

**Development and Evaluation of a Culturally Woven Transdiagnostic Group Intervention
for First Nation Children**

Kristy R. Kowatch

Department of Psychology, Lakehead University

Thunder Bay, Ontario

October 2025

A dissertation submitted in partial fulfillment of the requirements of the degree of Doctor of
Philosophy in Clinical Psychology

Supervisor: Dr. Christopher Mushquash

Supervisory Committee Member: Dr. Aislin Mushquash

Internal Examiner: Dr. Amanda Maranzan

External Examiner: Dr. Jill Ehrenreich-May

Copyright © 2025 Kristy R. Kowatch

All rights reserved. This work may not be reproduced in whole or in part, by photocopy or other
measures without permission of the author.

Acknowledgements

This research would not have been possible without the support of my professional mentors and personal supports. To Dr. Chris Mushquash, I will forever be grateful for all of the opportunities and support you have provided to me throughout my training. I have grown enormously as a researcher, clinician, and person through our discussions and navigating living life in graduate school. To Dr. Aislin Mushquash, you've consistently gone above and beyond to help develop my skills and support me throughout my training. To Dr. Amanda Maranzan, thank you for your warmth, kindness, and insights throughout this and other projects as well as clinical training. To Dr. Jill Ehrenreich-May, thank you for all of your insights in developing this document and all of your thoughtful feedback.

I would also like to thank the SURG and Coping Lab research teams – you made graduate school much more enjoyable, and I will treasure the memories that we made. To Abbey Radford, you are the best road trip buddy, research collaborator, and friend anyone could ask for. To Lauren Dalicandro and Elaine Toombs I am so thankful for all of our conversations, walks, and lunches and being able to grow with you during this journey.

A huge thank you to my life partner, Scott Tatem, who has supported me through many days of anxious preparation for milestones, been flexible with odd hours and changing schedules, and holding down the fort for numerous conference trips. To my kids, Shahara and Lucas, you bring so much light and love to my life that has kept me going and inspired the work I do. To my mom, Joy Kowatch, and sisters Kimberley Kowatch and Sharlaine McEachren, thank you for being my cheer leaders and your faith in my ability to succeed. To my late Dad, Jim Kowatch, as well as my late Uncle Ken, and Aunty Kathy, I know you would all be proud if you could see me

now – soon to be the first Dr. Kowatch – I miss you everyday. I am very thankful for all of the support I've received from everyone throughout this journey.

Abstract

The Truth and Reconciliation Commission of Canada has identified a need to address disproportionate levels of mental health needs among First Nation children while integrating Indigenous Knowledge. This research program worked with a community organization to develop and evaluate a mental health treatment that brought together cultural teachings and practices with clinical psychology strategies to address mental health needs of First Nation children. Study 1 assessed lived experiences and needs for future treatments using semi-structured interviews that brought together perspectives from children who previously received treatment ($n = 7$), caregivers ($n = 7$), and cultural and community workers ($n = 12$) including treatment providers, Elders, Cultural Knowledge Keepers, and organization managers. Theoretical thematic analysis was used to identify themes among transcripts. Informants endorsed primarily cognitive and behavioural strategies as being helpful, a need to take time in developing a meaningful relationship, individualization of treatment, and ensuring that treatments are engaging and hands-on. These findings were integrated with a systematic review of 24 studies (study 2) that identified psychoeducation, emotional awareness, cognitive strategies, opposite action, and problem solving as commonly embedded into successful transdiagnostic treatments for children. Results were synthesized into a draft treatment manual, and a team of cultural workers including an Elder and four Knowledge Keepers identified how to embed culture into the pilot treatment. Study 3 included a pilot treatment delivered to five children, aged 7- to 11-years, over five days as a summer-camp style intervention. Following the treatment a quantitative evaluation demonstrated relative stability in externalizing, internalizing, behavioural symptoms, and adaptive skills scores on the BASC-PRS, as well as relative stability on the BASC-SRP school problems, internalizing, inattention/hyperactivity, emotional

symptoms index, and personal adjustment scores, with some changes in the expected directions. Reliable change indices were non-significant for pre- and post-treatment changes on the PRS and SRP. Interviews with the children post-pilot revealed high engagement, appreciation of cultural interventions, and improvements in emotional awareness and regulation strategies. This process of treatment development provides a detailed depiction of how Two-Eyed Seeing can be implementing in developing mental health services within community organizations for First Nation children. The evaluation provides guidance for the treatment to be further developed and refined to meet the needs of youth in the community.

Table of Contents

Chapter 1: Introduction	13
Mental Health Needs in Childhood.....	15
Mental Health Difficulties in Indigenous Children and Youth.....	16
Transdiagnostic Conceptualizations of Mental Health	18
Internalizing and Externalizing Difficulties in Children and Adolescents	18
The General p Factor of Psychopathology.....	20
Research Domain Criteria (RDOC).....	20
The Hierarchical Taxonomy of Psychopathology (HiTOP)	22
Negative Affectivity.....	23
Repetitive Negative Thinking	24
Intolerance of Uncertainty	25
Experiential Avoidance.....	25
Anxiety Sensitivity.....	26
Emotion Regulation Strategies	27
Access to Mental Health Services.....	29
Group-based Treatments with Children and Youth	32
Group therapy factors	33
Group-based Treatment with Indigenous Populations.....	36
Summer Camps as Intensive Treatment Delivery Modalities	40
Community-Based Needs	44
Two-Eyed Seeing.....	45
Chapter 2: Overview of the Current Program of Research.....	49
Intervention Mapping.....	49
Step 1: Needs Assessment	53
Step 2: Performance and Change Objectives.....	54
Step 3 and 4: Protocol Development and Review	54
Step 5 and 6: Study 3 – Proposed Pilot Test.....	55
Chapter 3: Study 1 Qualitative Study of Previous Mental Health Treatment for First Nation Youth.....	56
Study 1 Objectives and Research Questions.....	57
Study 1 Method.....	58
Study 1 Recruitment	58
Study 1 Procedure	58
Study 1 Informants.....	60

Study 1 Analysis	60
Chapter 4: Study 1 Results.....	63
Intervention Strategies	65
Contributors to Success.....	67
Ideal Treatment	71
Chapter 5: Study 1 Discussion and Conclusions	72
Chapter 6: Study 2 Systematic Review of Transdiagnostic Interventions for Children	79
Study 2 Objective and Research Questions	82
Study 2 Method.....	82
Study 2 Data Sources	82
Study 2 Article Selection	83
Exclusion Criteria	83
Search Process	83
Data Extraction	84
Quality Assessment.....	84
Chapter 7: Study 2 Results.....	86
Study Characteristics	86
Participant Age.....	86
Geographical Location.....	86
Presenting Concerns.....	86
Intervention Components.....	87
Number of Sessions	91
Outcomes	91
Case Reports	91
Statistical Comparisons.....	93
Pre- to Post-treatment and Follow-up Comparisons	93
No Significant Difference	97
Between Group Changes.....	97
Chapter 8: Study 2 Discussion.....	100
Trends in Intervention Components.....	100
Generalizability of Studies.....	102
Symptom Reductions	103
Limitations and Future Directions	105
Conclusion	106

Chapter 9: Performance Objectives, Change Objectives, and Logic Model Based on Intervention Mapping	107
Chapter 10: Study 3 Evaluation of a Pilot Transdiagnostic Culturally Woven Mental Health Treatment Group for First Nation Children	109
Study 3 Objective and Research Questions	110
Study 3 Method.....	110
Study 3 Group Attendees	110
Study 3 Measures	111
Child and Adolescent Needs and Strengths (CANS) Assessment- Acute	111
Behavior Assessment System for Children, Third Edition (BASC-3)	111
First Nations Children's Wellbeing Measure (FNCWM).....	112
Qualitative Interviews.....	113
Critical Incidence Questionnaire and Group Counseling Helpful Impacts Scale (GCHIS).....	113
Field Notes	114
Study 3 Procedure	114
Treatment Protocol.....	116
Study 3 Analysis	119
Chapter 11: Study 3 Results.....	121
Pre-intervention Scores	122
Acute CANS	122
BASC-PRS.....	122
BASC-SRP.....	122
FNCWM	123
Post-intervention Scores	123
Engagement.....	123
BASC-PRS.....	124
BASC-SRP.....	124
Reliable Change Indices	125
Qualitative Results	125
Critical Incidence Questionnaire and Helpful Group Impacts Scale	130
Field Notes About Delivery and Adherence	130
Chapter 12: Study 3 Discussion and Conclusions	132
Limitations	136
Areas for Further Investigation.....	139
Conclusion	140

Chapter 13: General Discussion.....	141
Limitations	146
Future Research	148
References	150

List of Tables

Table 1: Study 1: Treatment Needs Identified in Qualitative Assessment	182
Table 2: Study 1 Psychological Interventions Endorsed in Qualitative Assessment.....	184
Table 3: Study 1 Cultural Interventions Endorsed in Qualitative Assessment.....	186
Table 4: Study 1 Contributors to Success in Treatment in Qualitative Assessment.....	188
Table 5: Study 2 Systematic Review Databases and Search Terms	190
Table 6: Study 2 Summary of Studies in Systematic Review	191
Table 7: Study 2 Presence of Intervention Components in Reviewed Studies.....	212
Table 8: Performance and Change Objectives.....	214
Table 9: Study 3 Daily Schedule for Transdiagnostic Group Intervention	216
Table 10: Study 3 Acute CANS Scores	217
Table 11: Study 3 BASC-SRP Raw Scores on Composite Scales for Each Child.....	218
Table 12: Reliable Change Indices for the BASC-3.....	219
Table 13: Study 3 Group Level Scores on the FNCWM.....	220

List of Figures

Figure 1: Overview of intervention mapping process.....	221
Figure 2: Intervention Mapping Steps for the Current Research.....	222
Figure 3: Study 2 PRISMA Diagram of Study Selection Process	223
Figure 4: Study 3 Logic Model for Treatment Development	224
Figure 5: Study 3 Severity of Symptoms Rated by Parents Pre-Intervention	225
Figure 6: Study 3 Pre-Intervention Symptom Severity as rated on the SRP	226
Figure 7: Study 3 Engagement Ratings During Summer Camp Treatment.....	227
Figure 8: Child 12 PRS Scores	228
Figure 9: Child 31 PRS Scores	229
Figure 10: Child 43 PRS Scores	230
Figure 11: Child 77 PRS Scores	231
Figure 12: Child 12 SRP Scores	232
Figure 13: Child 31 SRP Scores	233
Figure 14: Child 43 SRP Scores	234
Figure 15: Child 77 SRP Scores	235

List of Appendices

Appendix A: Research Ethics Board Approval Letter for Study 1 Qualitative Needs Assessment	236
Appendix B: Demographic Questionnaires for Needs Assessment.....	237
Appendix C: Semi-structured Interview Questions for Cultural and Community Workers.....	238
Appendix D: Semi-Structured Interview Questions for Community Members	241
Appendix E: Semi-Structured Interview Questions for Youth	243
Appendix F: Acute Child and Adolescent Needs and Strengths Assessment	244
Appendix G: First Nation Child Wellbeing Measure	246
Appendix H: Post-Treatment Qualitative Questions for Children.....	248
Appendix I: Critical Incident Questionnaire and Group Counselling Helpful Impacts Scale	249
Appendix J: Field Case Note Form.....	252
Appendix K: Research Ethics Board Approval Letter for Pilot Treatment	253

Chapter 1: Introduction

First Nation¹ children are the fastest growing demographic group in Canada (Statistics Canada, 2021), and the mental health needs of First Nation's children and youth are often greater in comparison to non-Indigenous Canadian populations. For example, suicide is 2 to 10 times more likely for Indigenous youth in comparison to youth from general populations (Lehti et al., 2009). Rates of trauma and substance use among Indigenous people are also higher when compared to non-Indigenous people (Assembly of First Nations & Health Canada, 2015). These increased rates are tied to the long history of assimilationist policies aimed at having First Nation people adopt a non-Indigenous way of life, and the consequential living and social circumstances arising from these policies (e.g., the reservation system, residential schools, over-representation in the child welfare system, higher rates of experiencing poverty, lower access to healthcare, etc.; Assembly of First Nations & Health Canada, 2015; Reading & Wein, 2009). An example of the intergenerational transmission of these mental health difficulties is demonstrated by research findings showing that having a parent or grandparent who attended residential school is associated with greater risks for depressive symptoms (Bombay et al., 2011), developing substance use difficulties and suicidal ideation (Ross et al., 2015), experiencing a higher number of adverse childhood experiences (Bombay et al., 2011; Radford et al., 2022), and increased risks

¹ Throughout this document specific language will be used to communicate about groups of people. *First Nation* reflects the descendants of the Indigenous groups residing in the areas now known as the Canadian provinces (Policy Research Initiative, 2003; Poirier, 2015). First Nation identifies people within Canada who would be considered legal "Indians", recognized as such under the *Indian Act* (1985), as well as those who self-identify as First Nation and could include individuals who reside on reservations or within urban centres. The term *Indigenous* is used to refer to people who are the original inhabitants of a geographical area and is applied as an inclusive term to reflect international or multi-group populations (Policy Research Initiative, 2003; Poirier, 2015).

for child welfare involvement (Barker et al., 2019). To interrupt the transmission of these mental health difficulties across generations, developing interventions for Indigenous children's mental health is a priority area (The Truth and Reconciliation Commission [TRC], 2015a).

Many assimilationist policies have interrupted the transmission of healthy family relationships and coping strategies (TRC, 2015b). Risks of experiencing psychological distress are higher among children, and grandchildren, of residential school survivors (Bombay et al., 2011). Within residential schools, punitive and institutional methods of behavioural control were often used with children (TRC, 2015b). Although continued research is needed in this area, the increased risks of psychological distress observed in children and grandchildren of residential school survivors may be due to necessary coping patterns, such as with emotional suppression, that were socialized through punitive measures. Furthermore, residential school attendance and placement of children into non-Indigenous foster homes or adoption sites interrupted the transmission of cultural and family values that are protective against mental health difficulties (Bombay et al., 2014). Taken together, these research findings suggest that providing mental health treatments to First Nation children that are culturally acceptable can provide an opportunity to develop healthy life-long emotional coping strategies.

It is clear that developing treatments that provide foundations for healthy emotional coping are needed for First Nation children to reduce mental health disparities that are observed. This program of research is the result of a collaboration with an Anishinabek community health organization that aimed to develop a mental health treatment for children entering into services. The first step in understanding how to address mental health difficulties is to develop an understanding of what mental health needs exist for First Nation children. An overview of the mental health needs of children and adolescents, with comparison to First Nation people

specifically, will be presented as this provides the context for comparison to the needs assessment completed in Study 1. The complex realities that many First Nation people experience in navigating services is reviewed through a discussion of the social determinants of health that exacerbate health disparities within First Nation groups. These social determinants of health are discussed as this provides insight into the importance of the intervention mapping framework (discussed in chapter 2) used for program development in this project. The integration of community needs and existing literature provides the rationale for study 2. An overview of group treatment, and therapeutic factors of group treatment, is presented as this modality has the potential to increase the relevance and reach of mental health services, as well as potentially being particularly helpful for treatments with First Nation children. Group therapy factors were explored as part of the evaluation of the pilot treatment in Study 3. Furthermore, a brief summary of suggestions from First Nation scholars, and the guiding framework of Two-Eyed seeing, situates this project in the pursuit of developing appropriate services for the community being served. These findings provide the basis for the development of a culturally woven transdiagnostic group intervention for children that was developed and evaluated within the community organization.

Mental Health Needs in Childhood

Across demographic groups, many mental health difficulties have onset within childhood, with estimates from general population surveys identifying over one-third occurring before the age of 14, and nearly half beginning before the age of 18 (Solmi et al., 2022). If childhood mental health difficulties are left untreated, they may persist into adulthood, leading to a host of negative outcomes such as symptoms of anxiety and/or depression, self-harm, conduct problems, substance use difficulties and functional impairment (Danielson, 2020; Garcia-Escalera et al.,

2019; Heleniak et al., 2016). Anxiety disorders are the most common mental health condition experienced by youth, with approximately 117 million children globally experiencing them, followed in frequency by disruptive behaviour disorders (113 million), Attention Deficit Hyperactivity Disorder (ADHD; 63 million), and depressive disorders (47 million; Polanczyk et al., 2015). Mental health symptoms in childhood predict adult psychological diagnoses such as anxiety and depressive disorders (Danielson, 2020). For example, a meta-analysis found that individuals who had problematic externalizing behaviour in childhood were 1.52 times more likely to be diagnosed with a depressive disorder in adulthood (Loth et al., 2014). Thus, early and effective treatment for children and youth could be highly beneficial. When mental health regulation skills are developed at the earliest sign of possible mental health difficulty, more intense or long-term mental health concerns may be avoided. Developing a fulsome understanding of the types of mental health difficulties children experience at early emergence can help direct the development of treatments that meet these needs.

Mental Health Difficulties in Indigenous Children and Youth

The research surrounding mental health needs experienced by First Nation children and youth is limited. Nelson and Wilson (2017) demonstrated that mental health research for First Nation people has largely focused on suicide and substance use, leaving knowledge gaps in understanding how mood, anxiety, and trauma disorders are experienced. More recent endeavours have sought to address this gap. A systematic review of mental health needs among First Nation youth under the age of 18-years found a pooled past year prevalence rate of diagnosed mood disorders of 2.1%, anxiety at 2.9%, ADHD at 2.9%, and suicidality at 8.9% (Owais et al., 2022). Lifetime pooled prevalence rates for anxiety and depression were 17.1% and suicidality was at estimated at 23.1% (Owais et al., 2022). Reports of elevated mood

symptoms were endorsed by 25.1% of youth within 2 studies, although rates on self- and parent-report assessments were lower (Owais et al., 2022). These estimated prevalence rates are lower than rates in non-Indigenous Canadians (Owais, 2022). However, these lower rates may reflect lower access to health care professionals, and/or assessment limitations in the diagnosis process rather than lower rates of mental health difficulties (Owais, 2022). Another large-scale evaluation of mental health needs is offered by the Regional Health Survey ([RHS]; First Nations Information Governance Centre, 2018). The RHS provides an indication of some mental health difficulties, including anxiety, mood, Autism Spectrum Disorder, ADHD, and Fetal Alcohol Spectrum Disorder, among First Nation children and youth residing on-reserve within Canada. In the RHS (2018) 1.1% of children under the age of 11 were diagnosed as having an anxiety or mood disorder, while 1.8% were diagnosed with ADHD. Among youth aged 12 – 17, 8.2% of youth were diagnosed with an anxiety disorder whereas 6.6% were diagnosed with a mood disorder, and 3.4% with ADHD (RHS, 2018). However, rates on a mental health screener (i.e., Kessler Distress Scale K10) suggested 23.4% of youth were likely to experience a moderate to severe mental health disorder, although only 11.6% of youth rated their mental health as fair or poor in response to the question “In general, how would you say your mental health is?” (RHS, 2018). These rates suggest that there may be underreported and underdiagnosed mental health difficulties within this group of people. In Northwestern Ontario, an assessment of mental health needs among children entering an Anishinabek community organization for mental health services identified the highest mental health needs as trauma (49.7%), anxiety (26.0%), emotion regulation (25.0%), and mood (21.4%) related symptoms (Kowatch, 2017). Taken together, these findings suggest that First Nation children and youth are likely experiencing mood, anxiety, and emotional regulation difficulties that are under diagnosed.

Transdiagnostic Conceptualizations of Mental Health

Helping children to develop healthy emotional regulation skills is complicated by mental health disorders often being characterized by significant symptom overlap and comorbidity (Hopwood & Grilo, 2010; Rubin & Mills, 1991). This is further complicated by the criteria that are used to meet diagnostic criteria for disorders within the Diagnostic and Statistical Manual of Mental Disorders ([DSM] American Psychiatric Association, 2022) often being heterogenous to the point that two presentations of the same disorder may not have a single symptom in common (Caspi et al., 2014). The literature surrounding treatments for mental health difficulties, whether they are biological (e.g., medication) or behavioural (e.g., psychotherapy), suggest that distinguishing between disorders may not be a requirement for treatment planning as many are similarly effective regardless of disorder (Cuthbert & Insel, 2013). Taken together, these findings suggest that there are likely similar underlying systems and processes that cut across existing diagnostic categories (Cuthbert & Insel, 2013; Morris et al., 2022). Researchers have been working to identify these transdiagnostic mechanisms and processes that are present across differing disorders.

Internalizing and Externalizing Difficulties in Children and Adolescents

In 1966, Achenbach identified two broad forms of maladjustment - internalizing and externalizing disorders - to conceptualize childhood mental health disorders (Hopwood & Grilo, 2010; Krueger & Eaton, 2015; Rubin & Mills, 1991). Externalizing problems are characterized by individuals experiencing trouble inhibiting behaviours that are deemed socially inappropriate or disruptive (Krueger & Eaton, 2015; Rubin & Mills, 1991) while internalizing problems are characterized by experiencing depressive and/or anxious symptoms, rumination, and low self-

esteem (Hopwood & Grilo, 2010; Krueger & Eaton, 2015). Grouping disorders into these two domains has been empirically supported, as well as recommended by the DSM, demonstrating the utility of this conceptualization for research and clinical practice (Achenbach et al., 2016). By having assessments that rate children's experiences along hierarchical dimensions, as well as lower order symptoms, specific connections between symptoms can be considered that may be otherwise missed by categorical assessments when developing treatment plans (Achenbach et al., 2016). Achenbach and colleagues (2016) argue that to take pervasive comorbidity into account, assessing a broad array of symptoms (such as on dimensions like internalizing and externalizing) is necessary.

The internalizing-externalizing distinction works exceptionally well for conceptualizing mental health difficulties among adolescents who display symptoms differently than the typical diagnostic presentations observed in adults (Reynolds, 1998). The co-occurrence of internalizing and externalizing difficulties in youth is associated with greater psychosocial impairment and risk of relapse when compared to singular disorders (Essau & de la Torre-Luque, 2021). As internalizing and externalizing difficulties are a major health issue in adolescence, especially when co-occurring, treatments must be developed to address, treat, and prevent a range of mental health symptoms while remaining efficient and cost-effective (Essau & de la Torre-Luque, 2021). Some youth exhibit concurrent internalizing and externalizing symptoms which can remain stable over time (Willner et al., 2016). For example, one study found that 41.5% of adolescents with an anxiety disorder and/or major depressive disorder (MDD) also experienced comorbid externalizing disorders (Essau & de la Torre-Luque, 2021). However, the internalizing – externalizing distinction does not account for disturbances in thoughts that are experienced by

individuals with schizophrenia or psychosis spectrum disorders, and a third category – thought disorders- has been suggested to account for these (Achenbach et al., 2016).

The General p Factor of Psychopathology

Analyses of commonalities between internalizing, externalizing, and thought disorders has led some researchers to propose a more parsimonious explanation (Caspi et al., 2014). Caspi and colleagues (2014), among others, suggest that there is one factor that can account for similarities in risk for developing mental health difficulties in general (Achenbach et al., 2016). This conceptualization is referred to as the p factor (Caspi et al.). The p factor is viewed as being analogous to the g factor in conceptualizations of intelligence. The p factor is intended to account for findings such as twin studies and risk factor analyses demonstrating that there is a heritable risk of developing some form of mental health difficulty if a biological relative has one, although the manifestation of the specific disorder may not be exactly the same as that relative (Caspi et al., 2014). In a study using a longitudinal general population sample, Caspi et al. (2014) demonstrated that predictive models using a three-dimension approach (i.e., internalizing, externalizing, and thought disorder clusters) demonstrated a good fit to the data. However, when a superordinate factor was added to the model (i.e., the p factor), the model was significant and helped to summarize people's propensity to develop any, and all, mental health difficulties (Caspi et al., 2014). These findings were predictive of greater levels of impairment throughout life, early disfunction in brain function, and worse developmental histories (Caspi et al., 2014). Indeed, the p factor has demonstrated a connection with early childhood experiences, such as childhood maltreatment, to explain overall risk in developing any mental health difficulty later in life, although not specific to a particular disorder (Caspi et al., 2014).

Research Domain Criteria (RDOC)

In response to research and concerns that the diagnostic criteria within the DSM created distinctions between disorders without sufficient research evidence to support these categories, the National Institute of Mental Health (NIMH) in the USA developed the Research Domain Criteria (RDoC; Cuthbert & Insel, 2013). RDoC suggests that researchers would be best positioned by viewing psychopathology as a disruption in basic functioning to various degrees (Morris et al., 2022). RDoC originally identified five constructs (i.e., negative valence, positive valence, cognitive systems, systems for social processes, & arousal/regulatory systems) for researchers to focus on developing an integrative, dimensional, understanding for, although these constructs have been extended to a sixth construct (i.e., sensorimotor systems; Morris et al., 2022). In attempts to translate basic scientific findings into clinically relevant findings, the RDoC constructs focus on systems and processes along continuums of typical functioning to psychopathological functioning, regardless of the specific diagnostic criteria that has been used to describe them. Morris and colleagues (2022) provide examples of how the RDoC has generated knowledge of transdiagnostic mechanisms among disorders including common brain structures between depression, schizophrenia, bipolar, and OCD, executive functioning patterns in ADHD and autism spectrum disorder prognoses, and emotional reactivity among trauma scores. RDoC researchers continue to recommend that phenotypic descriptions be used as the common elements grouping mental health experiences together to predict diagnoses and clinical outcomes, while viewing current diagnostic labels as proxy measures for those symptom clusters, rather than concrete descriptors of disease or illness (Morris et al., 2022). Developing a nuanced understanding of how dimensions of behavioural, cognitive, neural, and other types of processes come together to influence functioning, prognosis and treatment can be better predicted, guiding treatment developers (Morris et al., 2022). Nonetheless, the RDoC is not intended as a

classification system, rather it hopes to guide research to inform classification systems to more nuanced understandings (Cuthbert & Insel, 2013).

The Hierarchical Taxonomy of Psychopathology (HiTOP)

In compliment to the RDoC, the HiTop model was developed to offer a comprehensive understanding of symptom commonalities identified among mechanistic research within psychopathology (Kotov et al., 2017). This shift in understanding was driven by poor levels of inter-rater reliability for existing diagnostic categories as well as observing numerous people falling below threshold but experiencing significant symptom burden, and/or experiencing multiple disorders (Kotov et al., 2022). The HiTop model organizes mental health difficulties along six spectra: internalizing (or negative affectivity), thought disorder (or psychoticism), disinhibited externalizing, antagonistic externalizing, detachment, and somatoform (Kotov et al., 2017; Kotov et al., 2022). These spectra are highly correlated and are consistent with conceptualizations of a general p factor providing risk of development for general disorder (Caspi et al., Lahey et al., 2011). These spectra are further broken down into subfactors that describe common processes within the spectra (Kotov et al., 2017). For example, within internalizing, there are fear and distress subfactors, and potentially eating and sexual pathology subfactors (Kotov et al., 2017; Kotov et al., 2022). Externalizing was broken into two subfactors including antisocial and substance use (Kotov et al., 2017). These subfactors are then dissected further into common traits, for example, within the fear subfactor common traits include anxiousness, emotional liability, hostility, submissiveness, fragility, and identity problems, among others (Kotov et al., 2017; Kotov et al., 2022). In a review by Kotov et al. (2017), the HiTOP model demonstrated the ability to account for genetic vulnerabilities, common environmental risks, neurobiological abnormalities, illness course findings, functional

impairments, and efficacy of treatments. Furthermore, the HiTOP model has demonstrated greater ability to account for validators of disorder in comparison to traditional diagnoses (Kotov et al., 2022).

Within the HiTOP model, diagnoses take place through a profile of traits (Kotov et al., 2022). This trait and symptom-based approach (as opposed to a diagnosis-based approach) allows clinicians to consider treatment targets as higher levels, where a large amount of overlap may be observed (Kotov et al., 2022). These traits and symptoms can be assessed dimensionally to account for differences between individuals, severity levels at any time, as well as changes over one's lifetime (Kotov et al., 2022). However, the HiTOP model does not yet account for etiology of disorders (Kotov et al., 2022). Across the HiTOP and RDOC models lays a need to identify the specific mechanisms (e.g., traits, symptoms, processes) that can help clinicians and researchers understand and treat mental health difficulties.

Negative Affectivity

One identified trait is tied to a general neurotic syndrome that is commonly comorbid between anxiety and depression and where symptoms of these emotional disorders are varying expressions of the same syndrome (Ehrenreich-May et al., 2009). Underlying this neurotic syndrome is negative affect, which is a stable, general trait conceptualized as a temperamental sensitivity to negative stimuli, leading individuals to experience more negative emotions and moods (e.g., fear, anger, sadness, guilt, shame, etc.; Clark et al., 1994). In 1998, Brown and colleagues found that negative affect was tied to both depression and anxiety among latent path analyses with 350 children (Ehrenreich-May, 2009). This transdiagnostic factor contributes to a personality trait referred to as neuroticism (Clark et al., 1994). While neuroticism was previously thought to be more closely tied to internalizing disorders, contemporary research has

demonstrated connections to multiple patterns of psychopathology. For example, in a review of personality factors associated with anxiety, depression, and substance use, neuroticism was most strongly linked to psychopathology (Kotov et al., 2010). Neuroticism is the most commonly associated personality factor tied to both internalizing and externalizing symptoms for both adults and children (see Brandes et al., 2019 for a review). Preliminary support for negative affectivity being directly related to the p factor has been found within a sample ($n = 711$) of 7 to 13-year-olds (Brandes et al., 2019). Furthermore, Brandes et al. (2019) demonstrated that negative affectivity (both internalized and externalized) could be differentiated based on whether it had primary features of fear or irritability, suggesting that it is a robust predictor of different forms of psychopathology among children.

Repetitive Negative Thinking

One process that is known to contribute to higher levels of negative affectivity is repetitive negative thinking (RNT). RNT involves relatively passive or uncontrolled repetitive thoughts focused on negative content (Ehring & Watkins, 2008). RNT is a primary symptom of anxiety and depression, although it can manifest as rumination and worry (McEvoy et al., 2013). Ruminations are continual thought processes that focus on negative symptoms, the causes and outcomes, and a lack of action to alleviate the associated distress as observed in depressive disorders (McEvoy et al., 2013; Nolen-Hoeksema, 1991). Worry is defined as an uncontrollable, negatively focused chain of thoughts and images (Borkovec et al., 1983). Both forms of repetitive negative thinking have been suggested to be a common underlying mechanism for both depressive and anxiety symptoms (McEvoy et al., 2013), as well as substance use difficulties, and bulimic symptoms among 11 to 15-year-old girls (Nolen-Hoeksema et al., 2007). Identifying

this process provides treatment developers direction about how to shift mental processes to be less susceptible to negative affectivity.

Intolerance of Uncertainty

Intolerance of uncertainty (IU) has been suggested to contribute to the development of anxiety disorders and depression. IU is a dispositional trait whereby an individual experiences an aversive emotional response brought on by a perceived lack of knowledge (i.e., key, sufficient, or salient in nature) which perpetuates a feeling of uncertainty and incapacity to cope (Birrell et al., 2011; Koerner & Dugas, 2008). In a sample of children, a large effect size between anxiety and IU was found, and IU rates were associated with significantly higher avoidance responses, emotional numbness, and hyperarousal symptoms of PTSD (Osmanağaoğlu et al., 2018). Furthermore, IU rates have been associated with attention deficit hyperactivity disorder (ADHD), post-traumatic stress disorder (PTSD), obsessive compulsive disorder, and major depressive disorder in children (Fetzner et al., 2013). These findings suggest that IU is a transdiagnostic factor that influences both internalizing and externalizing difficulties.

Experiential Avoidance

Across many different mental health difficulties (e.g., specific phobia, social anxiety, post-traumatic stress disorder, etc.) behavioural and experiential avoidance are used as criteria for diagnosis (American Psychiatric Association, 2022). Experiential avoidance is a tendency to escape or avoid negative internal experiences, whereas behavioural avoidance is not engaging with specific distressing events or activities (Barlow & Kennedy, 2016). Experiential avoidance has been associated with generalized anxiety disorder, panic disorder, social anxiety disorder, specific phobia, depression, and conduct disorder (Coyne et al., 2014; Im & Kahler, 2020; Wang et al., 2024). Individuals who engage in avoidance may have temporary relief from their negative

experiences, although this can undermine their belief in their capacity to successfully engage with similar experiences in the future, and may perpetuate a belief in needing to avoid experiences or situations (see Barlow & Kennedy, 2016 for a review). Experiential avoidance has been shown to have an intergenerational transmission, as daughters of mothers with high rates of experiential avoidance tend to demonstrate higher levels themselves (Mellick et al., 2017). Experiential avoidance has been identified as a predictor of anxiety and depressive symptoms among children (Epkins et al., 2016). Furthermore, levels of experiential avoidance also predict later trajectories of major depressive disorder and generalized anxiety disorder, such that adolescents with persistent trajectories of symptoms experienced higher experiential avoidance (Mellick et al., 2019).

Anxiety Sensitivity

Along with experiential avoidance, anxiety sensitivity has been found to be a predictor of numerous anxiety disorders as well as major depressive disorder (Epkins, 2016). Anxiety sensitivity is a heightened awareness, and fear of, bodily sensations typically associated with anxiety (such as an increased heart rate, sweaty palms, and sense of derealization) that are thought to have negative psychological, physical, and social consequences (Epkins, 2016). Experiential avoidance and anxiety sensitivity often occur together, although experiential avoidance has been shown to account for more variability in depression and social anxiety scores beyond anxiety sensitivity (Epkins et al. 2016). Thus, anxiety sensitivity may be a precursor to experiential avoidance (Epkins et al., 2016). Within a cognitive behavioral treatment context, children who experienced decreases in anxiety sensitivity and/or experiential avoidance had similar treatment outcomes, demonstrating that they are ideal treatment targets (Lehrbach et al., 2023).

Negative affectivity, repetitive negative thinking, intolerance of uncertainty, anxiety sensitivity, and avoidance are all transdiagnostic mechanisms that have been identified to contribute to multiple mental health concerns. Although each of these contributes understanding of how mental health difficulties emerge, and are maintained, the model of emotion regulation identifies how they come together in a fulsome model.

Emotion Regulation Strategies

Emotion regulation describes the cognitive and behavioural processes that individuals engage in to influence the frequency, intensity, duration, and expression of an emotional reaction they are experiencing (Trosper et al., 2009). Within the process model of emotion regulation, Gross (1998) identified five emotion regulation strategies: situation selection (i.e., engaging in situations associated with positive emotions; avoiding situations associated with negative emotions); situation modification (i.e., changing behaviour in response to an aversive environment to make it tolerable); attentional deployment (i.e., redirecting attention to increase or decrease emotion); cognitive change (i.e., increasing or decreasing significance of emotional experience by changing how one thinks about it); and response modulation (i.e., employed when other strategies have failed whereby individuals regulate emotion through physiological or behavioural means). When used successfully and in moderation, emotion regulation strategies are adaptive and have been associated with good health outcomes, improved relationships, and improved academic and work performance (Aldao et al., 2010). Maladaptive emotion regulation strategies may heighten unwanted emotions, thereby leading to greater risks for the onset and maintenance of anxiety and mood disorders (Aldao et al., 2010; Ehrenreich-May et al., 2009). Excessive engagement with maladaptive strategies has also been associated with eating, and substance use disorders (Aldao et al., 2010; Trosper et al., 2009) as well as trauma related

symptoms (Weissman et al., 2019). Gratz and Roemer (2004) also propose that awareness, understanding, and acceptance, of emotional states influences individuals' capacities to act in a desired way in response to their emotional experiences. Trying to control emotional experiences, rather than accept them, as well as experiencing negative emotional responses to one's emotions is related to higher levels of emotional dysregulation (Gratz & Roemer, 2004). Brenning and colleagues (2022) found that dysfunctional emotion regulation was positively linked to internalizing and externalizing problems in a sample of non-clinical and clinically referred adolescents. A review by Daniel and colleagues (2020) demonstrated that within early and middle childhood the ability to engage in emotional regulation strategies (e.g., behavioural distraction, acceptance) was tied to lower risks of developing internalizing difficulties, and these emotion regulation skills promoted resilience among children at-risk for developing internalizing and externalizing difficulties.

Specific emotion regulation strategies have been associated with various risks for developing psychopathology. For example, emotion regulation strategies such as cognitive reappraisals demonstrated consistent connections to lower risks of numerous vulnerabilities (e.g., problematic video game, media, and technology use; alcohol and marijuana use, etc.) into adolescence (Daniel et al., 2020). In a meta-analysis, Compas et al. (2017) demonstrated that emotional suppression and denial were associated with increased levels of internalizing symptoms and avoidance with internalizing and externalizing symptoms within child and adolescent studies. As children got older, greater engagement in emotion regulation strategies such as cognitive reappraisal and approach/engagement coping was related to lower rates of internalizing symptoms, whereas emotional suppression was related to externalizing symptoms

(Compas et al., 2017). However, some emotion regulations strategies, such as acceptance have demonstrated variability in their adaptiveness (Daniel et al., 2020).

Knowledge of how mental health difficulties are related through symptoms and process provides direction for how to develop treatments for these mental health difficulties. Although treatments can provide a description of the types of disorders they have effectively reduced symptoms for, treatments that consider the mechanisms identified above, can better address mental health difficulties (Sauer-Zavala et al, 2017). Furthermore, if common underlying processes are targeted through treatments accessibility to treatments would be improved for children experiencing multiple mental health difficulties at one time (Sauer-Zavala et al, 2017). Transdiagnostic treatments can also improve accessibility to treatments within smaller community-based settings, which First Nations people often navigate, by addressing a number of presenting concerns which serves to reduce health disparities between Indigenous and non-Indigenous people (Sauer-Zavala et al, 2017). Furthermore, the interconnectedness between specific cognitive and behavioural processes into a higher-level risk for developing mental health difficulties (i.e., the *p* factor) suggests that providing strategies to effectively cope with common transdiagnostic processes can reduce risks, and treatment needs, for future experiences. Indeed, identifying key cognitive and behavioural processes common across most presentations would reduce training burdens for clinicians (Sauer-Zavala et al, 2017).

Access to Mental Health Services

When mental health difficulties are identified, accessing services can be difficult, and there are disparities between non-Indigenous and First Nation people in this accessibility. For example, within non-Indigenous populations, fewer than 25% of children who require specialized mental health services (i.e., community mental health clinics, private practitioners, or

social agencies) receive it (Waddell et al., 2002; Waddell et al., 2005). However, approximately 59% to 40% of children received primary healthcare services for their mental health across multiple studies (Waddell et al., 2002). Comparably, among children and youth with mental health conditions in the RHS (2018), fewer than half of the children requiring assistance for mental health needs received services, although the nature and effectiveness of these services were not reported. More specifically for children who had received a diagnosis, 39.5% and 34.8% of children and youth respectively received treatment for anxiety, 44.0% and 33.8% respectively for mood, and 58.8% and 48.1% respectively for ADD/ADHD (RHS, 2018). Given these findings, there are fewer First Nation children receiving specialized treatment for mental health difficulties when compared to general population estimates children.

