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# **Expanding Mindfulness as a Core Treatment Skill for Men and Women With Cognitive Deficits**

**Thomas G. Beckers *BS, LADC***  
**Vinland Center**

# *What Are We Going to Cover?*

- To gain understanding of the nature of addiction
- Learn how basic brain functioning education is delivered to men and women in the residential chemical health program at Vinland Center
- Understand how mindfulness is woven into direct skills practice
- Understand how direct skills practice is received by men and women at Vinland Center



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# *Before We Get Started*

This talk is about expanding Mindfulness practice in chemical health treatment with people with cognitive deficits.

I am very directly using content from the book *“Effective Addiction Treatment: The Minnesota Alternative”* by Paula DeSanto MS, LSW, CPRP, CCDP-D. Throughout the webinar I will use the term Minnesota Alternative Model to point to her very promising work.

No matter who or how you work with people with co-occurring disorders, this book can directly benefit your practice.

It is available online at Amazon or directly from The Minnesota Alternatives Program.

*Minnesota Alternatives, LLC*

7766 NE Hwy. 65

Spring Lake Park , MN. 55432

763-789-4895

[www.mnalternatives.com](http://www.mnalternatives.com)



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# *The Nature of Addiction*

*Drugs of abuse are not inherently addictive*

*The point of the drug taking or any behavior is in the service of moving someone from a state of discomfort to comfort is its only purpose*

*What is addicting is the compulsive need to get out of present moment experience*



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# *What is Mindfulness?*

*Mindfulness means paying attention, to what is happening right now in our bodies and minds.*

*Simply by noticing our bodies and minds and being at ease with what arises whether pleasant or unpleasant can decrease reward driven impulsive decision making behaviors*

*It is the observing quality of the mind.*



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# *Rationale for Mindfulness*

- Reinforces Experiential Learning.
- Client's with brain injuries often cannot remember specific details of a session, but can remember how they felt about it.
- Group fits in well with other services including exercise program, recreational therapy outings, outdoors activities, art projects, and music therapy.
- Offers concrete intervention to minimize impact of mental health symptoms including, low frustration tolerance, anxiety, depression, and impulsivity.
- Consistent with Vinland Center's goal of treating mind, body, and spirit.



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# *Teaching Basic Neuroscience in Substance Use Treatment*

- Clients at Vinland Center show interest in brain science.
- In groups that I facilitate, brain science is used to cultivate the impersonal nature of some phenomena.
- Depersonalizing helps begin to look at their functioning in a way that helps keep them in their seats.
- Many people feel overwhelmed by there many problems. Early in treatment I am interested in amplifying early success.



# *Basic Regions of the Brain and Their Function*

## ➤ **The Brain Stem (hindbrain)**

- The first to evolve
- Responsible for basic body functions
- Connected to the cerebellum

## ➤ **The Middle Brain (limbic system)**

- The emotional brain
- Controls and coordinates many internal states
- Extensive influence on behavior
- House's the reward system

## ➤ **The Cerebral Cortex (new/forebrain)**

- Seat of conscious awareness
- Responsible for executive functioning
- Less hardwired than other regions



# *What is Executive Functioning?*

Located in the front of the brain known as the prefrontal cortex. Responsible for higher end processing (hence the name executive) such as :

*Short term memory*

*Motivation*

*Problem Solving*

*Attention*

*Impulsive control*



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# *Ways to Adapt Program for those with Cognitive Deficits*

- When discussing the practice, use closed ended questions.
- Describe practice in concrete ways.
- Have them “experience” the effect rather than talk about it.
- Use repetition. Take extra time to summarize previous sessions.
- Keep group sizes small.
- If someone gets stuck on “Meditation” change description to “Brain Hygiene.”

# *Basic Neuroscience Education*

Includes focusing on the following:

- Understanding the nervous system
- Basic regions of the brain and their function
- Brain Development
- Empowerment and Brain Opportunities
- Ways to Engage the Frontal Lobe

# *Understanding the Nervous System*

- The nervous system is a very important system because it activates, controls, and coordinates all bodily functions.
- The nervous system is split between the central nervous system and the peripheral nervous system.
- Residing in both is the autonomic nervous system.

# *Understanding the Nervous System*

- Autonomic Nervous system is further divided into two types of nerve systems:
  - *Sympathetic*
  - *Parasympathetic*
- The sympathetic nervous system is the “**Go**” system. It mobilizes energy during times of stress.
- The parasympathetic nervous system is the “**Stop**” system. It conserves energy. Sometimes called the rest and restore response.

