within a larger Cochrane review of psychosocial interventions for co-occurring disorders, Hunt et al. (2019) compared integrated models of care with standard care for their effectiveness. In their conceptualization scheme, integrated care must have included the following: "1) assertive community outreach to engage and retain clients and to offer services to reluctant or uncooperative clients, 2) staged interventions to reduce substance use, and 3) adherence to the integrated team philosophy" (p. 21). The review included four randomized controlled trials (RCTs), published between 1995 to 2006. The authors did not find any clear difference in substance use and mental health outcomes between the two treatment conditions.

Chetty et al. (2023) conducted a systematic review to compare the effectiveness of integrated and non-integrated treatment for co-occurring disorders. The review included 11 RCTs published between 2009 and 2018. Compared to non-integrated treatment, integrated treatment resulted in greater reductions in psychiatric symptoms including post-traumatic stress disorder (PTSD), anxiety and depressive symptoms, and eating disorder symptoms. Only one study examining psychotic symptoms found comparable improvements for both integrated and non-integrated treatment conditions. Most studies did not find any significant differences in substance use outcomes between integrated and non-integrated treatment models. For both psychiatric and SUD symptom improvement, dialectical behavioral therapy (DBT), integrated cognitive behavioral therapy (ICBT), and concurrent treatment of PTSD and SUDs using prolonged exposure (COPE) were the most effective interventions. Results for treatment retention were mixed, with two studies finding that retention rates were significantly higher for integrated treatment compared to non-integrated treatment conditions whereas four studies not finding any significant differences in retention (Chetty et al., 2023). Few studies in the review found higher treatment completion rates for the non-integrated treatment groups.

Horton (2020) conducted a systematic review to explore the most effective approach for the treatment of co-occurring disorders among veterans. Nine research articles and two book chapters were reviewed. Horton found that the integrated therapies were more effective compared to sequential treatment of the conditions (e.g., treating SUD first then moving on to mental health issues).

Karapeddy (2019) conducted a systematic review of 12 studies, which were published between 2000 and 2013, to examine the effectiveness of integrated treatment and costs for the treatment of co-occurring disorders. The review found that integrated models were cost-effective and showed better outcomes in substance use and mental health compared to standard treatment.

In their review of 48 studies, Fantuzzi and Mezzina (2020) found that the majority of the studies identified integrated treatment as the "gold standard" treatment model (p. 303) where the same clinician or team provides both mental health and addiction treatment in a coordinated manner. Two prominent models emerged including IDDT and ACT, with some studies recommending their combination. Four out of six studies identified IDDT as the most effective treatment model for co-occurring disorders. Half of these studies recommended combining IDDT with ACT. When implemented with high fidelity to the model, this combination was linked to reduced hospital admissions, decreased alcohol use, and improved housing situations. The review also indicated that six studies pointed out ACT as the optimal treatment model.

2. Addressing Co-occurring PTSD and SUDs

Renaud et al. (2021) conducted a systematic review focused on treatment strategies for individuals with co-occurring PTSD and SUDs. The authors underscored the need for dual-disorder programs that directly integrate trauma-focused care and emotional regulation strategies alongside standard addiction treatment. Their review found that PTSD symptoms can significantly amplify substance cravings, especially when trauma-related and substance-related cues are experienced together. This craving response appears to be influenced not only by the negative emotional states but also by PTSD symptoms acting independently as powerful triggers. This reinforces the case for incorporating emotion regulation and trauma-focused content directly into SUD treatment programs.

The review also explored pharmacological strategies grounded in overlapping neurobiological mechanisms shared between PTSD and SUD (Renaud et al., 2021). Positive findings included the combined use of Disulfiram and Naltrexone for improving both alcohol use outcomes and PTSD symptoms. Other promising approaches included noradrenergic agents like Prazosin and Propranolol, and glutamatergic modulators such as Memantine, N-Acetyl-Cysteine, and Topiramate. These medications were often used in tandem with trauma-informed psychotherapies, especially Prolonged Exposure and Cognitive Processing Therapy, which are designed to target core PTSD features like emotion dysregulation and maladaptive trauma-related beliefs that can sustain or worsen substance use. One cited example involved a treatment combining prolonged exposure therapy with Naltrexone, which outperformed either intervention alone in reducing alcohol craving (Coffey et al., 2006, as cited in Renaud et al., 2021). The authors strongly advocated against postponing PTSD treatment until after individuals have achieved abstinence, arguing that the relationship between PTSD and substance use is bidirectional and mutually reinforcing.