When children experience mental health difficulties in childhood, treating it early can help decrease risks for long-term mental health concerns. Research with Indigenous youth from the United States of America (USA) and Canada suggests that identifying and addressing mental health concerns before adolescence might decrease risks of mental health difficulties becoming more complex (Whitbeck et al., 2008). Notably, within a three-year span from pre-adolescence (10-12 years) to adolescence (12-15 years) mental health needs such as internalizing disorders (e.g., anxiety, depression, etc.) and externalizing disorders (e.g., ADHD, Oppositional Defiance Disorder [ODD], and Conduct Disorder [CD]) doubled, and an eightfold increase was demonstrated for substance use disorders (Whitbeck et al., 2008). When children experienced an earlier depressive episode or externalizing disorder (among other mental health concerns) they were at higher risk (i.e., 2.03 to 8.65 times higher) of experiencing internalizing or externalizing mental health concerns in late adolescence (Whitbeck et al., 2008). Identification and intervention earlier in childhood (e.g., 7-12 years-old) can help support greater long-term mental

wellness within First Nation communities (Mental Wellness Continuum Framework [MWCF], Assembly of First Nations & Health Canada, 2015). Indeed, intervention research in child psychopathology demonstrates the importance of early intervention in playing an integral role in improved functioning (e.g., Keeton et al., 2019) and a lack of treatment predicting increased subsequent mental health difficulties, although this literature is limited (e.g., Beesdo et al., 2007; Bittner et al., 2007; Copeland et al., 2009). Thus, identifying and treating mental health difficulties early and effectively can decrease the long-term impact for these children.

For First Nation people accessing mental health supports is often affected by having lower access to social determinants of health (Reading & Wein, 2009). These determinants include proximal, intermediate, and distal determinants of health (Reading & Wein, 2009). First Nation people are often faced with navigating a fragmented health system, that does not have enough capacity or resources to fulfill needs (intermediary determinants; Reading & Wein, 2009). The available health resources within communities are often influenced by the economic resources available, which is affected by histories of assimilationist policies, geography, and many other influences that can vary significantly between communities. When services are available, they often prioritize westernized models of health and wellbeing, do not include cultural practices, and often focus primarily on serving individuals experiencing immediate crises (distal determinants; Reading & Wein, 2009). Furthermore, the legacy of colonialism has led to lower levels of educational attainment and employment that can create barriers, such as financial or transportation barriers, for First Nation people in seeking mental health services (proximal determinants; Reading & Wein, 2009). When these social determinants of health are not recognized by intervening health professionals it can also contribute to increased levels of racism and social exclusion that perpetuate health difficulties (proximal determinants; Nguyen et

al., 2020; Reading & Wein, 2009). Within urban settings, First Nation people report experiencing difficulties communicating with health professionals, having their needs dismissed or minimized by health care workers, long wait times, experiencing mistrust, racial discrimination, and transportation difficulties among others (Graham et al., 2023). These experiences lead to hesitations in accessing services when they are needed (Graham et al., 2023; Nguyen et al., 2020).

Group-based Treatments with Children and Youth

Across demographic groups, wait lists for mental health services are often long, which can prevent children and youth from receiving timely mental health services. Program developers often rely on group treatments to increase the number of clients that can receive treatment at any given time. Group treatments have shown to be effective in reducing mental health symptoms, while having beneficial socialization experiences. For example, meta-analyses show that when group treatments have identical components to individual treatments, they have similar levels of effectiveness as measured by symptom reductions (Burlingame et al., 2016; Ewing et al., 2015). Cognitive Behavior based group treatment is similarly effective as individual treatment for childhood anxiety (Ewing et al., 2015; Guo et al., 2021). Group-based treatment also offers unique social experiences among attendees that are especially relevant for children and that improve quality of life (Craigie & Nathan, 2009). Group bonding among children influences group functioning, anxiety levels, and engaging in cognitive exploration that leads to higher ratings of symptom change (Shechtman & Leichtertritt, 2010). Yalom and Leszcz (2005) described 11 therapeutic factors that are inherent to group therapy. These include installation of hope, universality, imparting of information, altruism, the corrective recapitulation of the primary family group, development of socializing techniques, imitative behaviour, interpersonal

learning, group cohesiveness, catharsis, and existential factors (Yalom & Leszcz, 2005). A number of these factors relate to interpersonal processes that may not be available in other contexts for these youth, thus having an environment to develop, practice, and adjust skills may be highly relevant for Indigenous children.

Group therapy factors. Yalom's therapeutic factors are viewed as interacting features of the group therapy process that wax and wane based on client needs and the group environment (Yalom & Leszcz, 2005). Installation of hope refers to the clients' belief that the intervention will effectively improve their lives and can be derived from multiple sources including change in other group members' symptoms, testimonials from successful people, and/or clinician confidence in the intervention. Universality is the recognition that other people have similar experiences to the clients, which in turn eases the clients' fear of being oddly exceptional or allows them to feel connected to others. Altruism stems from the clients' acts of supporting and being invested in the success of other group members, which provides the clients with a sense of making a difference and mattering to others. Interpersonal learning is a complex process that broadly reflects the development of a social space where clients can openly identify their own behaviour, the effect of this behaviour on others and themselves, implement new strategies to influence these interaction patterns, and review outcomes in order to adjust for future. Group cohesiveness refers to the level of attractiveness the group holds for the client, which is determined by the perceived warmth, supportiveness, acceptance, and belonging that people feel towards the group as a whole, as well as being valued within the group. Catharsis refers to experiencing and expressing emotions. Imitative behaviour describes the process of clients adopting the behaviour of the therapist or other clients in attempts to resolve difficulties they are experiencing. Although these therapeutic factors are often discussed as being beneficial for

group therapy clients, investigations of the presence and correlates of the factors within applied settings is limited. These seven group factors have been established as relevant with the assessment of the therapeutic process with children (Kivlighan et al., 1996).

The remaining four factors have little empirical support when assessing the group therapy process for children. These factors include imparting of information which is comprised of didactic instruction, where clients are provided with information about what skills could be used, as well as advice giving, where clients may give other group members suggestions on how to act or view a situation, thereby communicating interest and care for the other member (Yalom & Leszcz, 2005). The corrective recapitulation of the primary family group is described as the ability for clients to challenge and reform behavioural interaction patterns that were developed in their childhood family units, with group members and therapists inadvertently taking on the roles of these family members to accomplish this (Yalom & Leszcz, 2005). The development of socialization techniques may be directly influenced through such tasks as role playing and direct instruction or may be developed through interaction patterns among group members overtime, but nonetheless provide the client with more nuanced knowledge about successful interpersonal interactions (Yalom & Leszcz, 2005). Existential factors refer to facts about being alive that require acceptance as they cannot be changed (e.g., life is sometimes unfair and unjust, having to take responsibility for the way one lives their life regardless of the level of support and guidance received, there is no escape from some of life's pain or death, etc.; Yalom & Leszcz, 2005).

These therapeutic factors are tied to the process of therapy as well as improvements in symptoms targeted in group-based treatment with varying disorders. Studies of adults with Obsessive Compulsive Disorder (OCD) and Panic Disorder (PD) demonstrate that these group therapy factors differ in prominence throughout a 12-week Cognitive Therapy process, and often

shift based on the current tasks of the therapy process (Behenck et al., 2017). For example, among people with PD, existential factors were rated the highest in the beginning of the therapy process, which the authors attribute to a collective processing of a common fear of dying among people with PD (Behenck et al., 2017). In comparison, imparting information and interpersonal learning became more prominent during the phase of recognizing and challenging automatic thoughts (Behenck et al., 2017). Behenck et al. (2017) demonstrated that improvements in anxiety symptoms among adults with OCD were significantly correlated with self-reports of altruism, universality, interpersonal learning, guidance, catharsis, family re-enactment, self-understanding, and existential factors. Improvements in obsessive and compulsive symptoms were also associated with the therapeutic factors identified with anxiety symptoms, with the exception of guidance and catharsis (Behenck et al., 2017). However, correlations with depressive symptoms and therapeutic factors were not observed (Behenck et al., 2017). Taken together, these findings demonstrate that there are specific experiences of the group format (e.g., interpersonal learning, universality) associated with symptom reductions, at least for anxiety, that would not be available in individual treatment formats.

Choi and Park (2006) similarly demonstrated that greater symptom improvements among Cognitive Behavioral group members with Social Phobia were associated with higher ratings of interpersonal learning-output, guidance, universality, and group cohesiveness. Yalom and Leszcz (2005) clarify that the items captured in the interpersonal learning output items were reconceptualized as being part of the socializing techniques factor described above, whereas interpersonal learning-input and self-understanding contribute to the reconceptualized interpersonal learning domain. This collection of results demonstrates that the specific factors that influence symptom improvements may differ based on the type of mental health concern

being experienced, however, the limited number of studies in this area fail to account for contextual factors that may influence these interactions. Examination of therapeutic factors in a wider range of environments and with different populations is required to clarify this literature base.

In relation to Indigenous populations within North America specifically, Yalom's therapeutic factors have been observed following traditional Navajo sweat lodges with youth (Colmant & Merta, 1999). While Colmant and Merta (1999) outline and describe how the sweat lodge aligns with most of these therapeutic factors, no assessment of these factors or symptoms took place. Similar to the description provided by Colmant and Merta (1999), Yalom's 11 therapeutic factors (Yalom & Leszcz, 2005) align with First Nation's views of factors required for wellness according to the MWCF (2015). For example, the experience of altruism can provide people with a sense of meaning for participating in the group, and over time, could contribute to the development of a relationship that provides a sense of belonging. The installation of hope has a direct correspondence with the wellness factor of developing hope for oneself and family members, as clients would demonstrate greater hope for themselves and their relationships if they believe the intervention will work. However, the assessment of therapeutic factors and symptom reductions have not been examined in the existing literature although group-based treatment has been employed with various Indigenous groups.

Group-based Treatment with Indigenous Populations

Group-based treatment has been used with international Indigenous populations for intervention with suicide (Isaacs & Sutton, 2006), substance use (Beckstead et al., 2015; Calabria et al., 2014; Dickerson et al., 2016; Kulis et al., 2017; Lee et al., 2015; Lee et al., 2012; Lowe et al., 2012; Patchell et al., 2015; Patten et al., 2013, 2014; Scurfield, 1995), trauma (Morsette et

al., 2009; Scurfield, 1995), disruptive behaviours (Colmant & Merta, 1999), delinquency (Kahn et al., 1974), as well as social and emotional wellbeing (Allain, 2011). Although some of this research includes anecdotal evaluations of outcomes (e.g., Allain, 2011; Colmant & Merta, 1999; Kahn et al., 1974; Waldram & Wong, 1995), others offer in-depth evaluations of symptom reductions (e.g., Calabria et al., 2016; Morsette et al., 2009; Lowe et al., 2012) and/or client experiences (e.g., Lee et al., 2013; Patten et al., 2014). The nuance of this research is presented below.

The earliest description of group -based treatment with Indigenous people is offered by Kahn et al. (1974) who describes a group delivered to American Indian children on the Papago Indian Reservation in Arizona, USA. These children were identified by the school truancy officer and counsellor as being children in need of intervention for delinquency (Kahn et al., 1974). The group sessions first delivered messages that were selected for the age group because they were deemed as being relevant (e.g., dating, sex, diseases, etc.), then moved on to discuss problem areas, which led to problem solving, and developing plans for the future (Kahn et al., 1974). Kahn and colleagues (1974) describe that the children questioned the group facilitators' motives and intentions (e.g., were they motivated by money? What could white therapists offer children on a reservation?) which was resolved by the group facilitator in a session through confronting the youth about these hesitations. This group was viewed as a success with anecdotal reports of children's school attendance and arrest records improving, as well as the children requesting that the group continue after it was completed (Kahn, 1974).

Other interventions have been implemented for trauma-related symptoms, such as Scurfield's (1995) modified group for American Indian inpatient veterans in Washington, USA, experiencing Post Traumatic Stress Disorder [PTSD]. After community-based intervention,

providers observed that there were cultural factors influencing a lack of engagement in therapy among American Indian veterans, spiritual and cultural knowledge keepers were consulted to identify ways to make an inpatient bio-social education, process, and war-trauma intervention more engaging for American Indian people (Scurfield, 1995). For one cohort of clients this included the integration of sweat lodge ceremonies, hiring a local consultant for spiritual and cultural discussions, and facilitation of weekend attendance at pow-wows. The authors noted that within the all-American Indian group there were some tensions that arose from diversity in group member's level of affiliation with traditional practices and beliefs, and that this created difficult group dynamics (e.g., differences in confrontation, emotional expression, and preferred means of learning), as did people's ethnic heritage (i.e., if they were born from two people within the same tribe, mixed tribes, or mixed with European heritage). Furthermore, the staff that were involved with more of the traditional activities were viewed to be over-extended and over-involved with clients in comparison to staff not involved in traditional activities. Graduation rates were at 67% for the all-American Indian cohort, with four members leaving before completion, three of which were voluntary. In a subsequent cohort with 50% of the group being American Indian, the traditional practices were offered outside of the intervention times and were optional. This latter cohort had a 100% completion rate; the authors note that the differences may be due to increased insight for the second cohort gained from running the first, as well as reduced staff turnover during the second cohort.

Another example of a trauma-focused group intervention is the Cognitive Behavioral Intervention for Trauma in Schools ([CBITS]; Morsette et al., 2009). The group sessions were offered to sixth-graders in an undisclosed location and consisted of weekly sessions and covered relaxation techniques, cognitive therapy techniques (e.g., monitoring and restructuring thoughts),

exposure, development of trauma narratives, social problem-solving skills, relapse prevention, and graduation. Difficulties obtaining consent for involvement in the research resulted in a small group of four students participating in this intervention, thus the results were limited to case studies due to a lack of statistical power to detect effects. Three out of the four students had clinically significant improvements in depressive and trauma related symptoms. However, this study demonstrated a high rate of attrition (43%) due to factors such as child welfare involvement, medical emergencies, and relocation.

A more recent use of group -based treatment was developed to intervene with substance use. Lowe and colleagues (2012) compared school-based intervention groups targeting substance use for 13 to 18-year-olds. The Cherokee Talking Circle is an intervention that is based on the Keetoowah-Cherokee principles of being responsible, being disciplined, and being confident and was delivered over 10 weeks using a talking circle method among the Keetowah Band of Cherokee Indians in Oklahoma, USA (Lowe et al., 2012). The Cherokee Talking Circle was compared to a control group, Be A Winner, that is a standard curriculum utilizing education and delivery from police officers to inform children about the effects of substances. These interventions were both 10 weeks long, sessions were 45-60-minutes in duration and delivered weekly in a school setting. Following the intervention, the Cherokee Talking Circle participant's substance use symptoms decreased substantially more in comparison to the control group, as did internalizing, externalizing, and general life problems, and self-reliance scores increased.

Comparison of these interventions demonstrates that there is a wide variety in the theoretical orientations underlying treatment groups for First Nation and American Indian people. The majority (e.g., Morsette et al., 2009; Scurfield, 1995) relied heavily on current practices with evidence-based interventions while adapting for cultural elements. Cultural

adaptations of interventions included such things as changing the wording surrounding concepts, incorporating Elders, changing activities to account for location or community-level factors (e.g. not engaging in ice breaker activities due to familiarity with one another within a small reserve-based community), as well as using historical lessons, stories, and practices (e.g., Morsette et al., 2009; Scurfield, 1995). However, other group interventions focused on developing new methods based on beliefs and practices of the culture being served (e.g., Lowe et al., 2016). The rigour of the evaluations, limited sample sizes, and limited number of studies in this area impedes the ability to determine if adapting existing interventions leads to more effective interventions or vice versa. The level of acceptability of these interventions is similarly not evaluated, thus neglecting a potential benefit of adapting existing interventions for Indigenous populations. Furthermore, these studies did not examine therapeutic factors that might be contributing or hindering people's success. Current research thus presents either a description of outcomes or process factors, not both, when evaluating group therapies with Indigenous youth. However, the initial outcome results suggest that group interventions can be helpful in reducing mental health symptoms for Indigenous people. Although many studies discussed the importance of engaging with community members and cultural/spiritual advisors in the development of interventions, the process in which this occurred was largely neglected from description. The way that communities are engaged in service development and delivery influences the appropriateness and relevance of those treatments.

Summer Camps as Intensive Treatment Delivery Modalities

Treatment developers have acknowledged the multitude of barriers that caregivers and children can face in seeking out mental health services. Many evidence-based psychological treatments are delivered over an eight-to-sixteen-week period with once weekly treatment

sessions. Within families that have numerous children, low access to transportation, and/or irregular working hours, prolonged weekly treatments such as these can pose significant demands on under-resourced people. Preliminary research on intensive treatment has shown that shorter period treatments that retain manualized treatment protocols are as effective as traditional treatments, and significantly better than waitlist or placebo controls (Öst & Ollendick, 2017). Delivery formats for intensive, brief treatments vary. One particularly salient form of treatment delivery that may contribute greater engagement is the use of summer camp style treatments for children. Summer camps can reduce time demands for caregivers and children in taking time out of work or school activities for typical treatment (Guastello et al., 2024).

Summer camp style treatments also offer opportunities to engage in group processes that may contribute to enhanced psychological benefits such as enhanced social skills for children (Rice et al., 2017). Summer camps can reduce feelings of stigma through the gathering of multiple people experiencing similar symptoms or impairments (Guastello et al., 2024). Summer camp style treatments have been used as preventions for emotional disorders (Bilek & Ehrenreich-May, 2011), improving social skills for children with ADHD (Neprily & Climie, 2023), treating separation anxiety (Santucci & Ehrenreich-May, 2013), obsessive compulsive disorder (McCarty et al., 2024; Rice et al., 2017), and selective mutism (Cornacchio et al., 2019; Haggerty et al., 2022). Many of these disorders typically have co-occurring disorders, and summer camps have shown to reduce comorbid symptoms, even those not explicitly targeted in treatments (McCarty et al., 2024). Summer camps provide an opportunity to inherently address transdiagnostic mental health difficulties within an accessible, time limited environment.

The studies focused on improving wellbeing for children included a prevention aimed at emotional disorders (i.e., anxiety and depressive symptoms; Ehrenreich-May & Bilek, 2011) as

well as improving social skills for children with ADHD (Neprily & Climie, 2023). the Emotion Detective Prevention Program was universal prevention focused camp that utilized cognitive behavioural strategies embedded within an emotion focused framework to offer 15-sessions to children attending a regular camp program (Ehrenreich-May & Bilek, 2011). The children rated that they enjoyed the camp and learned about managing emotions; children also reported reduced anxiety and depression symptoms, although their parents did not (Ehrenreich-May & Bilek, 2011). Higher rates of attendance were associated with greater reductions in anxiety (Ehrenreich-May & Bilek, 2011). In comparison, the Summer Treatment Camp delivered by Neprily and Climie (2023) was delivered to 81 adolescents aged 12 to 16 years-old within a one-week overnight style camp. Although the camp was not explicitly therapeutic, it offered daily social skills training as well as a token economy to reinforce positive social skills. Children and counselors endorsed improvements in the children's social competence from pre- to post-camp.

The anxiety (i.e., Santucci & Ehrenreich-May, 2013; Haggerty et al., 2022) and OCD (McCarty et al., 2024; Rice et al., 2017) focused treatments were based primarily within a behavioural intervention framework. Treatment components across treatments included psychoeducation, development of exposure hierarchies, and gradual exposure with support from therapists and/or trained camp counsellors. Group formats were employed for three studies (i.e., Cornacchio et al., 2019; Haggerty et al., 2022; Stannuci & Ehrenrieck-May, 2013) with each day starting with a psychoeducational component and goals setting. These treatments ranged in length from 5-days (Cornacchio et al., 2019; Haggarty; McCarty et al.; Rice et al., 2017) to 7-days (Stannuci & Ehrenreich-May). In comparison, McCarty et al. (2024) diverged from the other two treatments by including 1-hour individual sessions daily, with individual exposure coaches for each child. All treatments included caregiver training to support children which

included psychoeducation, behavioural interventions such as shaping and fading protocols, as well as positive feedback.

All treatments demonstrated significant pre- to post-treatment decreases in the disorder of focus, although with varying degree. Stannuci and Ehrenreich-May (2013) found that parents and children differed in their reports of SAD symptom decreases, with parents reporting greater declines in anxiety symptoms than children, nevertheless, 61% of children did not meet the criteria for SAD at the follow-up period. Although McCarty et al. (2024) did not find a reduction for depression, anxiety and OCD levels did decrease pre- to post-treatment. This pattern remained at the 3-month follow-up for McCarty et al., with higher pre-camp severity associated with greater reductions in OCD and anxiety symptoms. Cornacchio and colleagues' (2019) demonstrated a 50% clinical response rate among their sample of 29 children receiving a 5-day treatment for selective mutism. At the 8-week follow-up, Cornacchio et al. (2019) 46% of children no longer met criteria for selective mutism. Haggarty et al.'s (2022) camp aimed at selective mutism found inconsistent responses between parental and counselor rating of anxiety symptoms, with counselors endorsing a greater frequency of symptom reduction than parents. Nevertheless, 50% of children in Haggarty et al. demonstrated significant reductions either pre- to post-treatment, or pre-treatment to follow-up.

In the studies reviewed, no summer-camp style treatment included an analysis of group therapy factors. Within the narrative description provided by Rice et al., however, there was a demonstration of group factors such as supporting each other through activities (i.e., altruism), providing a chance for real-time interpersonal work to take place (i.e., interpersonal learning), group cohesion (e.g., a sense of security in the group). Thus, treatment intensive summer camps provide children an opportunity to not only address mental health symptoms, but also improve

their global functioning (Guastello et al., 2024; Rice et al., 2017). Regardless of these promising findings, the included studies did not provide culturally informed services for Indigenous people.

Community-Based Needs

First Nation scholars have established that to effectively reduce disparities in mental health functioning within First Nation communities, researchers should strive to assess the specific mental health needs of youth within communities to ensure overlap between needs, capacity within the community or organization, and available treatments (Assembly of First Nations & Health Canada, 2015). Within First Nation communities specifically, the model of health and wellbeing underlying services can accentuate disparities in services through a lack of acceptability, even when services are available (MWCF, 2015). The MWCF (2015) advocates that these disparities can be addressed by shifting how services are developed and delivered. Among First Nation communities there is interest in developing and pursuing approaches to address mental health difficulties that are respectful and inclusive of cultural practices and traditional knowledge, while at the same time utilizing the best of what evidence-based psychological interventions bring to bear on the presenting difficulties (Hall et al., 2015). When health services incorporate access to culture, traditional healing, Indigenous-lead, and culturally safe care they are more appropriate for the First Nation people they are intended for (MWCF, 2015; Graham et al., 2023). The MWCF (2015) states that to be most effective, mental health services need to be developed in collaboration with community members and be based on specific community needs. Treatments that consider historical contexts of Indigenous peoples, the resilience and protective factors that interplay, and that assess what is currently working well, are more effective, with a greater capacity to engage Indigenous people in creating lasting change (RHS, 2018, pg. 135). This document provides an overview of the development process

for a transdiagnostic mental health intervention for First Nation children in Northwestern Ontario.

Two-Eyed Seeing

One theory that provides guidance in the development of services that balance the blending of existing evidence with community engagement is the Two-Eyed Seeing framework (Hall et al., 2015). Two-Eyed Seeing was developed through the work of Mi'kmaq Elders Murdena and Albert Marshall, as well as Dr. Cheryl Bartlett, in order to bridge the division of power between Indigenous and Western research processes and develop a more robust understanding (Hall et al., 2015, pg. 5). Two-Eyed Seeing states that the type of community engagement employed during the development phase of interventions for Indigenous people has implications for the cultural appropriateness of that intervention (Hall et al., 2015). Historically, research that has been conducted with Indigenous peoples has undermined traditional practices and cultural models of health by viewing these sources of knowledge as less informative or sound (Hall et al., 2015). For example, research based solely on western practices neglects the holistic model of wellness that has been identified as key to success for Indigenous people in Canada (Hall et al., 2015).

Two-Eyed Seeing argues that weaving Indigenous Knowledge and clinical scientific practices provides a “wider, deeper, and more generative” development of information than relying on either one in isolation (Iwama, Marshall, Marshall, & Bartlett, 2009, pg. 5). Clinical scientific practices in the current project refer to the guidelines outlined in evidence-based practice that identifies a hierarchy of evidence surrounding treatments or practices (CPA Task Force on Evidence-Based Practice of Psychological Treatments, 2012). These guidelines identify that when researchers are able to account for increasing numbers of influences over treatment

outcomes, and replicate these results, we can predict treatments that are likely to work for specific diagnoses or client presentations (CPA Task Force on Evidence-Based Practice of Psychological Treatments, 2012). Comparatively, Indigenous Knowledge refers to complex knowledge systems based on the worldviews of Indigenous peoples maintained over generations through sacred societies and community practices that are adapted for current realities (Assembly of First Nations & Health Canada, 2015; Government of Canada, 2024). Indigenous knowledge encompasses a relationality to land, people and animals within that land, language, social and political structures, as well as “intergenerational transmission of songs, ceremonies, protocols, and ways of life” (Greenwood & Lindsay, 2019, pg. 82). These worldviews and ways of life are transmitted to individuals in specific contexts through ceremonial practices and teachings, after which individuals are then sanctioned to use these practices to benefit others (Assembly of First Nations & Health Canada, 2015). Thus, any one Knowledge Keeper, holds a piece of cultural or Indigenous Knowledge, but not all possible knowledge (Assembly of First Nations & Health Canada, 2015). This understanding of knowledge being individual and context specific also applies to clinical, or Westernized-scientific knowledge, as no one person can know all things.

The model of Two-Eyed Seeing centres not on merging the two knowledge systems together, but regarding both as informative and valuable, in their own right (Iwama et al., 2009). Two-Eyed Seeing consists of seeing the strengths from each knowledge system and using these strengths together to benefit all (Bartlett et al., 2012). These knowledge systems (i.e., Indigenous Knowledge and clinical science) can be woven back and forth throughout a research process, benefitting from where one knowledge system may be more appropriate for the setting or intended outcome (Bartlett et al., 2012). Thus, a conscious decision is made based upon the circumstances as to which lens (or “eye”) to call upon (Hall et al., 2012, pg. 5).

To adhere to the Two-Eyed Seeing approach, research needs to meet standards of thoroughness and precision from both academic and Indigenous perspectives, as well as being harmonious with Indigenous spiritual and traditional practices (Iwama et al., 2009). To assess if information fits the criteria of Indigenous Knowledge, respected community members such as Elders and Knowledge Keepers, should be called upon to provide this information (Bartlett et al., 2012). These individuals have been vetted by cultural and spiritual practitioners in the community and have been recognized as legitimate community representatives (Bartlett et al., pg. 332). Relying on these community-respected individuals ensures that the utmost accuracy in Indigenous Knowledge is maintained (Bartlett et al., 2012). However, within most Indigenous Knowledge systems, it is acknowledged that an individual can only ever have a small piece of traditional knowledge, thus it is necessary to draw upon the collective consciousness of Elders and Knowledge Keepers through conversations with multiple community representatives (Bartlett et al., 2012).

Two-Eyed Seeing argues that for First Nation communities to see health improvement, Indigenous perspectives and understandings about health and social issues must be brought together into research and intervention development (Martin, 2012). Considering these multiple perspectives allows commonalities, strengths, and insights from Indigenous culture and current understanding about health and social issues to be identified and used to inform and improve existing knowledge (Martin, 2012). The current program of research will adhere to Two-Eyed Seeing by bringing together non-Indigenous scientific practices (e.g., quantitative research methods, an empirical approach to data collection, evidence-based practices) as well as Indigenous Knowledge (e.g., community engagement, advisory from a community-based

organization, cultural knowledge from community members, engagement of cultural Knowledge Keepers in the treatment, and cultural skill inclusion; Martin, 2012).

Chapter 2: Overview of the Current Program of Research

Objective

The overall objective of the current research was to develop and evaluate a mental health treatment that meets the needs of children presenting for mental health services at a First Nation community-based health organization. This objective was achieved through the use of Intervention Mapping (IM) as a framework to develop a mental health treatment that weaves together cultural interventions and evidence-based psychotherapeutic techniques. This research was guided by the following research questions:

- 1) What are the community identified needs regarding mental health services for First Nation children?
- 2) How can mental health services be developed to create a culturally relevant and effective treatment for First Nation children?

Before discussing the project, IM will be outlined as a framework for developing community- and evidence-based interventions. Following this overview, the specific application of IM steps to the current program of research will be described. In subsequent chapters (i.e., Chapter 3, 6 & 10), detailed information about each step of the intervention mapping process will be presented.

Intervention Mapping

IM is a treatment development method that amalgamates information from multiple sources, such as stakeholders, literature, clients, and other informants (such as Knowledge Keepers) to develop interventions that are acceptable and feasible (Pyne et al., 2014).

Intervention mapping (IM) aligns with Two-Eyed Seeing by drawing on these multiple perspectives. IM has been used to develop smoking cessation programs for youth (Dalum et al.,

2012), parental interventions for pediatric obesity (Ball et al., 2017), antipsychotic medication adherence interventions (Pyne et al., 2014), anger management interventions for youth with Intellectual Disabilities (Bellemans et al., 2018), a web-based alcohol intervention for college students (Voogt et al., 2014), and a community based intervention for social-wellbeing of young mothers in rural Uganda (Leerlooijer et al., 2014). An overview of the stages within IM is presented below and summarized in Figure 1, with an application of these stages to the current project in subsequent sections.

The first step in this stage-wise process is to conduct a needs assessment or problem analysis and identifying the target audience (Ball et al., 2017; Kok & Mesters, 2011). This often requires that a planning group be developed to provide information about what is needed, what the issues are, and what the specific goals of the intervention are (Kok et al., 2017). A key element of this stage is the inclusion of all stakeholders that influence, and are affected by, the target issue (Kok et al., 2017). This includes such people as interventionists, researchers, and program coordinators (Dalum et al., 2012). This stage also assesses the capacity of the community where the intervention will be implemented and specify program goals (Kok & Mesters, 2011). The development of new information emerges from the first stage through qualitative interviews as well as a review of existing literature (Kok et al., 2017).

The second stage is to develop a clear picture of the intended outcome, a plan of how this will be achieved, as well as how it will be measured (Kok & Mesters, 2011; Kok et al., 2017). Stage two is directly informed by the information identified in stage one, and it produces a clear indication of who and what will change with the final intervention (Ball et al., 2017). The performance objectives "...are the effects of the intervention on the target group with respect to what should be learned or specific behavior(s) that should be modified" (Ball et al., 2017, pg. 4).

Examples of these performance objectives from the Ball et al. (2017) study for parental interventions for pediatric obesity included such things as parents learning the causes and consequences of pediatric obesity, parents identifying and discussing real and perceived barriers to the implementation of positive changes, and parents discussing and implementing strategies that contribute to positive behavioural changes (pg. 4). Change objectives specify what participants need to learn in to achieve the performance objectives (Dalum et al., 2012). Matrices that outline the change and performance objectives, as well as strategies for achieving them, are often completed as part of this stage (Ball et al., 2017; Kok & Mesters, 2011).

The third stage consists of identifying and selecting the theoretically based intervention methods and applications to meet the change objectives (Kok et al., 2017). This stage is where theory, evidence-based, and other appropriate change strategies are brought together into the intervention protocol (Ball et al., 2017; Kok et al., 2017). Overlap from the change objectives and the intervention program being developed are also specified during this stage (Kok & Mesters, 2011). This can include an acknowledgement that certain strategies may only work within certain parameters or situations (Dalum et al., 2012).

The fourth stage consists of program or curriculum development where the specific themes, components, scope and sequence of the intervention are developed (Kok & Mesters, 2011). This fourth stage also consists of developing and refining program material, as well as testing and refining the intervention program (Kok & Mesters, 2011; Kok et al., 2017). An example of how this may be completed is through expert review and/or with interested parties (e.g., clinicians, program directors, etc.) in the field providing feedback on potential strategies identified through the first three stages (Ball et al., 2017). The development of the program

includes consideration of the sustainability and capacity of the intervention environment (e.g., personnel, physical space, funding, etc.).

Stage five includes the implementation of the intervention, with identified program users, specified outcome, and performance markers (Kok et al., 2017). Pilot testing of the intervention also occurs during this stage. Factors that influence whether the intervention is adopted and implemented, as well as methods for addressing these influences are also identified (Kok & Mesters, 2011). Stage six involves an evaluation of the intervention as well as dissemination of the results (Kok et al., 2017; Ball et al., 2017). Within this stage, the specific questions and evaluation plan are delineated and implemented to address the change objectives identified in stage one (Kok & Mesters, 2011). These stages are iterative and require the developers to move between tasks and stages as they gain more information and insight into various areas (e.g., implementation, practicality, etc.; Kok & Mesters, 2011). However, each step builds upon the previous one, further refining the process and intervention along the way (Kok & Mesters, 2011).

IM was selected as a research method for this research program as it aligns with Two-Eyed Seeing principles and provides a road map of how to meaningfully and respectfully bring two worldviews together. IM emphasizes the need to bring together multiple perspectives in identifying the needs and solutions when developing interventions, which is a foundational aspect of Two-Eyed Seeing – bringing together both Indigenous and non-Indigenous models of wellbeing. The process of IM aligns with the Two-Eyed Seeing emphasis on mutual respect and drawing upon the most appropriate wellness or intervention models based on the context or goals. During IM, the goals and change mechanisms are clearly identified, and there are multiple points where Knowledge Keepers and interested parties are engaged to develop collaboration and coordination, ensuring the most appropriate methods are used for the context. This process also

safeguards the accurate inclusion of information provided by Indigenous Knowledge Keepers and community-based cultural and community workers. Furthermore, by including multiple sources and methods of evaluation, IM ensures thoroughness and precision within clinical science and Indigenous Knowledge, which is also a key characteristic of Two-Eyed Seeing.

The specific steps for the current project are detailed in Figure 2, with a brief description of each step in this process also presented below. Detailed methodological information, results, and discussions are presented in subsequent chapters.

Step 1: Needs Assessment

The needs assessment for this intervention included the integration of quantitative, qualitative, and theoretical information through the IM framework (Figure 2). In identifying needs, adherence to Two-eyed Seeing requires bringing together Indigenous Knowledge in addition to psychological approaches. Within the current project this was accomplished in multiple ways. First, the project activities were overseen and directed by a Research Advisory Committee (RAC) from the Indigenous-led collaborating organization. This board is comprised of individuals within the organization who are primarily of Indigenous descent, respect traditional knowledge and practices, as well as appreciate how scientific approaches can be used conjointly to develop an intervention. The RAC also reports back to the 13 First Nation communities that contribute to the organization; thus, they ensure community-based needs are prioritized in all research activities. Additionally, the lived experience of cultural and community workers (including Indigenous Knowledge Keepers and Elders), community members, and children was prioritized through qualitative interviews (details are provided in Chapter 3). These interviews provided insight into everyday experiences and personal knowledge of mental health and interventions for First Nation children. An outline of this community engagement process is

available in Chapter 3. Indigenous knowledge was also woven in the program development phase, as described in Steps 3 and 4 below.

Step 2: Performance and Change Objectives

The needs identified in Step 1 were integrated into a table of specific symptoms and behaviours that were intended to be targeted through the intervention developed (see Chapter 9). These change objectives aligned with the performance objectives of reductions in anxiety, depression, emotional regulation, and adjustment to trauma symptoms as identified in previous research (i.e., Kowatch, 2017) and the current needs assessment (see chapter 3). The change objectives include the skills and knowledge that provide a foundation for the performance objectives (Dalum et al., 2012), such as increasing knowledge about mental wellness, specific skills to achieve desired emotional states, and similar indicators. Steps 2 and 3 were integrated to determine what practices can be used to target which symptoms or desired outcomes. This step in the intervention development was used to determine the specific client group that received the pilot intervention.

Step 3 and 4: Protocol Development and Review

Identifying specific theory-based frameworks is part of the third step within the IM process, although the steps are often overlapping and explored simultaneously. Thus, a systematic review of transdiagnostic treatments for children was conducted in Study 2 (Chapter 6) to guide the protocol development. The qualitative interviews and systematic literature review developed in Step 1, 2, and 3 (see chapter 3 and 6) provided guidance to existing protocols that overlap with the suggestions from cultural and community workers and community members for an ideal intervention. An intervention protocol was developed based on a synthesis of information from these sources. An integral aspect of the intervention development was the

identification of cultural skills that were implemented within the intervention. To identify and incorporate these cultural skills, expertise from an Elder, cultural coordinators, and Knowledge Keepers from the organization was drawn on through discussion, planning meetings, and implementation (see Chapter 9).

Step 5 and 6: Study 3 – Proposed Pilot Test

Chapter 10 provides an overview of the pilot test of the intervention developed. This pilot test was evaluated using a mixed-method qualitative and quantitative assessment. It was hypothesized that the pilot would be acceptable among youth, with youth indicating that they had improved knowledge of their emotions and strategies they can use to influence them during the qualitative evaluations. Furthermore, it was expected that the child and caregiver rated mental health symptoms would decrease from the pre-treatment to post-treatment evaluation.

Chapter 3: Study 1 Qualitative Study of Previous Mental Health Treatment for First Nation Youth

Study 1 includes a needs-assessment for mental health services offered to First Nation children in Northwestern Ontario. Ensuring community identified needs are at the centre of treatments being developed addresses a need within First Nation communities (MWCF, 2015). Qualitative research with community members allows researchers to identify barriers and obstacles that are specific to each organizational setting (Kok et al., 2017). Each community and organization differ in their level of resources and skills, which influences how treatments can be developed and maintained (MWCF, 2015; Kok et al., 2017). By identifying these barriers early in the development of treatments, clinicians can draw upon cultural and community worker's practical knowledge of how to address barriers to ensure treatments are feasible in the long-term. Engaging all levels of community members early in the development process ensures that treatments draw upon community knowledge, cultural models, and community specific needs (MWCF, 2015).

Utilizing a community based participatory action framework, such as IM, allows individuals with lived experiences to have self-determination and empowerment by influencing the way that services are developed and delivered (Case et al., 2014; Taggart et al., 2013). Valuing the expertise of individuals who are the intended recipient of an intervention allows treatments to better fit their local contexts (Anselma et al., 2019). Asking youth to reflect on treatments that they have received, and if the strategies and approaches were helpful or unhelpful, provides treatment developers direction about the skills and methods of delivery to emphasize. This community-based approach emphasizes that youth with lived experience are the experts of what it is like to navigate services and mental health difficulties (Case et al., 2014).

Thus, inclusion of youth knowledge provides an opportunity to empower youth to create a meaningful change (Case et al., 2014).

Including other community members, such as caregivers, can further inform the development of a treatment by identifying the specific skills that they observe their children drawing upon when distressed, or skills that were unhelpful. Within psychological treatments there is often a variety in which strategy will work for a particular client, however, phenomenological research allows treatment developers to identify commonalities among multiple individuals. The purpose of this chapter is to describe the process of engaging three informant groups about their lived experiences and recommendation for developing mental health treatments for First Nation children.

