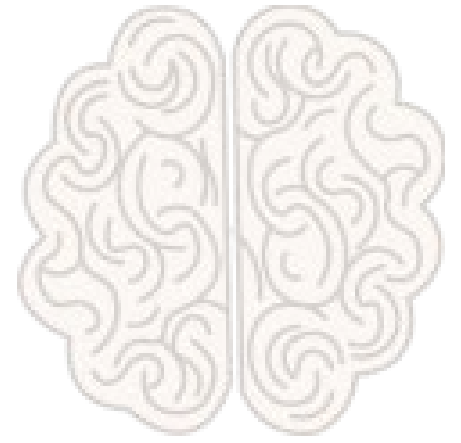




RELIEF
MENTAL HEALTH

THE MIND SOLUTION



Exploration of Neuro-Augmenting Therapies for Treatment Resistant Mental Health Diagnoses



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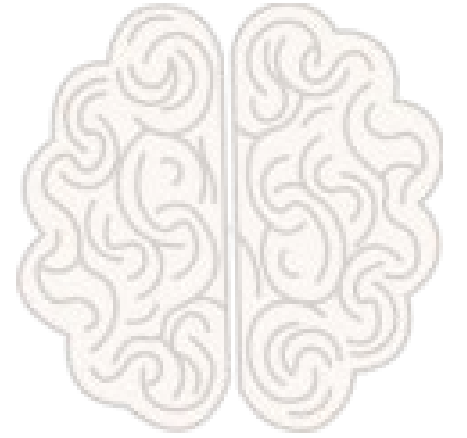
Learning Objectives

History behind Augmentation Therapies for Treatment Resistant Conditions

Brief Review of Transcranial Magnetic Stimulation and Psychedelic Assisted Therapy with Ketamine as 2 growing methods of Augmentation Therapy

How to work collaboratively with your clients to determine if either will support progress in their treatment





Understanding Neuro-Augmentation

Augmentation Therapy

Augmentation therapies have been used in a variety of contexts for decades.

- Medication Augmentation
- Pain management
- Neurofeedback
- ECT
- Imbedded Vagal Nerve Stimulation



Augmentation Therapy (cont.)

It's evolution appears to be heading towards more ways that are easily accessible and manageable for the everyday person with little physical impact.



Augmentation Therapy (cont.)

It also appears to be one of the newest waves to work with Treatment Resistant Disorders, who have persisted to be resistant to the types of current Evidence-based interventions that we do have.



Transcranial Magnetic Stimulation



Transcranial Magnetic Stimulation

A procedure that uses magnetic fields to stimulate nerve cells in the brain to improve symptoms.

It's called a "noninvasive" procedure because it's done without using surgery or cutting the skin.



Transcranial Magnetic Stimulation

Approved by the U.S. Food and Drug Administration (FDA), TMS usually is used only when other depression treatments haven't been effective.



Transcranial Magnetic Stimulation

Brief History

- 1985 - The first TMS coil was invented for human use By Anthony Barker & colleagues
- 1997 – Mark George provided clinical evidence of effectiveness for treatment of depression & PTSD in clinical trials
- 2008 – FDA approved the first TMS machines for Use with Treatment resistant depression.



Treated conditions

- Treatment resistant depression
- Post-Traumatic Stress Disorder (PTSD)
- Stress
- Anxiety
- Obsessive-Compulsive Disorder (OCD)
- Epilepsy
- **Outside of US:**
 - Huntington's, Parkinson, Chronic Pain Management, ASD, MS



Transcranial Magnetic Stimulation

Repeated TMS

- Coil is placed in alignment to directly on the vagal nerve (Left dorsal lateral PFC)
- Appointments are frequent and last about 30-40 minutes but have been starting to go down in duration.
- Generally, about 5-6 weeks, 5 days a week
- Penetrates about 1.75mm deep to stimulate

Deep TMS

- Coil is Imbedded in a helmet that the individual wears and can stimulate multiple spots at once.
- Appointments are frequent as well but last between 15-30 minutes
- Starts at 5 days a week, and tapers down
- Generally, about 28-36 sessions
- Penetrates to 3.25 mm deep into the brain



