



Neuroscience in Counseling

2016 Alabama Counseling Association
(ALCA) Fall Conference

CELESTE C. NEIL

PHD, LPC-S, NCC, NCSC, ACS, REGISTERED PLAY THERAPIST-SUPERVISOR

BASIC TERMS/CONCEPTS

- ▶ MINDFULNESS
- ▶ NEUROCOUNSELING
- ▶ NEUROPLASTICITY
- ▶ EXPLICIT - IMPLICIT
- ▶ INTERPERSONAL NEUROBIOLOGY
- ▶ POLYVAGAL THEORY
- ▶ OXYTOCIN
- ▶ CORTISOL
- ▶ ATTUNEMENT
- ▶ MIRROR NEURONS
- ▶ NEUROCEPTION
- ▶ AMYGDALA
- ▶ LIMBIC SYSTEM
- ▶ HEBB'S AXIOM
- ▶ INTEGRATION
- ▶ TLC-THERAPEUTIC LIFESTYLE CHANGES

JOHN KABAT-ZINN'S DEFINITION OF MINDFULNESS

Mindfulness means paying attention in a particular way: on purpose, in the present moment, and nonjudgementally.

- ▶ Kabat-Zinn, J. (2005), *Wherever You Go, There You Are*, p. 4.
- ▶ **9 ATTITUDES OF MINDFULNESS**: *Full Catastrophe Living (2013)*
**BEGINNERS MIND; NON-JUDGEMENT; ACCEPTANCE;
LETTING GO; TRUST; PATIENCE; NON-STRIVING (BEING WITH);
GRATITUDE; GENEROSITY**

MINDFULNESS

www.mindful.org(videos)

- ❖ Dan Harris (ABC News) – “It’s A Zoo In Here” - author: *10% Happier*
- ❖ Dr. Jon Kabat Zinn- creator of Mindfulness Based Stress Reduction (MBSR) – “Cure Anxiety and Depression”
- ❖ Bill Duane (Google)- “We have medicine that works!”
- ❖ Tim Ryan (Ohio Congressman)- “We Found the Bones” & “Mindful Armor”
- ❖ Jack Kornfield (PhD- Clinical Psychologist & Tibetan Monk)- “The Supermarket Miracle”

FIVE MINUTE MEDITATIONS

Corinne Zupko, EdS, NCC, BCC
www.JerseyShoreMindfulness.com

****5 Minute Mindful Breathing Meditation (cd-\$15/download-\$10)**

YOU DO HAVE TIME TO MEDITATE:

Visit www.mindful.org – FREE NEWSLETTER & DOWNLOADS

Regular Mindfulness practice has been scientifically shown to

****Increase Awareness, **Increase Quality of Life,**

****Decrease Stress and Anxiety, **Boost the Immune System,**

****Promote Positive Changes in the Brain**

❖MP3: Just Like Me (www.Mindful.org)

SOME CORE PRINCIPLES OF TRAINING THERAPISTS IN NEUROSCIENCE

- ▶ The more deeply immersed in neuroscience, the more compassion we can have for our client. Early history matters in both the counselor and the client. (“The family is always in the room.”)
- ▶ Neural INTEGRATION lies at the root of well-being. We can nurture neural integration in relationships. (Through NEUROPLASTICITY the brain is capable of change throughout the lifespan.)
- ▶ Healing and healthy living require the presence of both hemispheres. Changes begin in the right hemisphere and move to the left hemisphere. The process moves the IMPLICIT (consciously unaware) to the EXPLICIT (awareness).