Study 1 Objectives and Research Questions

The objective of study 1 is to understand how mental health services for First Nation children and youth within Northwestern Ontario are experienced from the perspectives of children, community members (e.g., caregivers), as well as cultural and community workers. These lived experiences will inform the development of the mental health treatment by addressing the following research questions:

- 1) What types of services are First Nation children receiving for their mental health?
- 2) How well do these services meet their wellness needs?
- 3) How can mental health services for First Nation children in Northwestern Ontario better meet the needs of these children?

Study 1 Method

Study 1 Recruitment

Trustworthiness of the qualitative assessment was emphasized through triangulation of data from multiple informants (Vapiro et al., 2017). Capturing nuanced perspectives of mental health services for First Nation children and youth can identify areas of similarity and overlap (Vapiro et al., 2017) to guide the treatment development. Informants were recruited to fit into 3 categories: youth (aged 8 to 17 years old), community members such as parents or caregivers to youth, family members, or other non-affiliated members of the community, as well as cultural and community workers who were comprised of mental health therapists, managers, cultural Knowledge Keepers, and Elders. Informants were recruited through posters advertising the study in communities of interest or through convenience sampling from the partnering community organization (CO). Convenience sampling within the organization was comprised of managers identifying cultural and community workers, children, and parents who might be interested in participating.

Study 1 Procedure

A manager within the partnering CO provided the research team with a list of all of the cultural and community workers within the organization that were working with children and adolescents. These cultural and community workers were contacted to explain the project and assess if they were interested in participating. Confidentiality for cultural and community workers was maintained by not informing managers within the CO about whether or not they chose to complete an interview. When recruiting community members, managers were given an information sheet to read to community members and youth who were eligible for participation. Community members and youth who agreed to participate were then contacted by the research

team for interviews. Although advertisements for community recruitment were posted, no informants were identified this way. This procedure ensured confidentiality of youth and community members who declined to participate. The procedure was reviewed and approved by the Lakehead University Research Ethics Board (See Appendix A) as well as the RAC within the CO prior to recruitment.

Demographic questionnaires were completed by caregivers as well as cultural and community workers prior to completing interviews (see Appendix B). Interviews were conducted by two researchers using a semi-structured interview guide (see Appendix C, Appendix D, Appendix E). During the development of the questions KK bracketed her expectations for the study by reflecting on a desire for the interviews to identify culture as a meaningful intervention, psychotherapeutic techniques to be valued, and for the mental health needs identified to overlap with previous assessments (i.e., Kowatch 2017; Tufford & Newman, 2012). The semi-structured questions were worded neutrally and balanced between positive and negative prompts to decrease perceived biases in the interview. CM and the RAC reviewed and approved the interview questions as being well balanced and unbiased. Interviewees were informed that they could chose not to answer any questions and could end participation at any time. The researchers asked to audio record the interviews but offered to take notes if the interviewee was not comfortable with audio recording. Audio files were transcribed verbatim. Cultural and community workers received \$30 cash in compensation, community members received a \$50 gift certificate and \$25 for travel costs (gas card or taxi voucher), and youth received \$25, with a potential \$25 gift card for travel costs. Childcare was offered by the community organization when community members had their interview to facilitate the scheduling process, although this was not utilized.

Study 1 Informants

The youth participating in the project ($n = 7$) ranged in age from 8 to 14 years-old ($M = 10.71$). All youth had previously received mental health services from the CO. Community members ($n = 7$; 85.71% female) were comprised of biological parents ($n = 2$), biological grandparents ($n = 1$), and foster or custodial parents ($n = 3$). Due to the relationship between these community members and the youth, the term Caregiver will be used to describe this subset of informants going forward. Caregivers ranged in age from 27 to 61 years of age ($M = 40.83$ years). Cultural and community workers ($n = 12$; 91.67% female) ranged in age from 26 to 55 years-old ($M = 35.82$ years). The length of time that cultural and community workers were employed within the CO included: 1-2 years (8.33% $n = 1$), 2-5 years (33.33% $n = 4$), 6 to 10 years (16.67% $n = 2$), 10 to 15 years (25% $n = 3$), ≥ 16 years (16.67% $n = 2$). A quarter (25%, $n = 3$) of the cultural and community workers were cultural Knowledge Keepers, with one of these individuals also being an Elder. Nearly half (i.e., 41.67%) of cultural and community workers had a college level education ($n = 5$), 25% had a bachelor's degree ($n = 3$), and 41.67% had a master's degree ($n = 5$). These categories were not mutually exclusive, although only one individual described having a college degree as well as a bachelor's degree.

Study 1 Analysis

Theoretical thematic analysis, as described by Braun and Clarke (2006), based within a phenomenological philosophy was used to develop concrete descriptions of the areas of interest. Theoretical thematic analysis is driven by the researcher's analytical interest in identifying how informant's experiences compare to existing theories or evidence (Braun & Clarke, 2006). In addition, the analysis was guided by phenomenological philosophy, which elicits descriptions from multiple informants with lived experience with the aim of arriving at common themes

describing the essence of what and how they experienced a phenomenon of interest (Creswell, 2007). The initial analysis included two coders, Kristy Kowatch (KK) and Abbey Radford (AR), who were the researchers that conducted the semi-structured interviews. An initial analysis framework identified categories for descriptors based on the intent of the semi-structured questions. These categories included child characteristics, strategies that work or are beneficial, barriers to treatment, the influence of cultural practices, and services or characteristics of treatments that are needed. The analysis process began with KK and AR reading the transcript independently as a whole and re-reading to identify specific descriptors. Initial sub-categories were developed by AR and KK through the identification of passages within the transcripts and labeling them with wording similar to the interviewee's response. NVivo 12 software was used to code and analyze the transcripts. As analysis was underway, commonalities between sub-categories were noted and grouped together for later review. These sub-categories were reviewed for similarity and collapsed together when sufficient similarity was observed. In instances where interviewee descriptions did not readily fit into the existing sub-category they were grouped into an "other" sub-category for deeper analysis. Where possible, these "other" descriptors were thematically grouped into larger themes. The sub-categories developed by AR and KK were then compared for agreement; any disagreements were resolved through discussion. Another round of analysis grouped descriptors into relevant themes during a third review of the sub-categories by the researchers.

Reflexivity. The team that contributed to the qualitative assessment and inquiry are described to provide an understanding of how these individual's positions may influence this assessment. These individuals include Indigenous and non-Indigenous team members. KK (female) is a PhD student in the Clinical Psychology program at Lakehead University and

completed multiple clinical practicums and pre-doctoral internship at Dilico; AR (female) was a first-year master's student in clinical psychology at Lakehead University during this project. After initial analysis was completed, the themes and categories were presented to the larger team which consisted of CJM (dissertation supervisor) who is a Professor in the Department of Psychology at Lakehead University and a licenced psychologist at Dilico; AM (dissertation committee member) who is an Associate Professor in the Department of Psychology at Lakehead University as well as a licenced psychologist at Dilico; JD who is the Director of Mental Health and Addictions at Dilico; KS who was the Manager of Counselling, Clinical, and Infant and Child Development Services at Dilico; BH who is the Assistant Director of Communications at Dilico. The wording of some themes was revised based on a desire by this research team to focus on strengths-based solutions as opposed to deficit-focused wording.

Throughout the interview process, several steps were taken to decrease potential biases. These measures included reassurance to informants that their choice to participate in the research would not influence the services they received (caregivers and youth) or their employment. The semi-structured interview questions were worded in an open-ended, neutral way, to encourage informants to provide information unbiased by researcher expectations. Nevertheless, some informants may have presented their experiences of receiving or delivering treatment as more positive than they genuinely experienced. During interviews, KK took notes on the content of each interview, supplemented by observations of body language. This provided an opportunity for KK to reflect on any perceived barriers associated with power differentials or biases within the interviews and address them.

Trustworthiness. Trustworthiness of data collection was developed through fostering credibility in the data collection process. This writer has specific qualitative analysis training

(i.e., an undergraduate research methods course on qualitative methods within psychology), and has completed numerous qualitative analyses, with methods that align with the collection and analysis methods described (Patton, 1999). This research experience is furthered by the clinical experiences available to this writer being a clinical psychology student with experiences working with children, youth, and families in multiple clinical placements. Triangulation of multiple informants' perspectives was also used to enhance the trustworthiness of the themes and categories that emerged from this investigation (Vaprio et al., 2017). Attempts to bracket the researcher's desires, expectations, and biases were embedded into the development of the semi-structured interview guide (Tufford & Newman 2012). To ensure the interview questions were as unbiased to the researchers' perspectives, they were reviewed by the RAC, including this writer's dissertation supervisor, to ensure that they were developmentally appropriate, neutral, and open to informants' experiences. Throughout the interviews, trustworthiness was enhanced by summarizing and checking back with informants and direct questioning (Barbour, 2001; Lincoln & Guba, 1985). Trustworthiness and bracketing in the data analysis was enhanced through discussions with AR about the categories, themes, and content to ensure there was mutual understanding and agreement that aligned with informant perspectives during the data collection process. Following analysis, discussion and review of the categories and themes with CM identified areas to improve parsimony among themes.

Chapter 4: Study 1 Results

Informants were asked to indicate what mental health needs First Nation children and youth experience most often. The most commonly identified needs were externalizing symptoms, internalizing symptoms, and interpersonal relationship difficulties (see **Table 1** for examples). Within the subtheme of externalizing symptoms, informants provided descriptions of

anger management difficulties, behavioural difficulties, attention difficulties, school refusal, suicidal ideation, substance use, self-harm, hyperactivity, risky behaviours, and impulsivity. In relation to anger management difficulties, examples included youth describing their bodies becoming tense, hot, and counselling being related to their ability to control their anger (e.g., Youth 104 *“I can feel like, hot”*; Youth 105 *“the counseling stopped because they thought I was getting better with controlling my anger”*). Caregivers described youth as having explosive emotional outbursts for seemingly unpredictable reasons. For example, Community member 0116 described *“...he's got the rage, like he could explode at any time about anything with his anger issues”*. Other descriptions included: *“She'll yell, she'll scream, she'll throw things, she'll hit the teachers”* Community member 0117; *“she has severe, severe anger issues that we are dealing with on a constant basis”* Community member 0114. Cultural and community workers described youth as showing physical and verbal aggression when they experienced anger regulation difficulties. For example, Cultural and community worker 007 described *“...some might get really angry, get into fights, um, kind of go from the zero to 100 really quick, or they might punch walls, punch themselves, um, stuff like that.”* Cultural and community worker 007.

Internalizing symptoms (Table 1) were also often mentioned. The most commonly identified internalizing symptoms included anxiety symptoms (e.g., feeling panicky, being worried about personal safety, a caregiver or parent's safety, difficulties being in groups of people, and avoidance of activities such as school), depressive symptoms (e.g., lack of meaningful activities, sleeping for extended periods), negative self-views, sleep difficulties, hopelessness, catastrophizing, eating disorders, grief, sense of identity, and weight difficulties. An example of depressive symptoms comes from Cultural and community worker 007 who

stated, *“It’s a lot of social withdrawal and just avoidance of again any kind of meaningful daily activities or routine, it’s usually very withdrawn, um kind of lack of self care...”*.

Descriptions of interpersonal difficulties related to attachment difficulties with caregivers and/or biological parents (e.g., parents not attending scheduled meetings, having mixed emotions about the prospect of being reunified with their biological parents, having a desire to have parents be present but not wanting to engage with them, lack of consistency and reliability in relationship, and having trauma due to parental actions), peer relationships (e.g., experienced teasing or bullying from peers at school, being physically or verbally aggressive toward others, or youth who have friend groups that engage in troublesome behaviours), parentified behaviours (i.e., engaging in typical adult behaviours that are developmentally inappropriate), and social impairments. An example of a description of attachment difficulties comes from Cultural and community worker 009 summarizing that s/he sees *“fairly traumatized youth who are dealing with a lot of neglect, attachment issues, don’t have a lot of connection with family, been through multiple foster placements”*. Additional symptoms that were described include trauma symptoms, emotional dysregulation, neglect, poverty, and intergenerational trauma.

Intervention Strategies

Across informant groups, behavioural and cognitive strategies were identified as helpful in increasing mental health functioning for children and youth. These strategies are summarized in Table 2 and presented below based on how frequently they were identified. Cultural and community workers worked in wide range of settings using primarily Cognitive Behavioural Therapy and Dialectical Behaviour Therapy. Cultural and community workers endorsed using specific strategies within these modalities including emotional awareness, psychoeducation, behavioural activation, cognitive restructuring, exposure, distress tolerance, mindfulness,

emotion regulation strategies, social skills training, and caregiver involvement. An example of how these strategies are integrated comes from Cultural and community worker 010 who described *“So we teach them how to like, identify feelings based on like, their body cues, what’s happening inside of their body and then once they realize that they’re having a feeling that’s starting to get out of control, having them practice like, deep breathing, counting to ten, getting a drink of water, walking away”*. Caregivers identified behavioural strategies (e.g., taking a break, paced breathing, physical activities, having a daily schedule, distracting activities, medication, physical affection, reducing stimulation, modeling desired behaviour, and using a worry box/bear), and cognitive strategies (e.g., action and consequence paradigms, journaling, talking to a caregiver, discussing/setting expectations, grounding techniques, using their voice strategically, giving advanced warnings, and debriefing after a verbal altercation). An example of a cognitive strategy was described by Community Member 0115 who stated *“He’s super engaging, but any of the real stuff he doesn’t talk about. So, I think journaling or the worry box or the worry bear or whatever they’ve done are probably the best way they get into his head, right, and let him do it”*. Children and youth also identified behavioural strategies (e.g., drawing, using distractions, deep breathing, hugs, and walking) and cognitive strategies (e.g., journaling, talking, and swearing).

The interviews also asked about the use of cultural interventions, asking if they were helpful, and which ones were helpful, for whom, and any limitations there might be to using cultural interventions. These interventions are summarized in Table 3 and are presented here in the order of frequency of being mentioned. These cultural interventions included smudging, attending powwows and/or dancing, drums (e.g., drum making, caring for a drum, and drumming), traditional crafts (e.g., beading, ribbon skirt making), land-based activities, the 7

Grandfather teachings, ceremonies (e.g., sharing circles, naming ceremony, healing ceremonies), specific teachings (e.g., kinship structure, bundles), learning about medicines, sweat lodge, the Medicine Wheel, praying, consultations with Elders, use of traditional language, feasts, food, songs, and cedar tea. An example of a quote describing the importance of land-based activities comes from Cultural and community worker 014 who stated *“So, if the family is not going to be there then I feel going into nature and getting the kids connected to something else other than themselves or their families, because sometimes that’s unstable, right? So, getting them in nature, getting them connected to something bigger than themselves is really helpful.”* However, it was noted by many ($n = 17$) that giving clients a choice of whether to engage in cultural practices, or not, was key. For example, Community Member 0116 stated: *“...I don’t force that kind of stuff on him but we do talk about it, but I don’t, like I said, I don’t force it into him, you know? Sometimes he’ll be into it, sometimes he’s not. He’s young, he’s still learning his, still finding his path”*. The most commonly mentioned barriers to cultural services were a lack of accessibility. This lack of accessibility included difficulties in arranging a suitable time, rearranging due to illness, a lack of transportation, and wait times after referrals are made. Client characteristics, which included substance use, food restrictions, and a hesitancy to develop new relationships, also contributed to difficulties with accessing cultural resources. Clinician characteristics were also noted as potential barriers, including clinician ethnicity (i.e., it was viewed as inappropriate to have non-Indigenous clinicians delivering cultural teachings) and the cultural leader’s gender not aligning with the client’s.

Contributors to Success

Caregivers and cultural and community workers had numerous examples of how they engage clients in treatment in meaningful ways. Endorsed engagement strategies included hands-

on activities (e.g., crafts, drawing/colouring, games, and diversions for when youth were shy or reserved), activities that make treatment fun (e.g., yoga, cultural activities, listening to music, pop culture, role playing, and community trips), and having rewards for practicing/engagement (e.g., positive feedback, an activity they enjoy, dollar store toys, gift certificates, or special food). An example of hands-on activities is provided by Community Member 0111 who stated, *“Okay so like the crafty stuff helps them, keeping their hands busy and maybe their minds busy too”*.

Caregivers along with cultural and community workers discussed a variety of factors that influence success in treatment. These contributors to success (summarized in Table 4) were grouped into the themes of treatment characteristics, provider characteristics, client characteristics, and environmental influences. Treatment characteristics was comprised of descriptions of having flexibility in treatment delivery (e.g., being able to meet the youth at school for sessions, taking them out of the office for their sessions, and/or being able to choose what portions of a treatment to use with a youth), individualized treatment (e.g., getting to know what the youth enjoys doing and integrating those interests into therapy, learning what specific experiences might cause the youth distress, and identifying specific areas for potential growth for the youth), having a lot of supplies, hands-on activities, group-based treatment, at-home practice, structured sessions, and transitioning the end of treatment. An example of the need to individualize treatment comes from Cultural and community worker 011 *“...recognizing that a lot of our kids are, say, maybe 10 or 12, but maybe they’re only at a six-year-old level or an eight-year-old level. So, again, tailoring it to the client as opposed to, like, what they look like on paper, like their age”*.

Within the subtheme of provider characteristics for successful treatment attributes described include the relationship between the client and the provider, building relationships,

taking time to come to know the youth and their experiences, being empathetic and genuine, coordination of care between multiple providers, and consultation with other treatment providers.

Cultural and community worker 007 provided an example of the importance of relationship by stating *“They’re pretty resistant to it, um, so I find you have to have the relationship almost to like even try any of the interventions I’d say. If you tried to provide information um or do interventions they need to trust you first before you even get in, if that makes sense?”*.

Client characteristics included descriptions of treatment aims being determined by the youth, the youth being self-motivated to change, and a younger age as contributing to greater success. For example, Cultural and community worker 012 stated *“We get referrals of like, parents saying, “This is what my kid is struggling with”. You get them in the office and they don’t see that as a problem. They actually have other problems they want to talk about”*.

Environmental influences included descriptions of engaged parents/caregivers, healthy role models, developing community connections, overcoming accessibility barriers, support at school, and having a stable environment. The engaged parents/caregivers theme included descriptions of caregivers that encourage youth to actively use the skills they are learning in therapy while at home, caregivers who work to connect with the clinician, and caregivers who are attuned to their youth’s emotional state. For example, Community Member 0113 stated *“I have to stay really on top of her to get her to use her coping skills and stuff”* and Cultural and community worker 008 stated *“...every kid is so different and like at home is so different right, so if they have like parents that are really engaged and wanting to help them like learn the stuff at home I found they did better than the kids who didn’t”*. Having healthy role models was identified as a source of strength for youth, with these role models often being extended family members (e.g., grandparent(s), aunts, uncles), which also has a connection to First Nation culture

(Toombs et al., 2016). It was also suggested that the clinician or cultural leader could act as a healthy role model; for example, Cultural and community worker 009 stated “...*even having [cultural leader] there, kind of as a role model, like he talks about his own life and what he’s been through. And then, they kind of see like, oh, he’s been through some stuff too, and look where he is now. He talks really about using the culture to help find yourself, and a lot of the kids resonate with that, and they’re just immediately drawn to him*”. Developing community connections included descriptions of fostering a sense of involvement with individuals and/or organizations in the community in order to provide support in addition to therapy, as well as once therapy was over. The theme of overcoming accessibility barriers described such things as providing a meal or snack when hosting a group and/or providing transportation for those in need. The theme of having a stable environment included having a consistent routine in a long-term home. The theme of having support at school included descriptions of teachers or educational aides at school that are knowledgeable about how to help the youth with their emotional experiences.

Cultural and community workers were asked what types of obstacles they face in providing youth the treatments that they would like to provide. The obstacles identified included provider related concerns, treatment delivery difficulties, and a lack of awareness of client experiences. The mostly common obstacles were provider related concerns including a lack of stability in service providers, paperwork, and overburdened staff. The treatment delivery difficulties theme most commonly included descriptions of a lack of space and difficulties coordinating with schools. The lack of space theme included descriptions of clinicians trying to work with youth at schools and in their homes not having an ideal space for confidential work, as well as a description of clinicians at the office having to coordinate among team members for the

same space. Descriptions of a lack of coordination with schools included a description of a client having difficulties obtaining records and an impression that some schools to engage with mental health services for troublesome youth. The lack of awareness of specific client experiences was mentioned by two cultural and community workers and included descriptions of teachers not being aware of mental health concerns, as well as clinician lack of awareness of intergenerational trauma and trauma work. For example, Cultural and community worker 012 stated *“I think education for other service providers on the rights of the client is important and probably on trauma in general because I think a lot of people think that they’re trauma-informed and really, they’re not. Not even close”*.

Ideal Treatment

All informants were asked to describe what they wish could be included in therapy. Three youth, six caregivers and twelve cultural and community workers provided descriptions of what they would like to see including specific aspects of treatment, caregiver involvement, new target areas, subjective perceptions of treatment, post-treatment aspects, role models, group-based treatment, and other elements. The specific elements of an ideal treatment included culture, hands-on activities, flexible and individualizable, retreats, land-based activities, rewards for youth, and a structured guide. For example, Cultural and community worker 202 (a Knowledge Keeper) described that he/she recommends including a *“Smudge ceremony. Every time you have a session, start with it. Like I said, it’s using those medicines to help cleanse the area, cleanse the energies that we carry”*. Suggestions for caregiver involvement included teaching specific caregiver strategies and having family members involved in treatment. Suggestions for treatment targets included trauma (especially in a stable environment), emotional awareness, identifying strengths, anger management, palliative care training, residential family treatment, and fostering

resilience. For example, Community Member 0114 stated “*‘Cause most of these kids are angry. You know, most of them are angry. And to try and figure out how to deal with – I think they need to deal with, more with what is angering these kids. Like I mean, there’s gotta be more talk about anger, like anger issues and how to deal with anger issues’*”. Subjective perceptions of treatment were recommended by one community member and three cultural and community workers.

Concepts that contribute to this theme include creating a sense of community, creating a sense of belonging, and having patience. For example, when Cultural and community worker 014 was asked what to include in a treatment s/he stated “*Resilience, sense of belonging, and community’*”. Descriptions of post-treatment aspects were provided by three cultural and community workers and included community involvement, continuity in care provider, and more follow-up.

Chapter 5: Study 1 Discussion and Conclusions

This qualitative need assessment has provided insight into how a mental health treatment can be developed to better suit the needs of First Nation children in Northwestern Ontario. This study 1 was directed by three research questions:

- 1) What types of services are First Nation children receiving for their mental health?
- 2) How well do these services meet their wellness needs?
- 3) How can mental health services for First Nation children in Northwestern Ontario better meet the needs of these children?

To situate the need assessment in the presenting concerns identified by cultural and community workers, they were asked to describe common mental health concerns that they see. These mental health concerns were largely grouped into externalizing, internalizing, and interpersonal interaction difficulties. The most commonly described mental health concerns

included anxiety, anger management, attachment difficulties, behavioural difficulties, depression, and peer relationships. In order to address research question #1, cultural and community workers described using intervention strategies that align with the evidence supported treatments for many of these concerns, such as psychoeducation, emotional awareness training, behavioural activation, cognitive strategies, emotional regulation, and mindfulness strategies. The emotional coping strategies mentioned by caregivers and youth overlap with the behavioural and cognitive strategies described by cultural and community workers (e.g., engaging in physical activities, journaling, & distracting activities). Although the mental health concerns described were wide ranging and diverse, cultural and community workers did not identify youth's presenting concerns as a reasoning for choosing different strategies. Thus, the strategies described herein suggest that regardless of mental health concern, there are commonalities in treatment approach, which supports the development and use of transdiagnostic treatments.

Continuing the assessment for research question number one, interviewees were asked to reflect on the use of cultural interventions for First Nation children. Indigenous scholars and cultural knowledge keepers advocate for the inclusion of cultural and spiritual practices in treatments for First Nation people. The inclusion of culture allows for a greater sense of wellness for First Nation people through the development of hope, belonging, meaning, and purpose (MWCF, 2015). Thus, interviewees were asked about the types of cultural practices that were included in their treatment experiences. Most cultural and community workers described integrating cultural aspects in some way, although the comfort level with these practices and use of specific strategies differed widely among cultural and community workers. Smudging, land-based activities, and integrating teachings, such as the 7 Grandfather Teachings, were commonly

endorsed by cultural and community workers. However, providing youth more information, and the choice, about which types of cultural practices to engage in was also highly endorsed by cultural and community workers and caregivers. It was noted that some First Nation people have complicated feelings regarding Anishinaabe cultural practices due to the history of residential schools, subsequent policies surrounding cultural practices, and widespread assimilationist views. Furthermore, some cultural and community workers did not feel comfortable integrating some cultural practices, and some practices (e.g., ceremonies, some teachings, etc.) were not appropriate for non-Indigenous clinicians to offer, thus having access to a cultural Knowledge Keeper and/or Elder was endorsed.

In pursuit of research question number three, and integration of best practices such as the MWCF, the intent of this program of research was to provide direction for the development of a culturally wise mental health treatment for First Nation youth. Informants were therefore asked about barriers that prevented them from engaging with the available cultural practices and services. The most commonly mentioned barriers included accessibility such as a lack of transportation, wait times after referral, and difficulties coordinating a suitable time. A lack of knowledge was also noted as preventing youth from engaging with cultural services. To address these challenges, it may be necessary to have an Elder or Knowledge Keeper that is specifically dedicated to youth in treatment at specific times. However, it is acknowledged that there are few Elders and Knowledge Keepers available in communities and they are often asked to participate in numerous activities and projects, making their time rare and highly sought after.

To identify how well existing treatments meet the needs of children (i.e., research question #2) interviewees were asked about treatment facilitators and barriers. When asked about what makes treatment successful interviewees mentioned having a flexible, individualized

treatment, that is delivered by a clinician who has developed a trusting relationship with the youth. Interviewees described that taking time to get to know youth and understand their needs and experiences was crucial for successful treatment. However, youth characteristics, such as their desire to engage in therapy, was also an influential factor for how well therapy addressed their needs. Thus, if a youth is not engaged in the treatment plan, clinicians could redirect their focus to achieving greater engagement to ensure greater success.

Cultural and community workers also noted that environmental factors, such as living in poverty or having instability in their living situation could undermine youths' ability to successfully engage in the treatment process. However, when youths' caregivers were engaged in the treatment process it assisted the youth in practicing and integrating the strategies learnt during therapy in their daily lives.

When describing an ideal treatment for youth to support the third research question, interviewees recommended more involved treatment approaches than what is currently available. This includes elements such as multiple recommendations for youth retreats, land-based activities, individualized and flexible treatment, as well as more family involvement. Addressing traumatic experiences was also recommended with a caveat that achieving stability in emotional and environmental experiences first is necessary. It was also noted that it would be ideal, although difficult, to have continuity in the relationship developed during treatment with the youth. Nevertheless, developing a sense of community and/or belonging through treatment was also recommended. Fostering this sense of connection may be facilitated using group-based treatment as literature has demonstrated that one therapeutic aspect of group treatments is the sense of connection among group members (e.g., Behenck et al., 2017). The use of group treatments could also help alleviate some of the waitlists and need for more clinicians that were

noted as barriers to treatment success as more youth would receive treatment from a lower clinician to youth ratio (i.e., 2 clinicians for 5 to 8 youth as opposed to 1 clinician for each youth).

Cultural and community workers were also asked if they experienced any organizational obstacles in providing youth the treatment that they would ideally like to be able to. Although some obstacles were noted (e.g., lack of space, lack of continuity in provider, too much paperwork) most cultural and community workers stated that they did not have significant obstacles. Many cultural and community workers stated that they had high levels of support in delivering treatment in the way they felt best suited their young clients and that they had the necessary resources to do so.

Limitations

The sample of caregivers and youth was primarily from the Thunder Bay area and may not be representative of the majority youth experience within more rural areas. Seeking mental health services within rural locations can be complicated by a lack of access to specialized service providers as well as concerns about confidentiality (Minore et al., 2004; Werth et al., 2010). To assess what differences there may be between First Nation youth experiences in accessing mental health services within an urban compared to rural locations, better representation of youth voices from rural locations would be ideal. Future research can work with community youth to identify what barriers there may be with collecting information regarding mental health services and how to overcome these barriers.

The method and procedure for recruiting participants and conducting interviews may have influenced who participated and how. For example, by having managers identify children who had received treatment, the manager may have been biased toward choosing children or

families that had successful or positive experiences with receiving mental health services.

Unfortunately, the attempts to recruit community-based children and caregivers did not result in any new participants, thus the implications from this study may be limited. Furthermore, cultural and community workers may have felt compelled to participate in the study due to the knowledge that their manager identified them as a possible informant. The researchers attempted to decrease this participation bias by ensuring that cultural and community workers understood that their manager would not be informed about whether or not they participated and that it would not influence their employment in any way. Another source of potential influence on the interview responses could be the location of the interviews. All interviews took place within the community organization. Although all efforts were made to ensure confidentiality (e.g., private spaces, white noise machines, no discussion of who was participating or what they spoke about) interviews may have responded differently to the questions than if the interviews were conducted off-site. However, there was a sufficient amount of information regarding the opportunities for services and practices to be enhanced from most interviewees that this potential bias may not have influenced interviewee responses.

Another area where the results from this study could be refined is the exploration of interviewees' own experiences and how that affects their reflections and responses. For example, how do therapists or service providers' connection to Anishinabek culture and identity influence their reflections and view of mental health services? This exploration of how interviewees' identities influence their view or provisioning of mental health services could also be explored for experiences such as their own involvement with mental health services (either as a child/youth or adult) as well as their families' experiences with the system. Nevertheless, the responses provided offer direction for how a treatment could begin to be developed.

An additional limitation of this study was the qualitative analysis undertaken by the researcher. The analysis was primarily conducted by this author, with some collaboration from AR. However, having a highly trained qualitative researcher, or a team-based analysis plan, may have enhanced the findings by developing greater trustworthiness in the results. The qualitative inquiry could have also been enhanced through greater reflection in the moment during interviews and analysis by this writer. Member checking after the analysis is completed has been suggested to improve the trustworthiness of results from qualitative analyses (Vaprio et al., 2017), however, this project did not use post-analysis member checking of themes due to time constraints and incongruence with the intent of the needs assessment. The intent of the current project was to develop an understanding of themes or commonalities of treatments that make mental health services more appropriate or effective for multiple people, as opposed to understanding individual's experiences, thus the collective knowledge generated by the themes was prioritized (Vaprio et al., 2017).

Conclusions

Taken together, the results from these interviews suggest that integrating transdiagnostic treatments with cultural practices would be beneficial for Anishinabek children and youth receiving treatment from the community organization. Integrating practices such as smudging, land-based activities, teachings, ceremonies, and cultural crafts under the guidance of an Elder and/or Knowledge Keeper would be ideal. Providing treatment in a group format may also overcome some barriers to treatment while providing an opportunity for greater connection and engagement among children and youth. Ensuring flexibility and individualized treatment plans in the treatment process will also be necessary to address the needs of these youth.

Chapter 6: Study 2 Systematic Review of Transdiagnostic Interventions for Children

Study 2 Purpose

The intent of the IM framework guiding this program of research was to develop a treatment that meets the greatest amount of need for children and youth being referred for mental health services within the community organization. Within the study 1 results, transdiagnostic mental health needs were identified as being pressing concerns. To develop a treatment program that addressed common mental health needs, a review of the transdiagnostic literature was deemed appropriate and formed the purpose of Study 2.

Traditional well-established mental health interventions for youth do not account for comorbid conditions. Evidence suggests that within pediatric populations comorbidity between ADHD, CD/ODD, anxiety, and depression is the norm rather than the exception (Dalglish et al., 2020; Dugré et al., 2022; Krueger & Eaton, 2015). Traditional interventions work by treating comorbid problems separately, sequentially, through several treatment strategies, or are minimally treated (Chu, 2012; Dalglish et al., 2020). Although these interventions are effective for some, a significant proportion of youth do not achieve diagnostic remission and/or retention of clinical gains (Kennedy et al., 2018). Estimates have shown that up to 40% of youth who receive Cognitive Behavior Therapy (CBT) for anxiety are deemed unresponsive to treatment (Kennedy et al., 2019; Walkup et al., 2008). Youth also commonly experience relapse and newly emerging mental health concerns after being previously treated with some evidence-based treatments (EBT; Benjamin et al., 2013; Ginsburg et al., 2014; Kennedy et al., 2019). One approach that may be effective in treating emotional disorders in youth is the transdiagnostic approach (Chu, 2012). Transdiagnostic approaches address some limitations of single-disorder

interventions by applying a common set of core principles to the treatment of multiple disorders concurrently (Ewing et al., 2015; Kennedy et al., 2019).

Transdiagnostic Interventions

Transdiagnostic intervention approaches are unified treatments for multiple problems within a single protocol (Chu, 2012). Transdiagnostic treatments have been gaining support and have proven efficacious among adult populations (Chu, 2012). Transdiagnostic treatments draw from a unifying theoretical model yet maintain flexibility to accommodate diverse problems (Chu, 2012; Ewing et al., 2015). These interventions work on transdiagnostic mechanisms such as interpersonal, cognitive, behavioural, emotional, and physiological processes that underlie many disorders commonly experienced in youth (Ehrenreich-May & Chu, 2014). Notably, Ehrenreich-May and Chu (2014) state that there are numerous process that influence the onset, maintenance, or development of a mental health difficulties that may have implications for informing treatment development. Some of these transdiagnostic mechanisms include repetitive negative thinking, negative affect, emotion regulation, and intolerance of uncertainty. Repetitive negative thinking, a cardinal symptom of anxiety and depression, involves relatively passive or uncontrolled repetitive thoughts focused on negative content (Ehring & Watkins, 2008). Negative affect is a stable trait conceptualized as a temperamental sensitivity to negative stimuli, leading individuals to experience heightened levels of emotions and moods (e.g., fear, anger, sadness, guilt, shame, etc.; Clark et al., 1994). Emotion regulation describes the cognitive and behavioural processes that individuals engage in to influence the frequency, intensity, duration, and expression of an emotional reaction they are experiencing (Trosper et al., 2009). Intolerance of uncertainty is a hallmark of anxiety disorders and refers to the difficulty of enduring the

experience of *not knowing*, which perpetuates a range of cognitive, behavioural, and emotional responses that lead an individual to avoid and/or resolve an aversive situation (Rosser, 2019).

Focusing on a “core psychopathology” has several advantages including, increased efficiency, practicality, and effectiveness. Targeting mechanisms that underlie multiple disorders can make treatment more efficient and generalizable without sacrificing the awareness of the greater complexity of interpersonal systems that impact youth (Chu, 2012; Ewing et al., 2015). Existing transdiagnostic approaches such as the Unified Protocol for Emotional Disorders (Barlow et al., 2004) and Fairburn et al.’s (2003) Cognitive Behavioural Therapy – Enhanced target adult core psychopathology, including anxiety, depression, and disordered eating, respectively (Chu, 2012). A meta-analysis of transdiagnostic CBT for children and adolescents experiencing anxiety disorders demonstrated a 9.15 increased odds ratio for children in transdiagnostic CBT to recover in comparison to control groups (Ewing et al., 2015). Transdiagnostic interventions developed with diverse theoretical orientations also exist (e.g., Dialectical Behaviour Therapy; DBT). DBT targets emotional dysregulation, making it an appropriate intervention for various disorders such as substance use, anxiety, depressive, eating, and stress-related disorders (Ritschel et al., 2015). Furthermore, modular interventions that can be individualized to address symptoms experienced across disorders such as depression, anxiety, conduct disorder, and hyperactivity have demonstrated a faster and longer-lasting reduction in symptoms compared to inflexible manualized interventions (Chorpita et al., 2017).

Research suggests that transdiagnostic interventions for youth offer significant reductions in a variety of symptoms and comorbid disorders, as well as time savings for clients, families, and clinicians. However, for some diagnoses such as social anxiety disorder, targeted interventions work to reduce symptoms more than generalized transdiagnostic treatments (Rapee

et al., 2023). Thus, the purpose of study 2 was to identify similarities among transdiagnostic interventions to guide the development of a core set of interventions. This information directed the development of change objectives for the pilot treatment. To our knowledge, no such systematic review had been conducted. These core interventions were incorporated into the intervention mapping process as identified in Chapter 9. This pilot is intended to meet the mental health service needs of First Nation children in Northwestern Ontario.

Study 2 Objective and Research Questions

The overarching goal of study 2 was to develop a nuanced understanding of transdiagnostic interventions for children and youth. The current research used a systematic review of existing literature to identify similarities and differences between the existing transdiagnostic interventions for children and adolescents. This systematic review was guided by the following research questions:

- 1) What treatment components are present within transdiagnostic interventions that are tied to reductions in mental health symptoms for children?
- 2) What is the quality of the research evidence for transdiagnostic interventions for children?

Study 2 Method

Study 2 Data Sources

Systematic searches of published and grey literature were conducted, and subsequent results reported in adherence with Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines. Figure 3 summarizes the complete selection process for the studies (PRISMA diagram). Fourteen electronic databases and ten grey literature websites were

searched using search terms developed to identify transdiagnostic treatments being used with youth (Table 5).

Study 2 Article Selection

Studies and/or reports were included if they (a) were published after 1980 and before 2021, (b) published in English, and (c) evaluated a transdiagnostic treatment for children or youth aged 5 to 20 years old. Transdiagnostic treatments were defined as treatments that were intended to reduce symptoms of multiple disorders (e.g., depression and anxiety, anxiety and somatic complaints, etc.) with the same treatment approach. Within publications, individuals may have had only one diagnosis, all diagnoses intended to be treated with the treatment, and/or additional diagnoses. However, inclusion into the treatment condition needed to demonstrate diagnosis or clinical level of symptoms.

Exclusion Criteria

Publications were excluded if participants had primary diagnoses of autism spectrum disorder or an intellectual disability. Exceptions were made for publications that had secondary diagnoses with autism spectrum disorder or intellectual disability within less than 10% of the sample. Meta-analyses, as well as book and article reviews were excluded.

Search Process

Databases (see Table 5) were modified to list by relevance. Titles and abstracts were screened by multiple reviewers (AR and KK) based on eligibility criteria and saved to a Rayyan, an online reference manager and reviewing platform. Once all databases, websites, and secondary sources were searched, all duplicates were removed. Full-text literature reviews were then conducted independently by two researchers for each article. These reviews indicated if both reviewers agreed on inclusion or exclusion, and consensus was reached for all studies in

question through discussion. Consultation was held between the research assistant and primary researcher to ensure included articles met eligibility requirements. No grey literature reports or publications were identified in this search.

Data Extraction

Data relating to transdiagnostic interventions for children and youth and general outcomes were extracted from the included studies. Data included sample size and composition, study design, theoretical model (e.g., CBT, Psychoanalysis, etc.) if provided, age of participants, ethnicity, mental health diagnoses or symptoms targeted. Specific data pertaining to each intervention was also extracted including length of treatment, modules, skills, or specific treatment approaches.