In conclusion, Renaud et al. (2021) called for a paradigm shift in treatment philosophy, urging the integration of trauma-specific therapies into addiction care settings. They recommended a multi-modal approach that blends pharmacotherapy, trauma-informed psychotherapy, and supportive interventions to comprehensively address the complex needs of this population. The review also pointed to the importance of broadening future research to include additional substances and behavioral addictions to extend the reach and relevance of integrated treatment frameworks.

3. Challenges in the Treatment of Co-occurring Disorders Involving Pharmacotherapy

McCabe and Parrish (2018) conducted a literature review to examine the wide-ranging challenges faced when supporting individuals concurrently prescribed antipsychotic medications for severe mental illness (SMI) and opioid substitution therapy (OST) for SUDs — now referred to as Medication Assisted Treatment (MAT) or Medication for Opioid Use Disorder (MOUD). The authors focused particularly on the clinical, pharmacological, and systemic barriers that arise, especially for students and early-career professionals who often work with this complex population.

Medication management emerged as a significant concern due to the potential for drug-drug interactions. For example, combining OST/MAT/MOUD medications such as methadone with antipsychotics like quetiapine or risperidone can lead to increased sedation or destabilization of withdrawal symptoms, heightening overdose risk. While some atypical antipsychotics may pose fewer interaction risks, close monitoring remains essential to manage potential adverse effects. For providers to identify and appropriately address any clinical changes they observe, they need to stay informed about the pharmacological properties of substances their clients are using.

Treatment adherence was another critical challenge, often undermined by side effects, cognitive impairments, fear or mistrust of medications, and ongoing substance use. Accessing coordinated care posed additional barriers. Individuals with dual diagnoses may find themselves excluded from services or navigating fragmented systems grounded in conflicting philosophies, such as medical versus recovery-oriented approaches. Although integrated, team-based models are ideal, they can be difficult to implement without robust inter-agency collaboration. Many individuals in this population also have histories of unresolved trauma and may use substances like opioids to self-medicate emotional distress. Recognizing and addressing these patterns is vital for effective treatment.

The authors argued for a comprehensive care plan that addresses mental health and substance use within a unified framework for integrated treatment, rather than relying solely on medication or psychosocial support. They reference the National Institute for Health and Clinical Excellence (NICE, 2011) guidelines in supporting this dual-focus model, which has been associated with improved emotional wellbeing, reduced substance use, and stronger treatment engagement. Approaches like modified cognitive behavioral therapy (CBT), motivational interviewing (MI), and complementary services such as nutritional counseling are cited as valuable tools within a comprehensive plan. The article concludes by calling for systemic, collaborative care models to promote more meaningful and sustained outcomes.

4. Treatment Components for Youth with Co-occurring Disorders

Rosic et al. (2024) conducted a systematic review and critical interpretive synthesis focused on outpatient programs serving children and youth with co-occurring disorders. By drawing on both published literature and outreach to existing service programs, the authors identified 12 core components that characterize effective outpatient programs and developed a framework to describe how these components function and interact.

The resulting Framework of the Components of an Outpatient Child and Youth Concurrent Disorders Program outlines foundational constructs such as “Accessibility,” “Engagement,” “Family Involvement,” “Integrated Assessment,” “Psychotherapy for Patients,” “Psychotherapy for Caregivers/Families,” “Medication Management,” “Health Promotion,” “Case Management,” “Vocational Support,” “Recreation and Social Support,” and “Transition Services” (Rosic et al., 2024, p. 389). The prominent psychotherapy modalities for these 12 elements represent the essential building blocks of coordinated, responsive outpatient care for youth with concurrent disorders and are designed to guide program design, delivery, and quality improvement efforts. Psychotherapy for youth in outpatient concurrent disorders programs typically included MI, DBT (including adolescent-adapted versions), CBT, and psychoeducation, delivered individually and in groups. Some programs incorporated trauma-specific treatments like Seeking Safety and sensorimotor-based therapy, as well as mindfulness, narrative, art-based, interpersonal, and acceptance and commitment therapies. Peer-led recovery groups were also used. For caregivers and families, seven programs and both theoretical models offered supports such as psychoeducation groups, DBT skills training, Collaborative Problem Solving, caregiver coaching, community reinforcement and family training-based groups, and peer support, with some allowing caregiver participation even when the youth was not engaged in treatment.

In addition to these key components, the framework also identifies six contextual influences that shape how programs are implemented: “Philosophical orientation of the program,” “Models of care,” “Health system factors,” “Clinical service factors,” “Program development,” and “Community partnerships” (Rosic et al., 2024, p. 389). These contextual factors provide insight into the operational realities, value systems, and service structures that influence what care looks like on the ground.

By offering a synthesized model of outpatient programming, the framework serves as a practical and reflective tool for service development and evaluation. It also recognizes the multidimensional nature of integrated care. While not all programs may implement every component, the framework invites providers to assess how their services align with these best practice elements and where there may be opportunities to strengthen care coordination, advocacy efforts, and resource allocation.