SOME CORE PRINCIPLES TRAINING THERAPISTS IN NEUROSCIENCE

(cont'd)

- ▶ **Mindfulness attention is a key component for change. It is important in counselor training to have “right brain” training experience. (ATTUNEMENT is “right brain” to “right brain” communication – or “being with” a person.)**
- ▶ **“Interpersonal oneness” (INTERPERSONAL NEUROBIOLOGY) is real and therapist mental health matters. Our mind and brain constantly resonate with one another.**
- ▶ **It is important to create an environment that allows students to look into “self.” The brain is a complex system pushing toward INTEGRATION. Class should begin with the practice of mindfulness.**

ACA Neurocounseling Interest Network (NIN)

- ▶ **Dr. Lori Russell Chapin (lar@fsmail.bradley.edu) Bradley University: Peoria, Illinois -- Contact person to join the ACA Neurocounseling Interest Network (NIN) www.neurocounselinginterestnetwork.com**
- ▶ **Approved March 2015 at ACA Convention**
- ▶ **2015: 150 members , 25 states, 3 countries; 2016: 291- 30 states, 7 countries**
- ▶ **Counseling Today (CT): Bridging Brain and Behavior – since 2013**
- ▶ **Be “*Neuro-Nimble*,” NOT “*Neuro-Naïve*”; Importance of Emotional and Physical Self-Regulation**
- ▶ **NEW TEXT: *Your Supervised Practicum and Internship* (2nd Ed)(co-authors: Dr. Ivey and Dr. Sherman)**

Neuroscience Leaders Impacting Counseling

- ▶ Dr. Dan Siegel (*The Whole-Brain Child, Brainstorm, Mindsight*)
- ▶ Dr. Bruce Perry (*The Boy Who Was Raised As a Dog, Born For Love*)
- ▶ Drs. Allen & Mary Bradford Ivey (TLC-Therapeutic Lifestyle Changes)
- ▶ Dr. Bessel Van der Kolk (*The Body Keeps the Score*)
- ▶ Dr. Bonnie Badenoch (*The Brain-Wise Therapist*); Dr. Karyn Purvis (*The Connected Child*)
- ▶ Dr. Stephen Porges (The Polyvagal Theory); Dr. Jaak Panksepp (Affective Neuroscience)
- ▶ Dr. Allen Schore (attachment & emotional regulation research)
- ▶ Dr. David Crenshaw (*Creative Arts & Play Therapy for Attachment Problems*)
- ▶ Dr. Richard (“Richie”) Davidson (“Einstein” of neuroscience research) (*The Emotional Life of Your Brain*)

DAN SIEGEL, MD, Neuropsychiatrist

“The Whole-Brain Child”

- ▶ Name it to Tame it
- ▶ Connect and Redirect
- ▶ Flipping Your Lid
- ▶ Move it or lose it
- ▶ Use the remote of the mind
- ▶ Upstairs- Downstairs Brain
- ▶ Engage, don't enrage
- ▶ Use it or lose it
- ▶ Make the implicit explicit
- ▶ Remember to remember

(*****DISNEY – “INSIDE OUT”**)

(Siegel & Bryson, 2012)

- ❖ Exercise “MINDSIGHT” (Siegel, 2011)
- ❖ SIFT- Help children to pay attention to their Sensations, Images, Feelings, and Thoughts
- ❖ Teenage Brain: ESSENCE—Emotional Spark- Social Engagement- Novelty- Creativity- Exploration (Siegel, 2015)

Disney Movie “INSIDE OUT”

- ▶ According to www.Mindful.org, “Inside Out” has moved viewers young and old to take a look inside their own minds.
- ▶ Much of the film takes place in the head of an 11-year-old girl named Riley, with five emotions—Joy, Sadness, Anger, Fear, and Disgust—embodied by characters who help Riley navigate her world.
- ▶ 1. Happiness is not just about joy.
- ▶ 2. Don’t try to force happiness.
- ▶ 3. Sadness is vital to our well-being.
- ▶ 4. Mindfully embrace—rather than suppress—tough emotions.
- ▶ (use HOBBERMAN SPHERE for nonverbal rating: www.amazon.com)

NEUROKINEMATICS: The Neuroscience of Film

- ▶ The therapeutic use of movies and TV shows can be a profoundly effective catalyst with even the most troubled or hard-to-reach clients (Robertson, 2016, pp. 50-55).
- ▶ Leading researchers studying the neuroscience of cinema, via the emerging field of NEUROKINEMATICS, have found that when groups of people view evocative, “well-directed” cinema together, they become collectively engaged through a phenomenon known as neural synchrony.
- ▶ Neuroimaging studies show that the activation of specific areas of their brains and their brain wave patterns actually become synchronized.

