Challenges and Opportunities to Implementing the Neurosequential Model of Therapeutics within Children's Residential Care

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Background

- Children and youth in the child welfare system who are exposed to complex trauma and manifest significant behavioural and mental health issues are often placed in residential care [1]
- Children residential care use a milieu-based environment, where every aspect of a child's day is treatment focussed
- Child maltreatment impacts brain development in ways that depend on the timing, nature and severity of the adversity [2]
- The Neurosequential Model of Therapeutics (NMT) is an evidence-based framework that enhances an understanding about the impact of trauma on brain development. The framework guides the selection of individualized interventions.
- Using the NMT in residential care may improve mental health and behavioural outcomes for young people [2, 3]

Purpose of the Study

- Assess the barriers and facilitators to the uptake of the NMT within residential care at Hull Services, a charitable youth mental health provider in Calgary

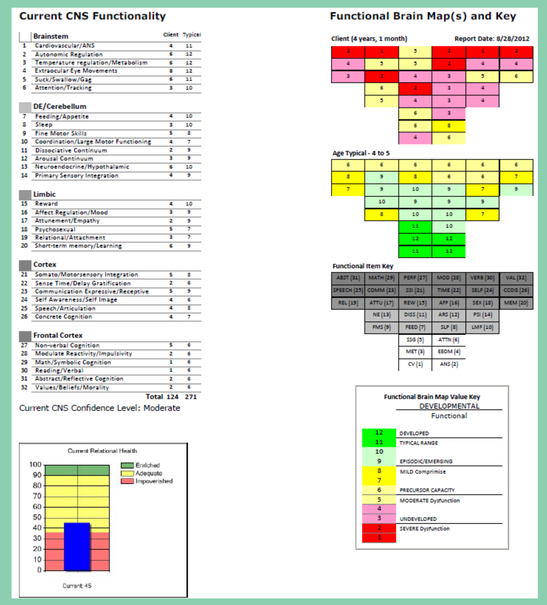
Research Methods

- Qualitative interviews with staff members in six residential care programs at Hull Services (n=42)
- NVivo Coding: Consolidated Framework for Implementation Research (CFIR) [4]
- Survey: Pragmatic Context Assessment Tool (14 items)

CFIR Scoring Guide

- Influence on NMT uptake: Strong Positive (+2); Positive (+1); No influence or mixed influence (0); Negative (-1); Strong negative (-2)

NM Metrics Assess Functioning



Pragmatic Context Assessment Tool: Survey

Item	Average Score
1. Recipient-Centredness	1.87
2. Alignment of NM with Leadership Goals	1.48
3. Alignment of NM with Clinical Values	1.44
4. Structures & Policies Permit NM Use	1.29
5. Commitment of Program Leadership to NM Use	1.22
6. Compatibility of NM with Existing Clinical Processes	1.21
7. Relative Advantage	1.19
8. Sufficient Space to Accommodate NM	0.90
9. Commitment of Higher-level Leadership to NM Use	0.79
10. Open Lines of Communication	0.75
11. Sufficient Time to Use NM	0.50
12. Tension for Change and the Need for NM	0.46
13. Access to Data to Track Outcomes	0.25
14. Availability of Resources	-0.05

Strong facilitators

Weak facilitators

Mixed feedback

RESULTS

CFIR Domains & Constructs

Innovation
- Evidence base (+2)
- Adaptability (+2)
- Relative advantage (+2)
- Complexity (-1)

Outer Setting
- Partnerships and connections (-1)

Individual
- Innovation recipients (+1)
- High-level leaders (-1)
- Mid-level leaders (0)
- Implementation facilitators (0)
- Innovation deliverers (0)

Inner Setting
- Culture (+2)
- Recipient-centredness (+2)
- Learning-centredness (+2)
- Relational connections (+2)
- Compatibility (+2)
- Physical infrastructure (-1)
- Work Infrastructure (-1)
- Space (-1)
- Communication (-1)
- Access to knowledge and information (-1)
- Relative priority (-2)

CFIR Construct	Participants' Responses	Representative Quotes
Innovation adaptability (+2)	Adaptable in all campus-based programs & across client population; Facilitates engagement with families, A roadmap for understanding behaviour	"Every program is different and every kid is A) different, B) has different needs, and C) different in the way they'll respond to care, and NM must be applied uniquely."
Relational connections (+2)	Support network; Relationship; Value in collaboration; within & across campus	"We do have a lot of debriefs at the end, what went well, what could have been done differently."
Recipient-centredness (+2)	Better understanding of children; Individualized care; Less focus on behaviour; Prioritizing co-regulation & relationship	"It's more about what happened to the youth, rather than why they're behaving in a certain way and using strategies for each client to help them regulate."
Access to knowledge and information (-1)	No refresher training; Not a required training for new staff; Inadequate guidance within programs	"I think having more training about it would be beneficial, just having a plain knowledge of the model is helpful, you can't really implement a model that you don't have a lot of knowledge about."
Communication (-1)	Some level of communication about NMT; Mostly informal	"It comes to our coordinators and our directors maybe being a little bit more intentional about how they communicate our use in NM."
Reflecting & evaluating (Implementation) (-1)	Lack of clarity about how to combine the NMT with other interventions in the therapeutic milieu	"We don't have where they can say 'when we do A or B, this is the lens that we're operating through or from' or it's not articulated, clearly articulated."
Relative priority (-2)	Variability in the use of the NMT in daily activity planning	"We have some programs that are really behaviour modification based which conflict with the information that we're learning."

Conclusion

The Neurosequential Model of Therapeutics is adaptable in different residential care programs at Hull Services, has a relative advantage over behaviour-focused models, and promotes an understanding about the impact of childhood trauma. Clearer communication, ongoing training and support will facilitate greater uptake of the model. Our findings have implications for enhancing the use of the NMT at Hull Services and other residential care programs to promote mental health outcomes for young people.

References

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3. Neurosequential Network. Neurosequential Network. 2015. Accessed January 27, 2025. https://neurosequential.com
4. Damschroder et al. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation Science.* 17 (75).

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