Quality Assessment

Publications were evaluated using the Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 2010) by KK and AR. Publications were evaluated on how representative the sample was, study design, control of possible confounding variables, the level of blinding among researchers and participants, reliability and validity of assessment tools, attrition, intervention integrity, and the appropriateness of analyses. A global rating of *Strong*, *Moderate*, or *Weak* was attributed to each publication. *Strong* publications were defined as those receiving primarily *Strong* and/or *Moderate* ratings, with no *Weak* ratings for any of the above fields (Effective Public Health Practice Project, 2010). *Moderate* global ratings were defined as publications with many *Moderate* ratings, some *Strong* ratings, as well as no more than two *Weak* ratings (Effective Public Health Practice Project, 2010). *Weak* ratings included everything that did not fit into the above categories (Effective Public Health Practice Project, 2010).

The majority of studies were rated as weak ($n = 16$; 66.67%) as indicated in Table 6. Moderate quality was found among 20.83% ($n = 5$) of studies whereas strong quality was indicated in three studies (12.5%). Between raters there was discrepancy in 10 out of 24 of the studies with discrepancies relating to differences interpreting the criteria (60%) and difficulties interpreting the study (40%). All discrepancies were resolved through discussion.

Chapter 7: Study 2 Results

Study Characteristics

In total, 24 studies were included in the review. Numerous studies included demonstrate overlap in the treatment protocol used. Where possible, these treatments were grouped together in Table 6.

Participant Age

In a large portion of the studies included ($n = 10$; 41.67%), youth were between 6 to 17 years old (see Table 6). Four studies (16.67%) only included youth between 6 to 11 years old, whereas ten studies (41.67%) included youth 12 years old and up.

Geographical Location

Most studies were conducted in the USA ($n = 19$, 79.17%; Table 6). Other locations included Italy ($n = 2$; Dalle Grave et al., 2015; Muratori et al., 2002), Israel (Brunstein-Klomek et al., 2017), Turkey (Sevi Tok et al., 2016), and India (Sharma et al., 2017). No studies examined the use of transdiagnostic interventions with Indigenous populations.

Presenting Concerns

A list of the disorders or symptoms addressed by the interventions are listed in Table 6. Most studies ($n = 21$) included participants experiencing anxiety and/or depression ($n = 18$). The three studies that addressed multiple forms of anxiety included Schneider et al. (2018), Sevi Tok et al. (2016), and Sharma et al. (2017). Two-thirds (66.67%, $n = 16$) of interventions addressed externalizing symptoms or disorders including attention and hyperactivity ($n = 9$), ODD/symptoms and CD/symptoms ($n = 6$), unspecified behavioural problems ($n = 3$), school difficulties ($n = 2$), as well as substance use ($n = 2$). Four studies included traumatic stress as primary diagnoses (12.5%, Chorpita et al., 2017; Ehrenreich-May et al., 2012; Weisz et al., 2017;

Wells & Faragher, 1993). Two studies (6.25%, Brunstein-Klomek et al., 2017 and Yeo et al., 2005) addressed interpersonal difficulties. Studies also included other disorders or symptoms as secondary concerns including obsessive compulsive disorder ($n = 4$), tic and/or Tourette's disorder ($n = 4$), physical pain (e.g., headaches, abdominal pain, etc.; $n = 3$), adjustment disorder ($n = 2$), selective mutism ($n = 2$), developmental disorder or learning disorder ($n = 1$), disordered eating ($n = 1$), as well as elimination disorder ($n = 1$).

Intervention Components

Most studies ($n = 20$, 83.33%; Table 7) included components that orient clients to treatment including developing greater awareness of one's own emotional experiences, psychoeducation about the adaptive and maladaptive role that emotions can have, as well as generating a greater level of motivation to be involved in treatment (Table 7).

Across studies, the most frequently endorsed intervention components (Table 7) included some form of cognitive strategies ($n = 22$, 91.67%). Cognitive strategies included developing problem-solving skills, cognitive reappraisal, mindfulness skills, flexibility in thinking, acceptance, and safety planning. Problem solving skills ($n = 17$) were conceptualized as a process of symptom monitoring, identifying contributing factors (e.g., sleep, hunger, interpretations, thoughts, etc.), action urges, behavioural and emotional outcomes, and generating alternate options. Problem solving was specifically mentioned in 54.17% of the studies ($n = 13$; Bilek & Ehrenreich-May, 2012; Chorpita et al., 2017; Ehrenreich-May & Bilek, 2012; Kendall et al., 2004; Robinson & Rapport, 2002; Seager et al., 2014; Sevi-Tok et al., 2016; Sharma et al., 2017; Sherman et al., 2018; Sloan et al., 2018; Weersing et al., 2012; Weisz et al., 2017; Yeo et al., 2005). Other commonly used interventions within the problem-solving skills category included analyzing possible interpretations and examining evidence for those options

(Ehrenreich-May & Bilek, 2012; Sevi-Tok et al., 2016; Sherman et al., 2018; Sloan et al., 2018), chain analyses (Lenz & Del Conte, 2017; Sloan et al., 2018), functional analyses (Chorpita et al., 2017; Sloan et al., 2018), and decision analyses (Brunstein-Klomek et al., 2017). The category of cognitive reappraisals ($n = 18$) included specifically mentioned cognitive reappraisal (Bilek & Ehrenreich-May, 2012; Ehrenreich et al., 2009; Ehrenreich-May & Bilek, 2012; Queen et al., 2014; Seager et al., 2014; Sloan et al., 2018), as well as flexible thinking (Allen et al., 2012; Ehrenreich-May & Bilek, 2012; Kennedy et al., 2018; Kennedy et al., 2019), cognitive restructuring (Chorpita et al., 2017; Sevi-Tok et al., 2016; Sharma et al., 2017; Sherman et al., 2018), and other descriptions (Muratori et al., 2002; Weisz et al., 2017; Yeo et al., 2005) that identified unhelpful thinking styles and generated alternate thoughts. Mindfulness skills ($n = 7$) included engaging the mind by focusing on specific sensations or processes to foster greater cognitive control (e.g., focusing on breathing, physical sensations, the five senses, allowing thoughts to pass, etc.). Acceptance ($n = 3$) included identification and tolerance of all emotions that are experienced. Safety planning ($n = 2$) included developing a plan of how to react when self-harm or suicidal ideations were experienced. A listing of the studies that included each of these intervention components is available in Table 7.

In total, 23 of the studies (95.83%) included some type of behavioural component including opposite actions, exposure or interventions aimed at reducing avoidance, behavioural activation, skills practice (e.g., social, or interpersonal skills), relaxation techniques (e.g., paced breathing, progressive muscle relaxation), and positive activity scheduling.

Opposite action ($n = 8$; Table 7) was described as teaching youth to identify the action urge that was provoked by the emotion they were experiencing and developing a plan to engage in behaviour that was opposite to these urges (e.g., exposure for anxiety, behavioural activation

with depression, engagement with interpersonal conflicts, etc.). Almost all the interventions describing opposite action also included exposure and behavioural activation, which are conceptualized here as forms of opposite action. Only one study, Robinson and Rapport (2002), described the use of opposite actions among youth with oppositional tendencies using procedures called positive practice or over-correction, where a more desirable way of acting is repeated with reinforcement. Two studies (Kennedy et al., 2018; Robinson & Rapport, 2002) included opposite action in the intervention but did not describe behavioural activation practices. Exposure and activities aimed at reducing avoidance ($n = 17$; Table 7) included developing a list of avoided activities or experiences (i.e., emotional, somatic, and/or situational) and creating a list of progressive steps to increase active participation. Behaviour activation ($n = 12$; Table 7) was specifically mentioned and/or described as engaging in activities that are inherently positive or rewarding to change one's emotional experience in the long-term.

Skills practice ($n = 8$) included emotion regulation skills (Bilek & Ehrenreich-May, 2012; Ehrenreich-May & Bilek, 2012), interpersonal or social skills (Brunstein-Klomek et al., 2017; Robinson & Rapport, 2002; Wells & Faragher, 1993), assertiveness skills (Sharma et al., 2017) role-plays (Kendall et al., 2004), or DBT skills (i.e., mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness; Lenz & Del Conte, 2017). Relaxation techniques ($n = 5$) included breathing exercises (Sevi-Tok et al., 2016;), progressive muscle relaxation (Sevi-Tok et al., 2016; Weisz et al., 2017), attention shifting exercises (Sevi-Tok et al., 2016), guided imagery (Sharma et al., 2017), or no description of the specific strategies taught (Chorpita et al., 2017; Weersing et al., 2012). Positive activity scheduling ($n = 4$) included developing a list of activities they could engage in to improve their mood (Dalle Grave et al., 2015; Sherman et al., 2018; Sloan 2018; Weersing et al., 2012).

Relapse prevention was included in 25% ($n = 6$) of studies. Although one study stated specifically that they included relapse prevention (Allen et al., 2012), more in-depth descriptions included a review of successful strategies learned throughout treatment, anticipation of potentially difficult situations in the future, and review of treatment gains (Brunstein-Klomek et al., 2017; Ehrenreich et al., 2009; Ehrenreich-May & Bilek, 2012; Sharma et al., 2017; Sherman et al., 2018). Parenting components were mentioned by 43.75% of studies ($n = 14$). Descriptions of parenting components included: supporting in-home skills use (Bilek & Ehrenreich-May, 2012; Ehrenreich-May & Bilek, 2012; Kennedy et al., 2018; Queen et al., 2014), coaching in behavioural management skills (Ehrenreich-May & Bilek, 2012; Kennedy et al., 2018; Robinson & Rapport, 2002; Weersing et al., 2012), finding a balanced parenting style or opposite-emotion parenting (Lenz & Del Conte, 2017; Queen et al., 2014; Sherman et al., 2018), identifying how the parents' early experiences influence current interactions with their child (Muratori et al., 2002), or general statements of working with parents (Allen et al., 2012; Brunstein-Klomek et al., 2017; Chorpita et al., 2017; Dalle Grave et al., 2015; Ehrenreich et al., 2009). Operant reinforcement practices were utilized in five studies, and included rewards for desired behaviour (Chorpita et al., 2017; Kendall et al., 2004), token economies (Lenz & Del Conte, 2017; Robinson & Rapport, 2002), and a behavioural management system (Yeo et al., 2005).

Other intervention components ($n = 15$) consisted of services provided other mental health professionals including experiential activities or therapy (Brunstein-Klomek et al., 2017; Schneider et al., 2018), intercession coaching (Lenz & Del Conte, 2017), individual counseling (Lenz & Del Conte, 2017), and psychiatric services (Schneider et al., 2018; Sharma et al., 2017). Additional topics that were addressed within other intervention components included clinical deterioration (Queen et al., 2014), generalization of skills (Robinson & Rapport, 2002), stress

management (Sharma et al., 2017), exploring values (Sloan et al., 2018), and distress tolerance (Sloan et al., 2018). The category of other intervention components also included the use of play-based strategies (Muratori et al., 2002), encouraging the use of community resources (Robinson & Rapport, 2002), and school collaboration (Brunstein-Klomek et al., 2017; Robinson & Rapport, 2002).

Number of Sessions

Most studies had between 8 to 12 ($n = 5$) or 12 to 16 ($n = 10$) sessions (see Table 6). Three studies that assessed the *Unified Protocol* (*Unified Protocol for the Treatment of Emotional Disorders in Youth with Pain*, Allen et al., 2002; *Unified Protocol for the Treatment of Emotional Disorders – Adolescents*, Queen et al., 2014; Seager et al., 2014) ranged from 8 to 21 sessions. The *Unified Protocol for Transdiagnostic Treatment of Emotional Disorders in Children* (Kennedy et al., 2018; 2019) and the *Emotion Detectives Treatment Protocol* (Bilek & Ehrenreich-May, 2012; Ehrenreich-May & Bilek, 2012) included 15 sessions. Two studies (6.25%) had fewer than eight treatment sessions, and seven studies (21.88%) had 16 or greater treatment sessions.

Outcomes

Case Reports

The six studies (Allen, 2012; Ehrenreich et al., 2009; Ehrenreich-May & Bilek, 2012; Seager et al., 2014; Sherman et al., 2018; Weersing et al., 2012) that provided case report results all assessed anxiety symptoms. Two studies (Allen et al., 2012; Sherman et al., 2018) demonstrated improved total anxiety and depressive scores on the Revised Children's Anxiety and Depression Scale (RCADs) for their samples when comparing pre- to post-treatment scores (3- & 11-point reduction in Allen et al., 2012; ≥ 12 -point reduction in Sherman et al., 2018). Total anxiety and depression scores continue to decrease from the post-treatment to follow-up

period for Allen et al. (2012; 14- & 7-point reductions). Depression RCADS subscale scores were only reported for one individual in Allen et al. (2012), demonstrating consistency in score from pre- to post-treatment and a slight reduction (3-point) at the 3-month follow-up. Sherman et al. (2018) demonstrated reductions in RCADS total anxiety, social anxiety (≥ 9 -point reduction), and depression (8-point reduction) subscale scores. Two studies (Ehrenreich-May & Bilek, 2012; Weersing et al., 2012) provided assessments of anxiety using the Screen for Child Anxiety Related Disorders (SCARED) questionnaire, which demonstrated decreased total anxiety scores for pre- to post-treatment across parent and child reports in both studies (21- & 10-point, 4- & 5-point reduction in Ehrenreich-May & Bilek, 2012; 24- & 5-point, 13- & 23-point reduction in Weersing et al., 2012). These assessments of anxiety (Table 6) also included variable reports of generalized anxiety symptoms improvements with decreased symptoms for one youth-parent dyad and one parent but not youth in the other dyad (Ehrenreich-May & Bilek, 2012). Similarly, variable reports for separation anxiety symptoms were observed in Ehrenreich-May & Bilek (2012), with one dyad reporting decreases pre-to-post treatment, but increased symptoms from the parent report and decreased symptoms from the youth report, in the second dyad. Social anxiety symptoms decreased pre-to-post treatment for one dyad but remained the same (non-elevated) for the second dyad (Ehrenreich-May & Bilek, 2012). The two remaining case reports described treatment outcomes using clinician severity ratings (CSR) as an indicator of magnitude. Ehrenreich et al. (2009), demonstrated reductions in various forms of anxiety (2-, 1-, 1-, 1-point reductions; includes anxiety not otherwise specified, social anxiety, generalized anxiety, and social anxiety respectively) and depression (1-point reduction) pre- to post-treatment, as well as from post-treatment to follow-up (2-, 2-, 3-, & 2-point reductions), for the three-youth assessed with clinician severity ratings. Seager et al. (2014) also demonstrated

reductions in multiple forms of anxiety including social anxiety (CSR change from 6 to 2) and generalized anxiety (CSR change from 4 to 0), as well as major depressive disorder (CSR change from 4 to 3) and a subclinical impulse control disorder (CSR change from 3 to 2). However, at 6-month follow-up, this participant did meet criteria for social anxiety, although the ratings for GAD and MDD were still subclinical.

Statistical Comparisons

Pre- to Post-treatment and Follow-up Comparisons

Three-quarters of the studies reviewed ($n = 18$, 75%) included a statistical comparison of pre- to post-treatment scores on a measure of symptom severity or clinician rating scales. Seven studies (29.17%; Kendall et al., 2004; Kennedy et al., 2019; Muratori et al., 2002; Queen et al., 2014; Sevi Tok et al., 2016; Wells & Faragher, 1993; Yeo et al., 2005) included an assessment of symptoms at a follow-up period as well. Three studies (12.5%; Robinson & Rapport, 2002; Sloan et al., 2018; Kennedy et al., 2018) assessed if the pre- to post-treatment changes met criteria as reliable changes. Study specific results are available in Table 6.

Statistical comparisons of anxiety symptoms included the SCARED (Bilek & Ehrenreich-May, 2012; Brunstein-Klomek et al., 2017; Kennedy et al., 2018; Kennedy et al., 2019; Schneider et al., 2018; Sevi-Tok et al., 2016), the Depression Anxiety and Stress Scale (DASS; Kennedy et al., 2018; Sloan et al., 2018), RCADS (Queen et al., 2014; Sherman et al., 2018), and the Revised Children's Manifest Anxiety Scale (RCMAS; Kendall et al., 2004). The SCARED assessment has a child and parent report form. The majority (83.33%; $n = 5$) of studies using the SCARED (Bilek & Ehrenreich-May, 2012; Kennedy et al., 2018; Kennedy et al., 2019; Schneider et al., 2018; Sevi Tok et al., 2016) demonstrated a significant decrease in pre to post-treatment child rated total anxiety, and social anxiety symptoms (Kennedy et al., 2018).

Comparatively, 50% ($n = 3$) of studies using the SCARED (Kennedy et al., 2018; Kennedy et al., 2019; Sevi Tok et al., 2016) demonstrated a reduction in parent rated total anxiety, and social anxiety (Kennedy et al., 2018). Reductions in anxiety were significant at the follow-up period for child and parent reports in one study (Sevi Tok et al., 2016), but non-significantly different for both parents and child reports at follow-up in another (Kennedy et al., 2019). Two studies found non-significant reductions in parent-rated total anxiety scores (Bilek & Ehrenreich-May, 2012), or did not find any statistically significant reductions in total anxiety or depression on any form of the SCARED (Brunstein-Klomek et al., 2017).

Similar to the SCARED, the RCADS also has parent and child report forms of anxiety and depression symptoms. Significant reductions in RCADS self-reported total anxiety and depression were observed for the pre- to post-treatment phase in both studies (Queen et al., 2014; Sherman et al., 2018). Queen et al. (2014) demonstrated significant reductions in total anxiety on the parent-report RCADS from pre- to post-treatment, but not from post-treatment to follow-up; Sherman et al. (2018) did not provide parent reported RCADS scores. Depression scores on the RCADS were more variable. Queen et al. (2014) demonstrated a significant reduction pre- to post-treatment on self-reported depression but no significant difference post-treatment to follow-up, and parent rated depression did not reach significance for either assessment phase; Sherman et al. (2018) demonstrated a significant reduction in the pre-to posttreatment phase, although a follow-up assessment was not conducted.

Reductions in anxiety were inconsistent among studies using the DASS for pre- to post-treatment assessments. The DASS is a parent-rated assessment of anxiety and depression symptom severity. Kennedy et al. (2018) found a non-significant difference on the DASS anxiety and depression subscales. Sloan et al. (2018) demonstrated reliably and clinically significant

reductions on both the anxiety and depression subscales of the DASS for more than half of their sample. The RCMAS is a self-report of anxiety that used in one study reviewed (Kendall et al., 2004). Kendall et al. (2004) demonstrated significant reductions from pre- to post-treatment, and from post-treatment to follow-up, using the RCMAS.

Assessments of depression included the Children's Depression Inventory (CDI; Bilek & Ehrenreich-May, 2012; Kendall et al., 2004; Kennedy et al., 2019; Sevi Tok et al., 2016) and the Moods and Feelings Questionnaire (MFQ; Brunstein et al., 2017; Schneider et al., 2018). The CDI offers a self-report, parent-report, and teacher-report measure of depressive symptoms. Significant reductions were observed on the CDI self-report between pre- to post-treatment and at follow-up in two studies (Kendall et al., 2004; Kennedy et al., 2019). No significant differences between pre- to post-treatment scores were observed in self-reported CDI scores in Bilek & Ehrenreich-May (2012). Sevi Tok et al. (2016) demonstrated a significant reduction in CDI scores when comparing pre-treatment to post-treatment, as well as follow-up scores, among one of three treatment groups; significant reductions were observed in a CBT only group, in comparison to CBT plus medication or medication alone. Significant reductions were observed on the CDI parent-report between pre- to post-treatment in one study (Bilek & Ehrenreich-May, 2012) but not found in another (Kennedy et al., 2019). Assessments of depressive symptoms using the MFQ were also variable. One study (Schneider et al., 2018) found significant reductions on the self-report MFQ from pre- to post-treatment, whereas another study (Brunstein-Klomek et al., 2017), did not find significant reductions pre- to post-treatment on child, mother, or father assessments.

Symptom inventories that assessed multiple diagnostic groups included the Behavior Assessment System for Children (BASC; Yeo et al., 2005) and Child Behavior Checklist

(CBCL; Kendall et al., 2004; Muratori et al., 2002; Weisz et al., 2017). Yeo et al. (2005) demonstrated significant reductions in youth-reported emotional symptom index and clinical maladjustment scores on the BASC but did not find significant reductions in school maladjustment or adaptive skills. Similarly, no significant differences were observed on the parent- or teacher-reported behavior symptom index, internalizing, externalizing, or adaptive skill scores pre- to post-treatment (Yeo et al., 2005). Using the CBCL, two studies found significant reductions in parent-reported internalizing (Kendall et al., 2004; Muratori et al., 2002) and externalizing (Kendall et al., 2004) from pre -to post-treatment, as well as at follow-up. Weisz et al. (2017) reported significant decreases pre- to post-treatment on parent and youth reported CBCL total problems, internalizing, and externalizing. Muratori et al. (2002) reported a significant decrease from post-treatment to follow-up on CBCL total and externalizing scores. Yeo et al. (2005) found significant reductions in teacher-reported internalizing pre- to post-treatment using the CBCL system, as well as a lack of significant improvements on parent reported internalizing, externalizing, and total problems. Sloan et al. (2018) demonstrated most of their sample had a significantly reliable change pre- to post-treatment on the Difficulties in Emotion Regulation Scale (DERS) and 60% had a clinically significant reduction.

Two studies (Robinson & Rapport, 2002; Wells & Faragher, 1993) provided comparisons from pre- to post-treatment using indicators of overall functioning for the youth. Robinson & Rapport (2002) reported that 27.5% of total sample was within normal youth outcome questionnaire (YOQ) levels, with 50.7% demonstrating symptom improvement pre- to post-treatment, and 46.5% demonstrated a reliable change in YOQ scores. Wells & Faragher (1993) demonstrated significant reductions in mean problem scores as reported by parents, professionals, and youth when comparing baseline to 1-month follow-up, although these differed

by the type of presenting concerns the youth experienced (Table 6). At the 2-year follow-up period, symptom improvements included: 79% of all youth as rated by youth, 74% as rated by parents, 69% as rated by professionals. A moderate number of youth were reported as unchanged at 2-years (20%, 24%, & 29% respectively) and a small portion (1%, 2%, & 2% respectively) were rated as worse.

No Significant Difference

Although most of the studies demonstrated reduction of symptoms, two studies found no difference pre-to-post intervention. Brunstein-Klomek et al., (2017) did not find differences between father rated school avoidance or child, mother, or father reports on the SCARED total scores, generalized anxiety, separation anxiety, social anxiety disorder, nor mood and feelings questionnaire. However, a significant reduction was observed in mother rated school avoidance ($T = 2.45$ $p < .05$). Similarly, Schneider et al. (2018) did not find significant differences in child rated SCARED scores based on age, depressive or social anxiety symptoms, anxiety related symptoms, or parent reports of pre-treatment severity.

Between Group Changes

Seven studies (29.17%) provided a comparison of the transdiagnostic treatment across age groups (Robinson & Rapport, 2002), to a control group (Muratori et al., 2002), or alternate treatment group(s) (Chorpita et al., 2017; Lenz & Del Conte, 2017; Kennedy et al., 2019; Sevi Tok et al., 2016; Sharma et al., 2017). Although Robinson & Rapport (2002) did not find a significant difference in rate of changes pre- to post-treatment between elementary and adolescent age groups, they did improve significantly over time ($F(3,138) = 5.89$, $p < .001$, $\eta^2 = .11$). However, elementary aged youth had greatest decreases in YOQ scores right after entry into treatment, and for adolescents, the greatest change was between 3 to 6 months in treatment.

Behavioural dysfunction also differed across groups, with elementary aged youth having higher scores across the four time periods. In comparison, adolescents had lower scores on the social problems subscale at time 4 compared to elementary, but the scores at time 1-3 did not differ between age groups.

Muratori et al. (2002) compared a transdiagnostic treatment to community services, which may have included no treatment, or treatment as usual (TAU; this was not assessed in the study). When comparing pre- to post-treatment total scores on the CBCL, no difference between the intervention groups were found (Muratori et al., 2002). However, when comparing their post-treatment to 18-month follow-up total scores on the CBCL a significant reduction was observed for the transdiagnostic treatment but was not observed for the control group (Table 6; Muratori et al., 2002). A similar pattern was observed between groups over time for the externalizing subscale from the CBCL (Table 6; Muratori et al., 2002). However, the internalizing subscale significantly decreased over time for both groups, with no significant difference between groups (Muratori et al., 2002). Global functioning was also more significantly improved at post-treatment for the transdiagnostic group, but this difference was no longer significant at follow-up (Muratori et al., 2002). Similarly, a difference in the proportion of youth in the functional range of the CBCL was significantly higher for the transdiagnostic group post-treatment but changes were not significantly different between groups at the follow-up period (Muratori et al., 2002).

Most studies using a TAU control group provided detail about the control group protocol. Chorpita et al. (2017) also relied on a TAU control group, although it was specified that this control group relies on delivering evidence-based treatments, without specifying which treatments that included. A comparison of pre- to post-treatment scores demonstrated that youth in the transdiagnostic treatment (MATCH) improved significantly in comparison to the control

group on total symptoms and internalizing scores on the brief problem checklist (BPC) regardless of if youth or parents rated the symptoms, as well as the youth's top-rated problems (Chorpita et al., 2017). The MATCH group also had a greater portion of youth in the clinically improved category in comparison to the control group (Chorpita et al., 2017). The externalizing subscale of the BPC demonstrated greater reductions when rated by youth in comparison to caregivers across treatment groups, however, the rate of reduction was significantly greater for the MATCH group than the control group overall (Chorpita et al., 2017). Lenz & Del Conte (2017) described a DBT-Adolescence in-patient treatment in comparison to a TAU control group (partial hospitalization based in a psychoanalytic perspective). Lenz and Del Conte (2017) observed decreased depression symptoms (SCL-90-R) that were significantly different across groups, as well as significantly different reductions in interpersonal sensitivity between groups, with greater improvements in the DBT-A group. However, there were no statistically significant differences in anxiety or hostility subscale scores between groups (Lenz & Del Conte, 2017).

The three remaining studies relied on specific treatment conditions as their control groups. Sharma et al. (2017) provided a comparison of a transdiagnostic group intervention to a TAU control group, that provided pharmacotherapy from a psychiatrist with no psychotherapy. Significantly greater reductions were observed pre- to post-treatment in the transdiagnostic group in comparison to the control groups for state anxiety scores (STAI-state), trait anxiety scores (STAI-trait), headache symptoms, and global functioning (Children's global assessment scale). Kennedy et al. (2019) provided a comparison of their transdiagnostic treatment (UP-C) to a CBT control group. No significant differences were observed between groups on clinician rated outcomes for principal diagnosis, emotional disorders, or responder status when comparing pre- to post-treatment ratings, or remission rates of all emotional disorders at 6-month follow-up

(Kennedy et al., 2019). However, the UP-C group was more likely to achieve responder status at 6-month follow-up when examining scores among treatment completers and not the intent to treat (ITT) sample (which did not differ from the comparison group; Kennedy et al., 2019). Sevi Tok et al. (2016) compared a transdiagnostic CBT intervention to the same CBT plus medication, as well as a medication only group. Significantly greater reductions in SCARED general anxiety (child-report and parent-report) scores were observed for samples completing the CBT and CBT plus medication groups on pre- to post-treatment measures. At follow-up, only the changes in SCARED general anxiety (child-report and parent-report) for the CBT plus medication group were significantly improved in comparison to the other treatment groups (Sevi Tok et al., 2016). For depressive symptoms (CDI), a significantly greater reduction was found for the CBT only group in comparison to the other treatments, although they all significantly decreased when comparing pre- to post-treatment scores. However, when comparing post-treatment to follow-up scores on the CDI, the CBT only group was the only condition with a significant difference (Sevi Tok et al., 2016). Quality of life (Health Related Quality of Life in Children) was significantly reduced from pre- to post-treatment on parent and youth reports for all three groups; however, at follow-up parents and child reports both demonstrated greater improvements in the CBT alone and CBT plus medication groups (Sevi Tok et al., 2016).

Chapter 8: Study 2 Discussion

Trends in Intervention Components

In pursuit of identifying the similarities and differences among transdiagnostic treatments similar components used within the treatments to initiate change in the mental health experienced by youth were identified. These similarities included:

- 1) Fostering emotional awareness and engaging in psychoeducation about emotions. Across interventions, youth were taught about the role that emotions play in everyday life, how they are part of the body's adaptive mechanisms for safety, and the factors that contribute to their emotional experiences. Youth are also encouraged to reflect on their common emotional experiences and instances when these are most common for them.
- 2) Problem solving skills were present in most interventions as well. These skills work in a systematic way to have youth identify their emotions, analyze the contributing factors to those experiences, examine the behavioural and emotional outcomes, and generate possible alternatives to their thoughts and/or actions.
- 3) Cognitive reappraisals were employed by many of the interventions and included identifying the youth's thoughts in a difficult moment, generating possible alternative thoughts, perspectives, or interpretations. This provides youth with greater flexibility in their thinking as it allows them to understand that there are views and perspectives that they may not have considered.
- 4) Reducing experiential avoidance included techniques such as exposure hierarchies, engaging in opposite action, and behavioural activation. These strategies are based on the premise that individuals experiencing anxiety, depression, trauma, and other concerns often avoid experiencing certain emotions or situations that could elicit emotions. This avoidance contributes to a lack of opportunity for corrective experiences and often perpetuates the belief in the need to avoid in order to be happy or safe. Thus, if youth are encouraged to face the situations they fear, or engage in fun activities when sad, they could cope with their emotional experience and have more opportunities to engage fully in life. The concept of opposite action provides an avenue for this strategy to be applied

to a wide range of dysfunctional behaviours or responses, as it aims to identify the action urge elicited by situations, analyzing the effectiveness of that urge, and engaging in an action that might be opposite to the urge, so as to achieve what the youth wants in the long-term.

Many of the interventions also included some aspect of parental involvement. This ranged from coaching parents in the use of skills taught while at home, providing information about behavioural management strategies, and developing a balanced parenting style. Commonly, parents were provided with a description of the skills the youth were learning in the sessions and given instructions on how to encourage the generalization of these skills in the home while fostering a positive relationship with youth. Discussions included basic reinforcement and how parental reactions influence youth behaviour. Encouraging and praising skill use, as well as communicating affection toward youth while demonstrating a need to apply the strategies, were common elements suggested to parents among the studies reviewed.

Generalizability of Studies

The second goal of this study was to establish an understanding of the quality of the evidence for transdiagnostic interventions for children. In pursuit of this goal, the range of methods used within the studies demonstrates a need for more clinically controlled trials within this subject area. Two studies provided a comparison of the transdiagnostic intervention to established treatment. One strength among some studies ($n = 4$; Chorpita et al., 2017; Kennedy et al., 2018; Muratori et al., 2002; Sharma et al., 2017) included a reliance on naturalistic samples recruited from community mental health care centres. Community-based recruitment controls for any type of bias that may occur in recruitment procedures. Overall, fewer than half of the studies included met criteria as moderate or higher quality in term of research design. It should be noted

that this review did not include all studies examining transdiagnostic treatments (e.g., Weersing et al., 2017) and revision of the search terms and databases may yield more studies that provide a higher level of generalizability. However, within the Weersing et al (2017) study, close to 60% of youth were considered responders after brief transdiagnostic treatment was completed.

Symptom Reductions

The first specific goal of this study was to identify the types of symptom reductions demonstrated within each transdiagnostic approach. Almost all the studies reported a reduction in one or more forms of anxiety. Although there was variability in the magnitude of the reduction in anxiety, or the timing of the reduction, most studies reported a significant improvement in overall anxiety pre- to post-treatment or at follow-up depending on whether the parent or child reported the change. Parent-rated assessments of youth anxiety pre – to post-treatment were less likely to be significant which may provide an explanation for the lower level of symptom improvement reported by Kennedy et al., (2018) and Sloan et al., (2018) as they relied on a parent-rated screen for anxiety and depression (DASS). Child-rated reductions in anxiety symptoms were observed in 91.67% of studies included in this review.

Assessments of depressive symptoms were also variable across studies. Two studies found significant reductions in either self-reported CDI scores (Sevi Tok et al., 2016; CBT only group) or MFQ scores (Schneider et al., 2018). Parent-reported symptoms demonstrated a significant reduction in depression symptoms, while child-reported ratings did not (Bilek & Ehrenreich-May, 2012). These interventions did not differ notably on the intervention components that were included.

In all studies that provided a comparison of a transdiagnostic intervention to a control group, transdiagnostic treatments were associated with either comparable or greater treatment

response. However, when comparison of transdiagnostic interventions were made to TAU control groups, findings were mixed. For example, Chorpita et al. (2017) and Muratori et al. (2002) both demonstrated significantly greater reduction in internalizing symptoms and a greater proportion of the transdiagnostic group in the clinically improved or functional range in comparison to a non-transdiagnostic control. Muratori et al. (2002) did not find a significant difference between the transdiagnostic intervention and control group on total symptoms post-treatment, although there was a significantly larger reduction in the transdiagnostic group at the 18-month follow-up. Comparatively, Lenz and Del Conte (2018) found significantly larger reductions in depression and interpersonal sensitivity among the transdiagnostic group, but no significant differences in anxiety or hostility scores. These findings suggest that in comparison to TAU, transdiagnostic interventions may contribute to a greater level of overall functioning after treatment is complete, although this is only preliminarily supported due to the limited number of studies reported here. Since completion of this review, Schniering and Rapee (2020) demonstrated reductions in life interference when comparing transdiagnostic treatments to waitlist controls, without significant differences between groups on self-reported symptoms for adolescents, but reduced rates of clinician rated diagnoses.

Comparisons to alternative treatment groups was consistently associated with significantly higher levels of global functioning, quality of life, and likelihood of achieving responder status respectively (Sharma et al., 2017; Kennedy et al., 2019; Sevi Tok et al., 2016). Although Sharma et al. (2017) and Sevi Tok et al. (2016) found consistently greater reductions in anxiety scores among the transdiagnostic group in comparison to treatment controls, Kennedy et al. (2019) did not find a difference between groups. The lack of consistency and limited number of studies conducting comparisons to active control groups precludes any conclusions about the

reduction of anxiety symptoms. However, since completion of this systematic review numerous studies have been published evaluating transdiagnostic treatments, thus current evidence may have greater insight.

Limitations and Future Directions

The variance in the types of outcome measures used prohibits direct comparison of the included treatments. Although many studies described reductions in mental health symptoms, the magnitude of difference between treatments is difficult to determine based on this inconsistency. Furthermore, the treatments included in this review did not include any Canadian or Indigenous children, which may limit the generalizability to the First Nation children intended to be served by the treatment being developed. Furthermore, no grey literature was identified for inclusion in this review.

Only two studies of the 24 reviewed included comparison of the transdiagnostic intervention to an established evidence-supported intervention. More multi-arm randomized control trials are needed to demonstrate comparative advantages of transdiagnostic interventions for long-term functional improvements. Future research should identify the components or influential aspects (e.g., number of sessions, service provider, etc.) of treatments that are tied to greater improvements.

There were discrepancies in multiple studies between parent-rated and youth-rated changes in anxiety. It would be helpful to understand what assessment and treatment factors may influence these differences and the implications for youth outcomes. For example, Becker-Haimes et al. (2018) demonstrated lower levels of functional improvements for youth whose parents reported a greater number of symptoms pre-treatment than youth did, and higher rates of parental symptom rating were associated with more parental psychopathology, but only within

the population receiving CBT (vs. medication or CBT plus medication). When parent and child reports became closer to one another over the course of treatment, these reports were more predictive of treatment outcomes in comparison to reports that continued to differ over the course of treatment for youth receiving CBT (Becker-Haimes et al., 2018). These findings may imply that when differences between youth self-report and parent-reported symptoms occur, placing a greater emphasis on parental involvement to increase concordance in the treatment may be useful (Goolsby et al., 2018).

The definition of transdiagnostic treatments may have excluded relevant culturally based programs being implemented by First Nation, Métis, and Inuit (FNMI) communities. Many FNMI cultures emphasize a balanced model of health that has direct overlap with transdiagnostic models. Thus, future reviews can develop a fulsome understanding of the overlap in these programs by intentionally seeking out a broader conceptualization of transdiagnostic intervention based on FNMI culture.

Conclusion

The core features of transdiagnostic interventions identified within this review will provide the basis for the pilot treatment developed in Study 3. These core features include psychoeducation, increasing emotional awareness, enhancing problem solving skills, learning opposite action (e.g., behavioural activation, exposure), developing greater cognitive flexibility (e.g., cognitive restructuring, acceptance), and parental involvement. These core features have demonstrated preliminary evidence of reducing transdiagnostic symptoms. The process for integrating these core features in the pilot treatment developed is outlined in Chapter 9. This will be the first transdiagnostic treatment to be evaluated within an explicitly First Nation group.

Chapter 9: Performance Objectives, Change Objectives, and Logic Model Based on Intervention Mapping

The first stage of the IM process was completed based on the qualitative needs assessment (Study 1) as well as the systematic review of literature surrounding transdiagnostic mental health treatments (Study 2). The findings from these data sources were synthesized into initial performance and change objectives. This process resulted in 12 performance objectives and 48 change objectives that were presented to the RAC within the community organization. These objectives were focused on increasing the children's motivation, awareness, mental health coping skills, as well as their sense of self-efficacy. Feedback from the RAC was sought through discussion about the appropriateness of the objectives as well as any implementation barriers that might be anticipated. Through this process, the performance objectives were reduced to 11, with 38 coordinating change objectives (see Table 8).

During review of the performance and change objectives, the RAC expressed a preference for a simplified model of the treatment objectives and goals. These goals were embedded into a logic model (Figure 4). This logic model provided the basis for the development of the treatment manual. The RAC identified that in order to adhere to cultural protocols, the cultural intervention techniques should be identified by traditional Knowledge Keepers. Thus, a draft treatment manual was developed that identified a progression of transdiagnostic psychotherapeutic techniques with placeholders for cultural interventions to be embedded.

The community organization identified one Knowledge Keeper to discuss potential cultural teachings to embed within the treatment. The Knowledge Keeper was provided with a copy of the treatment manual to review before meeting with the researcher. The Knowledge Keeper and researcher met to review the intent of the treatment and identify opportunities to

include cultural teachings and practices that would contribute to greater mental health among the children. Detailed notes during this discussion were made by the researcher. Following the meeting, the research included the cultural teachings and practices identified and emailed the revised treatment manuals to the Knowledge Keeper for review. Originally, the RAC and research team intended for this Knowledge Keeper to be involved in the delivery of the treatment. However, organizational changes took place that prohibited this from occurring.

The research team then met with the Cultural Coordinator within the community organization to discuss the possibility of implementing the treatment. The Coordinator agreed to have multiple Knowledge Keepers from the cultural team participate in delivery of the treatment. To ensure the cultural interventions were appropriate for the revised team, multiple planning meetings occurred. During this initial planning phase, it was identified that a summer camp may contribute to greater cohesion among the children and would allow for fewer disruptions in the cultural team's regular activities. An initial meeting was held to discuss the intent of the treatment, the specific clinical skills, and ask the Knowledge Keepers to reflect on how their cultural knowledge and teachings could be included. After a period of 3 weeks, all members of the treatment team (i.e., two PhD level facilitators, the researcher, Cultural Coordinator, and Knowledge Keepers) came together to develop a specific daily schedule (see Table 9). The description of this pilot treatment and evaluation is described in Chapter 10.