CINEMATHERAPY

- ▶ Cinematherapy is an expressive, sensory-based therapy that uses movies, TV show episodes, videos and animation as therapeutic tools for growth and healing (Robertson, p. 51).
- ▶ The clinical use of cinema has been found to enhance the therapeutic process on many levels, including strengthening the therapeutic alliance and increasing overall engagement in clients.
- ▶ The author Bronwyn Robertson described the use of mindfulness, group discussion, journaling and engaging in other expressive exercises, including role-play and writing or rewriting one's own script. Countless clients have reported that this integrative approach has helped them (p. 53).

NEUROSCIENCE IN MUSIC

- ACA President Thelma Duffey uses music with her clients to help them craft their “musical chronology and emerging life story” (Bray, 2015, pp. 28-35).
- Most of us know intuitively the impact that music can have on our emotions, and neuroscience research is now validating the therapeutic properties of music (Armstrong, 2016, pp. 60-63).
- The secret to making a playlist healing instead of heartbreaking is to start with one or two songs that reflect the client’s current emotional state, then add three or four songs that gradually move the client toward his or her desired emotional state.
- This suggestion is based on the concept of “entrainment.” Entrainment occurs when the rhythm of one object’s movement synchronizes with the rhythm of another.
- Our brain waves, heartbeat and motor areas are inclined to align with a song’s rhythm, which helps us to process our emotions and move forward.

NEUROSCIENCE IN MUSIC

“The Magic Bojabi Tree”

- ▶ Over the past decade, neuroimaging studies have demonstrated that music influences brain structures involved in emotion and associative learning.
- ▶ Research has demonstrated that listening to music with slow, “relaxing” tempos or upbeat, “joyful” tempos decreases the release of stress hormones such as cortisol.
- ▶ Music has been shown to mitigate pain and release endogenous opioids in the brain.
- ▶ Activities such as drumming, singing, chanting and dancing have traditionally been pastimes that societies engaged in together to strengthen bonds.
- ▶ In his book *This Is Your Brain on Music (2006)*, neuroscientist and music researcher Daniel Levitin reported that when humans sing together, our brains release oxytocin, a powerful hormone that promotes emotional bonding.
- ▶ Incorporating music into your counseling sessions is an enjoyable intervention that can help clients resolve painful feelings more quickly and completely than when using traditional talk therapy alone.

BRUCE PERRY, MD

“The Boy Who Was Raised As A Dog”

- ▶ Your Brain Reflects the World You Grow Up In (Stress, Trauma, Resilience)
- ▶ The Impact of Stress on the Body (Shown by the NIMH Adverse Childhood Events or ACE study)
- ▶ Humans become humane: The capacity to share, to listen, value, and be empathic-- to be compassionate—develops from being cared for, shared with, listened to, valued, and nurtured.
- ▶ Six Core Strengths for Healthy Child Development:
- ▶ 1-Attachment; 2-Self-Regulation; 3-Affiliation; 4-Awareness of Others; 5-Tolerance; 6-Respect for Diversity
- ▶ “The Mobile” – infants sensitive to emotions and tone of voice –even sleeping

According to Dr. Allen Ivey...

Recipient of 2015 ACES* Legacy Award

* ACES: Association for Counselor Education and Supervision

- ▶ **WHY NEUROSCIENCE IS IMPORTANT TO OUR FUTURE: (Why TLC is key-)**
- ▶ **NIMH will move to a brain-based diagnostic system with specifics for treatment**
- ▶ **Stress is a concern in all client issues**
- ▶ **If we understand the brain and stress management, we are prepared to deal with many types of life challenges**
- ▶ **Theories remain important, but need to be examined in the relationship of the brain and stress**
- ▶ **Brain awareness leads to social justice action**
- ▶ **Increased Focus on Developmental Stages**