Rule outs or Things to Consider

- At least two failed trials of medications for management of depression.
- At least 8-10 weeks psychotherapy CBT based that has not been effective in alleviating symptoms
- No hx of Bipolar Disorder (specifically in a manic episode), Schizophrenia
- No recent TBI (must be cleared)
- Cannot have a pacemaker, vagal nerve stimulation, or electrical impact device implanted.
- Sober for at least 90 days



How this can be integrated into treatment

- Clients who are not responding to talk therapy and medications alone may benefit since it can:
 - Help stimulate the parts of the brain that are critical in executive functioning and decision making
 - TMS generally is still done while the individual is receiving medications and therapy
 - First noticeable effects are the behavioral activation and seeing a person start to make more functionality decisions. (even when they aren't noticing)



How this can be integrated into treatment

- This creates a way to start opening ways to change behavior or cognitions, reduce emotional dysregulation that has been a challenge so far in traditional treatment.
 - Skilled based intervention can be more successful
 - More awareness and processing of emotional material is available
 - Better sense of regulation and lifting effects are overall more noticeable

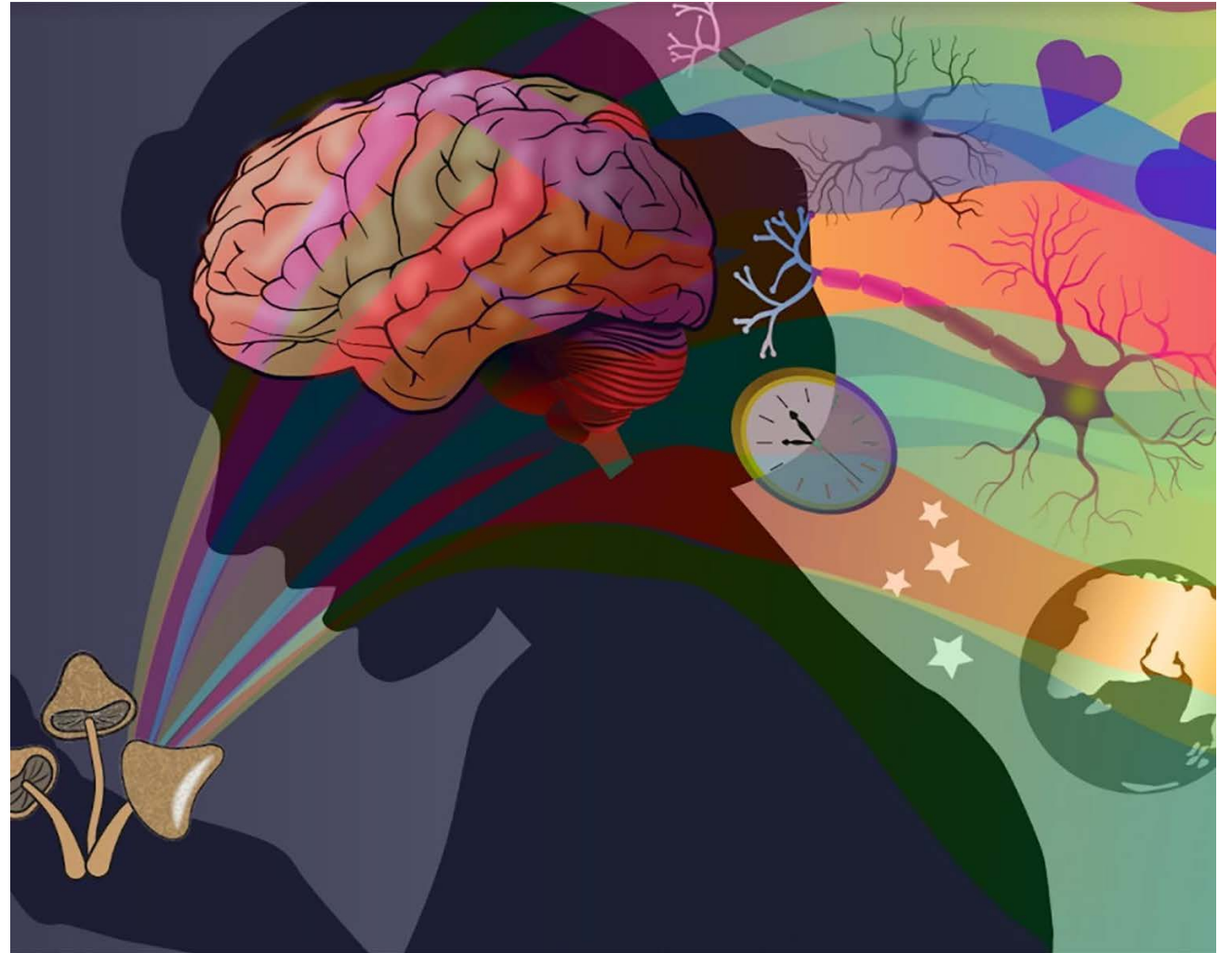


Psychedelic Therapies with Ketamine



Psychedelic Assisted Psychotherapy (PAP)

Psychedelic assisted psychotherapy is the process of using Psychedelics (i.e. the medicine or molecule) to expand the brains potential for inner healing and openness to new ideas.



Modes of PAP

Ketamine*

MDMA/MDNA – Clinical validating trials completed

Psilocybin – Clinical Trials being completed on wider scale

LSD* in the past – Much of the therapeutic use and intervention comes from these experiments (Stanislav Groff)



Ketamine Assisted Therapies

Ketamine has the widest use at this time.

It is administered in various forms (some of which have FDA approval)

- Intravenous (IV)
- Intramuscular (IM)
- Sublingual
- Intranasal (Esketamine/Spravato)



Ketamine Use in Psychiatric Treatment

- **Medical use / Symptom Reduction – Ketamine Therapy**
 - IV, Intranasal, Sublingual without assistance or therapy
 - Dosage is usually low
 - Effects are considered to go only to "psycholytic" state
