

The NeuroSequential Model of Therapeutics (NMT)

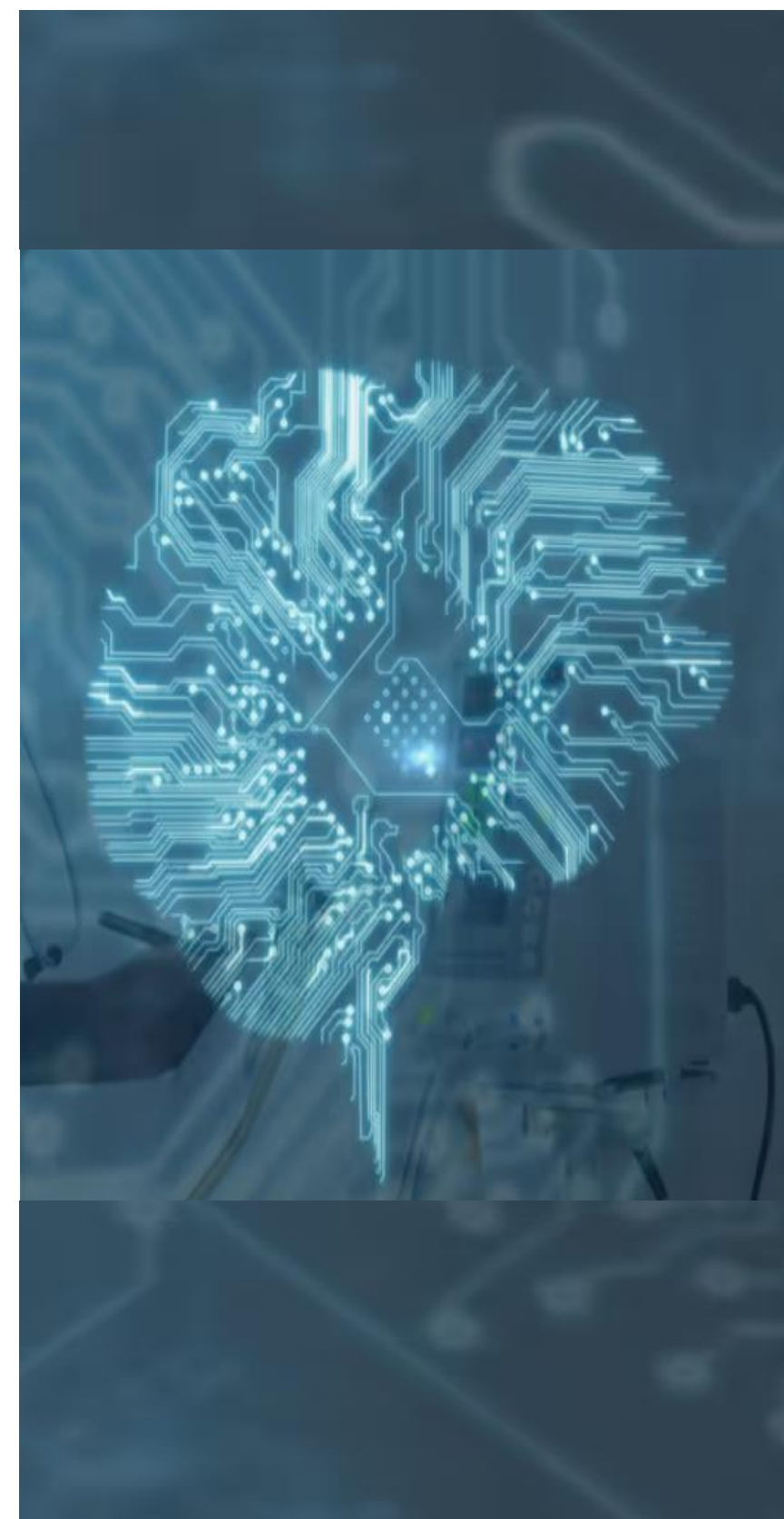
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NeuroSequential Model of Therapeutics

- The NeuroSequential Model of Therapeutics (NMT) was designed to examine the cognitive, behavioral, emotional, social and physiological effects of neglect and trauma in children, adolescents and adults.
- NMT is not a specific therapeutic technique or intervention. It is an approach that integrates core principles of neurodevelopment and traumatology to inform clinical work.
- NMT's target population is those who have experienced traumatic events.
- NMT takes rich evidence based research in multiple disciplines such as neuroscience, social sciences, psychology, public health, epidemiology, traumatology and more.
- NMT is not a specific therapeutic technique nor its aim to replace other assessment elements but to complement the evaluation/assessment process. NMT covers the missing links that some modalities and assessments cease to cover.
- Due to the holistic view of the NMT, it is possible to take a picture of the grand scheme of things, evaluating the wealth of relationships, current level of functioning, and development compared to a healthy developed brain for that specific age.