**** NEUROPLASTICITY--- COUNSELING CHANGES THE BRAIN**

Ivey's -Therapeutic Lifestyle Changes (TLC) -- focus on Wellness and Prevention

- ▶ **THE TOP SIX:**
- ▶ **1- Exercise (avoid sitting) (see Dr. John Ratey video)**
- ▶ **2- Sleep**
- ▶ **3- Social Relations**
- ▶ **4- Nutrition**
- ▶ **5- Cognitive Challenge and Education**
- ▶ **6- Meditation**

Dr. Stephen Porges

The Polyvagal Theory

- ▶ **POLYVAGAL THEORY** has changed our understanding of the Autonomic Nervous System (ANS)– Sympathetic and Parasympathetic
- ▶ Before only “FIGHT or FLIGHT” model of stress, now includes “SHUTDOWN” (Porges) or “FREEZE” (Siegel)
- ▶ Dorsal, older Reptilian defense system in our brain “shuts down,” or “freezes” (e.g., fainting) in response to a perceived life threat (person not aware of cues, but are aware of body)
- ▶ Created term of “NEUROCEPTION”: nervous system reaction to safety and risk in the environment
- ▶ **YOUTUBE VIDEO: Human Nature and Early Experience (46.38)**
https://www.youtube.com/watch?v=SRTkkYjQ_HU

Dr. Bessel Van der Kolk

“The Body Keeps the Score”

- ▶ **Trauma & Attachment (3:03):**
<https://www.youtube.com/watch?v=0yCzxm4l5fg>
- ▶ **Interventions: (Rational brain has no contact with emotional brain- Cognitive approach not helpful) – recommends...**
 - EMDR (Eye Movement Desensitization Regulation)
 - Neurofeedback
 - Yoga
 - Sensory Integration

Dr. Jaak Panksepp

Affective Neuroscience

Bowling Green University

- ▶ Nicknamed the “Rat Tickler”
- ▶ Identified/mapped 7 PRIMAL EMOTIONS in the Brain: (through electrical stimulation of areas in the brain and neurochemical analysis)
 - SEEKING (Enthusiasm); RAGE (Anger); FEAR (Anxious); LUST (Sexual);
 - CARE (Tender Loving); PANIC (Lonely, Sad); PLAY (Joy)

YOUTUBE VIDEO: The Science of Emotion-TedX (17:39)

https://www.youtube.com/watch?v=65e2qScV_K8

NEW TREATMENTS FOR DEPRESSION:

- Developing safe opioids (Buprenorphine);
- Use of deep brain stimulation of SEEKING system to elevate enthusiasm;
- Identifying new neurochemistries in the brain to promote PLAY social feelings–
(GLYX-13 antidepressant currently undergoing FDA testing)

Impact of Mirror Neurons

- ▶ In 1994, Italian scientists accidentally identified specialized cells in the cortex that became known as “MIRROR NEURONS.”
- ▶ Electrodes attached to individual neurons in a monkey’s premotor area were monitored by a computer to document neurons firing when the monkey picked up a peanut or grasped a banana.
- ▶ One researcher put food pellets in a box and noticed the monkey’s brain cells were firing at the identified location. The monkey wasn’t moving. It was watching the researcher and its brain was vicariously mirroring the researcher’s actions.
- ▶ Numerous follow up experiments explained aspects of the mind such as empathy, imitation, synchrony, and language development.
- ▶ “MIRROR NEURONS” are our brain’s “neural WiFi” and pick up on other people’s movement as well as emotional state and intentions.