5. Technology-based Interventions for Co-occurring Disorders

Sugarman et al. (2018) conducted a narrative review to assess the current state of research on technology-based interventions (TBIs) for individuals with co-occurring disorders. The review identified five distinct TBIs evaluated across six RCTs, with SHADE (Self-Help for Alcohol and other drug use and Depression) and VetChange demonstrated the strongest evidence. Both interventions, grounded in CBT and MI, were associated with reductions in substance use and psychiatric symptoms. Notably, computer-delivered SHADE performed comparably to therapist-delivered SHADE and required significantly less clinician time, with one trial showing superior alcohol reduction. In contrast, brief or low-intensity TBIs such as supportive text messaging or single-session interventions showed limited or short-term effects, suggesting duration and intensity may be important for sustaining treatment gains.

Beyond the RCTs, pilot studies demonstrated feasibility and acceptability for tools like DBT Coach (for individuals with borderline personality disorder and SUDs) and a disaster-response web-based program addressing depression, anxiety, and substance use. However, their clinical effectiveness awaits validation through controlled trials. Three RCTs are currently underway, including those evaluating the iTreAD platform (with added social networking), a veteran-focused intervention (Coming Home and Moving Forward), and a school-based prevention model (Climate Schools Combined). The majority of TBIs reviewed targeted alcohol use, depression, and anxiety. TBIs addressing eating disorders or psychosis remain notably underdeveloped.

The level of integration across TBIs varied, with SHADE and VetChange offering the most integrated strategies that addressed both types of problems together rather than separately. Declining engagement over time was a common issue, with several studies reporting low session completion. The review highlighted the need for strategies to improve engagement, determine optimal dosage, and address safety monitoring in TBIs without live therapist contact. Few studies examined implementation in real-world settings or clinician uptake. The authors conclude that while TBIs offer a promising, cost-effective approach to integrated care for individuals with complex comorbid needs, further rigorous trials and design innovations, such as incorporating biosensors, gamification, and platforms built specifically for digital delivery, are needed to advance the field.

Conclusion

The evidence regarding integrated treatment for co-occurring disorders presents a nuanced picture. While the Cochrane review (Hunt et al., 2019) found no clear differences between integrated care and standard care, another systematic review (Chetty et al., 2023) found that integrated approaches yield superior outcomes for psychiatric symptoms including PTSD, anxiety, depression, and eating disorders. However, findings on substance use outcomes remain mixed, with most studies showing comparable results between integrated and non-integrated approaches (Chetty et al., 2023). Two reviews add further support for integrated treatment, highlighting its effectiveness for veterans with co-occurring PTSD and SUDs (Horton, 2020) and its cost-effectiveness compared to standard treatment (Karapeddy, 2019). Fantuzzi and Mezzina (2020) identified IDDT and ACT as prominent models for the treatment of co-occurring disorders, with high-fidelity implementation of their combination showing positive outcomes in reducing hospitalizations and improving housing stability. Despite some inconsistencies across studies, especially regarding the conceptualization of integrated treatment, the overall evidence supports integrated treatment as a preferred approach for individuals with co-occurring disorders, though further research is needed to determine which specific integrated models work best for particular client populations.

Multiple studies highlight the importance of integrated approaches that simultaneously address both mental illness and SUDs rather than treating them sequentially or in isolation. Renaud et al. (2021) specifically challenged the perception of postponing trauma treatment until after substance use recovery, emphasizing the bidirectional relationship between PTSD and SUDs that necessitates concurrent intervention. This integrated treatment approach is also supported by McCabe and Parrish (2018), who recommended comprehensive care that address the unique pharmacological challenges faced by individuals with co-occurring disorders.

The framework developed by Rosic et al. (2024) provides a practical roadmap for implementing youth-focused outpatient programs through 12 core components, ranging from accessibility and family involvement to integrated assessment and transition services. This framework acknowledges both the therapeutic elements and contextual factors that impact program effectiveness. Additionally, Sugarman et al. (2018) point to promising technology-based interventions that could expand access to integrated care, with evidence supporting the efficacy of comprehensive digital platforms that incorporate cognitive-behavioral and motivational strategies.

These findings suggest that effective treatment for co-occurring disorders requires multi-modal approaches that combine pharmacotherapy, psychotherapy, supportive interventions, and provide technology-based interventions. Though there is a need for clear conceptualization of integrated treatment and more research to investigate its effectiveness, the current literature supports moving toward holistic, trauma-informed, and technology-enhanced integrated care models that address the full spectrum of client needs rather than compartmentalizing treatment.

Recommended Citation

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