Chapter 10: Study 3 Evaluation of a Pilot Transdiagnostic Culturally Woven Mental Health Treatment Group for First Nation Children

Study 3 Purpose

Delivering evidence-based treatments to ethnically diverse children is complicated by the model and strategies that are used to develop treatments. A review of culturally adapted CBT treatments demonstrated that there are multiple ways that culture can be embedded into treatments (Kowatch et al., 2019). Existing protocols can be adapted by using more culturally appropriate wording, examples, and descriptions (Kowatch et al., 2019). One example of a similar adaptation of a transdiagnostic treatment for Japanese children, that implemented the Unified Protocol for Children adapted for cultural meanings and examples, had good satisfaction among parents and children as well as improvements in functional status (Fujisato et al., 2021). Approximately 60% of children within this treatment achieved responder status (as rated by clinicians on the Clinical Global Impression scale indicating either “very much...” or “much improved”) with the use of this culturally adapted treatment (Fujisato et al., 2021). Furthermore, Hispanic youth receiving a brief transdiagnostic treatment demonstrated greater improvements in symptoms and functioning when compared to non-Hispanic youth (Weersing et al., 2017).

There is a lack of literature examining the use of transdiagnostic treatments among First Nation children, as no treatments were identified by the author within Study 2. The intent of this treatment was to rely on evidence-based clinical interventions from the transdiagnostic literature as well as cultural interventions. Thus, children were provided with information and instruction about both intervention methods simultaneously. The transdiagnostic skills were not adapted based on culture as cultural interventions were offered as established and known methods of shifting emotional experiences. Using this deeper method of cultural embeddedness into the

treatment allows cultural models to be more influential throughout the treatment process (Kowatch et al., 2019).

Study 3 Objective and Research Questions

The overall objective of study 3 was to explore the use of a culturally woven transdiagnostic group treatment for First Nation children and youth. This exploratory study aimed to identify how effective and acceptable the proposed treatment is for a small sample of First Nation children. This research was guided by the following questions:

- 1) Does the treatment demonstrate reductions in mental health symptoms?
- 2) Does the treatment improve wellbeing for the children?
- 3) Was the treatment acceptable to the children who received it?

To address these research questions, a mixed method study was conducted. The approach used within this study aligns with an ethnographic assessment within implementation science that prioritizes context specific experiences and well as the children's perspectives of the treatment (Gertner et al., 2021). This study used observation with structured field notes, participation, a quantitative evaluation, as well as semi-structured interviews to capture these contextual and lived experience perspectives (Gertner et al., 2021). KK acted as an observer-participant throughout the treatment group (Higginbottom et al., 2013).

Study 3 Method

Study 3 Group Attendees

Although the intent was to recruit eight to ten children for the group, five children and their caregivers participated in this pilot study. Children were identified by their placement on the waitlist for mental health services within the CO and ranged in age from 7 to 11 years with a mean age of 10.11 years ($SD = 1.43$ years). There were two female (40%) and three male (60%)

children. Caregivers included three biological mothers and one biological father (two of the children were siblings). All children were identified by their caregivers as First Nation.

Study 3 Measures

Child and Adolescent Needs and Strengths (CANS) Assessment- Acute

The Acute CANS Assessment is a 51-item scale that is completed by a mental health service provider (see Appendix F). Domain subscales include mental health (13 items), risk behaviours (9 items), family and caregiver needs (6 items), functioning (13 items), care intensity and organization (4 items), and individual strengths (12 items). All subscales, with exception of the individual strengths scale, are rated as 0 = *no evidence*, 1 = *history, mild, suspicion*, 2 = *moderate, action needed*, 3 = *severe, disabling, dangerous, immediate action needed*. The individual strength subscale is rated as: 0 = *center-piece strength*, 1 = *useful strength*, 2 = *identified strength*, 3 = *no strength identified*. Thus, higher scores on all subscales indicate greater need within that domain. The CANS has demonstrated good inter-rater reliability for the total scale (.81), dimensions (.72 - .85), and items (.55 - .90) in prospective studies (Anderson et al., 2003).

Behavior Assessment System for Children, Third Edition (BASC-3)

The Behaviour Assessment System provides an assessment of children's adaptive and maladaptive behaviour and emotions in comparison to norm-referenced scores (Reynolds et al., 2015). This measure assessed mental health symptoms before the treatment as well as after (i.e., a pre-post comparison of symptoms). The Parent Rating Scale (PRS) provides scores in 15 domains: Hyperactivity, Aggression, Conduct Problems, Anxiety, Depression, Somatization, Attention Problems, Learning Problems, Atypicality, Withdrawal, Adaptability, Social Skills, Leadership, Study Skills, and Functional Communication (Reynolds et al., 2015). These

subscales can be grouped into 5 larger scores: Externalizing Problems, Internalizing Problems, School Problems, Behavioral Symptoms Index, and Adaptive Skills (Reynolds et al., 2015). Different forms have been developed for children (aged 6 – 11) and adolescents (ages 12 – 21). Test-retest reliability for the PRS for children has been demonstrated to range from $r = 0.81$ to 0.94 (Reynolds et al., 2015). The Self-Report of Personality (SRP) provides information about children's thoughts, feelings, attitudes, and internal reactions to others across various personality dimensions as well as clinical and adaptive domains (e.g., anxiety, depression, hyperactivity, social stress, etc.; Reynolds et al., 2015). The SRP-C was developed for children aged 8 – 11 years and has a test-retest reliability of $r = 0.61$ to 0.94 (interval range between assessments: 7 to 67 days; (Reynolds et al., 2015).

First Nations Children's Wellbeing Measure (FNCWM)

The FNCWM is a 28-item scale (see Appendix G) that was developed through collaboration between the community organization and researchers at Lakehead University (Drawson, 2018). This scale assesses a First Nation model of wellness through the incorporation of items intended to assess the 7 grand-father teachings (i.e., respect, love, truth, bravery, wisdom, generosity, and humility) from Anishinabek culture as well as items that assess the four-quadrants of health identified in the medicine wheel (i.e., physical, emotional, spiritual, and mental wellness). The scale was developed using the rational empirical approach for scale development. The items are scored on a five-point Likert-type scale ranging from (1) Not Applicable to (5) Almost Always.

The total score ranges from 28 to 140, and the 28-items load onto 3 factors: General Wellbeing (range = 15 to 75), Traditional Activities (range = 8 to 40), and Social Engagement (range = 5 to 25). Internal consistency for these scales ranged from very high to adequate with

Cronbach's alphas of .950, .884, and .762 respectively (Drawson, 2018). Convergent validity between the FNCWM and the CANS was also assessed and demonstrated overlap between the General Wellbeing and Social Engagement factors and the CANS scales, with the exception of Family Caregiver Needs and Strengths. Furthermore, the Traditional Activities factor demonstrated convergent validity with the CANS Individual Strengths scale (Drawson, 2018).

Qualitative Interviews

Semi-structured interviews were used to assess the children's experience of the treatment (see Appendix H for interview questions). The semi-structured questions were worded neutrally and balanced between positive and negative prompts to decrease perceived biases in the evaluation. Children were asked what they enjoyed, what they did not enjoy, if they learned anything new, what their thoughts were about the cultural activities, if these cultural activities were new or something they already knew about, their experience being with the other children and facilitators, as well as how they think the treatment will affect them in the future. During the interviews, KK bracketed her expectations by reflecting on these biases before conducting the interviews, intentionally prompting for more feedback when negative aspects of the treatment were identified, questioning when informants' positive descriptions contradicted body language or previous observations, and writing memos on interview notes (Tufford & Newman 2012).

Critical Incidence Questionnaire and Group Counseling Helpful Impacts Scale (GCHIS)

To assess group treatment related factors that may improve or enhance group treatments, the children were asked the Critical Incidence Questionnaire (Appendix I) with the qualitative response being coded using the 28-item Group Counselling Helpful Impacts Scale ([GCHIS], Appendix I). The GCHIS was developed by integrating 3 rating systems (a total of 32 items) that describe group and individual therapy processes (Kivlighan et al., 1996). These included Elliott's

taxonomy of helpful impacts, Mahrer and Nadler's good moments system, and Bloch et al.'s therapeutic factors rating system (see Kivlighan et al., 1996 for further description). Principal components analysis using an undergraduate sample identified 4 factors that 28 of the items loaded onto: Emotional Awareness-Insight, Relationship-Climate, Other versus Self Focus, and Problem Solving-Behaviour Change (Kivlighan et al., 1996). The rating system demonstrated adequate internal consistency for three (Emotional Awareness-Insight, Relationship-Climate, & Problem Solving-Behaviour Change) of the four factors within Shechtman and Gluk's (2005) study. Coding for items 21 to 26 will follow the guidelines developed by Bloch et al., (1979) as these provide behavioural indicators of how raters can identify the presence of these items. Furthermore, the inclusion of these items was developed based on the Bloch et al. (1979) procedure and have previously been used with a North American Indigenous population (Colmant & Merta, 1999).

Field Notes

The author attended each day of the treatment to observe and provide clinical supervision for the PhD practicum trainees that delivered the treatment. Daily notes were completed regarding the activities of the day and engagement of the children using a form (Appendix J) that was developed for this purpose. However, this form was developed before the summer camp style was determined (which did not include homework activities) so not all information is available from this sheet.

Study 3 Procedure

Children were identified through the community organization's waitlist for mental health services. The waitlist manager provided a list of children who scored a 2 or higher (indicating moderate need for intervention to a need for immediate action) on the anxiety, mood, trauma, or

emotional regulation symptoms scales from the Acute CANS. The Acute CANS was completed at intake into the mental health services before children were placed on the waitlist. Caregivers of potential participants were contacted via telephone, provided a brief description of the study and treatment, and asked if they were interested in having their child attend. For individuals that were interested and available, individual interviews with a caregiver were arranged either in-person or online. During these intake interviews, the acute CANS, BASC-PRS, and FNCWM was completed. The children attended a 5-day treatment camp (as described below) at the community organization from 10:00 am to 3:00 pm daily. Follow-up measures for caregivers were sent home with children on the fourth day of the day or completed over the phone. The BASC-SRP was completed by the children on the first and last day of the treatment camp. The children also completed qualitative interviews in the afternoon on the last day of the treatment camp.

Approval for this project was granted by Lakehead University's Research Ethics Board (see Appendix K) as well as the RAC at Dilico Anishinabek Family Care. The treatment protocol was delivered by two PhD level clinical psychology students, one male First Nation, and one female non-Indigenous. Due to these clinicians' student status, they required supervision of their clinical work. KK, the primary researcher, acted as a co-supervisor for these clinicians throughout the treatment. CM provided KK with clinical co-supervision regarding her supervision of the group facilitators. Prior to beginning the group, each group facilitator was given a copy of the treatment manual to read through. Two meetings were arranged between the group facilitators and KK to discuss the intent of the treatment, the practical application of the treatment content, and the structure for supervision. The facilitators worked together to develop a coordinated plan of who would deliver each section, and how, and they sought feedback and

oversight from KK about the appropriateness of this plan. The facilitators also attended planning meetings with the cultural team when identifying how all of the intervention components would come together. KK attended each day of the treatment to observe and provide feedback on the clinician's delivery of services, as well as ensure the children's safety. Supervision consisted of daily meetings before the children arrived to discuss the day's plan and organize how the activities would be conducted, ad-hoc feedback and suggestions about how to improve delivery of the psychotherapeutic skills, as well as a debriefing session at the end of the day to discuss any concerns or reflections the clinicians had throughout the day. KK attempted to provide minimal ad-hoc feedback about implementation to reduce the influence of her feedback on adherence to the treatment manual.

Treatment Protocol

The treatment wove evidence-based transdiagnostic psychological strategies with Anishinabek cultural teachings and practices as identified in the performance and change objectives (Chapter 9; see Table 8). As much as possible, the intent behind the skills was aligned for each day. Each day began with a smudging ceremony (change objective [CO] 3.1) and sharing circle that was facilitated by a cultural Knowledge Keeper. The first day focused on orienting the children to the treatment camp, developing group guidelines, and generating group cohesion through fun activities (COs 7.1, 11.1). The children were provided teachings about smudging (COs 3.1, 3.2).

The second day focused on generating greater emotional awareness. The day began with a sharing circle and teachings about how to engage in sharing circles (e.g., you do not have to speak if you do not feel comfortable). Psychoeducation about emotions was delivered through a game of feelings charades (when children act out the emotion and other children guess), as well

as a scavenger hunt for somatic symptoms of different emotional experiences. These interventions specifically targeted COs 1.1, 1.2, 1.3., and 2.1; see Table 8) The children tie-dyed shirts as a cohesion building activity (CO 11.4). The cultural interventions included teachings about the four sacred medicines and how each one can assist in coping with a specific emotional experience (COs 6.1, and 6.2). A singing and drumming teaching was provided that emphasized how these cultural interventions can assist in processing emotions by allowing them to be expressed and flow through the body when they arise (COs 6.1, and 6.2). The day ended with a gratitude circle (COs 3.1, 3.2).

The third day focused on the function of emotions and some coping strategies. These included psychoeducational awareness of the function of emotions from a cognitive behavioural approach (CO 2.1), as well as cultural teachings that identify emotions as gifts from the creator (CO 2.1). The cultural Knowledge Keeper provided a teaching about feathers, self-love, and the gift of emotional expression to restore balance in one's body (COs 3.2, 4.7, 5.5, 6.1). The children constructed coping boxes to develop a tool kit of supplies in assisting them to express their emotions or redirect them when needed (COs 6.1, 6.2). The concept of opposite action was introduced during the creation of coping boxes, and reinforced through a game of *Simon Says*, where the children were instructed to do the opposite of what the facilitator said (COs 4.4, 4.5, 4.6, 4.7, 5.1, 5.3, 5.6). The cultural Knowledge Keepers also provided teachings about shawl dancing and Grandfather drums (Cos 3.1, 3.2, 6.1, 7.1, 8.1). The children engaged in dancing and the male children (based on gender restrictions according to cultural protocols) were allowed to use the grandfather drum. The day ended with a gratitude circle (COs 3.1, 3.2).

The fourth day provided more emotional coping skills to the children. The cultural Knowledge Keeper provided a teaching about finishing what you start and leaving things the

way that you find them. The children and group facilitators went for a walk to a nearby park and discussed self-care activities (e.g., eating, sleeping, regular exercise, following doctor's instructions, etc.) along the way (COs 2.2, 4.1, 4.4, 7.1). At the park, the children were taught about using the five senses for mindfulness and engaged in mindfulness activities (CO 5.2). These mindfulness activities continued on the walk back to the treatment centre. After lunch, the cultural Knowledge Keeper taught about the Seven Grandfather Teachings and had the children identify how they were living according to these teachings each day (COs 3.1, 3.2, 6.1, 6.2). The Knowledge Keeper provided a model of how to do this before asking the children to demonstrate. The children were also taught about the steps to engage in problem solving when they experience difficult emotions (CO 6.1).

The fifth day focused on consolidating learning and individualizing the information taught (COs 4.1, 4.5, 4.6, 4.7, 8.1), as well as completing the qualitative interviews. The cultural Knowledge Keeper discussed the Medicine Wheel and how life stages are conceptualized, as well as how balance between mental, physical, spiritual, and emotional health influence wellbeing (COs 3.1, 3.2, 8.1). The children identified and provided examples of different behaviours and practices that fit into each domain (CO 8.1). The children were taught about distinguishing helpful and unhelpful emotions and when to use problem solving or opposite action (COs 5.2, 5.6). At the end of the day, the children completed questionnaires and qualitative interviews before finishing with a final gratitude circle (COs 3.1, 3.2).

Throughout the treatment camp, activities such as boardgames, soccer, colouring, and painting were used to provide the children with physical exercise and develop greater cohesion (COs 7.1, 11.3, 11.4). Cultural knowledge keepers and clinical facilitators participated in mealtimes as well as cohesion activities (CO 11.3).

Study 3 Analysis

Descriptive analyses were completed for the mental health symptoms scores on the Acute CANS, BASC-PRS, and BASC-SRP. Reliable change indices (RCI) were calculated between the pre-treatment and post-treatment scores for the BASC-3 PRS and SRP using the Jacobson and Truax method outlined by Maassen (2004) and the test-retest reliability measures available within Reynolds and Kamphaus (2015).

Qualitative analysis. Theoretical thematic analysis, as described by Braun and Clarke (2006), based within a phenomenological philosophy was used to analyse the semi-structured interviews. Theoretical thematic analysis is driven by the researcher's analytical interest in identifying how informant's experiences compare to existing theories or evidence (Braun & Clarke, 2006). Phenomenological philosophy aims to develop an understanding of the meaning derived from lived experiences from several individuals (Creswell, 2007). Transcripts of the interviews were transcribed verbatim using an online artificial intelligence-based transcription service. KK reviewed all transcripts for accuracy. An initial coding framework was developed based on the intent of the interview questions. Categories included *positive aspects*, *negative aspects*, *cultural interventions*, *outcome of group*, and *emotions*. KK read through each transcript to develop a fulsome understanding of participant's responses. After the initial reading of all transcripts, each transcript was further analyzed by reading line by line and identifying and coding themes among individuals. Analysis was completed using a digital matrix with a left-hand column listing the predefined category, a column for informant number, and a column for direct quotes from informants. Within the right-most column direct quotes were copy and pasted from informant's transcripts. After this initial coding for all transcripts, themes within categories were identified by reading through the right-most column within each category. Commonalities

were noted and labeled with a descriptor of the common theme between them. For chunks of information that did not fit into the predefined categories, new categories were developed and titled with informant's wording to stay close to the informant's intent. For quotes that did not demonstrate commonality with other quotes, an "other" category was developed for each content area. These quotes retained their original wording.

Reflexivity. Throughout the interview process, several steps were taken to decrease potential biases. These measures included reassurance to informants that their choice to participate in the research would not influence the services they received. Attempts to bracket KK's desires, expectations, and biases were embedded into the development of the semi-structured interview guide (Tufford & Newman 2012). During the development of the questions KK reflected on a desire for the treatment to significantly reduce mental health symptoms for the children, provide a greater sense of connection to Anishinabek culture, as well as create a safe and warm space for the children to engage in self-reflection and growth. The semi-structured interview questions were worded in an open-ended, neutral way, and age-appropriate way to encourage informants to provide information unbiased by researcher expectations. Nevertheless, some informants may have presented their experiences of receiving the treatment as more positive than they genuinely experienced due to the knowledge that the interviewer developed the treatment. During interviews, KK took notes on the content of each interview, supplemented by observations of body language. This provided an opportunity for KK to reflect on any perceived barriers associated with power differentials or biases within the interviews and address them. To bracket KK's biases and expectations about the results, KK developed memos during coding, as well as stepping away from coding for multiple days and reflected on her own hopes

and desires for the project before re-reading the themes and categories. This self-awareness helped to ensure the results were embedded within the informant's words and experiences.

The analysis for this project is influenced by KK's position as the leading researcher on this project, while also being the clinical co-supervisor for the group facilitators. KK is a female, non-Indigenous PhD student in clinical psychology. KK conducted intake interviews for the children and attended the week-long camp, providing many opportunities to observe and experience the child's personality as well as development over the week.

Trustworthiness. Trustworthiness in the data collection was enhanced through development of the semi-structured interview questions. The questions were worded to maximize neutrality and decrease the chances of researcher perspectives biasing the informant responses. These questions were reviewed by CM to assess the developmental appropriateness and neutrality of the wording. Trustworthiness was further enhanced by KK being fully immersed in the research by attending all the treatment session, conducting all interviews with the children, reviewing the transcripts for accuracy, and conducting the analysis. During the interviews trustworthiness was enhanced with member checking that consisted of summarizing and restating the informant's responses during the interviews, as well as clarifying questions as needed. Triangulation with quantitative measures from the children and their caregivers further enhances the trustworthiness of these results.

Chapter 11: Study 3 Results

Summaries of pre-intervention and post-intervention scores are provided below. One child's assessments were removed from the results due to a lack of attendance, incomplete data, and a long delay in completing the post-intervention assessments (i.e., greater than three weeks

after the treatment ended). This child's initial BASC scores were not completed which prevents a comparison of presenting characteristics for comparison.

Pre-intervention Scores

Acute CANS

The Acute CANS was completed by a clinician following the intake interview. Means and standard deviations for the mental health items and composite scores are presented in Table 10. For each mental health item, no child scored greater than a 2 (indicating a moderate need). The greatest needs were demonstrated for anxiety (3/4 children scoring 2; 1 scoring 1), emotional control (2 children scoring 2; 1 scoring 1), attention deficit and impulse control (2 scoring 2); all other scores had a mean score of less than 1. For mood related symptoms, one child had a score of 2, and one had a score of 1. The range of children's scores for each section total are included in Table 10.

BASC-PRS

The BASC-PRS was completed for four out of five children who attended the treatment camp. Figure 5 demonstrates that the areas of greatest symptom severity occurred with externalizing problems, the behavioral symptoms index, and adaptive skills. Standardized scores for each child are available in Figure 8, Figure 9, Figure 10, and Figure 11.

BASC-SRP

The raw scores from the pre-treatment and post-treatment BASC-SRP are available in Table 11. Raw scores are provided as one child was 6-months younger than the age-referenced norms used to develop the standardized *T* scores. Visual inspection of these data suggests that the 7.5-year-old had similar scores to the other children assessed. Thus, categorical ratings of

symptom severity are presented in Figure 6, as well as standardized scores for each child in Figure 12, Figure 13, Figure 14, and Figure 15.

FNCWM

Parent ratings of children's wellbeing on the FNCWM are shown in Table 13. The mean total score of all children in the group was relatively high (122 out of 140 possible). However, there was high level of variability in individual child scores (i.e., 79, 97, 98, 122, 124). Scores on the general wellbeing subscale demonstrate children scored in the top quartile of functioning. With the traditional activities' subscale, children were in middle quartile, and for social engagement mean scores were in the top quartile again.

Post-intervention Scores

Engagement

The case notes and engagement forms were completed for each child at the end of each day of the summer camp (see Figure 7). Each child's engagement ratings increased subsequently each day from the beginning until the end of the treatment week, with exception of Child 77, who left the treatment early due to illness. The case notes on the first day noted four children choosing not to participate in activities, being quiet, and/or not engaging with peers. On the second day, two children experienced difficulties engaging in tasks, however, two other children made notable connections with either cultural Knowledge Keepers, other children, or group facilitators. On the third day, no children refused to engage in activities, three children provided intimate examples of vulnerable emotions (e.g., sadness) or demonstrated a connection to a cultural teaching (e.g., the grandfather drum), and all children became more talkative. On the fourth day, Child 48 left early due to illness, however the other children were similarly engaged with other children, Knowledge Keepers, and the group facilitators. On the fifth day, Child 48

did not attend due to continued illness. The other four children demonstrated high levels of engagement with one another. For example, one child brought mementos to share with the other children in the group, two children impulsively collaborated using problem solving skills to find a solution, children were more responsive to questions posed by the facilitators, provided personally relevant examples, and demonstrated enjoyment through facial expressions.

BASC-PRS

The parent rated scores on the BASC-PRS remained relatively stable for three out of the four children; see Figure 8, Figure 9, Figure 10, and Figure 11. Some of the children's scores shifted from one severity range to another across the assessment times. Child 77 (Figure 11) had improvements in externalizing (T pre-treatment = 64; T post-treatment = 54), internalizing (T pre-treatment = 68; T post-treatment = 53), and behavioural symptoms index (T pre-treatment = 71; T post-treatment = 61). The first two of the previously mentioned symptom changes represent a shift from the at-risk range to non-problematic, and the third symptom change is a decrease from the clinically significant range to the at-risk range. Child 31 (Figure 9) experienced improvements in adaptive skills (T pre-treatment = 38; T post-treatment = 42) moving from the at-risk range to the non-problematic range. For the remaining two children, their composite scores remained within the same severity rating range. Although Child 31's externalizing and internalizing scores increased from pre- to post-treatment, this change was not a shift in the severity range (i.e., it remained in the non-problematic range).

BASC-SRP

Child rated scores on the BASC-SRP remained similar from pre-intervention to post-intervention; see Figure 12, Figure 13, Figure 14, and Figure 15. Shifts between risk-categories for index scores included Child 12 (Figure 12) shifting from at-risk for inattention/hyperactivity

scores ($T = 61$) to the clinically significant range ($T = 74$), and Child 43 (Figure 14) increasing in school problems from non-problematic ($T = 48$) to at-risk ($T = 60$). However, in terms of improvements on index scores, Child 31 (Figure 13) had higher personal adjustment scores from the at-risk range pre-assessment ($T = 38$) to non-problematic ($T = 44$) post-intervention, and Child 43 (Figure 14) had a slight decrease in the emotional symptoms index from the at-risk range ($T = 60$) to the non-problematic range ($T = 58$). The remaining composite scores for the children remained within the same risk categories, although there were changes for each child

Reliable Change Indices

To determine if BASC-3 scores differed significantly from pre- to post-treatment for both the PRS and SRP, reliable change indices were generated (see Table 12). Across the PRS and SRP, no significant improvements or declines were observed; all the RCIs demonstrated stability from the pre-to post-treatment period in their BASC scores.

FNCWM

Post-treatment assessments with the FNCWM were only available for one child, thus the results are not reported.

Qualitative Results

All five children completed interviews to describe their experiences. The results from these interviews are presented below as well as field notes as relevant to the themes identified.

Negative Aspects. The children were asked about what they did not like within the treatment camp. Responses included being bored or not enjoying having to wait in the lobby before the day started. For example, Child 43 stated “*The thing that I didn't like was sitting down in the lobby*”. Another child indicated that they did not like having restrictions on using phones:

“No phones... ’Cause then I had to wait till lunch to show him the pitch, show [the facilitator] the pictures of my dog. I didn’t want to wait”.

Cultural Interventions. The children predominantly reported enjoying the cultural interventions that were taught. The interviewer specifically asked if the children had learned something new about culture and most stated that they did. Examples include Child 77 stating *“I didn’t know that the like the circle... What is it called again?”* (referring to the Medicine Wheel), Child 12 stated they learned *“That the Buffalo is the respect”*, Child 31 stated *“Yeah... the flute”*. Child 48 indicated that learning cultural interventions was *“Really cool”* and it was enjoyable *“That I thought of doing new things”*.

For three children, engaging in cultural skills was tied to positive emotional experiences. The following exchange demonstrates these positive emotional experiences for Child 31:

Interviewer: OK, What did you like about the flute?

Child 31: The sounds of the flute

Interviewer: OK, did that make you feel anything inside? Did you feel any emotions?

Child 31: I felt like lifted or something and like the bad stuff kinda was [motions hands up to air]

Interviewer: lifted off of your chest?

Child 31: yes!

Another example comes from Child 77 stating *“It helps me learn the cultural thingy and it it makes me happy to hear it. And like. Because like, uh, I just like the music and like the voices and I like the Jingle dresses because they’re they sound nice and then like they calm me”*. For Child 43, one of the teachings reminded them of how to foster positive emotions: *“Because when you when you start something and when and when you finish, like all it, you get to see it and it*

and it makes you happy”. When describing why they enjoyed the daily sharing circle, Child 43 stated *“Because it was like, I was excited to do it, but now it's fun to do it”*.

Additional themes that emerged from questions about cultural interventions related to cultural teachings fostering a sense of connection to community. One example comes from a conversation with Child 12 stating that they enjoyed the Grandfather drum:

Interviewer: ...Why do you like it in general?

Child 12: 'Cause it was something we did in [small town].

Interviewer: Reminds you of where you used to live.

Child 12: Yeah

This sense of connection to community was also expressed by Child 77 when describing why they enjoyed the drumming and dancing demonstration:

Child 77: Um, how it sounded like because I usually get to hear them. Um, a little while later.

Interviewer: Tell me a bit more. I don't. I don't know that I understand what you're saying.

Child 77: They usually start in the summer and sometimes they go find somewhere to like dance and I then I sometimes miss them and like, I can't like hear. I mean,

Interviewer: you don't get to go to the pow wows to hear the drums playing.

Child 77: Yeah, sometimes

Outcomes of the Group. The children endorsed a number of outcomes from engaging in the group including developing greater emotional awareness, awareness of emotion regulation strategies, as well as a greater sense of comfort in group interventions.

Awareness of emotions. Some of the children talked about having increased knowledge about their emotional experiences. For example, Child 48 stated that they learned *“That you could have mood swings really often, sometimes”*. Greater emotional awareness was also observed by the researcher throughout the treatment camp. During a free-play exercise, greater awareness of emotions was observed with Child 31, as they engaged in sidewalk drawing of facial expressions associated with different emotions in collaboration with a facilitator. Another example of this heightened awareness was demonstrated by the children being able increasingly engage in the accurate opposite action for an emotion when playing “opposite action Simon Says” (e.g., Simon says “I’m scared of you”, with children responding with approach behaviours like walking closer).

Awareness of emotional regulation strategies. A couple of the children identified that they learned new strategies for influencing the types of emotions they experience or the intensity that they feel them with. An example of this comes from an interchange with the interviewer and Child 31:

Interviewer: mindfulness? Yeah. What did you like about mindfulness?

Child 31: Taught me about it, like how to use my senses.

Interviewer: OK, what do you use your senses for?

Child 31: Not get mad and. I think that's all. Just not get mad and other stuff

Another example of an emotion regulation strategy was described by Child 43 stating *“You can, when you when you feel mad, you can take a breather and, and, sit and talk to somebody that you want to talk to”*.

Greater comfort with meeting new people. The majority of children indicated that they were nervous or uncomfortable with the idea of meeting new people before the camp but became

more comfortable over time. Examples of this theme includes Child 12 stating “*I’m more comfortable with meeting new people*”, Child 43 stating “*I’m not shy anymore*”, the interaction between the interviewer and Child 48 stating “*Interviewer: What made it exciting for you? Child 48: That I would meet new people*”. Child 12 demonstrated a deeper sense of connection to the group that challenged previous experiences. This was evidenced in the following exchange:

Interviewer: OK, so you liked playing it all together?

Child 12: yes

Interviewer: Is that something that was important to you,

Child 12: yeah

Interviewer: playing altogether?

Child 12: yeah

Interviewer: Did you feel like you were a part of a group?

Child 12: yeah (softening in voice)

Interviewer: Do you usually feel like that?

Child 12: No.

Interviewer: no. Usually you have a hard time feeling like you belong.

Child 12: [whispers] yeah

Interviewer: Did I get that right?

Child 12: Yeah

Child 12’s greater sense of connection to the group was also observed by the group facilitators and researcher. In the beginning of the treatment camp, this child primarily conversed with the facilitators and was persistent about deciding which activities to engage in. Over the week, this

child demonstrated cooperation with multiple other children in group activities and brought mementos on the last day for each child.

Critical Incidence Questionnaire and Helpful Group Impacts Scale

All children were asked the Critical Incidence Questionnaire; however, the richness of the children's answers was not sufficient to complete the GCHIS. For example, in response to the Critical Incidence Questionnaire, Child 12 stated "*No school*", Child 31 stated "*The teachings*", and Child 77 stated "*The water guns was really fun and this day was really fun and all the other days, so all of them were really important*". Thus, the GCHIS was not completed.

Field Notes About Delivery and Adherence

Delivery of the intervention. On the first day of the treatment camp the planned cultural Knowledge Keeper was unable to attend. Another Knowledge Keeper was able to provide an impromptu teaching about smudging and the sacred medicines. There was also difficulty with finding a suitable meeting space which resulted in delivering some of the skills in the lobby of the treatment centre. The treatment protocol called for an identification of individualized goals on the first day. However, this was moved to the second day.

The emotional awareness activities (i.e., feelings charades and somatic symptoms scavenger hunt) presented information about emotions in general but did not identify emotional experiences for each individual child. In general, providing a greater rationale (e.g., personalized goals) and description of when the specific skills (e.g., problem solving, mindfulness) can be used would help to refine the children's capacity to use the skills.

Throughout the camp, the skills were embedded into play activities. This may have allowed for greater generalization and application of some of the skills. For example, on the day of the mindfulness session, the facilitator connected mindfulness in the form of intentional,

nonjudgemental, awareness with a putting activity (i.e., golf) that two of the children were engaged in.

Throughout the treatment KK provided the clinicians with some direction about how to engage the children and/or deliver the skills. For example, during the opposite action “Simon Says” KK provided the clinician with multiple specific prompts to deepen the children’s understanding of what actions would be the opposite for specific emotions. During the mindfulness walk, KK prompted the clinicians to engage all 5 senses as opposed to focusing on sight and hearing. During the debriefing sessions, KK provided feedback about which daily objectives were achieved and which ones were not, while problem solving how to integrate the information the following day, if it was deemed appropriate. Thus clinician adherence to the treatment protocol was likely enhanced by KK being present, prompting, and providing feedback about the delivery of the skills.

Engagement. There were numerous times when a child did not want to participate in the planned activities. For example, on the first day of the treatment camp, one child refused to engage in cultural activities. This child was encouraged to help the facilitators in arranging the next activity. The following day, another child refused to engage in the game of feelings charades. On the third day, the facilitators engaged in a skills review. The children were hesitant (i.e., not providing responses) until they were offered stickers for participation, after which they began readily providing responses. One child became ill during the third day of the treatment camp and did not return.

In reflection on relationships that were demonstrated within the treatment group observations were made about how the children interacted with one another as well as the facilitators and/or cultural knowledge keepers. Two of the children had a pre-existing

relationship, which was related to arguing about playing with fidget toys early in the treatment camp. However, having a variety of facilitators in the group seemed to improve engagement. Among all of the children in the group it was observed that connections were developed to one of the facilitators, although each child demonstrated a connection with a different one. Notably, having cultural Knowledge Keepers engaging in all of the activities during the day seemed to improve the children's connection as it allowed them to engage in informal conversation, and some children developed a closer connection with cultural Knowledge Keepers in comparison to the clinical facilitators. These conversations increased in intimacy over the course of the week.

Chapter 12: Study 3 Discussion and Conclusions

The intent of this pilot treatment was to assess how acceptable and effective a culturally woven transdiagnostic group-based treatment was for First Nation children in Northwestern Ontario. The three guiding research questions were: 1) Does the treatment demonstrate reductions in mental health symptoms? 2) Does the treatment improve wellbeing for the children? 3) Was the treatment acceptable to the children who received it? Ratings on the Acute CANS demonstrated some expected findings. Most children were rated as experiencing anxiety and emotional control in need of intervention (i.e., ≥ 2). However, in comparison to previous assessments (Kowatch, 2017) there was a lower level of need for intervention for adjustment to trauma difficulties (one child indicated) and mood symptoms (one child indicated) than was expected. Half of the children attending this treatment also experienced attention and hyperactivity symptoms requiring intervention.

In pursuit of research question number one, pre-to-post assessments of mental health symptoms on the BASC-SRP and -PRS were completed. To establish indicators of consistency in symptom reporting, comparisons of the BASC-SRP and PRS were made. The child and parent

rated symptoms on the initial BASC identified similarities in the types of symptoms experienced by the children. Notably, on the PRS the greatest symptoms of concern related to externalizing, behavioural, and/or inattention/hyperactivity for most children. The behavioural symptoms index was elevated for three out of four of the children. This index includes items related to hyperactivity, aggression, depression, attention problems, atypicality, and withdrawal. Of these subscales, hyperactivity, aggression, and attention problems were elevated (i.e., at-risk or higher) for three of four children, whereas withdrawal was elevated for half of the children. Only one child had elevated scores on depression or atypicality. The symptoms that children experienced within this study differ from the majority of previous studies of transdiagnostic treatments (see Table 6) by having a lower endorsement of depressive symptoms. However, similarity with children from past treatment studies is observed in regular endorsement of anxiety symptoms and attention deficit/impulse control symptoms (see Table 6 for comparison).

In comparison from pre-to-post treatment, the PRS scores demonstrated very small changes toward a reduction of symptoms. The magnitude of these changes ranged from a difference of 3.25 points (or 4.98%) to 0.75 (or 2.07%) change toward symptom improvement. However, the RCI analyses showed stability in scores on the PRS from the pre-treatment to post-treatment time period. While this could demonstrate that the treatment did not have the intended effect of significantly reducing mental health symptoms, methodological limitations could account for the small magnitude of change observed. Reliability for pre-test post-test reliability for the BASC-3 has been established for a period of 22 days on average (ranging from 7 to 68 days). However, in this study, the interval between the pre- to post-treatment assessments was 13.5 days for the PRS (range = 8 to 29 days) and 4 days for the SRP, which therefore limits the results from this study due to a lack of confidence in the ability of these assessments to detect a

reliable change. The procedure for the pre-to-post treatment evaluation was intended to prioritize retaining respondents. Future evaluations could include an immediate post-treatment evaluation as well as a longer-term follow-up assessment (e.g., one- or two-months post-treatment) to capture potential treatment effects. Nevertheless, any symptom reductions observed within this study were inconsistent and of small magnitude.

The BASC-3 SRP results demonstrated more variability in child responses to treatment. Visual inspection of each child's symptom profiles from pre-to post-treatment demonstrate that two children (Child 31 & 77) had numerous, although small, reductions, one child had increases on most scores and a noticeable increase on Inattention/Hyperactivity (Child 12), and another child (Child 43) had increases in school problem scores. Despite these variabilities in scores, the RCIs for the SRP did not find any significant changes on the SRP. When examining previous research, differences between child and parent rated score reductions are common (see Table 6 for a review). The results from the current study demonstrated a pattern of greater endorsement of symptom reduction from parent reports, in comparison to child self-reports, than past research. In previous studies (e.g., Chorpita et al., 2017; Queen et al., 2014; Yeo et al., 2005) child self-reported symptoms demonstrated significant reductions when parent reported changes were not significant. However, within the current research, some increases in symptoms (i.e., SRP rated Inattention/Hyperactivity for Child 12 & increased internalizing scores on the PRS for Child 31) likely demonstrate greater consistency and awareness of emotional experiences between raters. Previous research has shown that across parent-child dyads, First Nation parents demonstrate greater consistency in rating mental health symptoms with their children when compared to non-Indigenous dyads (Sinclair et al., 2019).

The timing of the treatment likely influenced ratings on the school problems scale, as it was delivered the week before school, and many children were observed to be discussing their back-to-school plans. The results are also influenced by the interval between the pre- and post-treatment assessments, which was four-days for all the children. Similar to the parent reports, this short time frame precludes confidence in ability of the SRP to demonstrate reliable change. Furthermore, some of these increases in ratings of emotional symptoms may indicate greater emotional awareness, which was an intended outcome from the treatment. Indeed, during the qualitative interviews, most of the children endorsed having a greater awareness of their emotional experiences after the treatment.