PLAY THERAPY

- ▶ **BONNIE BADENOCH, PhD.....***The Brain-Wise Therapist ; The Brain-Savvy Therapist's Workbook, Interpersonal Neurobiology of Group Psychotherapy...*
- ▶ **VIOLA A. BROWDY, PhD.....***The Dialogue of Touch*
- ▶ **DOTTIE HIGGINS KLEIN, LMFT, RPT-S*.....***Mindfulness-Based Play-Family Therapy*
- ▶ **LINDA HOMEYER & DANIEL SWEENEY (both PhD, RPT-S*)...** *Sandtray Therapy, 2nd Ed*
- ▶ **THERESA A. KESTLY, PhD, RPT-S*.....***The Interpersonal Neurobiology of Play*
- ▶ **PHYLLIS BOOTH & ANN JERNBERG***Theraplay*
- ▶ **CATHY MALCHIODI & DAVID CRENSHAW, MD, *Registered Play Therapist-Supv.***Creative Arts and Play Therapy for Attachment Problems*
- ▶ **CATHY MALCHIODI & BRUCE PERRY, MD...** *Creative Interventions with Traumatized Children*

SANDTRAY THERAPY & THE BRAIN

Dr. Bonnie Badenoch “*The Brain-Wise Therapist*”

*from C. Neil’s SACES Presentation: *Using Sandtray in Supervision*

- ▶ Badenoch (2008) discussed the broader perspective of sandtray therapy and the brain. Badenoch indicated that use of sandtray awakens and regulates the right-brain limbic processes, prompting vertical integration in the right brain.
- ▶ New neural pathway “templates” are developed, effectively rewiring dysfunctional painful memories. Badenoch indicates that touching the sand activates the brain. The sensations travel to the prefrontal cortex, which makes sense of tactile input. During the building of the tray, the counselor and client stay attuned through right-brain resonance.
- ▶ “When the client recalls painful experiences and is met with kindness and empathy, new synapses carry that information to the brain, and blood flow changes to more soothing paths” (p.12). (HEBB’S AXIOM- “what fires together, wires together”) Once the tray (world) is created, verbally discussing the content results in left and right brain integration.
- ▶ Adding words to the story (left brain) to the imagery and feelings of the right brain, strengthens and grows the corpus callosum resulting in greater regulation of the emotional content of the sandtray experience.

INTERPERSONAL NEUROBIOLOGY

- ▶ Bonnie Badenoch, PhD, *Interpersonal Neurobiology of Group Psychotherapy*
- ▶ Dan Siegel, MD, *Pocket Guide to Interpersonal Neurobiology*
- ▶ Theresa Kestly, PhD, Registered Play Therapist – Supv *The Interpersonal Neurobiology of Play*
- ▶ Ed Tronick, PhD, *The Still Face Experiment (Mom)*
- ▶ Richard Cohen, PhD, *Still Face (Dads)*

DR. KARYN PURVIS

“The Connected Child”

- ▶ Director of the Texas Christian University Institute for Child Development
- ▶ “Passionate Advocate for Children from Hard Places:” trauma, abuse, adopted- but her work is helpful to all kids (TRUST BASED RELATIONAL INTERVENTION – TBRI)
- ▶ Websites: www.empoweredtoconnect.org; www.tapestryministry.org; www.child.tcu.edu
- ▶ YOUTUBE VIDEOS: *The IDEAL Response for Parents (7:28) <https://www.youtube.com/watch?v=761xx61-q1c>
- ▶ *Understanding Sensory Processing (5:56) <https://www.youtube.com/watch?v=v79-x34dEm0>
- ▶ Understanding Neurotransmitters (7:28) <https://www.youtube.com/watch?v=d5haMQTB7ag>
- ▶ Attachment: Why It Matters (8:07) --with Dr. Dan Siegel <https://www.youtube.com/watch?v=mNqRhK1fE0U>

RELATED APPLICATIONS

- ❖ Howard Glasser – “The Nurtured Heart Approach”
Chairman: Children Success Foundation (Tucson, AZ)
- ❖ The Kaufman family- “Son-Rise” Autism Program
(Sheffield, Massachusetts)
- ❖ Dr. Ron Minson & Dr. Edward Hallowell: iLs-Integrated Listening Systems
(bilateral brain & auditory stimulation for dyslexia, autism, LD, ADD/ADHD)
- ❖ Brijin Gardner, Registered Play Therapist- Supervisor
Operation Breakthrough: Theraplay Parenting Groups
“Brain Builder” video
- ❖ Dr. Brene Brown- “Connection gives meaning to life.”