 - Dissociative state possibly achieved
 - Symptom alleviation and reduction achieved
 - Empathogenic effects
 - At times possible Out of Body Experience



Ketamine Use in Psychiatric Treatment

- **Ketamine with Assisted Psychotherapy (KAP)**
 - Goal to get to Moderate or high dosages
 - To achieve psychedelic experience or trance state
 - Complete separation from the body, diminished ego defenses
 - Effects are beyond "Psycholytic" to "Psychadelic"
 - Transformative
 - Oriented toward inner healing protentional
 - Rewiring of the brain to open more potent experience
 - Non ordinary State of Consciousness is achieved.



Ketamine Assisted Psychotherapy

Course of Treatment considers:

- Preparation and Assessment sessions for several weeks
3-4 weeks
 - HX, psychoeducation, and consent
- Creating Set and Setting to induce NOSC.
- Integration sessions following in-between dosing sessions.
- Concurrent collaboration with Primary therapist throughout treatment.



Ketamine Assisted Psychotherapy

Initial Phase

Frequent sessions 1-2 session per week for 3-6 weeks

Middle Phase

Lower frequency of session (every 2 weeks) sessions are spaced out and at home sessions can be considered for evaluation at this time.
Symptom reduction is stable.

End Phase

Session can be planned out for Maintenance or as needed – 1 session per month or 1 session every 6-8 weeks or less



Ketamine Assisted Psychotherapy

Ethical considerations

- Potential for Psychedelic experiences (OBE, NDE)
- Regressed states – Suggestibility
- Abreactions
- Non reactions – no reaction to Ketamine dosing
- Over sensitivity to dosing
- Vulnerability of the client & potential enhancement of trust
- Heightened sensitivity to set and setting



Resources

TMS Resources

- Mayo Clinic – [Mayoclinic.org](https://www.mayoclinic.org)
- International OCD foundation – [IOCDF.org](https://iocdf.org)
- U.S. Department of Veterans Affairs - [VA.gov](https://www.va.gov)
- Deep TMS
 - [Brainsway.com](https://www.brainsway.com)



Resources

Psychedelic Assisted Therapy

- Multidisciplinary Association for Psychedelic Studies
(MAPS) – [MAPS.org](https://www.maps.org)
- Michael Pollan, PhD – [MichaelPollan.com](https://www.michaelpollan.com)
- Stanislav Groff
- George Zeff



Thank You!



Questions?





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