The treatment delivery method of the current treatment differed from many of the existing transdiagnostic delivery models. With the exception of three studies (i.e., Schneider et al., 2018; Robinson & Rapport, 2002; Wells & Faragher, 1993) from the review in study 2, the remaining 91.67% of treatments were delivered as weekly 60- to 90-minute sessions. Within the three studies that had more frequent and/or longer treatment sessions, two studies (Schneider et al., 2018; Wells & Faragher, 1993) were conducted among inpatient samples, and one was a day-treatment school-based intervention (Robinson & Rapport, 2002). Thus, the delivery of this treatment differed from previous transdiagnostic interventions and the implications for how this delivery affected symptom reduction or treatment engagement is unclear.

The initial assessment scores on general wellbeing with the FNCWM indicate that the children had daily functioning that was relatively high. Given the nature of the children being referred for mental health services, this was unexpected. The FNCWM may assess aspects of wellbeing, such as relationships and connections with others, that are not assessed with non-culturally informed assessments (such as the BASC; Drawson, 2018). Many of the items on the

general wellbeing subscale ask about interpersonal functioning and the scores on social engagement demonstrate that the children did have relatively high social functioning from a cultural standpoint. The mean scores on the traditional activities' subscale did demonstrate that this was an area of lower wellbeing in comparison to the other aspects of wellbeing assessed. Although follow-up with this assessment was not possible, the results from the qualitative interviews suggest that the children had a greater awareness of traditional activities that they could engage in.

In addressing if the treatment improved the children's wellbeing, and if it was acceptable to them, qualitative interviews demonstrated preliminary support. The children indicated in the qualitative interviews that they enjoyed the treatment, had fun getting to know other kids, learned more about their emotions and strategies to cope with them, while also learning more about cultural teachings and practices. These descriptions indicate that there was meaningful learning gained from this treatment camp.

Limitations

Within this treatment camp the clinicians were PhD clinical psychology students who were supervised by Kristy Kowatch. The type of training among the clinicians may limit the generalizability of the effectiveness of this treatment based on the type of mental health service providers working within the community organization and rural locations. Many of the mental health service providers within the community organization have a master's degree in either social work or counselling psychology, as opposed to clinical psychology, which may influence how the treatment is delivered. These community clinicians could also have professional and/or lived experiences that would provide them with greater insight into how to deliver this treatment more effectively for children within their region. Furthermore, having KK as the clinical co-

supervisor for the clinicians, and present throughout the treatment, may have influenced how the treatment was delivered and/or the reported outcomes. The clinicians may have had greater impression management and adherence to the treatment method, or they may have relied on her to provide guidance if they were unsure. Future research can seek to clarify how this treatment is delivered by autonomous clinicians. Furthermore, the children attending the group were aware that KK was evaluating the camp to examine “how much it helps and how it can be made better”. Thus, during the qualitative evaluation, the children may have experienced a desire to fulfill researcher expectations. Attempts to overcome this were made by prompting for constructive feedback and negative opinions.

Interpreting the symptom changes for children attending the camp is limited by a lack of comparison group. Although this study focused on assessing feasibility of the treatment, having a waitlist control group could provide greater insight into any changes that are observed among the children’s mental health symptoms. Furthermore, the size of the treatment group (i.e., 5 children) could also influence treatment engagement and associated outcomes. Most treatment groups aim to have 8 to 10 children attending. The application of this treatment could therefore be further refined by increasing the group size and administering the group to multiple cohorts over time.

The treatment presented here did not include any parental involvement other than the initial intake interviews and post-treatment questionnaire completion. This is a deviation from previously reported summer-camp based treatments (e.g., Santucci & Ehrenreich-May, 2013; McCarty et al., 2024). During the needs assessment in study 1, and in consultation with the clinical manager and research advisory board, it was agreed that parental involvement would pose a barrier to child participation in the treatment. Parental training that includes psychoeducation and behavioural interventions often contributes to greater treatment gains for

children. The magnitude of symptom change related to the current treatment may be enhanced by some degree of parental involvement.

The children's responses within the post-treatment qualitative assessment demonstrated an appreciation of interpersonal components from the group treatment. However, researchers can identify ways to systematically assess group factors among children, as the intended use of the GCHIS was not informative for this treatment. In middle childhood, it is hypothesized that peer attitudes and opinions start to develop greater influence over children's behaviour in comparison to parental attitudes (Do & Telzer, 2024). Indeed, peer relational stress is associated with increasingly negative self-views among preadolescent children (Caldwell et al., 2004). Thus, it is expected that group treatments could provide an opportunity for the experience of universalism of intense emotional experiences and decreasing subjective experiences of peer stress.

Methodological changes could be used to strengthen the findings from this program of study. The short interval between the pre- and post-treatment evaluation time periods interferes with the ability to interpret quantitative findings from the pilot study. The minimal change observed on the BASC-3 within the pilot assessment may reflect a lack of skill acquisition for the children, it may also indicate a lack of opportunity to integrate newly learned skills, or it may indicate a lack of appropriate opportunity to reflect on and practice newly acquired skills. Future research can address this by having a longer follow-up period to assess for symptom change. Furthermore, having additional researchers engage in the qualitative assessment, and systematic documentation of observations of the children's behaviour during the treatment, would enhance trustworthiness of the results. Throughout all aspects of the evaluation of this group an emphasis was placed on minimizing participant burden. Member checking within the qualitative analysis following coding was not completed to reduce the burden on participants. The analysis was also

completed by KK alone as it drew upon observational data from her presence within the group over the week, providing greater contextual cues and insights into the children's experiences. An additional coder would not have these contextual cues and explaining them may interfere with clinical confidentiality. Thus, a deeper description of the children's lived experiences was intended to be captured by this limitation on the number of coders.

Areas for Further Investigation

Although the summer-camp style of this treatment likely contributed to greater group cohesion, it may have limited the ability for the children to implement and reflect on skill use in their daily lives. Engaging in home practice has been shown to improve outcomes for cognitive behavioural treatments (Kazantzis et al., 2000). It can be argued that the learning from psychotherapy often comes from applying skills learned and problem-solving difficulties in real-life settings (Cummings et al., 2014; Hudson & Kendall, 2002; Kazantzis et al., 2016). However, for children experiencing anxiety, the influence of the therapeutic relationship may be more influential over treatment outcomes than homework activities (Hughes & Kendall, 2007). Future research can work to identify the nuances of how application of skills, the therapeutic relations, and treatment engagement influence mental health outcomes for children receiving similar treatments. Another way to assist the children in consolidating the information presented would be through the use of summarizing handouts. Future implementations of this treatment can provide a developmentally appropriate summary of the rationale and steps for using each of the psychological skills taught. Furthermore, the importance of conveying the rationale for specific skills to the children can be emphasized more to ensure that group attendees are aware of why and how to use specific skills.

Conclusion

This project describes how transdiagnostic psychological strategies were brought together with Anishinabek cultural interventions to reduce mental health needs for a small group of children. Although the BASC-3 PRS and SRP comparisons of pre- to post-treatment demonstrated inconsistent and small changes, the qualitative results suggested greater emotional awareness, cultural knowledge, and comfort within a group setting. This treatment can be further refined to improve the ability to address mental health needs for First Nation children in the future. Nevertheless, this project provides an example of how to implement Two-Eyed Seeing into the development of a transdiagnostic mental health treatment for First Nation children.

Chapter 13: General Discussion

This program of research describes the process of following a Two-Eyed Seeing model by utilizing IM to develop a culturally woven transdiagnostic group treatment for First Nation children. The project was driven by community-based practices such as being based on a need identified within the organization, the RAC overseeing all aspects of the treatment development, and caregivers being engaged in multiple ways during development. The goals of this research program were two-fold: 1) Establish the community identified needs regarding mental health services for First Nation children; 2) Determine how mental health services could be developed to create a culturally relevant and effective treatment for First Nation children.

The first step was completing a needs assessment, which triangulated lived experiences through qualitative interviews with youth who had received treatment for mental health difficulties, caregivers who expressed an interest in the wellbeing of children, as well as cultural and community workers from the collaborating community organization (i.e., therapists, managers, cultural Knowledge Keepers, Elders, etc.). The findings from these interviews identified that many children experience symptom patterns that overlap with transdiagnostic presentations of mental health difficulties. Interviewees identified that cognitive and behavioural intervention techniques were the most helpful treatments that children had received. Interviewees also described cultural interventions that helped to develop greater wellness among children, families, and communities. The findings demonstrate the need to incorporate community specific needs and experiences into treatment developments (Assembly of First Nations & Health Canada, 2015).

The second step of the treatment development plan was integrating existing research through a systematic review of transdiagnostic treatments for children and youth. This review

identified common treatment strategies that demonstrated reductions in anxiety, mood, and emotion regulation symptoms to be integrated into the treatment being developed. These treatment components consisted of psychoeducation about emotions, increasing emotional awareness, problem solving skills, and acting the opposite (i.e., behavioural activation, exposure, and emotional regulations skills).

Results from the systematic review were integrated into performance and change objectives that could direct the development of the treatment. Detailed objectives were streamlined into a logic model at the RAC's request. The shift from focusing primarily on change and performance goals to reliance on a logic model reflects the required responsiveness of researchers engaging in community-based work (Assembly of First Nations & Health Canada, 2015; Racine et al., 2022). Following the community organization's lead in developing research and treatment priorities contributes to a relational process that provides a foundation for successful community-based research (Racine et al., 2022).

The three primary goals of the treatment were to help the children develop greater skills in coping with mental health difficulties, increase their levels of cultural connectedness, and to ensure that the treatment was engaging. These goals would be achieved through cognitive behavioural techniques including psychoeducation about emotions, increasing emotional awareness, problem solving skills, and acting the opposite (i.e., behavioural activation, exposure, and emotional regulations skills). Furthermore, cultural connectedness would be fostered through the inclusion of cultural teachings and practices. It was expected that the treatment would result in reductions in BASC-3 internalizing and externalizing domains, increased ratings of wellbeing on the FNCWM, as well as high levels of engagement as indicated by treatment attendance and clinician observations of engagement. Including both the BASC-3 and FNCWM were intended

to demonstrate the strength of weaving of clinical strategies with Indigenous Knowledge to improve the children's wellbeing in alignment with Two-Eyed Seeing (Bartlett et al., 2012).

In developing a culturally relevant and effective treatment for First Nation children, the community identified objectives were integrated into a draft manual that was used to orient conversations with cultural Knowledge Keepers about the best way to embed culture along with the psychological interventions. Through a series of discussions and planning meetings, a treatment schedule and outline that emphasized the strengths and knowledge of four Knowledge Keepers was developed. The scheduled treatment was planned as a week-long summer camp style treatment.

The pilot treatment was delivered over the course of five days within the community organization. Two PhD level clinicians facilitated the group treatment in coordination with three knowledge keepers. The researcher attended the treatment to provide clinical supervision. The evaluation consisted of a pre-post-evaluation using the BASC-3 SRP and PRS as well as qualitative interviews with the children. Although the BASC-3 did not demonstrate large reductions in symptoms, the assessment interval was too short to have confidence in these findings. The children's qualitative responses indicated that children had greater awareness of their emotional experiences, knew more emotion regulation skills they could use, had increased knowledge of cultural teachings and practices, as well as enjoyed the treatment.

The treatment described herein differed notably from many of the treatments reviewed in chapter 6 and 7 by assessing externalizing and internalizing mental health symptoms among children. ADHD and other externalizing mental health difficulties were co-occurring mental health concerns in 66.67% of the studies reviewed, however, only five of these studies (20.83 %) provided measures of externalizing symptom changes. Notably, many of the interventions

focused primarily on symptoms of emotional disorders, such as anxiety and depression. Furthermore, the sample size between the treatment described here ($n = 4$) and most of those reviewed (see Table 6) differed, with the current treatment providing only a small sample. Some similarity was observed in pre-to-post treatment symptom changes when comparing treatments with similar sizes (i.e., Ehrenreich et al., 2009; Ehrenreich-May & Bilek, 2012). For example, within Ehrenreich et al., 2009, child and parent reports of anxiety symptoms remained stable from pre- to post-treatment, although these decreased from the post-treatment to follow-up time periods. The internalizing symptoms measured among children in the treatment developed demonstrated similar stability from pre- to post-treatment; however, a follow-up assessment was not conducted, precluding the ability to assess if there were longer term changes in these emotional experiences. Similar to Ehrenreich-May and Bilek (2012), child-reported assessments varied for pre-to-post symptom changes among children in the treatment, although three out of four children demonstrated decreases in internalizing, inattention/hyperactivity, and the emotional symptoms index of the BASC-SRP. These trends in symptom change suggest that skills in emotional regulation were enhanced for these children.

The treatment delivery also differed as the treatment delivered herein utilized a summer camp style of full-day engagement with psychologists and cultural Knowledge Keepers. This deviated from the typical once per week delivery observed in other studies. This intensive delivery style aligns with needs identified in Study 1, indicating that transportation and accessibility were concerns with youth mental health treatment. This delivery method allowed children to be transported from their home address to the treatment site, and also required few resources from caregivers, as food and supplies were provided. Future research could seek to

clarify if this intensive delivery method effects symptom reduction, child/family engagement, and attendance.

Based on the systematic review, this is the first attempt to use Two-Eyed Seeing to weave Anishinabek cultural interventions with clinical psychotherapeutic strategies. Documenting the process of how these two models of health and wellbeing can be brought together to work harmoniously provides direction for community organizations to develop their own treatments that are relevant for community needs. The children interviewed in this study demonstrated an appreciation for cultural teachings and practices being offered in conjunction with psychological skills, with some children demonstrating a preference for these skills. The coming together of these models of wellness, in a developmentally appropriate way, could potentially provide children with a model of how to utilize the strengths of each worldview when it makes the most sense for them. In study 1, cultural and community workers, caregivers, and youth stated that having a choice of using cultural interventions was recommended due to complex histories of assimilationist policies and practices within specific communities. Nevertheless, by emphasizing cultural interventions as healing practices, children are encouraged to critically evaluate assimilationist beliefs and practices that devalue Indigenous Ways of Knowing and hopefully contributes to a sense of positive identity and connection for the children.

The group intervention format that was used was received well by the children. Although many children reported that they were worried about being with a group over the week, most reported that the connection they experienced to group members was one of the largest improvements they experienced. This aligns with the research surrounding the therapeutic influence that group interactions can have in helping children to engage in treatment more (Shechtman & Leichtentritt, 2010). The critical incidence questionnaire and group counseling

helpful impacts scale (Kivlighan et al., 1996) did not provide additional information above the semi-structured interview questions. Assessing group cohesion, as well as Indigenous wellness indicators such as a sense of belonging, meaning, and purpose through group dynamics is an area that could be further refined. The ethnographic observations and qualitative feedback indicate that the children felt an increasing sense of connection and belonging to the group, and for children such as Child 12, this was an experience that was healing in itself. Future research can engage with the Indigenous Knowledge Keepers and clinicians in evaluation of the group and suggestions for improvements. Furthermore, having Indigenous Knowledge keepers provide guidance on how the evaluation could be conducted in a way that could capture key aspects of mental wellness would demonstrate a deeper alignment with the principles of Two-Eyed Seeing (Bartlett et al., 2012).

Limitations

At first glance, the service intensity level of having two clinical facilitators and three cultural knowledge keepers for five children may appear to be disproportionate and non-cost effective. However, when comparing the hours spent with each child, across all service providers (i.e., 25 hours over the week total), this works out to approximately 5 hours per child for the week. Within the systematic review, it was shown that most treatments spanned between 8 to 16 sessions that were each sixty- to ninety minutes-long. Thus, it is possible that the present treatment did not provide enough clinical time to have a meaningful influence on the mental health symptoms of the children, although a longer follow-up assessment period would be required for certainty. This type of a treatment could provide an opportunity for children to develop a greater familiarity of the psychotherapeutic treatment process, increase motivation, and/or improve their willingness to attend treatment in the future. Small improvements in mental

health and well-being can contribute to exponential improvements later in life. In a cost analysis of mental health difficulties in the USA, children and youth who experienced mental health concerns had medical costs of $\$5,254 \pm \$18,801$ to $\$6,258 \pm \$83,157$ (from 2012 to 2018) in comparison to medical costs for children and youth without mental health concerns $\$1,554 \pm \$8,912$ to $\$1,825 \pm \$15,881$ (from 2012 to 2018; Tkacz & Brady, 2021). Thus, a health economic assessment could provide information about potential financial benefits of offering transdiagnostic mental health treatments to First Nation children before mental health difficulties progress (Simoens, 2009) which contributes to more medical costs and years spent living with disability (Tkacz & Brady, 2021). This treatment group could potentially be offered to larger groups of children (e.g., 8 to 10) which could increase the number of children who receive treatment earlier on in their lives, decreasing long-term impairments.

While this research attempted to prioritize the lived experience of children and families who had previously accessed mental health services these individuals were primarily involved as consultants or advisors (Case et al., 2014). To decrease the power differential between caregivers and researchers, having these community groups participate actively in all aspects of the research (e.g., method planning, data collection, dissemination, etc.) could be enhanced (Case et al., 2014). For example, children could have been called upon to develop questions or suggested methods for conducting the qualitative needs assessments to ensure there is high engagement, as well as provide feedback about the program and change objectives, similar to the process used by Anselma et al. (2019). Having children help develop the needs assessment and organize the information collected by research may have provided richer detail due to decreased stigma or power differentials, although this is complicated by the confidential nature of seeking mental health services. The current project did engage the community organization in most aspects of

the treatment development (i.e., they participated in method development but did not collect research data) to enhance the acceptability of the treatment. These initial steps can be improved in the future by engaging children and caregivers throughout this process as well.

The qualitative research methods in Study 1 and Study 3 could also be further developed. Engaging in discussion with a qualitative expert about the collection, analysis, and interpretation of the areas of interest may have provided greater trustworthiness in the data.

Future Research

The delivery method of this treatment differed from most of the previous transdiagnostic treatments. Extending the post-treatment follow-up period could provide greater insight into how this treatment influences emotional experiences long-term. Future studies could also investigate the influence that this delivery method has on outcomes for children. For example, implementing the group treatment as a once or twice-weekly format to assess the influence of greater home practice on skill acquisition and possible symptom reduction may be beneficial. Additionally, inviting caregivers and treatment providers to reflect on the accessibility of the once weekly treatment could help to clarify if a weekly or week-long treatment would be most appropriate.

Multiple transdiagnostic treatments for children in the preadolescent period often integrate family or caregivers into the treatment (e.g., Allen et al., 2012; Bilek & Ehrenreich-May, 2012; Brunstein-Klomek et al., 2017; Chorpita et al., 2017; Dalle Grave et al., 2015; Ehrenreich-May & Bilek, 2012; Kennedy et al., 2018; Queen et al., 2014). While incorporating caregivers was considered for this treatment, multiple cultural and community workers indicated barriers in attempting to recruit children into groups with a parenting component within the community organization. Thus, finding accessible and flexible ways of integrating caregivers into their children's treatment plans may allow for greater effectiveness of the treatment.

Aligning with the IM method of service development, this treatment can be further refined to meet community needs while improving sustainability and considering organizational capacity. For example, offering this treatment as a one-day per week treatment on weekends, or an evening-based treatment after school, would provide more information about the practicalities of implementing the treatment. Through these various applications, the effectiveness of differing treatment styles could be assessed. Often, culturally based services are not compared to standardized treatments. Investigating when, and for who, culturally based treatments are best utilized for would also be useful information for community organizations in capacity planning.

In conclusion, this program of study depicts the process of developing a transdiagnostic culturally woven group intervention for First Nation children. This treatment was developed in collaboration with an Anishinaabe community health organization to meet the specific needs of the children they serve. A week-long summer camp style treatment, delivered by psychology trainees and Cultural Knowledge Keepers, demonstrated trends toward mental health symptom reductions. A qualitative assessment demonstrated high levels of engagement and appreciation of the cultural interventions used. Future research can seek to clarify how adjustments in the delivery and evaluation of this treatment influence findings. Nevertheless, this project provides an example of how a community organization can use Two-Eyed seeing practices to develop, implement, and evaluate culturally based mental health treatments.

References

- Achenbach, T. M. (1966). The classification of children's psychiatric symptoms: A factor-analytic study. *Psychological Monographs: General and Applied*, 80(7), 1–37. <https://doi.org/10.1037/h0093906>
- Achenbach, T. M., Ivanova, M. Y., Rescorla, L. A., Turner, L. V., & Althoff, R. R. (2016). Internalizing/externalizing problems: Review and recommendations for clinical and research applications. *Journal of the American Academy of Child & Adolescent Psychiatry*, 55(8), 647-656. <https://doi.org/10.1016/j.jaac.2016.05.012>
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30(2), 217-237. <https://doi.org/10.1016/j.cpr.2009.11.004>
- Allain, G. (2011). An art-based healing process: The Aurukun Creative Livelihoods project at the Wik and Kugu Arts and Craft Centre. *Australasian Psychiatry*, 19(Suppl 1), S42–S44. <https://doi.org/10.3109/10398562.2011.582772>
- Allen, L. B., Tsao, J. C. I., Seidman, L. C., Ehrenreich-May, J., & Zeltzer, L. K. (2012). A Unified, transdiagnostic treatment for adolescents with chronic pain and comorbid anxiety and depression. *Cognitive and Behavioral Practice*, 19(1), 56–67. <https://doi.org/10.1016/j.cbpra.2011.04.007>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>
- Anderson, R. L., Lyons, J. S., Giles, D. M., Price, J. A., & Estle, G. (2003). Reliability of the Child and Adolescent Needs and Strengths-Mental Health (CANS-MH) Scale. *Journal of Child & Family Studies*, 12(3), 279 - 289. <https://doi.org/10.1023/A:1023935726541>

Anselma, M., Altenburg, T. M., Emke, H., van Nassau, F., Jurg, M., Ruiter, R. A., ... &

Chinapaw, M. J. (2019). Co-designing obesity prevention interventions together with children: Intervention mapping meets youth-led participatory action research. *International Journal of Behavioral Nutrition and Physical Activity*, 16, 1-15.
<https://doi.org/10.1186/s12966-019-0891-5>

Assembly of First Nations & Health Canada. (2015). *First Nations Mental Wellness Continuum Framework*. http://health.afn.ca/uploads/files/24-14-1273-fn-mental-wellness-frameworken05_low.pdf

Ball, G.D., Mushquash, A.R., Keaschuk, R.A., Ambler, K.A., & Newton, A.S. (2017). Using Intervention Mapping to develop the Parents as Agents of Change (PAC©) intervention for managing pediatric obesity. *BMC Research Notes*, 10, Article 43.
<https://doi.org/10.1186/s13104-016-2361-3>

Barbour, R. S. (2001). Checklists for improving rigor in qualitative research: A case of the tail wagging the dog. *British Medical Journal*, 322, 1115-1117.
<https://doi.org/10.1136/bmj.322.7294.1115>

Barker, B., Sedgemore, K., Tourangeau, M., Lagimodiere, L., Milloy, J., Dong, H., Hayashi, K., Shoeller, J., Kerr, T. & DeBeck, K. (2019). Intergenerational trauma: The relationship between residential schools and the child welfare system among young people who use drugs in Vancouver, Canada. *Journal of Adolescent Health*, 65(2), 248-254.
<https://doi.org/10.1016/j.jadohealth.2019.01.022>

Barlow, D. H. (2004). *Anxiety and its disorders: The nature and treatment of anxiety and panic*. Guilford press.

- Barlow, D. H., & Kennedy, K. A. (2016). New approaches to diagnosis and treatment in anxiety and related emotional disorders: A focus on temperament. *Canadian Psychology / Psychologie Canadienne*, 57(1), 8–20. <https://doi.org/10.1037/cap0000039>
- Bartlett, C., Marshall, M., & Marshall, A. (2012). Two-eyed seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental Studies and Sciences*, 2(4), 331-340. <https://doi.org/10.1007/s13412-012-0086-8>
- Becker-Haimes, E. M., Jensen-Doss, A., Birmaher, B., Kendall, P. C., & Ginsburg, G. S. (2018). Parent–youth informant disagreement: Implications for youth anxiety treatment. *Clinical Child Psychology and Psychiatry*, 23(1), 42-56. <https://doi.org/10.1177/1359104516689586>
- Beckstead, D. J., Lambert, M. J., DuBose, A. P., & Linehan, M. (2015). Dialectical behavior therapy with American Indian/Alaska Native adolescents diagnosed with substance use disorders: Combining an evidence-based treatment with cultural, traditional, and spiritual beliefs. *Addictive Behaviors*, 51, 84–87. <https://doi.org/10.1016/j.addbeh.2015.07.018>
- Beesdo, K., Bittner, A., Pine, D.S., Stein, M.B., Höfler, M., Lieb, R., & Wittchen, H.U. (2007). Incidence of social anxiety disorder and the consistent risk for secondary depression in the first three decades of life. *Archives of General Psychiatry*, 64, 903–912. <https://doi.org/10.1001/archpsyc.64.8.903>
- Behenck, A., Wesner, A. C., Finkler, D., & Heldt, E. (2017). Contribution of group therapeutic factors to the outcome of cognitive–behavioral therapy for patients with panic disorder. *Archives of Psychiatric Nursing*, 31(2), 142-146. <https://doi.org/10.1016/j.apnu.2016.09.001>.

- Bellemans, T., Didden, R., Visser, R., Schaafsma, D., Totsika, V., & van Busschbach, J. T. (2018). Psychomotor therapy for anger and aggression in mild intellectual disability or borderline intellectual functioning: An intervention mapping approach. *Body, Movement and Dance in Psychotherapy*, 13(4), 234–250.
<https://doi.org/10.1080/17432979.2018.1471006>
- Benjamin, C. L., Harrison, J. P., Settapani, C. A., Brodman, D. M., & Kendall, P. C. (2013). Anxiety and related outcomes in young adults 7 to 19 years after receiving treatment for child anxiety. *Journal of Consulting and Clinical Psychology*, 81, 865-876.
<https://doi.org/10.1037/a0033048>
- Bittner, A., Egger, H. L., Erkanli, A., Jane Costello, E., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology & Psychiatry*, 48(12), 1174–1183. <https://doi.org/10.1111/j.1469-7610.2007.01812.x>
- Bilek, E. L., & Ehrenreich-May, J. (2012). An open trial investigation of a transdiagnostic group treatment for children with anxiety and depressive symptoms. *Behavior Therapy*, 43(4), 887–897. <https://doi.org/10.1016/j.beth.2012.04.007>
- Birrell, J., Meares, K., Wilkinson, A., & Freeston, M. (2011). Toward a definition of intolerance of uncertainty: A review of factor analytical studies of the Intolerance of Uncertainty Scale. *Clinical psychology review*, 31(7), 1198-1208.
<https://doi.org/10.1016/j.cpr.2011.07.009>
- Bloch, S., Reibstein, J., Crouch, E., Holroyd, P., & Thermen, J. (1979). A method for the study of therapeutic factors in group psychotherapy. *The British Journal of Psychiatry*, 134(3), 257-263. <https://doi.org/10.1192/bjp.134.3.257>

- Borkovec, T. D., Robinson, E., Pruzinsky, T., & DePree, J. A. (1983). Preliminary exploration of worry: Some characteristics and processes. *Behaviour Research and Therapy*, 21(1), 9-16.
[https://doi.org/10.1016/0005-7967\(83\)90121-3](https://doi.org/10.1016/0005-7967(83)90121-3)
- Bombay A., Matheson K., & Anisman H. (2011). The impact of stressors on second generation Indian residential school survivors. *Transcultural Psychiatry*, 48(4), 367-391.
<https://doi.org/10.1177/1363461511410240>
- Bombay, A., Matheson, K., & Anisman, H. (2014). The intergenerational effects of Indian Residential Schools: Implications for the concept of historical trauma. *Transcultural psychiatry*, 51(3), 320-338. <https://doi.org/10.1177/1363461513503380>
- Brandes, C. M., Herzhoff, K., Smack, A. J., & Tackett, J. L. (2019). The p Factor and the n Factor: Associations Between the General Factors of Psychopathology and Neuroticism in Children. *Clinical Psychological Science*, 7(6), 1266-1284. <https://doi.org/10.1177/2167702619859332>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, T. A., Chorpita, B. F., & Barlow, D. H. (1998). Structural relationships among dimensions of the DSM-IV anxiety and mood disorders and dimensions of negative affect, positive affect, and autonomic arousal. *Journal of Abnormal Psychology*, 107(2), 179–192. <https://doi.org/10.1037//0021-843x.107.2.179>
- Brenning, K., Soenens, B., Vansteenkiste, M., & Antrop, I. (2022). Emotion regulation as a transdiagnostic risk factor for (non)clinical adolescents' internalizing and externalizing psychopathology: Investigating the intervening role of psychological need experiences.

Child Psychiatry and Human Development., 53(1). <https://doi.org/10.1007/s10578-020-01107-0>.

- Brunstein-Klomek, A., Kopelman-Rubin, D., Apter, A., Argintaru, H., & Mufson, L. (2017). A pilot feasibility study of interpersonal psychotherapy in adolescents diagnosed with specific learning disorders, attention deficit hyperactive disorder, or both with depression and/or anxiety symptoms (IPT-ALD). *Journal of Psychotherapy Integration*, 27(4), 526–539. <https://doi.org/10.1037/int0000036>
- Burlingame, G. M., Seebeck, J. D., Janis, R. A., Whitcomb, K. E., Barkowski, S., Rosendahl, J., & Strauss, B. (2016). Outcome differences between individual and group formats when identical and nonidentical treatments, patients, and doses are compared: A 25-year meta-analytic perspective. *Psychotherapy*, 53(4), 446–461. <https://doi.org/10.1037/pst0000090>
- Calabria, B., Clifford, A., Rose, M., & Shakeshaft, A. P. (2014). Tailoring a family-based alcohol intervention for Aboriginal Australians, and the experiences and perceptions of health care providers trained in its delivery. *BMC Public Health*, 14, Article 322. <https://doi.org/10.1186/1471-2458-14-322>
- Caldwell, M. S., Rudolph, K. D., Troop-Gordon, W., & Kim, D. Y. (2004). Reciprocal influences among relational self-views, social disengagement, and peer stress during early adolescence. *Child Development*, 75(4), 1140–1154. <https://doi.org/10.1111/j.1467-8624.2004.00730.x>
- Caspi, A., Houts, R. M., Belsky, D. W., Goldman-Mellor, S. J., Harrington, H., Israel, S., Meier, M. H., Ramrakha, S., Shalev, I., Poulton, R., & Moffitt, T. E. (2014). The p Factor: One general psychopathology factor in the structure of psychiatric disorders? *Clinical Psychological Science*, 2(2), 119–137. <https://doi.org/10.1177/2167702613497473>

- CPA Task Force on Evidence-Based Practice of Psychological Treatments. (2012). *Evidence-based practice of psychological treatments: A Canadian Perspective*. Canadian Psychological Association.
- https://cpa.ca/docs/File/Practice/Report_of_the_EBP_Task_Force_FINAL_Board_Approved_2012.pdf
- Case, A. D., Byrd, R., Claggett, E., DeVeaux, S., Perkins, R., Huang, C., Sernyak, M. J., Steiner, J. L., Cole, R., LaPaglia, D. M., Bailey, M., Buchanan, C., Johnson, A., & Kaufman, J. S. (2014). Stakeholders' perspectives on community-based participatory research to enhance mental health services. *American Journal of Community Psychology*, 54(3–4), 397–408.
- <https://doi.org/10.1007/s10464-014-9677-8>
- Choi, Y., & Park, K. (2006). Therapeutic factors of cognitive behavioral group treatment for social phobia. *Journal of Korean Medical Science*, 21, 333–336.
- <https://doi.org/10.3346/jkms.2006.21.2.333>
- Chorpita, B. F., Daleiden, E. L., Park, A. L., Ward, A. M., Levy, M. C., Cromley, T., Chiu, A. W., Letamendi, A. M., Tsai, K. H., & Krull, J. L. (2017). Child STEPs in California: A cluster randomized effectiveness trial comparing modular treatment with community implemented treatment for youth with anxiety, depression, conduct problems, or traumatic stress. *Journal of Consulting and Clinical Psychology*, 85(1), 13–25.
- <https://doi.org/10.1037/ccp0000133>
- Chu, B. C. 2012. Translating transdiagnostic approaches to children and adolescents. *Cognitive and Behavioral Practice*, 19(1), 1–4. <https://doi.org/10.1016/j.cbpra.2011.06.003>.

- Clark, L. A., Watson, D., Mineka, S. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of Abnormal Psychology, 103*(1), 103-119.
<https://doi.org/10.1037//0021-843x.103.1.103>
- Colmant, S. A., & Merta, R. J. (1999). Using the sweat lodge ceremony as group therapy for Navajo youth. *Journal for Specialists in Group Work, 24*(1), 55–73.
<https://doi.org/10.1080/01933929908411419>
- Compas, B. E., Jaser, S. S., Bettis, A. H., Watson, K. H., Gruhn, M. A., Dunbar, J. P., ... & Thigpen, J. C. (2017). Coping, emotion regulation, and psychopathology in childhood and adolescence: A meta-analysis and narrative review. *Psychological bulletin, 143*(9), 939. <https://doi.org/10.1037/bul0000110>
- Copeland, W.E., Shanahan, L., Costello, E.J., & Angold, A. (2009). Childhood and adolescent psychiatric disorders as predictors of young adult disorders. *Archives of General Psychiatry, 66*, 764–772. <https://doi.org/10.1001/archgenpsychiatry.2009.85>
- Cornacchio, D., Furr, J. M., Sanchez, A. L., Hong, N., Feinberg, L. K., Tenenbaum, R., Del Busto, C., Bry, L. J., Poznanski, B., Miguel, E., Ollendick, T. H., Kurtz, S. M. S., & Comer, J. S. (2019). Intensive group behavioral treatment (IGBT) for children with selective mutism: A preliminary randomized clinical trial. *Journal of Consulting and Clinical Psychology, 87*(8), 720–733. <https://doi.org/10.1037/ccp0000422>
- Coyne, L. W., Birtwell, K. B., McHugh, L., & Wilson, K. G. (2014). Acceptance and commitment therapy. In J. Ehrenreich-May & B. C. Chu (Eds.), *Transdiagnostic treatments for children and adolescents: Principles and practice* (pp. 233–264). New York: The Guilford Press.
- Craigie, M. A., & Nathan, P. (2009). A nonrandomized effectiveness comparison of broad-

- spectrum group CBT to individual CBT for depressed outpatients in a community mental health setting. *Behavior therapy*, 40(3), 302 - 314.
- <https://doi.org/10.1016/j.beth.2008.08.002>
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Sage Publications.
- Creswell, J.W., & Miller, D.L. (2000). Determining validity in qualitative inquiry. *Theory Into Practice*, 39(3), 124-130. https://doi.org/10.1207/s15430421tip3903_2
- Cummings, C. M., Kazantzis, N., & Kendall, P. C. (2014). Facilitating homework and generalization of skills to the real world. *Evidence-based CBT for anxiety and depression in children and adolescents: A competencies-based approach*, 141-155.
- <https://doi.org/10.1002/9781118500576.ch11>
- Cuthbert, B. N., & Insel, T. R. (2013). Toward the future of psychiatric diagnosis: the seven pillars of RDoC. *BMC Medicine*, 11(1), 126. <https://doi.org/10.1186/1741-7015-11-126>
- Dalle Grave, R., Calugi, S., Sartirana, M., & Fairburn, C. G. (2015). Transdiagnostic cognitive behaviour therapy for adolescents with an eating disorder who are not underweight. *Behaviour Research and Therapy*, 73, 79–82. <https://doi.org/10.1016/j.brat.2015.07.014>
- Dalum, P., Schaalma, H., & Kok, G. (2011). The development of an adolescent smoking cessation intervention—an Intervention Mapping approach to planning. *Health education research*, 27(1), 172-181. <https://doi.org/10.1093/her/cyr044>
- Daniel, S. K., Abdel-Baki, R., & Hall, G. B. (2020). The protective effect of emotion regulation on child and adolescent wellbeing. *Journal of Child and Family Studies*, 29(7), 2010-2027. <https://doi.org/10.1007/s10826-020-01731-3>

- Danielson, M. (2020). Community-based prevalence of externalizing and internalizing disorders among school-aged children and adolescents in four geographically dispersed school districts in the United States. *Child Psychiatry and Human Development*, 52, 500-514. <https://doi.org/10.1007/s10578-020-01027-z>
- Dickerson, D. L., Brown, R. A., Johnson, C. L., Schweigman, K., & D'Amico, E. J. (2016). Integrating motivational interviewing and traditional practices to address alcohol and drug use among urban American Indian/Alaska Native youth. *Journal of Substance Abuse Treatment*, 65, 26–35. <https://doi.org/10.1016/j.jsat.2015.06.023>
- Do, K. T., & Telzer, E. H. (2024). Longitudinal changes in the value and influence of parent and peer attitudes about externalizing behaviors across adolescence. *Developmental Psychology*, 60(8), 1500–1510. <https://doi.org/10.1037/dev0001715>
- Drawson, A.S. (2018). *The wellbeing of First Nations children: An exploration of indicators and evaluation of a new measure* (unpublished doctoral dissertation). Lakehead University, Thunder Bay.
- Dugré, J. R., Eickhoff, S. B., & Potvin, S. (2022). Meta-analytical transdiagnostic neural correlates in common pediatric psychiatric disorders. *Scientific Reports*, 12, Article 4909. <https://doi.org/10.1038/s41598-022-08909-3>
- Effective Public Practice Research Project (2010). *Quality Assessment Tool for Quantitative Studies*. Retrieved from: https://www.epphpp.ca/PDF/Quality%20Assessment%20Tool_2010_2.pdf
- Ehrenreich, J. T., Goldstein, C. R., Wright, L. R., & Barlow, D. H. (2009). Development of a unified protocol for the treatment of emotional disorders in youth. *Child & Family Behavior Therapy*, 31(1), 20–37. <https://doi.org/10.1080/07317100802701228>

- Ehrenreich-May, J., & Bilek, E. L. (2011). Universal prevention of anxiety and depression in a recreational camp setting: An initial open trial. *Child & Youth Care Forum*, 40(6), 435-455. <https://doi.org/10.1007/s10566-011-9148-4>
- Ehrenreich-May, J., & Bilek, E. L. (2012). The development of a transdiagnostic, cognitive behavioral group intervention for childhood anxiety disorders and co-occurring depression symptoms. *Cognitive and Behavioral Practice*, 19(1), 41–55. <https://doi.org/10.1016/j.cbpra.2011.02.003>
- Ehrenreich-May, J., & Chu, B. C. (Eds.). (2014). *Transdiagnostic treatments for children and adolescents: Principles and practice*. The Guilford Press.
- Ehrenreich, J. T., Goldstein, C. R., Wright, L. R., & Barlow, D. H. (2009). Development of a Unified Protocol for the treatment of emotional disorders in youth. *Child & Family Behavior Therapy*, 31(1), 20–37. <https://doi.org/10.1080/07317100802701228>
- Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. *International Journal of Cognitive Therapy*, 1(3), 192-205. <https://doi.org/10.1521/ijct.2008.1.3.192>
- Epkins, C. C. (2016). Experiential avoidance and anxiety sensitivity: Independent and specific associations with children's depression, anxiety, and social anxiety symptoms. *Journal of Psychopathology and Behavioral Assessment*, 38(1), 124-135. <https://doi.org/10.1007/s10862-015-9502-1>
- Essau, C. A., & de la Torre-Luque, A. (2021). Comorbidity between internalising and externalising disorders among adolescents: Symptom connectivity features and psychosocial outcome. *Child Psychiatry and Human Development*, 54, 493-507. <https://doi.org/10.1007/s10578-021-01264-w>.

