Mirror, mirror: the mirror neuron system and its role in mental health

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Nothing to declare.

Relationships and trust

Nobody loves me!

Work-related stressors

I can’t cope!

Life stress

I feel broken!

Introduction to Mirror Neurons

Mirror neurons are neurons which fire when performing an action and when observing an action performed by another

Found in the premotor cortex, inferior frontal gyrus, and parietal lobe.

Relevance to mental health:

- - Role in empathy, social cognition, and emotional regulation.
- - Link to attachment and interpersonal relationships.

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Review Article

Mirror neurons and their role in communication

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ABSTRACT

Actions done by others are probably the most important stimuli of our lives. Most of others' actions do not convey intentional information to the observer. From them, however, we understand what others are doing and we can infer why they are doing it. This involuntary communication is fundamental for interpersonal relations, and is at the basis of social life. What is the mechanism underlying our capacity to understand others' actions? The traditional view is that actions done by others are understood in the same way as other visual stimuli. Thus, action understanding is based on the visual analysis of the different elements that form an action. For example, when we observe a girl picking up a flower, the analyzed elements would be her hand, the flower, and the movement of the hand towards the

The Mirror Neuron System and Attachment

Attachment theory overview:

- - Secure vs. Insecure attachment styles.

Mirror neurons and early development:

- - Mirror neurons facilitate bonding and emotional attunement between caregiver and child.
- - Impact of disrupted mirror neuron activity on attachment (e.g., neglect, trauma).

Recent literature:

- - Studies on mirror neurons and attachment in adults.

Fonagy, P., Luyten, P., & Allison, E. (2018). Epistemic trust and the emergence of mentalizing in attachment. Developmental Psychopathology, 30 (4), 1337-1351.

ACADEMIA | Letters

Heroin is My Mother and Booze is My Father - Addiction as an Attachment Disorder

Michael G. Bricker MS, NCAC-2, LPC, The STEMSS Training Institute

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I was watching from across the room at the Child Welfare Visitation Center as one of my clients was having a supervised visit with her 6-month old child. The child was born drug-free, although the Mom had used meth through her first trimester. Fortunately, the foster parents report that the baby appears to be developing normally. Yet something was going noticeably awry with the visit. The baby interacted normally when the foster mom brought her in—cooing and smiling. When the birth Mom took her, she began rocking and talking to her baby like any mom would… and the baby looked confused. After a few moments, she began to fuss and cry, and couldn't be comforted. It was a long visit, as Mom struggled to soothe her baby, and the child just squirmed, whimpered and cried.

This wasn't a "strange situation" experiment from child psychology—Mom and baby had 2-hour visits three times a week. So what was going wrong? The thought occurred to me that my client was a third-generation meth addict; both her mother and grandmother had been addicted, and my client had grown up with multiple placements in the foster care system. Yet she was doing everything right today—sober, making eye contact, rocking her baby and talking to her—but her daughter looked confused. The baby looked relieved when she went back to the foster mom, and calmed almost immediately. My client looked heartbroken—and angry.

Self-soothing and emotional regulation

Role of mirror neurons in self-soothing:

- Observing calming behaviors in others activates mirror neurons, promoting self-regulation.

Link to emotional dysregulation:

- Dysfunctional mirror neuron activity in borderline personality disorder (BPD) and narcissistic personality disorder (NPD).

Coping strategies:

- Teaching patients to observe and mimic adaptive behaviours.

Siegel, D.J. (2020). The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are (3rd edition). Guilford Press.

Empathy and self-love

Mirror neurons enable us to "feel" others' emotions.

- Self-love and self-compassion.

- Self-reflection and self-acceptance.

Clinical implications:

- encouraging patients to practice self-compassion through mirroring exercises.

Security and trust in self and others

Mirror neurons and trust:

- Mirror neurons facilitate trust-building in relationships.

Impact of trauma:

- Trauma can impair mirror neuron function, leading to mistrust and relational difficulties.

Therapeutic interventions:

- building trust through therapeutic alliance and mirroring techniques.

Personality pathology and mirror neurons

Narcissistic personality disorder (NPD):

- - Hypoactivity in mirror neurons may contribute to lack of empathy.

Borderline personality disorder (bpd):

- - Hyperactivity in mirror neurons may lead to emotional overwhelm.