BRENE BROWN, PhD

(Social Scientist-Author-Speaker)

▶ Books:

- ▶ --*Daring Greatly*
- ▶ --*The Gifts of Imperfection*
- ▶ --*Rising Strong*

▶ Theory of Wholehearted Living:

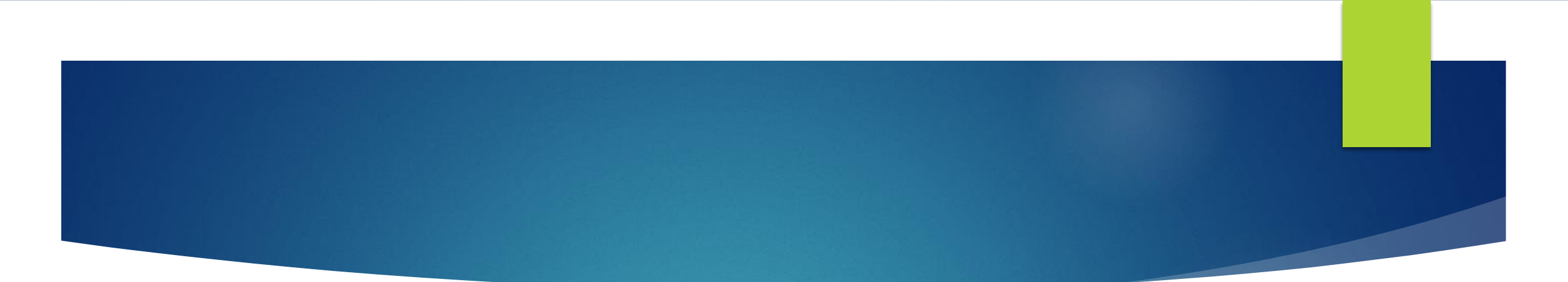
Love and belonging are irreducible needs of all men, women, and children. We're hard-wired for connection- it's what gives purpose and meaning to our lives. The absence of love, belonging, and connection always leads to suffering.

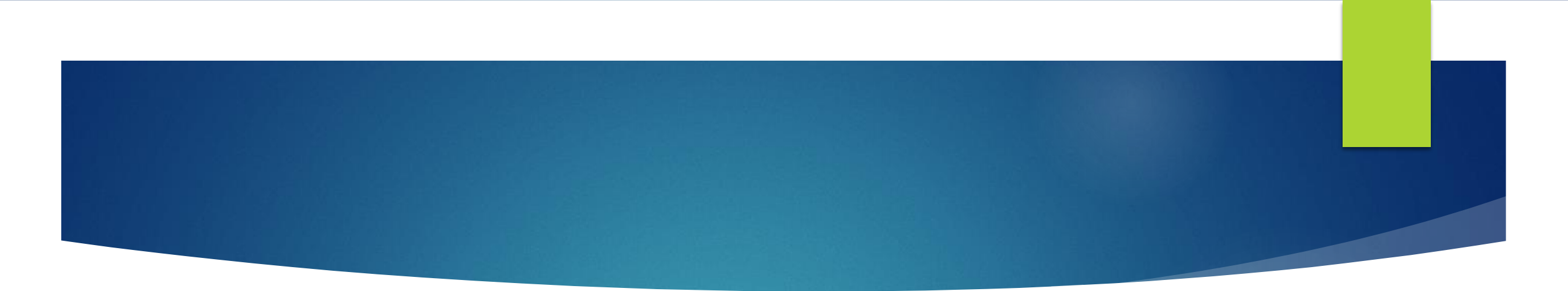
Brene Brown's *The Gifts of Imperfection*— “Ten Guideposts for Wholehearted Living”