- Ewing, D.L., Monsen, J.J., Thompson, E.J., Cartwright-Hatton, S., & Field, A. (2015). A meta-analysis of transdiagnostic Cognitive Behavioural Therapy in the treatment of child and young person anxiety disorders. *Behavioural and Cognitive Psychotherapy*, 43, 562-577. <https://doi.org/10.1017/S1352465813001094>
- Fairburn, C. G., Cooper, Z., & Shafran, R. (2003). Cognitive behaviour therapy for eating disorders: A “transdiagnostic” theory and treatment. *Behaviour Research and Therapy*, 41(5), 509-528. [https://doi.org/10.1016/S0005-7967\(02\)00088-8](https://doi.org/10.1016/S0005-7967(02)00088-8)
- Fetzner, M. G., Horswill, S. C., Boelen, P. A., & Carleton, R. N. (2013). Intolerance of uncertainty and PTSD symptoms: Exploring the construct relationship in a community sample with a heterogeneous trauma history. *Cognitive Therapy and Research*, 37(4), 725-734. <https://doi.org/10.1007/s10608-013-9531-6>
- First Nations Information Governance Centre. (2018). *National report of the First Nations regional health survey* (Phase 3: Volume two). Ottawa, ON: Author.
- Fujisato, H., Kato, N., Namatame, H., Ito, M., Usami, M., Nomura, T., Ninomiya, S., & Horikoshi, M. (2021). The unified protocol for transdiagnostic treatment of emotional disorders among Japanese children: A pilot study. *Frontiers in Psychology*, 12, 1-12. <https://doi.org/10.3389/fpsyg.2021.731819>
- García-Escalera, J., Chorot, P., Sandín, B., Ehrenreich-May, J., Prieto, A., & Valiente, R. M. (2019, February). An open trial applying the unified protocol for transdiagnostic treatment of emotional disorders in adolescents (UP-A) adapted as a school-based prevention program. In *Child & Youth Care Forum* (Vol. 48, pp. 29-53). Springer US.
- Gertner, A. K., Franklin, J., Roth, I., Cruden, G. H., Haley, A. D., Finley, E. P., Hamilton, A. B., Palinkas, L. A., & Powell, B. J. (2021). A scoping review of the use of ethnographic

approaches in implementation research and recommendations for reporting.

Implementation Research and Practice, 2. <https://doi.org/10.1177/2633489521992743>

Graham, S., Muir, N. M., Formsma, J. W., & Smylie, J. (2023). First Nations, Inuit and Métis Peoples living in urban areas of Canada and their access to healthcare: A systematic review. *International Journal of Environmental Research and Public Health*, 20(5956), 1-18. <https://doi.org/10.3390/ijerph20115956>

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54. <https://doi.org/10.1023/B:JOBA.00000007455.08539.94>

Greenwood, M., & Lindsay, N. M. (2019). A commentary on land, health, and Indigenous knowledge (s). *Global Health Promotion*, 26, (3_suppl), 82-86. <https://doi.org/10.1177/1757975919831262>

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of general psychology*, 2(3), 271-299. <https://doi.org/10.1037/1089-2680.2.3.271>

Goolsby, J., Rich, B. A., Hinnant, B., Habayeb, S., Berghorst, L., De Los Reyes, A., & Alvord, M. K. (2018). Parent–child informant discrepancy is associated with poorer treatment outcome. *Journal of Child and Family Studies*, 27(4), 1228-1241. <http://dx.doi.org/10.1007/s10826-017-0946-7>

Government of Canada (2024, June 21). *Indigenous Knowledge*. <https://www.canada.ca/en/impact-assessment-agency/programs/aboriginal-consultation-federal-environmental-assessment/indigenous-knowledge-policy-framework-initiative.html>

Ginsburg, G. S., Becker, E. M., Keeton, C. P., Sakolsky, D., Piacentini, J., Albano, A. M., . . .

Kendall, P. C. (2014). Naturalistic follow-up of youths treated for pediatric anxiety disorders. *JAMA Psychiatry*, *71*, 310-318.

<https://doi.org/10.1001/jamapsychiatry.2013.4186>

Guastello, A.D., Barthle-Herrera, M.A., Downing, S., Mirhosseini, T., Valko, A., McNamara,

J.P.H. (2024). Using summer camps as opportunities to provide brief interventions. In: Davis III, T.E., Storch, E.A. (eds) *Brief CBT and Science-Based Tailoring for Children, Adolescents, and Young Adults. CBT: Science Into Practice*. Springer, Cham.

https://doi.org/10.1007/978-3-031-60746-2_8

Guo, T., Su, J., Hu, J., Aalberg, M., Zhu, Y., Teng, T., & Zhou, X. (2021). Individual vs. group cognitive behavior therapy for anxiety disorder in children and adolescents: A meta-analysis of randomized controlled trials. *Frontiers in Psychiatry*, *12*, Article 674267.

<https://doi.org/10.3389/fpsy.2021.674267>

Haggerty, D., Carlson, J. S., & Kotrba, A. (2022). A pilot feasibility study of an intensive summer day camp intervention for children with selective mutism. *Children*, *9*(11), 1732.

<https://doi.org/10.3390/children9111732>

Hall, L., Dell, C. A. , Fornssler, B. , Hopkins, C. , Mushquash, C. , Rowan, M. (2015). Research as cultural renewal: Applying Two-Eyed Seeing in a research project about cultural interventions in First Nations addictions treatment. *The International Indigenous Policy Journal*, *6*(2), 1-15. <https://doi.org/10.18584/iipj.2015.6.2.4>

Heleniak, C., Jenness, J. L., Vander Stoep, A., McCauley, E., & McLaughlin, K. A. (2016).

Childhood maltreatment exposure and disruptions in emotion regulation: A transdiagnostic

- pathway to adolescent internalizing and externalizing psychopathology. *Cognitive Therapy and Research*, 40(3), 394-415. <https://doi.org/10.1007/s10608-015-9735-z>.
- Higginbottom G. M. A., Pillay J. J., Boadu N. Y. (2013). Guidance on performing focused ethnographies with an emphasis on healthcare research. *Qualitative Report*, 18(9), 1–16. <https://doi.org/10.7939/R35M6287P>
- Hopwood, C. J., & Grilo, C. M. (2010). Internalizing and externalizing personality dimensions and clinical problems in adolescents. *Child Psychiatry and Human Development*, 41, 398-408. <https://doi.org/10.1007/s10578-010-0175-4>.
- Hudson, J. L., & Kendall, P. C. (2002). Showing you can do it: Homework in therapy for children and adolescents with anxiety disorders. *Journal of Clinical Psychology*, 58(5), 525-534. <https://doi.org/10.1002/jclp.10030>
- Hughes, A. A., & Kendall, P. C. (2007). Prediction of cognitive behavior treatment outcome for children with anxiety disorders: Therapeutic relationship and homework compliance. *Behavioural and Cognitive Psychotherapy*, 35(4), 487–494. <https://doi.org/10.1017/S1352465807003761>
- Im, S., & Kahler, J. (2020). Evaluating the empirical evidence for three transdiagnostic mechanisms in anxiety and mood disorders. *The Journal of General Psychology*, 149(2), 232–257. <https://doi.org/10.1080/00221309.2020.1828252>
- Isaacs, A., & Sutton, K. (2016). An Aboriginal youth suicide prevention project in rural Victoria. *Advances in Mental Health*, 14(2), 118–125. <https://doi.org/10.1080/18387357.2016.1198232>

- Iwama, M., Marshall, M., Marshall, A., & Bartlett, C. (2009). Two-eyed seeing and the language of healing in community-based research. *Canadian Journal of Native Education*, 32(2), 3-23. <https://doi.org/10.14288/cjne.v32i2.196493>
- Kahn, M. W., Lewis, J., & Galvez, E. (1974). An evaluation study of a group therapy procedure with reservation adolescent Indians. *Psychotherapy: Theory, Research & Practice*, 11(3), 239–242. <https://doi.org/10.1037/h0086348>
- Kazantzis, N., Deane, F. P., & Ronan, K. R. (2000). Homework assignments in cognitive and behavioral therapy: A meta-analysis. *Clinical Psychology: Science and Practice*, 7(2), 189-202. <https://doi.org/10.1093/clipsy.7.2.189>
- Kazantzis, N., Whittington, C., Zelencich, L., Kyrios, M., Norton, P. J., & Hofmann, S. G. (2016). Quantity and quality of homework compliance: A meta-analysis of relations with outcome in cognitive behavior therapy. *Behavior Therapy*, 47(5), 755-772. <https://doi.org/10.1016/j.beth.2016.05.002>
- Keeton, C. P., Caporino, N. E., Kendall, P. C., Iyengar, S., Lee, P., Peris, T., Sakolsky, D., Piacentini, J., Compton, S.N., Albano, A.M., Birmaher, B., & Ginsburg, G. S. (2019). Mood and suicidality outcomes 3–11 years following pediatric anxiety disorder treatment. *Depression and Anxiety*, 36, 930-940. <https://doi.org/10.1002/da.22944>
- Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of Consulting and Clinical Psychology*, 72(2), 276–287. <https://doi.org/10.1037/0022-006X.72.2.276>
- Kennedy, S. M., Bilek, E. L., & Ehrenreich-May, J. (2019). A randomized controlled pilot trial of the unified protocol for transdiagnostic treatment of emotional disorders in children. *Behavior Modification*, 43(3), 330–360. <https://doi.org/10.1177/0145445517753940>

- Kennedy, S. M., Tonarely, N. A., Sherman, J. A., & Ehrenreich-May, J. (2018). Predictors of treatment outcome for the unified protocol for transdiagnostic treatment of emotional disorders in children (UP-C). *Journal of Anxiety Disorders*, 57, 66–75.
<https://doi.org/10.1016/j.janxdis.2018.05.004>
- Kivlighan, D. M., Jr., Multon, K. D., & Brossart, D. F. (1996). Helpful impacts in group counseling: Development of a multidimensional rating system. *Journal of Counseling Psychology*, 43(3), 347–355. <https://doi.org/10.1037/0022-0167.43.3.347>
- Kok, G., & Mesters, I. (2011). Getting inside the black box of health promotion programmes using Intervention Mapping. *Chronic Illness*, 7(13), 176-180.
<https://doi.org/10.1177/1742395311403013>
- Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking “Big” personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin*, 136(5), 768-851. <https://doi.org/10.1037/a0020327>.
- Kowatch, K.R. (2017). Analysis of the Child and Adolescent Needs and Strengths assessment in a First Nation population (Unpublished master’s thesis). Lakehead University, Thunder Bay.
- Kowatch, K.R., Schmidt, F, Mushquash, C.J. (2019). Review of culturally-adapted cognitive behavioral therapy interventions for North American Indigenous children and youth. *Journal of Concurrent Disorders*, 1(3), 5-22. <https://doi.org/10.54127/ldmq1890>
- Kotov, R., Krueger, R. F., Watson, D., Achenbach, T. M., Althoff, R. R., Bagby, R. M., Brown, T. A., Carpenter, W. T., Caspi, A., Clark, L. A., Eaton, N. R., Forbes, M. K., Forbush, K. T., Goldberg, D., Hasin, D., Hyman, S. E., Ivanova, M. Y., Lynam, D. R., Markon, K., Miller, J. D., Moffitt, T. E., Morey, L. C., Mullins-Sweatt, S. N., Ormel, J., Patrick, C. J.,

- Regier, D. A., Rescorla, L., Ruggero, C. J., Samuel, D. B., Sellbom, M., Simms, L. J., Skodol, A. E., Slade, T., South, S. C., Tackett, J. L., Waldman, I. D., Waszczuk, M. A., Widiger, T. A., Wright, A. G. C., & Zimmerman, M. (2017, March 23). The Hierarchical Taxonomy of Psychopathology (HiTOP): A Dimensional Alternative to Traditional Nosologies. *Journal of Abnormal Psychology*. Advance online publication. <http://dx.doi.org/10.1037/abn0000258>
- Koerner, N., Dugas, M.J. (2008). An investigation of appraisals in individuals vulnerable to excessive worry: The role of intolerance of uncertainty. *Cognitive Therapy and Research*, 32, 619–638. <https://doi.org/10.1007/s10608-007-9125-2>
- Krueger, R. F., & Eaton, N. R. (2015). Transdiagnostic factors of mental disorders. *World Psychiatry*, 14(1), 27-29. <https://doi.org/10.1002/wps.20175>
- Kulis, S. S., Ayers, S. L., & Harthun, M. L. (2017). Substance use prevention for urban American Indian youth: A efficacy trial of the culturally adapted Living in 2 Worlds program. *The Journal of Primary Prevention*, 38(1–2), 137–158. <https://doi.org/10.1007/s10935-016-0461-4>
- Lahey, B. B., Van Hulle, C. A., Singh, A. L., Waldman, I. D., & Rathouz, P. J. (2011). Higher-order genetic and environmental structure of prevalent forms of child and adolescent psychopathology. *Archives of General Psychiatry*, 68(2), 181-189. <https://doi.org/10.1001/archgenpsychiatry.2010.192>
- Lee, K. S. K., Dawson, A., & Conigrave, K. M. (2013). The role of an Aboriginal women's group in meeting the high needs of clients attending outpatient alcohol and other drug treatment. *Drug and Alcohol Review*, 32(6), 618-626. <https://doi.org/10.1111/dar.12068>

- Lee, J. P., Moore, R. S., Roberts, J., Nelson, N., Calac, D., Gilder, D. A., & Ehlers, C. L. (2015). Off-premise alcohol outlets on and around tribal land: Risks for rural California Indian youth. *Journal of Ethnicity in Substance Abuse, 14*(1), 59–78.
<https://doi.org/10.1080/15332640.2014.958643>
- Lee, L., Midford, R., & Malone, S. (2012). The Dampier Peninsula Prevention Project: working with a group of remote Australian Aboriginal communities to address alcohol and drug use. *International Journal of Health Promotion and Education, 50*(3), 111–124.
<https://doi.org/10.1080/14635240.2012.661966>
- Leerlooijer, J. N., Kok, G., Weyusya, J., Bos, A. E. R., Ruiter, R. A. C., Rijdsdijk, L. E., Nshakira, N., & Bartholomew, L. K. (2014). Applying Intervention Mapping to develop a community-based intervention aimed at improved psychological and social well-being of unmarried teenage mothers in Uganda. *Health Education Research, 29*(4), 598–610.
<https://doi.org/10.1093/her/cyu020>
- Lehrbach, K. R., Crane, M. E., Olino, T. M., & Kendall, P. C. (2023). Anxiety sensitivity and experiential avoidance: Relations with anxiety severity and treatment outcomes in anxious youth. *Cognitive Therapy and Research, 47*(5), 841–850.
<https://doi.org/10.1007/s10608-023-10408-2>
- Lehti, V., Niemela, S., Hoven, c., Mandell, D., & Sourander, A. (2009). Mental health, substance use and suicidal behaviour among young indigenous people in the Arctic: A systematic review. *Social Science & Medicine, 69*, 1194 – 1203.
<https://doi.org/10.1016/j.socscimed.2009.07.045>

- Lenz, A. S., & Del Conte, G. (2018). Efficacy of dialectical behavior therapy for adolescents in a partial hospitalization program. *Journal of Counseling & Development, 96*(1), 15–26.
<https://doi.org/10.1002/jcad.12174>
- Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry*. Sage Publications.
- Loth, A. K., Drabick, D. A. G., Leibenluft, E., & Hulvershorn, L. A. (2014). Do childhood externalizing disorders predict adult depression? A meta-analysis. *Journal of Abnormal Child Psychology, 42*(7), 1103–1113. <https://doi.org/10.1007/s10802-014-9867-8>
- Lowe, J., Liang, H., Riggs, C., Henson, J., & Elder, T. (2012). Community partnership to affect substance abuse among Native American adolescents. *The American Journal of Drug and Alcohol Abuse, 38*(5), 450–455. <https://doi.org/10.3109/00952990.2012.694534>
- Lyons, J.S., Weiner, D.A., & Lyons, B.A. (2011). Measurement as communication. *The Child and Adolescent Needs and Strengths tool*. In Mariush, M.E. (Eds.), *The use of psychological testing for treatment planning and outcomes assessment*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Maassen, G. H. (2004). The standard error in the Jacobson and Truax Reliable Change Index: The classical approach to the assessment of reliable change. *Journal of the International Neuropsychological Society, 10*(6), 888–893.
<https://doi.org/10.1017/S1355617704106097>
- Martin, D. H. (2012). Two-eyed seeing: a framework for understanding Indigenous and non-Indigenous approaches to Indigenous health research. *Canadian Journal of Nursing Research, 44*(2), 20–42. Retrieved from: <http://cjunr.archive.mcgill.ca/article/view/2348>

- McCabe, E., Amarbayan, M., Rabi, S., Mendoza, J., Naqvi, S. F., Thapa Bajgain, K., Zwicker, J.D., & Santana, M. (2023). Youth engagement in mental health research: A systematic review. *Health Expectations*, 26(1), 30-50. <https://doi.org/10.1111/hex.13650>
- McCarty, R. J., Downing, S. T., Guastello, A. D., Lazaroe, L. M., Ordway, A. R., MirHosseini, T., Barthle-Herrera, M.A., Cooke, D.L., Mathews, C.A., & McNamara, J. P. (2024). Implementation and preliminary outcomes of an exposure-based summer camp for pediatric OCD and anxiety. *Behavior Therapy*, 55(3), 543-557. <https://doi.org/10.1016/j.beth.2023.08.006>
- McEvoy, P. M., Watson, H., Watkins, E. R., & Nathan, P. (2013). The relationship between worry, rumination, and comorbidity: Evidence for repetitive negative thinking as a transdiagnostic construct. *Journal of Affective Disorders*, 151(1), 313-320. <https://doi.org/10.1016/j.jad.2013.06.014>
- Mellick, W. H., Mills, J. A., Kroska, E. B., Calarge, C. A., Sharp, C., & Dindo, L. N. (2019). Experiential avoidance predicts persistence of major depressive disorder and generalized anxiety disorder in late adolescence. *The Journal of Clinical Psychiatry*, 80(6). <https://doi.org/10.4088/jcp.18m12265>
- Mellick, W., Vanwoerden, S., & Sharp, C. (2017). Experiential avoidance in the vulnerability to depression among adolescent females. *Journal of Affective Disorders*, 208, 497-502. <https://doi.org/10.1016/j.jad.2016.10.034>
- Minore, B., Boone, M., Katt, M., Kinch, P., & Birch, S. (2004). Addressing the realities of health care in northern aboriginal communities through participatory action research. *Journal of Interprofessional Care*, 18(4), 360-368. <https://doi.org/10.1080/13561820400011784>
- Morris, S. E., Sanislow, C. A., Pacheco, J., Vaidyanathan, U., Gordon, J. A., & Cuthbert, B. N.

- (2022). Revisiting the seven pillars of RDoC. *BMC Medicine*, 20(1), 220.
<https://doi.org/10.1186/s12916-022-02414-0>
- Morsette, A., Swaney, G., Stolle, D., Schuldberg, D., van den Pol, R., & Young, M. (2009). Cognitive behavioral intervention for trauma in schools (CBITS): School-based treatment on a rural American Indian reservation. *Journal of Behavior Therapy and Experimental Psychiatry*, 40(1), 169–178. <https://doi.org/10.1016/j.jbtep.2008.07.006>
- Muratori, F., Picchi, L., Casella, C., & Tancredi, R. (2002). Efficacy of brief dynamic psychotherapy for children with emotional disorders. *Psychotherapy and Psychosomatics*, 71(1), 28–38. <https://doi.org/10.1159/000049341>
- National Household Survey. (2013). *Aboriginal peoples in Canada: First Nations People, Métis and Inuit* [Statistics Canada Publication No. 99-011-X2011001]. Retrieved from Statistics Canada Website: <https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.cfm>
- Neprily, K., & Climie, E. (2023). Happy Campers: Enhancing social competence in adolescents with attention-deficit/hyperactivity disorder at summer camp. *Journal of Outdoor Recreation, Education, and Leadership*, 15(2). <https://doi.org/10.18666/JOREL-2022-11350>
- Nguyen, N. H., Subhan, F. B., Williams, K., & Chan, C. B. (2020, April). Barriers and mitigating strategies to healthcare access in Indigenous communities of Canada: A narrative review. In *Healthcare* (Vol. 8, No. 2, p. 112). MDPI. <https://doi.org/10.3390/healthcare8020112>
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, 100(4), 569–582. <https://doi.org/10.1037/0021-843X.100.4.569>

- Nolen-Hoeksema, S., Stice, E., Wade, E., & Bohon, C. (2007). Reciprocal relations between rumination and bulimic, substance abuse, and depressive symptoms in female adolescents. *Journal of Abnormal Psychology, 116*(1), 198-207.
<https://dx.doi.org/10.1037/0021-843X.116.1.19>
- Osmanağaoğlu, N., Creswell, C., & Dodd, H.F. (2018). Intolerance of uncertainty, anxiety, and worry in children and adolescents: A meta-analysis. *Journal of Affective Disorders, 225*, 80-90. <https://dx.doi.org/10.1016/j.jad.2017.07.035>.
- Öst, L. G., & Ollendick, T. H. (2017). Brief, intensive and concentrated cognitive behavioral treatments for anxiety disorders in children: A systematic review and meta-analysis. *Behaviour Research and Therapy, 97*, 134-145.
<https://doi.org/10.1016/j.brat.2017.07.008>
- Owais, S., Tsai, Z., Hill, T., Ospina, M. B., Wright, A. L., & Van Lieshout, R. J. (2022). Systematic review and meta-analysis: First Nations, Inuit, and Métis youth mental health. *Journal of the American Academy of Child & Adolescent Psychiatry, 61*(10), 1227-1250. <https://doi.org/10.1016/j.jaac.2022.03.029>
- Patchell, B. A., Robbins, L. K., Lowe, J. A., & Hoke, M. M. (2015). The effect of a culturally tailored substance abuse prevention intervention with Plains Indian adolescents. *Journal of Cultural Diversity, 22*(1), 3–8. <https://www.proquest.com/scholarly-journals/effect-culturally-tailored-substance-abuse/docview/1672175922/se-2>
- Patten, C. A., Fadahunsi, O., Hanza, M. M. K., Smith, C. A., Decker, P. A., Boyer, R., ... Offord, K. P. (2014). Tobacco cessation treatment for Alaska native adolescents: Group randomized pilot trial. *Nicotine & Tobacco Research, 16*(6), 836–845.
<https://doi.org/10.1093/ntr/ntu004>

Patten, C. A., Fadahunsi, O., Hanza, M., Smith, C. M., Hughes, C. A., Brockman, T. A., ...

Offord, K. P. (2013). Development of a tobacco cessation intervention for Alaska Native youth. *Addiction Research & Theory*, 21(4), 273–284.

<https://doi.org/10.3109/16066359.2012.714428>

Polanczyk, G. V., Salum, G. A., Sugaya, L. S., Caye, A., & Rohde, L. A. (2015). Annual research review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *Journal of Child Psychology and Psychiatry*, 56(3), 345-365.

<https://doi.org/10.1111/jcpp.12381>

Pyne, J.M., Fischer, E.P., Gilmore, L., McSweeney, J.C., Stewart, K.E., Mittal, D., Bost, J.E., & Valenstein, M. (2014). Development of a patient-centered antipsychotic medication adherence intervention. *Health Education & Behavior*, 41(3), 315-324.

<https://doi.org/10.1177/1090198113515241>

Queen, A. H., Barlow, D. H., & Ehrenreich-May, J. (2014). The trajectories of adolescent anxiety and depressive symptoms over the course of a transdiagnostic treatment. *Journal of Anxiety Disorders*, 28(6), 511–521. <https://doi.org/10.1016/j.janxdis.2014.05.007>

Racine, N., Madigan, S., Cardinal, S., Hartwick, C., Leslie, M., Motz, M., & Pepler, D. (2022). Community-Based Research: Perspectives of Psychology Researchers and Community Partners. *Canadian Psychology/Psychologie canadienne*, 63(4), 523-535.

<https://dx.doi.org/10.1037/cap0000318>

Radford, A., Toombs, E., Zugic, K. et al. (2022). Examining adverse childhood experiences (ACEs) within Indigenous populations: A systematic review. *Journal of Child and Adolescent Trauma*, 15, 401–421. <https://doi-org.ezproxy.lakeheadu.ca/10.1007/s40653-021-00393-7>

- Rapee, R.M., McLellan, L.F., Carl, T., Trompeter, N., Hudson, J.L., Jones, M.P., & Wuthrich, V.M. (2023). Comparison of transdiagnostic treatment and specialized social anxiety treatment for children and adolescents with social anxiety disorder: A randomized control trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 62(2), 646-655. <https://doi.org/10.1016/j.jaac.2022.08.003>
- Reading, C.L. & Wien, F. (2009). *Health Inequalities and Social Determinants of Aboriginal People's Health*. Prince George, BC: National Collaborating Centre for Aboriginal Health. Retrieved from: <https://www.ccsa-nccah.ca/docs/determinants/RPT-HealthInequalities-Reading-Wien-EN.pdf>
- Reynolds, W. M. (1998). Adolescent psychopathology scale (APS): Administration and interpretation manual. Psychological Assessment Resources Inc. (PAR Inc.).
- Reynolds, C. R., Kamphaus, R. W., & Vannest, K. J. (2015). *BASC-3: Behavior Assessment System for Children*. PsychCorp
- Rice, T. R., Kostek, N. T., Gair, S. L., & Rojas, A. (2017). Summer camp program for children with obsessive-compulsive disorder: Description and preliminary observations. *Cognitive and Behavioral Practice*, 24(2), 142–151. <https://doi.org/10.1016/j.cbpra.2016.03.006>
- Ritschel, L. A., Lim, N. E., & Stewart, L. M. (2015). Transdiagnostic applications of DBT for adolescents and adults. *American Journal of Psychotherapy*, 69(2), 111-128. <https://doi.org/10.1176/appi.psychotherapy.2015.69.2.111>
- Robinson, K. E., & Rapport, L. J. (2002). Outcomes of a school-based mental health program for youth with serious emotional disorders. *Psychology in the Schools*, 39(6), 661–675. <https://doi.org/10.1002/pits.10064>

- Ross, A., Dion, J., Cantinotti, M., Collin-Vézina, D., & Paquette, L. (2015). Impact of residential schooling and of child abuse on substance use problem in Indigenous Peoples. *Addictive Behaviors*, 51, 184-192. <https://doi.org/10.1016/j.addbeh.2015.07.014>
- Rosser, B. A. (2019). Intolerance of uncertainty as a transdiagnostic mechanism of psychological difficulties: A systematic review of evidence pertaining to causality and temporal precedence. *Cognitive Therapy and Research*, 43(2), 438-463. <https://doi.org/10.1007/s10608-018-9964-z>
- Rubin, K. H., & Mills, R. S. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 23(3), 300-317. <http://dx.doi.org/10.1037/h0079019>.
- Santucci, L. C., & Ehrenreich-May, J. (2013). A randomized controlled trial of the Child Anxiety Multi-Day Program (CAMP) for separation anxiety disorder. *Child Psychiatry & Human Development*, 44(3), 439-451. <https://doi.org/10.1007/s10578-012-0338-6>
- Sauer-Zavala, S., Gutner, C. A., Farchione, T. J., Boettcher, H. T., Bullis, J. R., & Barlow, D. H. (2017). Current definitions of “transdiagnostic” in treatment development: A search for consensus. *Behavior Therapy*, 48(1), 128-138. <https://doi.org/10.1016/j.beth.2016.09.004>
- Shechtman, Z., & Gluk, O. (2005). An investigation of therapeutic factors in children's groups. *Group Dynamics: Theory, Research, and Practice*, 9(2), 127. <https://doi.org/10.1037/1089-2699.9.2.127>
- Shechtman, Z., & Leichtentritt, J. (2010). The association of process with outcomes in child group therapy. *Psychotherapy Research*, 20(1), 8-21. <https://doi.org/10.1080/10503300902926562>

- Schneider, S., La Buissonnière-Ariza, V., Højgaard, D., Kay, B., Riemann, B., Eken, S., Lake, P., Nadeau, J., & Storch, E. (2018). Multimodal residential treatment for adolescent anxiety: Outcome and associations with pre-treatment variables. *Child Psychiatry & Human Development*, 49(3), 434–442. <https://doi.org/10.1007/s10578-017-0762-8>
- Schniering, C.A., Rapee, R.M. (2020). Evaluation of a transdiagnostic treatment for adolescents with comorbid anxiety and depression. *Journal of Affective Disorders Reports*, 2. <https://doi.org/10.1016/j.jadr.2020.100026>
- Scurfield, R. M. (1995). Healing the warrior: Admission of two American Indian war-veteran cohort groups to a specialized inpatient PTSD unit. *American Indian and Alaska Native Mental Health Research*, 6(3), 1–22. <https://doi.org/10.5820/aian.0603.1995.1>
- Seager, I., Rowley, A., & Ehrenreich-May, J. (2014). Targeting common factors across anxiety and depression using the unified protocol for the treatment of emotional disorders in adolescents. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 32(1), 67–83. <https://doi.org/10.1007/s10942-014-0185-4>
- Sevi Tok, E.S., Arkar, H., & Bildik, T. (2016). The effectiveness of cognitive behavioral therapy, medication, or combined treatment for childhood anxiety disorders. *Turkish Journal of Psychiatry*, 27(2), 1–8. <https://doi.org/10.5080/u13697>
- Sharma, P., Mehta, M., & Sagar, R. (2017). Efficacy of transdiagnostic cognitive-behavioral group therapy for anxiety disorders and headache in adolescents. *Journal of Anxiety Disorders*, 46, 78–84. <https://doi.org/10.1016/j.janxdis.2016.11.001>
- Sherman, J. A., Tonarely, N. A., & Ehrenreich-May, J. (2018). Targeting comorbid anxiety and depression using the unified protocol for transdiagnostic treatment of emotional disorders

- in adolescents. *Clinical Case Studies*, 17(2), 59–76.
<https://doi.org/10.1177/1534650117753671>
- Sinclair, S.M., Schmidt, F., Kowatch, K.R., & Mushquash, C.J. (2019). Mental health cross-informant agreement for Indigenous and non-indigenous adolescents. *Journal of Child and Family Studies*, 28, 906-916. <https://doi.org/10.1007/s10826-019-01328-5>
- Sloan, E., Hall, K., Simpson, A., Youssef, G. J., Moulding, R., Mildred, H., & Staiger, P. K. (2018). An emotion regulation treatment for young people with complex substance use and mental health issues: A case-series analysis. *Cognitive and Behavioral Practice*, 25(3), 427–441. <https://doi.org/10.1016/j.cbpra.2017.12.006>
- Solmi, M., Radua, J., Olivola, M., Croce, E., Soardo, L., Salazar de Pablo, G., Shin, J.I., Kirkbride, J.B., Jones, P., Kim, J.H., Kim, J.Y., Carvalho, A. F., Seeman, M.V., Correll, C.U., & Fusar-Poli, P. (2022). Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. *Molecular Psychiatry*, 27(1), 281-295.
<https://doi.org/10.1038/s41380-021-01161-7>
- Statistics Canada. (2017). *Ontario and Canada Census Profile, 2016 Census*. [Catalogue no. 98-316-X2016001]. Retrieved from Statistics Canada website:
<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed March 6, 2019)
- The Truth and Reconciliation Commission of Canada. (2015a). *Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada* (Cat. no.: IR4-7/2015E-PDF).
http://www.trc.ca/assets/pdf/Honouring_the_Truth_Reconciling_for_the_Future_July_23_2015.pdf

- Truth and Reconciliation Commission. (2015b). *Canada's Residential Schools: The Legacy: The Final Report of the Truth and Reconciliation Commission of Canada (Volume 5)*. McGill-Queen's Press-MQUP. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Volume_5_Legacy_English_Web.pdf
- Tkacz, J., & Brady, B. L. (2021). Increasing rate of diagnosed childhood mental illness in the United States: Incidence, prevalence and costs. *Public Health in Practice*, 2 (100204), 1-7. <https://doi.org/10.1016/j.puhip.2021.100204>
- Trosper, S. E., Buzzella, B. A., Bennett, S. M., & Ehrenreich, J. T. (2009). Emotion regulation in youth with emotional disorders: Implications for a unified treatment approach. *Clinical Child and Family Psychology Review*, 12(3), 234-254. <https://doi.org/10.1007/s10567-009-0043-6>
- Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work*, 11(1), 80-96. <https://doi.org/10.1177/1473325010368316>
- Simoens, S. (2009). Health economic assessment: A methodological primer. *International Journal of Environmental Research and Public Health*, 6(12), 2950-2966. <https://doi.org/10.3390/ijerph6122950>
- Statistics Canada (2021). Focus on geography series, 2021 census of population. <https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/page.cfm?lang=E&topic=8&dguid=2021A000247>
- Varpio, L., Ajjawi, R., Monrouxe, L. V., O'Brien, B. C., & Rees, C. E. (2017). Shedding the cobra effect: Problematising thematic emergence, triangulation, saturation and member checking. *Medical education*, 51(1), 40-50. <https://doi.org/10.1111/medu.13124>

Voogt, C. V., Poelen, E. A. P., Kleinjan, M., Lemmers, L. A. C. J., & Engels, R. C. M. E. (2014).

The development of a web-based brief alcohol intervention in reducing heavy drinking among college students: An Intervention Mapping approach. *Health Promotion International*, 29(4), 669–679. <https://doi.org/10.1093/heapro/dat016>

Waddell, C., Offord, D.R., Shepherd, C.A., Hua, J.M., McEwan, K. (2002). Child psychiatric epidemiology and Canadian public policy-making: The state of the science and the art of the possible. *The Canadian Journal of Psychiatry*, 47(9), 825-832.

<https://doi.org/10.1177/070674370204700903>

Waddell, C., McEwan, K., Shepherd, C. A., Offord, D. R., & Hua, J. M. (2005). A public health strategy to improve the mental health of Canadian children. *The Canadian Journal of Psychiatry*, 50(4), 226-233. <https://doi.org/10.1177/070674370505000406>

Waldram, J. B., & Wong, S. (1995). Group therapy of Aboriginal offenders in a Canadian forensic psychiatric facility. *American Indian and Alaska Native Mental Health Research*, 6(2), 34–56. <https://doi.org/10.5820/aian.0602.1995.34>

Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., & Kendall, P. C. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, 359, 2753-2766.

<https://doi.org/10.1093/med/9780190625085.003.0010>

Weersing, V.R., Brent, D.A., Rozenman, M.S., Gonzalez, A., Jeffreys, M., Dickerson, J.F., Lynch, F.L., Porta, G., & Iyengar, S. (2017). Brief behavioral therapy for pediatric anxiety and depression in primary care. *JAMA Psychiatry*, 74(6), 571-578.

