Mental Illness as a Multilayered Risk Factor for SUD

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Context:

The confluence of impact of Mental Illness on those living with Substance Use Disorder is profound and complex. To best support our clients' needs, it helps for professionals be up-to-date on current research's reflections on what can cause and sustain SUD, as well as what can hamper interventions and client success.

So, let's talk about it!

Learning Objectives:

By the end of our event, participants will be able to:

- Recite the multiple ways and manners in which mental illness intersects with substance use disorder.
- Explain how this information can affect our treatment efforts and interventions.
- Relay at least 4 opportunities for improved responses or integration of strategies to mitigate the negative impact of mental illness on substance use treatment efforts.

Scope of the Problem:

- When considering impact and opportunities, it can help to consider the scope and prevalence of a challenge.
- World-wide approximately 13% of humanity experiences mental health challenges.
- World-wide, approximately 0.2% percent experience SUD

(Castaldelli-Maia & Bhugra, 2022; Mehta, 2024)

However, . . .

As a nation, our statistics are more dire:

- In 2023, 16.7% (or 48.5 million Americans) met the criterial for a substance use disorder.
- 7.9% (20.4 million Americans) suffered from both a mental health disorder and substance use disorder in 2023.

(American Addiction Centers, 2025).

Approximately, 23.4% (or 61.5 million) of adults in the USA experienced mental illness in 2024 (NAMI, 2024).

The challenges:

- There are multi-directional considerations of interplay and impact between mental illness and substance use.

- Understanding the multilayered impact is helpful when reflecting on treatment opportunities and efficacy.

Bi-directional Impact:

- Mental Illness causes vulnerabilities for substance use and SUD
- SUD causes vulnerabilities for mental illness and challenges to mental health intervention
- SUD affects neurological structures, processes, and cognitive patterns

Reason:

- The ways in which substances affect neurological processes and social experiences can cause or exacerbate untreated mental illness (Volko & Blanco, 2023; Jones & Vigo, 2023).

Conversely:

- Many people with untreated mental illness self-medicate with substances, despite the added challenges they bring . . .

Impact of Mental Illness on SUD:

Mental illnesses cause the following challenges re: substance use disorder:

- Vulnerability to self-medicate via substance use
- With mood disorders with mania, or developmental disorders, there can be increased impulsivity, resulting in substance use.
- Mental illnesses can affect client judgment, leading to increased risk of substance use.
- Mental health diagnoses can cause avolition, and a lessening of engagement in SUD treatment

SUD's Impact on Mental Illness:

SUD has been identified as impacting mental illnesses in the following ways:

- Substances can short-circuit the reward channels of the brain, causing increased salience and dependence.
- Substances can reduce judgment and impulse control
- Substances can increase MH challenges (Volkow & Blanco, 2023)
  - Substances can increase the drive for additional use and amounts
  - Substances can decrease the amount of self-control that people are experiencing
  - Substance use can exacerbate anxiety, mood dysregulation, lesson executive functioning
  - Substances can hamper self-awareness

Connecting the dots . . .

As you reflect on your clients and their presentations, what is coming up for you considering this information?

What is making more sense? Less sense?

Are you feeling opportunity or overwhelm?

A question of dopamine:

Dopamine is a critical component in modulating mood, cognition, and a person's behavior.

- Dopamine is centralized in the functioning of the brain's reward system. Substance reliance rewires those reward systems toward altered patterns of reinforcement and behavior.
- This results in maladaptive reward-seeking behaviors.

Dopamine irregularities:

When there are dopamine irregularities, there can be an increase in cross-substance vulnerability.

- People are more likely to become reliant on multiple substances when there are dopamine deficits.
- Without adequate dopamine stores, people seem to be drawn to and more securely linked to substances than those with adequate dopamine levels

(Hatoum et al., 2023).

Dopamine and compulsion.

Disruption of dopamine-driven reward systems from other sources (eg substances, technology, food), can lead to compulsive use of the alternative source, sleep disturbances, and depression (Speranza et al., 2025).

Dopamine and Genetics:

According to Speranza et al. (2025), epigenetic changes in dopamine activity (passed down via rna- or fathers) can affect future children for generations.

This means that more study needs to be made on how epigenetics impact cognitive processing and compulsion and potential vulnerability to substance use disorder.

Dopamine and SUD:

Methamphetamines were found to disrupt dopamine signaling, interrupting cognitive processes and the brain's malleability.