NMT Assessment

- An important part in NMT is called "Relational History". This is where the individual's relationships will be assessed. This gives insight into the attachment and related resilience and or vulnerability the individual may have endured through development.
- The second phase of the assessment will be an evaluation of the current functioning of the individual. This allows estimates to be made on the individuals current neural systems and brain areas which are involved in the many neuropsychiatric symptoms and the key strengths and vulnerabilities. This is also where the assessor will begin to develop what's called a "Functional Brain Map".
- The Brain Map serves as a visual representation of the individual's development status. For example, a 15-year old may have the speech and language of a 11-year old and the self-regulation of a 5-year old.
- The NMT's brain mapping matrix helps providers in identifying specific areas for therapeutic work and in selecting appropriate therapies.
- Subsequently, the assessor will have NMT Recommendations and will "filter out" services which are not needed. If the NMT assessor deems that the need for a behavior coach is not needed due to the brain map, they will make the recommendation.
- The NMT also evaluates the immediate family (relational history) and works with the family. Not working through the family but with them to better equip the child. This can be done by modeling safe and healthy touch/affection and the utilization of the 5-love languages.



NMT Therapeutic Process



- NMT has three key components – training/capacity building, assessment and then, the specific recommendations for the selection and sequencing of therapeutic, educational and enrichment activities that match the needs and strengths of the individual.
- Four critical areas of brain functioning are scored on the NMT metric: sensory integration, self-regulation, relational function, and cognition.
- Interventions include individualized relational interactions (e.g., one-to-one time outside of class), rocking, therapeutic massage, patterned, repetitive, developmentally matched activities, such as singing, sequencing, rhythmic movement, therapeutic touch, infant games, play, movement activities, pacification, rudimentary social skills, calming activities).

Sample Case Study

Case

The client was a 7-year-old Native American girl. Fostered from age 4 and adopted at age 6. There was prenatal exposure to alcohol, marijuana, and nicotine. The girl was removed from her biological mother due to severe neglect in the first three months of life. Relatives were unable to cope with the girl's behavioral problems. During many placements, the client experienced additional chaos and trauma (sexual abuse by an older foster child in one foster home). At age 3, she was nonverbal, unsocialized, and still in diapers. She presented severe sleep problems and hypervigilance, with a profound behavioral reactivity to any challenge, frustration, or transition. The client showed primitive self-soothing behaviors including rocking herself, biting and sucking her thumb, rhythmic humming, and hoarding of food. Despite her chronological age, she was developmentally below the 18–24 month level in most domains (i.e., cognitive, social, motor, and emotional) based on standard developmental metrics and the Neurosequential Model of Therapeutics Metrics.



NMT Process

After the assessment, the approach for this client included the following interventions:

- Occupational therapy with sensory tasks
- Somatosensory soothing from caregivers
- Structured nighttime ritual
- Somatosensory rich, relationally mediated schedule of activities (a schedule of 10–15 minute hand and neck massages, frequent sensory breaks in school, elements of collaborative problem solving and pairing academic lessons)
- Reconnecting her with elders and others in her tribe of origin

Effectiveness

- Based on existing research that includes pre-test and post-test scores, researchers have found significant improvement in the Preschool Social and Emotional Developmental Readiness Index (PSEDR).
- No significant improvement in parents' ratings of children's Achenbach Child Behavior Checklist (CBCL) to measure the children's emotional and behavioral problems.
- Additional research is needed to continue examining the effectiveness of NMT as a complement to psychotherapy.



Conclusion(s)

- NMT is an approach that integrates core principles of neurodevelopment and traumatology to inform work with children, families and the communities in which they live.
- NMT is a complement to psychotherapy modalities and aimed to be a sort of magnifying glass and not to replace any modalities or assessment elements.

Sample references

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