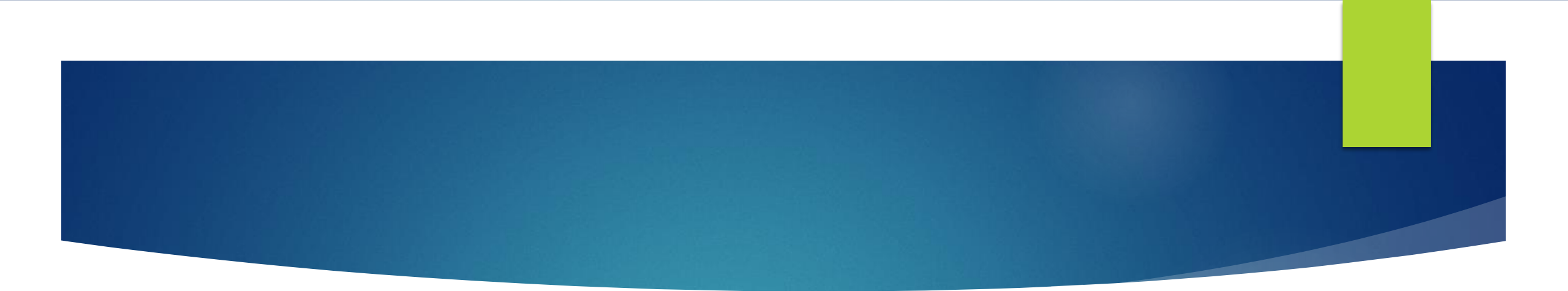
- ▶ 1. Cultivating authenticity: letting go of what people think
- ▶ 2. Cultivating self-compassion: letting go of perfectionism
- ▶ 3. Cultivating a resilient spirit: letting go of numbing and powerlessness
- ▶ 4. Cultivating gratitude and joy: letting go of scarcity and fear of the dark
- ▶ 5. Cultivating intuition and trusting faith: letting go of the need for certainty
- ▶ 6. Cultivating creativity: letting go of comparison
- ▶ 7. Cultivating play and rest: letting go of exhaustion as a status symbol and productivity as self-worth
- ▶ 8. Cultivating calm and stillness: letting go of anxiety as a lifestyle
- ▶ 9. Cultivating meaningful work: letting go of self-doubt and “supposed to”
- ▶ 10. Cultivating laughter, song, and dance: letting go of being cool and “always in control”

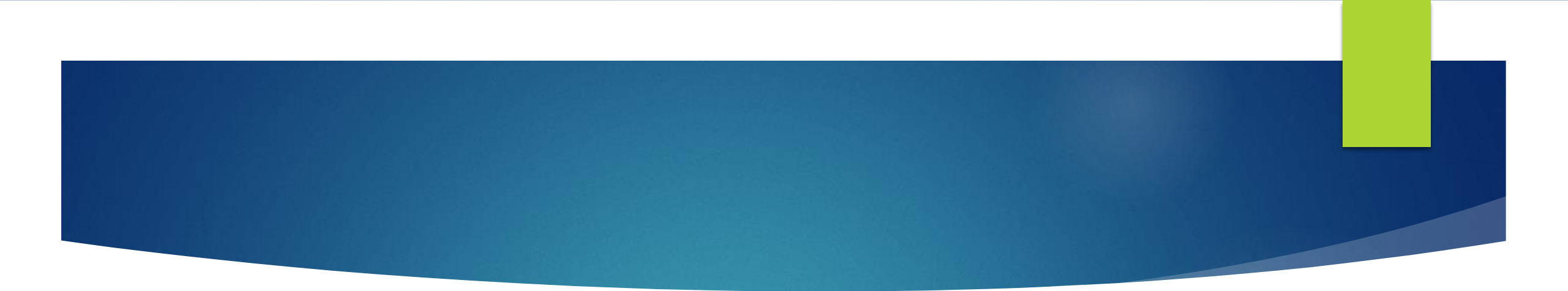
References

- ▶ **Armstrong, C. (2016). Music: A powerful ally in your counseling sessions. *Counseling Today*, 58(9), 60-63.**
- ▶ **Badenoch, B. (2008). *Being a brain-wise therapist*. New York, NY: Norton & Company.**
- ▶ **Badenoch, B. (2011). *The brain-savvy therapist workbook*. New York, NY: Norton & Company.**
- ▶ **Booth, P., & Jernberg, A. (2010). *Theraplay*. San Francisco, CA: Jossey-Bass.**
- ▶ **Bray, B. (2015). Counseling and leading with creative spirit. *Counseling Today*, 58(1), 28-35.**
- ▶ **Browdy, V. (2006). *The dialogue of touch*. New York, NY: Rowman & Littlefield.**