# *Understanding the Nervous System*

- An important idea to communicate is:

*The Autonomic Nervous system is intertwined with and helps regulate every other bodily system. Mental activity has greater direct influence over this system than any other system.*

- I use the “**French Fry**” meditation to illustrate this point.

# *Understanding the Nervous System*

- The ideal state is to have the system in balance.
- Primarily parasympathetic activation for some sense of ease and contentment in the world and mild sympathetic nervous system activation to support vitality and enthusiasm.

# *Understanding the Nervous System*

## **Nerve Cells**

- The brain is made up of 75% water and glial cells.
- The rest is primarily nerve cells.
- Nerve cells pass information in the form of neurotransmitters.
- The main neurotransmitters:

Dopamine

Endorphins

Serotonin

Anandamide

Norepinephrine

Acetylcholine

GABA

Glutamate



# *Understanding the Nervous System*

## **What they do...**

- **Dopamine** – Is present in several parts of the brain and fuels attraction, focus, approach, wanting, and doing. Dopamine is responsible for feelings of pleasure.
- **Serotonin** – Plays several complex roles in the brain. One of the primary roles is regulating information flow by inhibiting the firing of neurons that might otherwise fire too quickly. Serotonin has broad implications in mood, sleep, appetite, and sexual functioning. It dampens it paces, and it soothes.

# *Understanding the Nervous System*

## **What they do...**

- **Norepinephrine** – Fuels alertness, arousal, excitement, and attention to sense detail. It is one the of the brain's natural stimulants responsible for the fight or flight reaction and part of the stress response.
- **Acetylcholine** – Energizes all mental operations, consciousness, and thought itself. It transmits orders to the muscular system.
- **Gaba** – Primarily works to inhibit the activity of neurons and calm electrical activity. It is the brain's natural Valium and suppresses over-excitement /anxiety while allowing higher cognitive processes to remain alert.

# *Understanding the Nervous System*

- **Glutamate** – One of the primary stimulatory neurotransmitters. It is widely distributed in the brain and is engaged in many different activities.
- **Anandamide** – Activates the group cannabinoid receptors in different parts of the brain. Cannabinoid receptors are sensitive to THC, which mimics anandamide. Endocannabinoids serve as an internal neuromodulatory system and are involved in appetite, pain sensation, mood, memory, and synaptic plasticity.
- **Endorphins** – Are related to pain perception and pain control. Release of endorphins not only decreases pain, but provides a sense of well-being and happiness.

# *Understanding the Nervous System*

## **The take away?**

The central nervous is the highway between the brain and body. The nerve cells are the vehicles traveling this highway. It is an incredible structure that is both impersonal and personal. Nerve cells simultaneously respond without any conscious effort and are highly influenced by conscious effort like what we put into our bodies and how we respond to our environment.

# *Brain Development*

- As a human brain develops, it has more nerve cells than it needs. What nerve cells survive depend on the environment.
- Healthy brain development needs nutrition, physical security, and consistent emotional nurturing
- Many client histories are lacking in these areas.
- Neuroplasticity is when the mind shapes the brain.

# *Brain Development*

- When small children encounter environments that contain care givers that are inattentive they respond with one of three options.
- Run away , Tune out , Fight Back
- Drug use can be a version of either three.

# *Empowerment and Brain Opportunities*

- Self-regulation means maintaining a reasonably stable internal environment regardless of what is going on in the external environment.
- Where we place our attention and for how long defines us at a neurological level.
- Empower clients with concrete skills.

# *Ways to Engage the Frontal Lobe*

- Get Out of Survival Mode
- Manage Stress
- Practice Mindfulness
- Be Intentional and Use Repetition
- Practice Mental Rehearsal
- Engage in New Experiences
- Enrich Our Life



# *The Key Skills*

- Practicing Basic Self Care
- Calming Self Through Breathing and Mindfulness
- Creating an Optimal Environment
- Experiencing Emotions
- Building Positive Experiences
- Cultivating Hope and Gratitude

# *The Key Skills*

- Reframing
- Practicing Acceptance
- Understanding Impermanence
- Practicing Attached Detachment
- Focusing on Effectiveness
- Demonstrating Understanding
- Developing Meaningful Activity

# *In Closing*

Thank you for taking the time to attend this webinar. I hope our example of adapting this progressive therapeutic perspective encourages you to add dynamic elements to traditional therapy to meet the ever-changing needs of your clients.

I am open to ongoing communication. Email is the best way to communicate.

Thanks and take care.

Tom Beckers BS, LADC

[tbeckers@vinlandcenter.org](mailto:tbeckers@vinlandcenter.org)



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