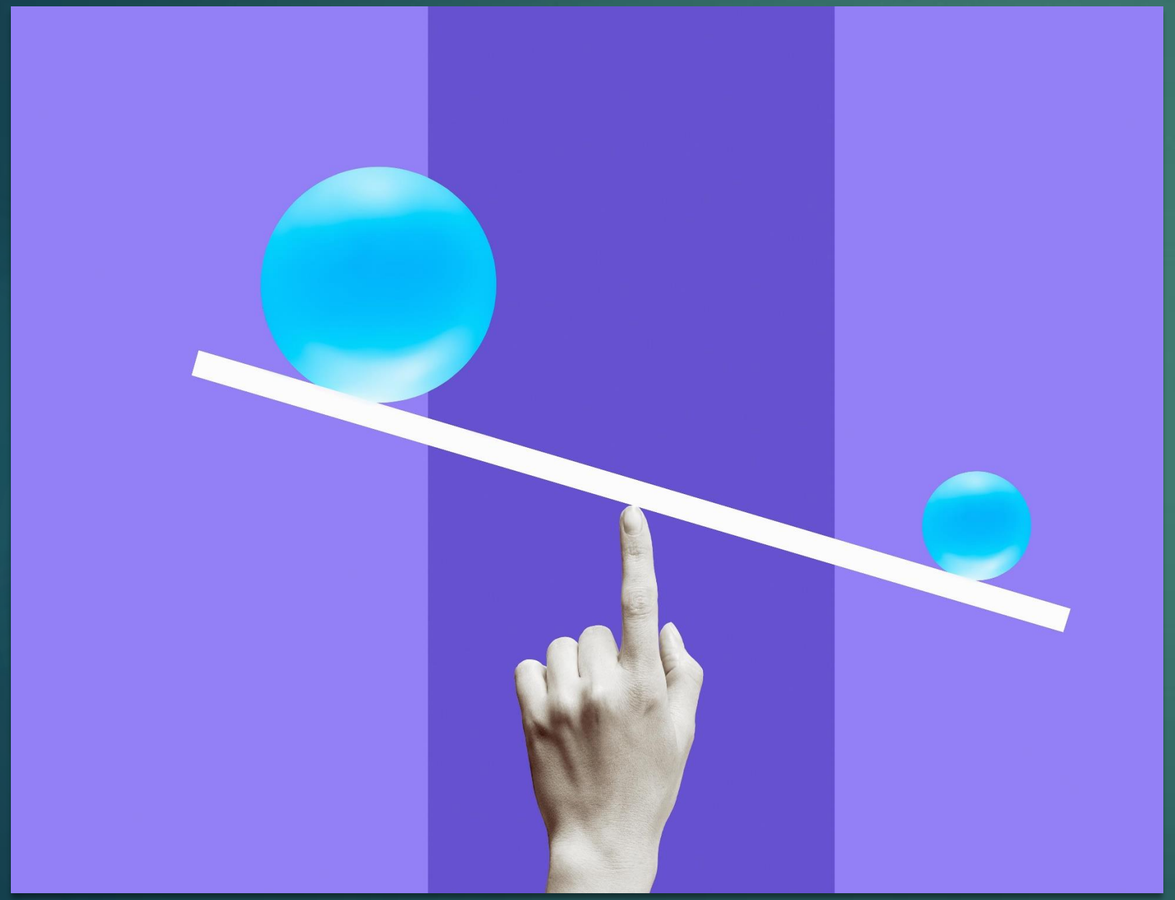
Clinical approach:

- - using GPM, DBT, TFP (transference and countertransference) approaches to address these issues.

Gabbard, G.O. (2014). Psychodynamic psychiatry in clinical practice (5th edition). American Psychiatric Publishing.

Kernberg, O.F. (2016). Borderline conditions and pathological narcissism. Jason Aronson.

Coping in extremes for survival



Maladaptive coping mechanisms:

- Substance misuse, self-harm, and other extreme behaviours.

Mirror neurons and coping for survival:

- How mirror neurons adapt to extreme stress but may reinforce maladaptive behaviours.

High-functioning patients:

- The challenge of addressing coping strategies in patients who appear functional but struggle internally.

Linehan, M.M. (2014). DBT Skills Training Manual (2nd ed.). Guilford Press.