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- ▶ **Brown, B. (2010). *The gifts of imperfection*. Center City, MN: Hazeldon.**
 - ▶ **Brown, B. (2012). *Daring greatly*. New York, NY: Avery.**
 - ▶ **Brown, B. (2015). *Rising strong*. New York, NY: Random House.**
 - ▶ **Davidson, R. J. (2012). *The emotional life of your brain*. New York, NY: Penguin.**
 - ▶ **Gantt, S. B., & Badenoch, B. (2013). *The interpersonal neurobiology of group psychotherapy and group process*. New York, NY: Karnac Books.**
 - ▶ **Glasser, H. (2008). *All children flourishing*. Tucson, AZ: Nurtured Heart Publications.**
 - ▶ **Glasser, H. (2015). *Igniting greatness*. Tucson, AZ: Nurtured Heart Publications.**
 - ▶ **Glasser, H. (2016). *Transforming the difficult child: The nurtured heart approach*, 5th ed. Tucson, AZ: Prolong Press.**

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- ▶ Higgins-Klein, D. (2013). *Mindfulness based play therapy*. New York, NY: Norton & Company.
 - ▶ Hofmeyr, D., & Grobler, P. (2013). *The magic bojabi tree*. London: Frances Lincoln.
 - ▶ Homeyer, L., & Sweeney, D. (2011). *Sandtray therapy: A practical manual*, 2nd ed. New York, NY: Taylor & Francis.
 - ▶ Kabat-Zinn, J. (2005). *Wherever you go, There you are*. New York, NY: Hyperion Books.
 - ▶ Kabat-Zinn, J. (2013). *Full catastrophe living*. New York, NY: Bantam Books.
 - ▶ Kestly, T. A. (2014). *The interpersonal neurobiology of play*. New York, NY: Norton & Company.

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- ▶ **Levitin, D. (2006). *This is your brain on music*. New York, NY: Penguin Books.**
 - ▶ **Malchiodi, C., & Crenshaw, D. (2015). *Creative arts and play therapy for attachment problems*. New York, NY: Guilford Press.**
 - ▶ **Malchiodi, C., & Perry, B. (2014). *Creative interventions with traumatized children*. New York, NY: Guilford Press.**
 - ▶ **Perry, B. D., & Szalavitz, M. (2006). *The boy who was raised as a dog*. New York, NY: Basic Books.**
 - ▶ **Perry, B. D., & Szalavitz, M. (2010). *Born for love*. New York, NY: Harper Collins.**
 - ▶ **Purvis, K. (2007). *The connected child*. New York, NY: McGraw Hill.**

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- ▶ Robertson, B. (2016). All things connect: The integration of mindfulness, cinema, and psychotherapy, *Counseling Today*, 58(10), 50-55.
 - ▶ Russell-Chapin, L. A., Sherman, N. E. & Ivey, A. E. (2016). *Your supervised practicum and internship*. New York, NY: Routledge.
 - ▶ Siegel, D. J. (2011). *Mindsight*. New York, NY: Bantam Books.
 - ▶ Siegel, D. J. (2012). *Pocket guide to interpersonal neurobiology*. New York, NY: Norton & Company.
 - ▶ Siegel, D. J. (2015). *Brainstorm: The power and purpose of the teenage brain*. New York, NY: Random House.
 - ▶ Siegel, D. J., & Bryson, T. P. (2012). *The whole-brain child*. New York, NY: Bantam Books.
 - ▶ Van der Kolk, B. (2014). *The body keeps the score*. New York, NY: Penguin Books.