Opioids have affected similar processes in humans, suggesting that dopamine targeted interventions can help address both addiction and neuropsychiatric disorders

(Speranza et al., 2025).

Additional genetic vulnerability:

Research has identified a genetic marker for susceptibility to Substance Use Disorder from our metabolic and receptor genes.

The genetic influences of how our bodies process substances and how they affect our receptors can amplify resistance or vulnerabilities to substances and risk for dependence.

(Volkow & Blanco, 2023)

Reflecting on Genes . . .

There has been historic research and reflections on genetic influences on substance use disorder (Nature vs Nurture)- how does this information land for you as a provider?

How do you imagine sharing this information with a client without communicating doom and ill-fated conclusions?

Considering the Complexities:

It can be overwhelming to consider intervention when faced with multiple points of impact, so let's break down ways in which we can leverage this information to inform and affect our practice strategies.

Organizing Strategies:

Considering how many points of impact we have identified, I am going to organize our potential strategies in the following ways:

- Prevention Efforts
- Mental Health Focused Interventions
- Behavioral Health Focused Interventions
- Medicine Based Interventions
- Alternative Interventions

Prevention Efforts:

Research guides us to reflect on the following prevention strategies to prevent Substance Use Disorder in the context of mental illness:

- Addressing the risk factors in children and adolescents prior to substance interaction.
  - Supporting mental health needs, social stressors, and physical threats
  - Teaching coping mechanism and stress reduction techniques

(Volkow & Blanco, 2023)

Additional Prevention Efforts:

Authors McLellen et al (2022), also encourage us to create a new category of attention and intervention called “pre addiction, similar to “prediabetes”

Pre-addiction is the space in which people are experimenting with substances, but not yet reliant. Efforts in this space could include:

- Psychoeducation
- Increased screening
- Ongoing monitoring and support

Preaddiction Debate:

Despite some National Organizations' efforts at introducing preaddiction as an opportunity to increase focus on "Mild" substance use, there are others who feel that to do so increases the sense of othering clients can feel, creates more challenges, and furthers a fuzzy definition.

Rather, the request is that we create a "continuum" model of care where we focus on problematic behaviors vs the "stage" of use (Boness, 2023).

Where do you land?

Considering both sides of the debate, where do you land on the idea of “preaddiction” being a term that helps or harms?

Mental Health Focused Interventions:

According to the World Health Organization (2025), the following are some opportunities to affect wellbeing around substance use via mental health interventions:

- Exercise for anxiety management
- Engage Digital Interventions
  - Leveraging AI in the form of chatbots, motivational enhancements, and monitoring to support clients
- Recognize and support the interplay between the mental, neurological, and substance use (MNS) as an intervention model (Jones & Vigo, 2023)

Recommended Therapies:

The WHO also suggested the following therapeutic frameworks for SUD:

- Motivational Enhancement Therapy
- Eye Movement Desensitization and Reprocessing Therapy (EMDR) for stress and PTSD
- Problem Solving Therapy
- Interpersonal Therapy (IPT)
- Life Review Therapy

Behavioral Health Focused:

The following methods are identified as positive strategies to combat SUD:

- Decriminalizing substance use to ensure disclosure and treatment (Volkow & Blanco, 2023)
- Trauma specific interventions to address historic experiences resulting coping with substance use
- Polytherapy- a mix of clinical interventions and modalities to address the complexities (WHO, 2023)

Medicine Based Interventions:

Medications for Opioid Use Disorder (MOUD)- support the symptoms and active challenges in SUD for opioid use by replacing illegal or unregulated opioids with buprenorphine, methadone, and naltrexone.

MOUD is still considered the gold standard for intervention for SUD typed as “Moderate” or “Severe” under the DSM 5 criteria.

Alternative Medicine Based Interventions:

The following medicine-based interventions are highly recommended by the WHO (2023):

- Nonsteroidal Anti-Inflamatory Drugs (NSAIDS)- address withdrawal pain; can prevent opioid addiction post medical procedures
- Selective Serotonin Reuptake Inhibitors (SSRI's)- allows for more mood stabilizing chemicals to be metabolized by the body
- Baclofen (for AUD) by suppressing dopamine release in response to alcohol consumption
- Ketamine treatment to address historic trauma

Alternative Interventions:

Alternative to medicinal, psycho-social, and behavioral interventions, we have:

- Neuromodulation (NM) interventions
  - Repetitive Transcranial magnetic stimulation (rTMS)
  - Transcranial direct current stimulation (tDCS)
  - Deep Brain Stimulation (DBS)

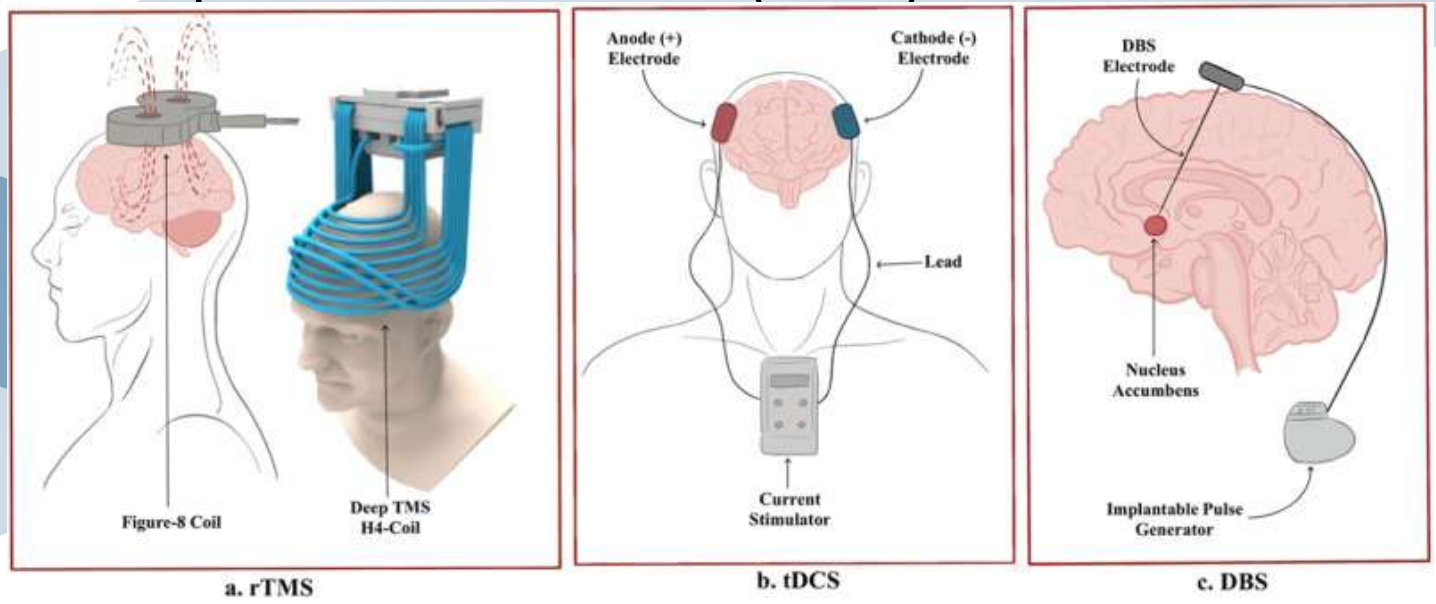

Image Courtesy of Mehta et al., 2024

Positives vs Negatives:

Positives of Neuromodulation:

- High efficacy
- Gains across socio-demographics
- Not contingent on intellectual capacity or ability to participate in talk treatment
- Reduces risk factors for SUD challenges

Negatives of Neuromodulation:

- Expensive
- Not clearly understood
- Not often covered by insurance
- Not enough data to advocate for universal access

Integration Reflection:

Considering your role, training, setting, and client populations, what is feeling more accessible to you re: interventions and focal points?

Are there things you wish you could implement but are facing challenges or “road blocks” against doing?

Conclusion:

The interplay of mental illness and substance use disorder is complex and challenging to unravel. It is further impacted by individual life experiences and internal resources.

As providers, understanding the process as best we can is the first step to helping those affected.

Thank you for joining me in this reflection!

Resources:

World Health Organization's Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders:

https://www.who.int/publications/i/item/9789240084278

Motivational Enhancement Therapy Manual:

https://www.niaaa.nih.gov/sites/default/files/match02.pdf

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The ATTC Network Mission & Vision

- Accelerate the adoption and implementation of evidence-based and promising addiction treatment and recovery-oriented practices and services;
- Heighten the awareness, knowledge, and skills of the workforce that addresses the needs of people with substance use or other behavioral health disorders; and
- Foster regional and national alliances among practitioners, researchers, policy makers, funders, and the recovery community.

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