Failure of relationships

Role of mirror neurons in relationship dynamics:

- how mirror neuron dysfunction contributes to miscommunication and conflict.

Case example:

- a high-functioning patient with recurrent relationship failures.

Therapeutic goals:

- Improving emotional attunement and communication skills.

Gunderson, J.G., & Links, P.S. (2014). Good Psychiatric Management for Borderline Personality Disorder: A Practical Guide. American Psychiatric Publishing.

Transference and countertransference

Understanding transference:

- Patients projecting past relationship dynamics onto the therapist.

Countertransference reflections:

- Therapists using their emotional responses to guide treatment.

Case example:

- Managing transference in a patient with NPD or BPD.

Kernberg, O.F. (2016). Borderline conditions and pathological narcissism. Jason Aronson.

Emotional dysregulation and substance misuse

Link between emotional dysregulation and substance

- substance misuse as a coping mechanism for emotional pain.

Mirror neurons and addiction:

- how mirror neurons may reinforce addictive behaviours through social learning.

Intervention strategies:

- teaching alternative coping skills during acute crises.

Koob, G.F., & Volkow, N.D. (2016). Neurobiology of addiction: A neurocircuitry analysis. The Lancet Psychiatry, 3(8), 760-773.

Khantzian, E.J. (2012). Addiction as a self-regulation disorder: The role of emotions and self-care. Journal of Psychoactive Drugs, 44(2), 125-131.

The suicidal patient

Risk factors and warning signs:

- Emotional dysregulation, hopelessness, and social isolation are key risk factors.

Dialectical Behavioural Therapy (DBT):

- Using DBT principles to teach distress tolerance and emotional regulation.

Good Psychiatric Management (GPM):

- Practical problem-solving to address interpersonal difficulties which lead to emotion dysregulation and suicidal ideation.

The role of mental health clinics

Multidisciplinary Team Approach:

- - The importance of a team-based approach (e.g., psychiatrists, psychologists, occupational therapists).

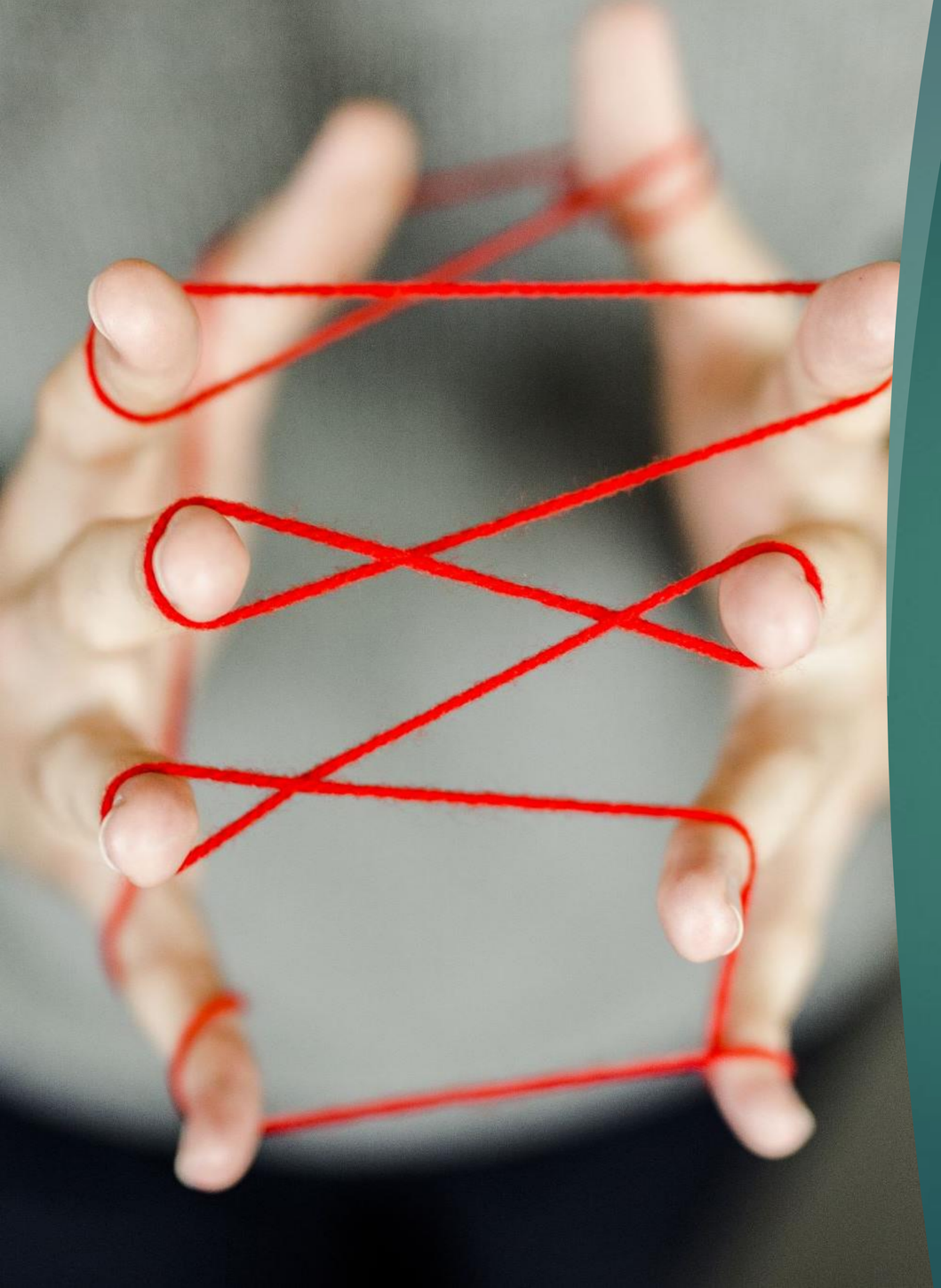
Our MDT Model:

- - Integrating mirror neuron research into treatment plans.

Crisis Intervention:

- - Teaching coping skills during acute episodes.

Van der Kolk, B.A. (2014). The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma. Viking.



Practical applications and future directions

Teaching coping skills:

- Role-playing and mirroring exercises in therapy.

Future research:

- Exploring the potential of mirror neuron-based interventions.

Call to action:

- Integrating mirror neuron research into clinical practice.

Keysers, C., & Gazzola, B. (2014). Dissociating the ability and propensity for empathy. Trends in Cognitive Sciences, 18(4), 163-166.

Conclusion and Q&A

Mirror neurons play a critical role in empathy, attachment and emotional regulation.

Addressing mirror neuron dysfunction can improve outcomes for high-functioning psychiatric patients.

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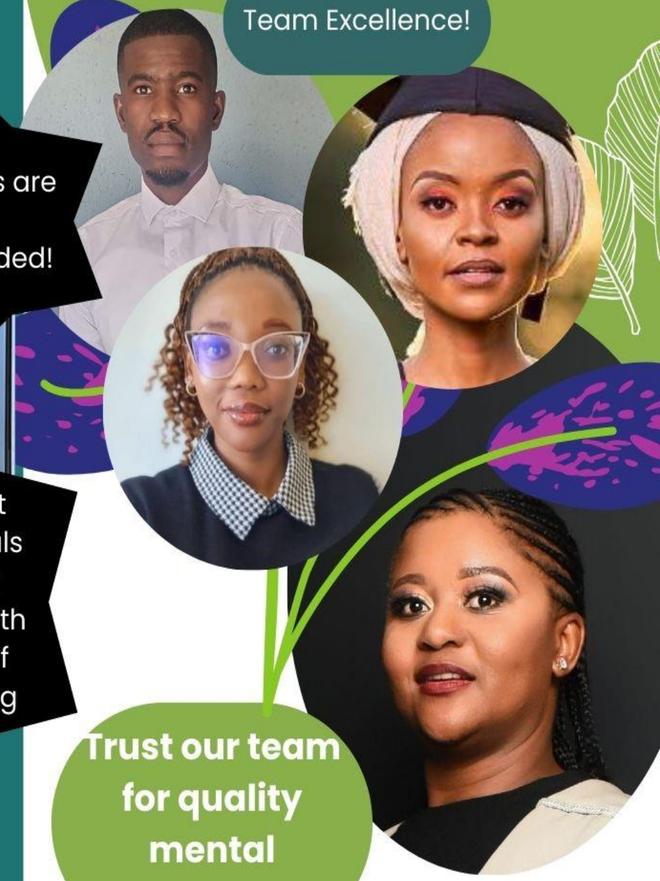
078 166 7341

Team Excellence!



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