<https://doi.org/10.1001/jamapsychiatry.2017.0429>

Weersing, V. R., Rozenman, M. S., Maher-Bridge, M., & Campo, J. V. (2012). Anxiety,

- depression, and somatic distress: Developing a transdiagnostic internalizing toolbox for pediatric practice. *Cognitive and Behavioral Practice*, 19(1), 68–82.
<https://doi.org/10.1016/j.cbpra.2011.06.002>
- Wells, P., & Faragher, B. (1993). In-patient treatment of 165 adolescents with emotional and conduct disorders: A study of outcome. *The British Journal of Psychiatry*, 162, 345–352.
<http://dx.doi.org/10.1192/bjp.162.3.345>
- Weisz, J., Bearman, S. K., Santucci, L. C., & Jensen-Doss, A. (2017). Initial test of a principle-guided approach to transdiagnostic psychotherapy with children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, 46(1), 44–58.
<https://doi.org/10.1080/15374416.2016.1163708>
- Weissman, D. G., Bitran, D., Miller, A. B., Schaefer, J. D., Sheridan, M. A., & McLaughlin, K. A. (2019). Difficulties with emotion regulation as a transdiagnostic mechanism linking child maltreatment with the emergence of psychopathology. *Development and Psychopathology*, 31(3), 899–915. <https://doi.org/10.1017/S0954579419000348>
- Werth Jr, J. L., Hastings, S. L., & Riding-Malon, R. (2010). Ethical challenges of practicing in rural areas. *Journal of Clinical Psychology*, 66(5), 537–548.
<https://doi.org/10.1002/jclp.20681>
- Whitbeck, L. B., Yu, M., Johnson, K. D., Hoyt, D. R., & Walls, M. L. (2008). Diagnostic prevalence rates from early to mid-adolescence among indigenous adolescents: First results from a longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(8), 890–900. <https://doi.org/10.1097/CHI.0b013e3181799609>
- Willner, C. J., Gatzke-Kopp, L. M., & Bray, B. C. (2016). The dynamics of internalizing and externalizing comorbidity across the early school years. *Development and*

- Psychopathology*, 28(4pt1), 1033-1052. <https://doi.org/10.1017/S0954579416000687>
- Wolpert, M., Görzig, A., Deighton, J., Fugard, A.J.B., Newman, R. and Ford, T. (2015), Comparison of indices of clinically meaningful change in child and adolescent mental health services: difference scores, reliable change, crossing clinical thresholds and ‘added value’ – an exploration using parent rated scores on the SDQ. *Child and Adolescent Mental Health*, 20, 94-101. <https://doi.org/10.1111/camh.12080>
- Yalom, I., & Leszcz, M. (2005). *Theory and practice of group psychotherapy*. New York, NY: Basic Books.
- Yeo, L. S., Wong, M., Gerken, K., & Ansley, T. (2005). Cognitive-behavioural therapy in a hospital setting for children with severe emotional and/or behaviour disorders. *Child Care in Practice*, 11(1), 7–22. <http://dx.doi.org/10.1080/1357527042000332763>

Table 1:*Study 1: Treatment Needs Identified in Qualitative Assessment*

Theme	Exemplar Quotes
Externalizing symptoms • Anger management • Attention difficulties • School refusal • Suicidal ideation	<i>“I can feel like, hot” Youth 104; “...he's got the rage, like he could explode at any time about anything with his anger issues” Community member 0116</i> <i>“...super forgetfulness and whether that's trauma-based or ADHD, not paying attention” Community Member 0115</i> <i>“...some of the avoidance behaviours we see are high truancy from school, um, huge attendance issues. So many of the kids I see one of the main concerns is low attendance” Cultural and community worker 007</i> <i>“a lot of the issues are around self harm, suicidal ideation, depression, anxiety, trauma, those are the biggest things and usually they're not independent of one another” Cultural and community worker 012</i>
Internalizing Symptoms	
• Anxiety	<i>“He's constantly checking surroundings. He's kind of settled now in my house, but if we're somewhere new, he'll be a little more vigilant” Community Member 0115</i>
• Depressive symptoms	<i>“It's a lot of social withdrawal and just avoidance of again any kind of meaningful daily activities or routine, it's usually very withdrawn, um kind of lack of self care...” Cultural and community worker 007</i>
Interpersonal Relationship Difficulties	
• Attachment difficulties	<i>“So, when mom doesn't show up, he's like waiting for her the entire visit. And he doesn't engage with her when she's there. He will not even talk to her. He just needs to see that she's there and she's okay kind of thing” Community Member 0113</i>
• Being in care	<i>“they get referred a lot I find for feelings about being in care but I don't find they always need to talk about that. I think they're pretty young I don't even really know if they know what their feelings are about it yet” Cultural and community worker 008</i>
• Peer relationships	<i>“...girls are awful to each other at that age, so she's had a little bit of trouble with some girls at school that was last year” Community member 0113</i>
Other Symptoms	
• Trauma	<i>“I think for a lot of our kids there's a lot of trauma” Cultural and community worker 010</i>

• Emotional Dysregulation	<i>“they don’t know how to properly voice the way they feel about what’s wrong”</i> Cultural and community worker 202
---	---

Table 2*Study 1 Psychological Interventions Endorsed in Qualitative Assessment*

Themes and Subthemes	Exemplar Quote
Behavioural Strategies	
Behaviour activation	<i>"...working on behavioral activation strategies of getting her out of the house and like, consistency in going to school"</i> Cultural and community worker 015
Exposure	<i>"...anxiety doing like exposure hierarchies so kind of making like a ladder of their fear and slowing working up it"</i> Cultural and community worker 007
Distress tolerance	<i>"...physically changing your temperature, doing deep breathing, um, so really role modeling the skills with the kids to show them how they work"</i> Cultural and community worker 007
Emotion regulation	<i>"...once they realize that they're having a feeling that's starting to get out of control, having them practice like, deep breathing, counting to ten, getting a drink of water, walking away"</i> Cultural and community worker 010 <i>"...she knows the coping skills so it's up to us to really, kinda you know, this is what you need to do whether it be deep breathing, or listening to music, go for a walk, whatever, whatever it is that she needs to do at that time"</i> Community Member 0113
Cognitive Strategies	
Emotional awareness	<i>"...identifying and describing emotions where you feel in your body and how that impacts your thoughts and your behaviour"</i> Cultural and community worker 007
Psychoeducation	<i>"...looking at helping them identify how like, their feelings and thoughts are leading them to make choices that are, as we call it, making their problems bigger"</i> Cultural and community worker 010
Cognitive restructuring	<i>"...providing them tools to challenge negative thoughts..."</i> Cultural and community worker 007
Mindfulness	<i>"...we find just getting out on the land and doing mindfulness, kind of, with the anxiety kids is very beneficial for them"</i> Cultural and community worker 009
Journalling/ worry box	<i>"So, I think journaling or the worry box or the worry bear or whatever they've done are probably the best way they get into his head, right, and let him do it".</i> Community Member 0115
Other Strategies	

• Social skills	<i>“...we talked about communication, we talked about assertive communication”</i> Cultural and community worker 015
• Caregiver involvement	<i>“...obviously a lot of it comes back to home environment and parenting, but I do what I can do with them”</i> Cultural and community worker 013

Table 3*Study 1 Cultural Interventions Endorsed in Qualitative Assessment*

Themes	Exemplar Quotes
Smudging	<i>Smudge ceremony. Every time you have a session, start with it. Like I said, it's using those medicines to help cleanse the area, cleanse the energies that we carry."</i> Cultural and community worker 202
Powwows/ dancing	<i>For us in our community, we've been doing our pow wow, and our community, again at the band level, provides regalia-making on a regular basis, so I think that's a good, strong activity for them."</i> Cultural and community worker 201
Drums	<i>"And even something like taking care of our drums. Like teaching like, it's a traditional teaching, but it's teaching them to be gentle and to be respectful. Not just of the drum, but of everything. So that carries to, you know – It's a great teaching."</i> Cultural and community worker 014
Traditional crafts	<i>"Helping the families in things they're interested in. So, we did ribbon-skirt making. A lot of traditional crafts."</i> Cultural and community worker 013
Land-based activities	<i>"So, the ADHD girl took the lead, and she was in front and she noticed everything. She saw the moose tracks, she saw the moose shit, she saw a partridge. She noticed everything and she was teaching the younger girls like, oh look, this is what the moose eat, on the side there. And she knew. And it was so amazing to see, I was like, oh my goodness, you do pay attention and you are listening. I was like, I'm so amazed at how good of an observer you are and I'm so thankful that you're here because I would have missed all those. Yeah. I was like, yeah, you're really good. And you could see how proud she felt..."</i> Cultural and community worker 202
7 Grandfather Teachings	<i>"I had one little boy, I would bring in these little seven teachings cards and each week we'd go through them and talk about how we could incorporate the seven teachings into his life and he loved those."</i> Cultural and community worker 008
Ceremonies	<i>"...when I talk about I'll do a referral to the cultural program, they, they can go and do like healing ceremonies with families..."</i> Cultural and community worker 007
Other teachings	<i>"Maybe you were being raised by your grandmother and grandfather, or maybe just your auntie, and it's important for us to understand that. It's not always going to be mom and dad, mom and dad might be too young, for instance. Or maybe mom and dad can't care for you because of their addictions or whatever else it may be, so maybe auntie will step in, or</i>

	<i>grandma will step in. That's part of our culture, too, and we've done that for generations."</i> Cultural and community worker 201
Medicines	<i>"I began teaching with the four medicines and I had pamphlets for them to take home also about the different ceremonies such as fasting and all the ceremonies, and whatever questions they needed."</i> Cultural and community worker 202
Sweat lodge	<i>"[The cultural coordinator] really stepped up our home in terms of even just building the sweat lodge on site. So, a lot of our kids, like the teenage girls, wanted to participate in stuff like that, but when we said you have to go to the main office, we would get there and then they would see how many people showed up or whatever, and none of them wanted to participate."</i> Cultural and community worker 009
Medicine Wheel	<i>"Right now, I kind of use the medicine wheel as a base line, kind of a rapport building exercise, and also seeing where people are at to kind of educate different aspects about your self and also what you are doing to take care of yourself and other things that can help you be more balanced."</i> Cultural and community worker 007
Choice of cultural interventions	<i>"...never assume that they want or need a smudge because there are really strong Catholic's in our communities, and they do not want that ceremony or that way at all. And that's okay, like I said, we have to be respectful and mindful of other people's ways and that's okay, that's how they pray"</i> Cultural and community worker 202

Table 4*Study 1 Contributors to Success in Treatment in Qualitative Assessment*

Themes and subthemes	Exemplar Quotes
Treatment Characteristics	
Flexibility in delivery	<i>“They go see him at school, which I think is super beneficial because pulling him out and bringing him somewhere takes half an hour more...Doing the onsite service where they are is super beneficial”</i> Community Member 0115
Individualized treatment	<i>“I think all your treatment has to be around the child, and where he’s at, and what he’s willing to bring, right? Like, what his capacity is and where he is, and then you’ll just do it from there. So, you wouldn’t, I don’t think, go in with any kind of hard – It would have to be based on each individual child”</i> Cultural and community worker 014
Plentiful supplies	<i>“...in our counselling hallway we have tons and tons of supplies whether its for journals, making sensory jars or anything like, as long as you tell the manager what you need its usually ordered as long as its within reasonable means of price”</i> Cultural and community worker 007
Provider Characteristics	
Relationship between client and provider	<i>“...I find you have to have the relationship almost to like even try any of the interventions I’d say. If you tried to provide information um or do interventions they need to trust you first before you even get in, if that makes sense?”.</i> Cultural and community worker 007
Taking time	<i>“I think from like the Rogerian terms of being sincere and empathetic and genuine. Really just being consistent and showing up”</i> Cultural and community worker 015
Coordination of care	<i>“...as long as I have consent I’ll share the information with other workers involved through the school and we’ll kind of like share what the client gives me permission to in terms of like coping plans or skills or kind of warning signs and things like that”.</i> Cultural and community worker 007
Environmental Influences	
Engaged parent/caregivers	<i>“I have to stay really on top of her to get her to use her coping skills and stuff”</i> Community Member 0113 <i>“...every kid is so different and like at home is so different right, so if they have like parents that are really engaged and wanting to help them like learn the stuff at home I found they did better than the kids who didn’t”</i> Cultural and community worker 008
Healthy role models	<i>“...all that child needs is one person to be there for them and it helps them overcome whatever they’re going through at that time”</i> Cultural and community worker 202

• Developing community connections	<i>“I typically try to connect people with supports outside that they’re able to continue to go to. Whether that’s in the Indigenous Friendship Centre, and/or ONWA or different programming that way. So that I try to set it up so that I can step out, and these supports can continue in their lives”</i> Cultural and community worker 015
--	---

Table 5*Study 2 Systematic Review Databases and Search Terms*

Academic Databases	Grey Literature
Academic Search Premier The Cochrane Library ERIC (Educational Resources Information Centre) Evidence-Based Medicine (EBM) Reviews Health Board JSTOR ProQuest Dissertations and Theses Databases PsycARTICLES PsycINFO PubMed Public Health Department of the Cree ScienceDirect Social Sciences Citation Index Social Services Abstracts Social Science Research Network (SSRN) Web of Science	Ontario Centre of Excellence for Child and Youth Mental Health McCreary Centre Society Canadian Child Welfare Research Portal Child Welfare League of Canada First Nations Child & Family Caring Society Canadian Coalition for the Rights of Children PLEA Community Services Open Grey Repository New York Academy Grey Literature Report
Search Terms	
“youth” OR “adolescents” OR “children”, “transdiagnostic” OR “emotional disorders”, “group treatment” OR “treatment” OR “intervention”	

Table 6*Study 2 Summary of Studies in Systematic Review*

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
Unified Protocol for the Treatment of Emotional Disorders in Youth with Pain (UP-YP)					
Allen, L. B., Tsao, J. C. I., Seidman, L. C., Ehrenreich-May, J., & Zeltzer, L. K. (2012).	14-year-old male 17-year-old female USA (California or Miami) QA: Weak	- daily headache - anxiety (school & social) - high functioning autism spectrum disorder - fibromyalgia - irritable bowel syndrome - major depressive disorder	$n = 2$ 6 months: 8-21 weekly sessions, 50 min/each		Case report: - Functional impairment: one declined on average, other increased by end of treatment - Total anxiety & depression (RCADS) improved for both PTP and at 3-month FU - Depression (RCADS) decreased PTP for one child & remained the same for the other - Emotional awareness & expression (Emotion Expression Scale for Children) improved PTP for one but worsened for the other; both improved at FU - Somatization (CSI) decreased for one & increased for the other PTP, but reduced at FU for both Pain remained the same PTP for one but increased for the other; both decreased at FU
Emotion Detectives Treatment Protocol (EDTP)					
Bilek, E. L., & Ehrenreich-May, J. (2012).	7-12 yrs old • $m = 9.79$ 46% female USA (Miami)	GAD 12.5% SAD 37.5% SP 43.8% Sep 6.3% OCD 6.3%	$n = 22$ 15 sessions Weekly group format		CSR's: - principal anxiety diagnosis $t(20) = 5.04$, Cohen's $d = 1.38$; - all anxiety & depression $t(19) = 4.66$, Cohen's $d = 1.07$;

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
	QA: Strong	Anx NOS 6.3% MDD 12.5% Dep NOS 18.8% Adj 6.3% ADHD 12.5% Tic disorder 12.5%			SCARED: - child reported anxiety $t(18) = 2.17$, Cohen's $d = 0.47$; - no parent-reported difference in anxiety; CDI: - parent reported depressive symptoms $t(20) = 2.42$, Cohen's $d = 0.54$; - no difference on child report; subsample of treatment completers – child-report $t(14) = 3.14$, Cohen's $d = 0.65$
Ehrenreich-May, J., & Bilek, E. L. (2012).	7-12 yrs old 50% female USA (Miami) QA: Weak	GAD 50% SAD 50% SP 50% Sep 50% one child had subclinical GAD, SAD, Dep NOS symptoms	$n = 2$ 15 session group treatment 90 min each		SCARED: - Total: decreased PTP for both, on parent & child reports - Generalized anxiety: decreased PTP on parent (5-point reduction) & child (7-point reduction) reports for one; and only parent report for the other (child report was zero; 6-point reduction for parent) - Separation anxiety: decreased for one parent (4-point) & child (5-point) PTP; decreased (4-points) for the other child but increased 1-point for parent PTP - Social anxiety decreased for one but remained the same across parent & child (6-point reduction for both) reports PTP for the other - School avoidance decreased for one (3- & 4-point reduction) but was not present for the other PTP across reports CDI: decreased (4- & 2-point, 12- & 8-point, reduction) PTP across reports for both youth

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					Reductions in clinical & subclinical anxiety concerns for both youth
Interpersonal Psychotherapy for Depressed Adolescents with Specific Learning Disorder and/or ADHD (IPT-ALD)					
Brunstein-Klomek, A., Kopelman-Rubin, D., Apter, A., Argintaru, H., & Mufson, L. (2017).	10-17 yrs old • $m = 12.57$ • $SD = 1.99$ 73.33% male Israel QA: Weak	SLD 26.6% ADHD 40% SLD/ADHD 33.3% At least 2 subsyndromal anxiety or depression symptoms Depression 6.7% Anxiety 13% Tic disorder 6.7%	$n = 15$ 15 sessions School-based sessions		SCARED: • Total depression & anxiety, GAD, Sep, SAD subscales not significantly different PTP for child, mother, or father assessments • Mother reported school avoidance decreased $T = 2.45$ $p < .05$; Father reports not significant MFQ: • Not significantly different PTP for child, mother, or father assessments
Modular Approach to Therapy for Children (MATCH)					
Chorpita, B. F., Daleiden, E. L., Park, A. L., Ward, A. M., Levy, M. C., Cromley, T., Krull, J. L. (2017).	5-15 yrs old • $m = 9.30$ • $SD = 2.82$ 55.1% male USA (Southern California) QA: Strong	CD 79.7% Depression 73.2% Anxiety 85.5% Traumatic stress 17.4% Inattention/hyperactivity 33.3% Elimination disorder 4.3%	$n = 138$ 33 modules		Brief problem checklist: • Externalizing scores – decreased more for youth than caregivers regardless of condition; rate of decrease greater for MATCH than comparison treatment ($t = -2.46$, $p = .0155$, $ES = 0.38$ caregiver; 0.50 child) • Internalizing scores – scores did not differ based on rater (i.e., youth or caregiver); greater decrease in MATCH condition than control ($t = -2.85$, $p = .0052$, $ES = 0.46$) • Total symptoms - scores did not differ based on rater; greater reductions among MATCH group ($t = -3.14$, $p = .0022$, $ES = 0.51$)

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					Significantly greater number of children in clinically improved category PTP ($\chi^2(1) = 6.75, p < .001$) for MATCH (60%) compared to control group (36.7%) Greater reduction in top problems among MATCH group in comparison to control group ($t = -3.05, p = .0028, ES = 0.56$ caregiver; 0.38 child)
Enhanced Cognitive Behaviour Therapy (CBT-E)					
Dalle Grave, R., Calugi, S., Sartirana, M., & Fairburn, C. G. (2015).	13-19 yrs old $m = 16.5$ $SD = 1.7$ 97% female Italy QA: Weak	BN 29.4% Binge eating disorder 20.6% Other eating disorder 50.0%	$n = 68$ 20 sessions, 1/week		EDE-Q: - ITT: overall severity $t(67) = 8.33$ Cohen's $d = 1.03$, dietary restraint $t(67) = 8.36$ Cohen's $d = 1.14$, eating concern $t(67) = 8.09$ Cohen's $d = 1.09$, weight concern $t(67) = 7.11$ Cohen's $d = 0.92$, shape concern $t(67) = 6.27$ Cohen's $d = 0.95$; global severity index $t(67) = 6.27$ Cohen's $d = 0.66$ - Completers: overall severity $t(50) = 9.81$ Cohen's $d = 1.64$, dietary restraint $t(50) = 10.09$ Cohen's $d = 1.73$, eating concern $t(50) = 9.51$ Cohen's $d = 1.70$, weight concern $t(50) = 7.95$ Cohen's $d = 0.1.37$, shape concern $t(50) = 8.25$ Cohen's $d = 1.31$; global severity index $t(50) = 6.60$ Cohen's $d = 1.13$ Diagnosis status of completers: 82.4% minimal residual eating disorder pathology; 76.5% of

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					individuals who binged or purged ceased by the end of treatment
Unified Protocol for the Treatment of Emotional Disorders – Adolescents (UP-A)					
Ehrenreich, J. T., Goldstein, C. M., Wright, L. R., & Barlow, D. H. (2009).	12, 16, & 16 years-old 66.6% male USA (Boston) QA: Weak	Anxiety disorder NOS 33.3% ADHD 33.3% Social phobia 66.66% Generalized anxiety disorder 33.3% Major depressive disorder 33.3%	$n = 3$ 13 sessions		- Anxiety (clinician severity ratings): - Remained the same from initial to post-wait for 2, increased for 1 - Decreased PTP and FU for all 3 - Depression: only assessed for 1; remained the same from initial to post-wait, decreased PTP and FU
Queen, A. H., Barlow, D. H., & Ehrenreich-May, J. (2014).	12-17 yrs old $m = 15.42$ $SD = 1.71$ 57.6% female USA (Miami or Boston) QA: Moderate	GAD 64.41% SAD 44.07% MDD 42.37% OCD 13.56% PD with Agoraphobia 5.08% SP 13.56% PD without agoraphobia 6.78% Tic Disorder 1.69% Anx NOS 11.86% Dys 8.47% Trichotillomania 1.69% ADHD, combined 5.08% Sep Anx 3.39% Dep Dx NOS 10.17% PTSD 1.69% Enuresis 1.69%	$n = 59$ 8-21 weeks 5 modules		RCADS Anxiety: - self-reported anxiety: significant decrease from pre- to -post treatment ($M_{s1} = 4.76$, $SE = 0.74$, $p < 0.001$) - and from post-treatment to follow-up ($M_{s2} = 1.48$, $SE = 0.50$, $p < 0.01$); - parent-rated anxiety from pre- to post-treatment was also significant ($M_{s1} = 4.09$, $SE = 0.70$, $p < 0.001$), - but the post-treatment to follow-up change was not significant - Participants with greater anxiety severity at baseline decreased in anxiety symptoms faster than participants with lower baseline anxiety scores - Participants with faster reduction in anxiety scores during treatment had

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
		ADHD, inattentive 1.69% ODD 1.69% ED NOS 1.69%			slower decreases during the follow-up period RCADS Depression: - Self-reported depressive symptoms significantly decreased PTP ($M_{sl} = 4.82$, $SE = 0.82$, $p < 0.001$), - however, the post-treatment to FU change was not significant; - changes in parent-reported depressive symptoms were not significant
Sherman, J. A., Tonarely, N. A., & Ehrenreich-May, J. (2018).	15 years-old Male USA (Florida) QA: Weak	SAD GAD High depressive and neuroticism symptoms	$n = 1$ 18 sessions		RCADS: - Total anxiety decreased PTP - Social anxiety decreased PTP - Depression decreased PTP Global distress tolerance increased PTP Avoidance (Emotional Avoidance Strategy Inventory for Adolescents) decreased PTP Negative affect (Positive and Negative Affect Schedule–Negative Affect) increased PTP
Seager, I., Rowley, A. M., & Ehrenreich-May, J. (2014).	17 years-old Female USA (Florida) QA: Weak	SAD GAD MDD Impulse control disorder NOS	$n = 1$ 21 weekly sessions 50 min each		Clinician severity ratings: - PTP: SAD (6 to 2), GAD (4 to 0), MDD (4 to 3), impulse control disorder (3 to 2) 6-month FU: met criteria for SAD; GAD & MDD (CSR= 2) subclinical
Cognitive Behavioural Therapy (CBT)					
Kendall, P. C., Safford, S., Flannery-	9-13 yrs old 9-10: 52%	GAD 58.51% SAD 23.40%	$n = 86$ No length specified		Revised Children's Manifest Anxiety Scale (RCMAS) significant ($F(2, 69) = 33.58$, $p < .001$) reduction

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
Schroeder, E., & Webb, A. (2004)	11- 13: 48% 38% female USA (Philadelphia) QA: Moderate	SP 18.09% (primary), 48% (comorbid) ADHD 14% ODD 8% MDD 6% CD 1%	LTFU $M = 7.4$ years		- pre- to post-treatment ($d = 0.91$) - post-treatment to LTFU ($d = 0.30$) Child-reported coping skills (CQ-C) significant increase $F(2, 68) = 32.78, p < .001$ - pre-to-post treatment $d = .95$, and - post treatment to LTFU $d = 0.66$; parent reported coping skills (CQ-P) improved ($F(2, 73) = 134.11, p < .001$) - pre- to post-treatment ($d = 1.42$), and - post-treatment to LTFU ($d = 1.02$) Child reported depression (CDI/BDI) significant decrease ($F(2, 67) = 52.08, p < .001$) - pre- to post-treatment ($d = 0.86$), and - post-treatment to LTFU ($d = 0.20$) Parent reported internalizing (CBCL; $F(2, 75) = 56.54, p < .001$) - pre- to post-treatment decrease $d = 0.93$, and - post-treatment to LTFU $d = 0.69$; Parent reported externalizing (CBCL; $F(2, 75) = 10.05, p < .001$) - pre- to post-treatment decrease $d = 0.30$, and - post-treatment to LTFU $d = 0.29$
Schneider, S. C., La Buissonniere-Ariza, V., Hojgaard, D. R. M. A., Kay, B. S., Riemann, B.	8-17 yrs old $m = 15.4$ $SD = 1.1$ 61.4% female	GAD 60% SAD 45.71% Anx NOS 12.9% PD: 15.71% SEP 2.86% Mutism 1.4%	$n = 70$ 5 days/week, 90 mins each Residential treatment		- SCARED -C significant decrease PTP ($t = 10.71, p < .001, d = 1.28$), 10% of youth demonstrated worse scores on the SCARED-C PTP, 77.1% of youth had an improvement of 25% or more

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
C., Eken, S. C., Storch, E. A. (2018).	Unclear location QA: Weak	ADHD 22.9% OCD 14.3%			○ “Change in SCARED-C total scores was significantly correlated with changes in social anxiety ($r_s = .47, p < .001$), depression ($r_s = .53, p < .001$), and anxiety-related impairment ($r_s = .42, p < .001$).” (pg. 438) ○ Higher pre-treatment SCARED scores associated with greater reduction at post-treatment • Liebowitz social anxiety scale for children and adolescents—self-report decreased PTP ($t = 10.01, p < .001, d = 1.21$), • MFQ decreased PTP ($t = 8.68, p < .001, d = 1.06$), • child Sheehan disability scale—child report decreased PTP ($t = 4.46, p < .001, d = 0.59$)
Unified Protocol for Transdiagnostic Treatment of Emotional Disorders in Children (UP-C)					
Kennedy, S. M., Bilek, E. L., & Ehrenreich- May, J. (2019) ¹	6-12 yrs old • $m = 9.31$ 55.31% female USA (Miami or Michigan) QA: Moderate	GAD 75% SAD 58.33% Sep 8.33% Anx NOS 12.50% OCD 12.50% SP 12.50% Selective mutism 4.17% MDD 4.17% Dep NOS 8.33% ADHD 4.17% Tourette’s 4.17%	$n = 47$ 15 sessions, 90 min each		SCARED Scores: • Parent-rated total anxiety scores: significant PTP reduction ($M_s = -5.02, SE = 0.91, p < .001$), FU reductions not significant • Child rated scores: significant PTP reduction ($M_s = -3.93, SE = 0.62, p < .001$) but FU reduction was not significant CDI scores: • Parent rated: when initial scores controlled PTP and FU reductions were not significantly different;

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					- child rated CDI scores significantly decreased PTP and to FU for the UP-C group ($M_s = -1.04$, $SE = 0.37$, $p < .01$) whereas the control group demonstrated a reduction PTP and increase to FU in child-rated CDI scores Children's Emotion Management Scales: - no significant difference in anger dysregulation scores PTP of FU - significant decrease in sadness dysregulation PTP ($M_s = -0.22$, $SE = 0.05$, $p < .001$) in comparison to other treatment faster reduction observed - worry dysregulation significantly decreased over the course of assessment ($M_s = -0.31$, $SE = 0.08$, $p < .001$); did not differ between groups Emotion Regulation Questionnaire for Children and Adolescents: - cognitive reappraisal: no significant decrease over the assessment period - expressive suppression: no significant change over assessment period Comparison to alternate treatment group: - no significant difference in clinician rated outcomes of principal diagnosis remission among treatment completers (61.90% vs. 57.90%, $\chi^2(1) = 0.067$, $p = .80$, $OR = 1.18$) and ITT groups

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					(54.20% vs. 45.80%, $\chi^2(1) = 0.19$, $p = .77$, OR = 1.28) - All emotional disorders significantly decreased PTP among completers (57.1% vs. 40.00%, $\chi^2(1) = 0.90$, $p = .34$, OR = 1.83) and ITT (50.00% vs. 40.00%, $\chi^2(1) = 1.11$, $p = .38$, OR = 1.88) - No difference between groups at 6-month FU on principal diagnosis or all emotional disorders using the completer or ITT sample - PTP no significant difference between groups on responder status, regardless of analysis sample used; the UP-C group (treatment of interest) was more likely to achieve responder status at 6-month FU when examining scores among treatment completers and not the ITT sample (which did not differ from the comparison group)
Kennedy, S. M., Tonarely, N. A., Sherman, J. A., & Ehrenreich-May, J. (2018).	6-13 yrs old $m = 9.47$ $SD = 1.68$ 53% female USA (Colorado or Miami) QA: Weak	GAD 63.33% SAD 46.67% Sep 16.67% SP 20.00% Anx NOS 6.67% OCD 3.33% Dep NOS 6.67% ADHD 13.33% Mutism 3.33% Dysthymia 1.67% Tourettes/Tic disorder 1.67%	n = 79 15 sessions, 90 min each		SCARED scores: - Child – Pre-treatment social anxiety ($M = 6.73$, $SD = 3.91$) decreased to post-treatment ($M = 4.86$, $SD = 3.31$, $p < .001$; total scores significantly decreased pre- ($M = 25.57$, $SD = 15.87$) to post-treatment ($M = 16.74$, $M = 12.78$, $p < .001$) - Parent – social anxiety decreased pre- ($M = 7.95$, $SD = 4.51$) to post-treatment ($M = 6.36$, $SD = 3.96$); total scores significantly decreased pre- ($M = 28.91$, $SD = 10.81$) to post-treatment ($M = 21.69$, $SD = 9.14$)

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
		MDD 5.00% ODD 5.00%			DASS scores (parent rated): - No significant difference on the anxiety or depression subscales Penn State Worry Questionnaire: no significant difference PTP Remission rates: 51.67% achieved remission of all emotional disorders PTP on the clinician global impression scale (CGI-S) 28.33% were categorized as achieving diagnostic remission (i.e., scoring a 1 or 2 on the CGI-S) - Higher rates of pre-treatment social anxiety were predictive of lower odds of achieving diagnostic remission Reliable change: - Child rated: 43.33% had a reliable change in anxiety PTP (higher with higher initial anxiety & social anxiety scores); - Parent rated: 33.33% achieved a reliable change in anxiety PTP
Dialectical Behaviour Therapy for Adolescents (DBT-A)					
Lenz, A. S., & Del Conte, G. (2018) ^{1, 2}	12-18 yrs old $m = 15.4$ $SD = 1.55$ 60% female	ADHD 6% Anxiety 11% Bipolar disorder 16% Depressive disorder 31%	$n = 103$ 12-24 weeks Group format; partial		SCL-90-R Significantly decreased depression symptoms between groups $F(1, 102) = 8.35, p = .005, g = -0.58$;

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
	USA (Texas or Tennessee) QA: Weak	Mood disorder NOS 32% Other 4%	hospitalization program		- significant reduction in interpersonal sensitivity between groups $F(1, 102) = 18.26, p < .001, g = -0.85$; - no statistically significant difference between groups in anxiety subscale scores; - no statistically significant difference in hostility subscale scores between groups
Brief Psychodynamic Psychotherapy (BPP)					
Muratori, F., Picchi, L., Casella, C., Tancredi, R., Milone, A., & Patarnello, M. G. (2002) ^{1, 2}	6-11 yrs old $m = 8.75$ $SD = 1.6$ 60% male Italy QA: Weak	Anxiety disorder 73.33% Dysthymic disorder 60.00% ODD 20.00%	$n = 30$ 11 weekly sessions over 4 months		CBCL scores: - No significant difference PTP for both groups on total scores - significant difference between groups on total scores from T2 (6-months post-treatment) to T3 (18-month follow-up; $F(1, 50) = 10.59; p = .001$) was seen in the experimental group ($t = 6.035; df = 14; p < .001$) but not control group ($t = 1.066; df = 14; p = .306$) - significant difference over time & between groups on externalizing scores ($F(1, 50) = 7.89; p = .001$); differences PTP not significant but at FU, significant difference between groups ($t = 2.237; df = 28; p = .026$), with the change occurring in the experimental group - internalizing scores significantly decreased over time for both groups ($F(1, 50) = 7.65; p = .001$); no difference between groups

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					Global functioning: groups differed from one another PTP ($t = 2.026$, $df = 28$, $p = .05$) but not at FU with the experimental group showing a greater improvement More children in functional range PTP in the experimental group but differences were non-significant between groups at FU
School-based mental health program for youth					
Robinson, K. E., & Rapport, L. J. (2002).	5-17 yrs old 79% male USA (Utah) QA: Weak	Severe emotional disorder 97% Disruptive behaviour disorders (ADHD, ODD, CD) 77% Mood and anxiety 21% Developmental disorder 4.9% Adj 16.0%	$n = 145$ 6 hours/day, 5 days/week 1 hr individual therapy/week Weekly family therapy		Youth Outcome Questionnaire – • elementary and adolescent age groups improved significantly over time but did not significantly differ in their rates of change in comparison to one another ($F(3,138) = 5.89$, $p < .001$, $\eta^2 = .11$) • Changes in symptoms differed among the groups but both groups had significantly lower symptoms comparing initial scores to approximately 9 months within treatment; elementary aged had greatest decreases right after entry into treatment, for adolescents, the greatest change was between 3 to 6 months in treatment Robinson et al. (2002) 27.5% of total sample was within normal YOQ levels, 50.7% demonstrated symptom improvement PTP; 46.5% demonstrated a reliable change in YOQ scores PTP • Significant decreases in YOQ intrapersonal distress ($F(3, 138) = 3.81$, $p = .012$),

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					interpersonal relations ($F(3, 138) = 5.16, p = .002$), social problems ($F(3, 138) = 3.28, p = .023$), behavioural dysfunction ($F(3, 138) = 4.09, p = .008$), and critical items ($F(3, 138) = 4.55, p = .004$) PTP ○ Somatic subscale was not significantly different • Behavioural dysfunction differed across groups with elementary children having higher scores across the four time periods • Adolescents had lower scores on the social problems subscale at time 4 compared to elementary, but the scores at time 1-3 did not differ
Fear Hunter					
Sevi Tok, E. S., Arkar, H., & Bildik, T. (2016). ^{1, 2}	8-12 yrs old • $m = 9.94$ • $SD = 1.57$ 56.3% male Turkey QA: Weak	SP 18.8% GAD 43.8% SAD 18.8% Sep 18.8% ADHD 18.8% MDD 25.0% Tic disorder 6.3% Stutter 6.3%	$n = 46$ 16 sessions (60 min individual interviews)		SCARED: • Child report anxiety: decreased PTP & FU for CBT & CBT + medication groups; medication only was not significantly different • Parent reported anxiety: decreased PTP & FU for CBT & CBT + medication groups • For both raters, the largest decrease in anxiety was observed in the CBT + medication group CDI: significantly decreased PTP and at FU for the CBT group in comparison to the CBT + medication & medication only groups Quality of life: parent and child reports both demonstrated an increase over time across

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					groups ($F(4,82) = 6.731$; $p = 0.000$, $\eta^2 = 0.247$; $F(4,82) = 2.578$; $p = 0.042$, $\eta^2 = 0.108$) - All 3 groups increased PTP - Medication alone did not increase at FU but the other 2 groups did - Other 2 groups were significantly improved in comparison to the medication only group Negative cognitive errors: decreased significantly across groups over time ($F(2.307,48.44) = 39.765$; $p = 0.000$, $\eta^2 = 0.654$) - CBT & CBT + medication decreased significantly at PTP and FU - CBT & CBT + medication did not differ at PTP or FU in magnitude of change, however, both were significantly better than medication alone at decreasing negative errors
Transdiagnostic Cognitive Behavioural Therapy (TCBT)					
Sharma, P., Mehta, M., & Sagar, R. (2015) ^{1, 2}	10-19 yrs old $m = 13.90$ $SD = 2.60$ 53.1% male India QA: Moderate	SP 65.62% SAD 18.75% PD 3.13% OCD 3.13% GAD 6.25% Agoraphobia 3.23% Co-occurring headache	$n = 63$ (group TCBT $n = 32$) 12 weekly sessions – 2 hour/each 5-6 adolescents/group		Anxiety Scores: - State anxiety scores (STAI-state) differed PTP and across treatments with participants in the Transdiagnostic CBT group demonstrating greater improvements ($F[1,61] = 32.58$, $p < 0.05$, $\eta^2 = 0.35$) in comparison to TAU - Trait anxiety scores (STAI-trait) differed PTP and across treatments with participants in the Transdiagnostic CBT group demonstrating greater improvements

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					($F[1,61] = 12.33, p < 0.05, \eta^2 = 0.17$) compared to TAU Headache scores differed PTP and across treatments with participants in the Transdiagnostic CBT group demonstrating greater improvements ($F[1,61] = 20.83, p < 0.05, \eta^2 = 0.25$) compared to TAU Children's global assessment scale (CGAS; clinician rated): the improvements on global functioning were significantly better in the TCBT group ($F[1,61] = 234.99, p < 0.05, \eta^2 = 0.79$) compared to TAU
Emotion Regulation and Impulse Control Treatment (ERIC)					
Sloan, E., Hall, K., Simpson, A., Youssef, G. J., Moulding, R., Mildred, H., & Staiger, P. K. (2018).	16-20 yrs old • $m = 19.1$ 60% female Australia QA: Weak	MDD 60% PTSD symptoms 20% Anxiety 50% BPD 10% PD 10% BN 10% Substance induced psychosis 10% Co-occurring substance use disorder (e.g., methamphetamine, cannabis, alcohol, GHB, heroin, ecstasy, inhalants, hallucinogens)	$n = 10$ 12 modules 4-6 weeks 10-20 min weekly Residential treatment		DERS= Difficulties in Emotion Regulation Scale: • 80% experienced a reliably significant decrease in DERS total scores; • 60% had a clinically significant reduction AFQ-Y= Avoidance and Fusion Questionnaire: • 70% had a reliable decrease PTP & • 60% had a clinically significant reduction; DASS-A= Anxiety subscale of the Depression Anxiety and Stress Scale: • 60% had a significantly reliable reduction & • 50% had a clinically significant reduction; DASS-D= Depression scale of the Depression Anxiety and Stress Scale • 60% had a reliable significant change PTP,

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					50% had a clinically significant decrease, 10% had a clinically significant increase PTP One youth (10%) did not have a reliable or clinically significant change on any measure (content was reduced into 3 sessions instead of 4 -6)
Brief Behavioural Therapy (BBT)					
Weersing, V. R., Rozenman, M. S., Maher-Bridge, M., & Campo, J. V. (2012).	8 yrs old Female 17 yrs old Female USA (California or Ohio) QA: Weak	Anxiety somatic complaints SAD Depression symptoms Stomach aches (both)	<i>n</i> = 2 6 Sessions		SCARED: Decreased PTP on parent & child reports for both Depression (MFQ) decreased PTP for parent & child reports (15- & 10-point, 16- & 4-point reduction) for both youth Somatic symptoms (CSI) decreased PTP for one youth on child & parent reports (16- & 11-point reduction); decreased on child report (13-points) but increased on parent report (4-points) for one youth
FIRST					
Weisz, J., Bearman, S. K., Santucci, L. C., & Jensen-Doss, A. (2017).	7-15 yrs old <i>m</i> = 11.03 <i>SD</i> = 2.69 Half male USA	ADHD 66.6% Adj 4.00% SP16.7% Sep 12.5% GAD 37.5% SAD 16.7% OCD 8.3% PD 4.16% Anx NOS 20.8%	<i>n</i> = 24 45-60 minutes individual therapy		Weekly changes: - parents and youth reported significant improvements on the brief problem checklist over the course of treatment with weekly assessments (parent slope = -0.80, <i>p</i> < .001, <i>ES</i> = .66; youth slope = -0.35, <i>p</i> = .013, <i>ES</i> = .41) - Both were significant for externalizing scores on the BPC as well (parent slope = -

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
	QA: Moderate	ODD 20.8% Disruptive behaviour disorder 41.7% Elimination disorder 4.2% MDD 12.5% Psychosis 4.2% ASD 4.2% Tic disorder 4.2%			0.38, $p = .001$, ES = .67; youth slope = -0.22, $p = .023$, ES = .62) • Only parents were significant for the internalizing scale on the BPC (parent slope = -0.42, $p = .004$, ES = .29) • Both reported significant reductions on the Top Problems measure (parent slope = -0.78, $p < .001$, ES = 1.91; youth slope = -0.72, $p = .001$, ES = 2.66) • Clinicians endorsed significant improvements on the Clinical Global Impression measure (slope = -0.68, $p < .001$, ES = 3.43) PTP on CBCL: • total problems (parent: 8.68-point decreases, $p = .012$, ES = .85; youth: 12.62-point decreases, $p < .001$, ES = 1.15), • internalizing (parent: 6.08-point decreases, $p = .038$, ES = .51; 11.18-point decreases, $p = .005$, ES = .94), • externalizing (parent: 8.73-point decreases, $p = .021$, ES = .93; youth: 8.62-point decreases, $p = .008$, ES = .94) • “fewer youths scored above the clinical cutoff on the Total Problems score (pre = 33.3%; post = 11.8%), Internalizing score (pre = 54.2%, post = 29.4%), and Externalizing score (pre = 33.3%; post = 8.3%)... fewer youth scored above

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					the clinical cutoff on the Total Problems score (pre = 17.4%, post = 5.3%), Internalizing score (pre = 13.0%, post = 10.5%), and Externalizing score (pre = 17.4%, post = 5.3%; pg.55)”
Inpatient Treatment					
Wells, P., & Faragher, B. (1993).	13-18 years-old <i>m</i> = 181 months <i>SD</i> = 13 months 50.91% female England QA: Weak	Emotional, conduct, or mixed emotional and conduct disorders	<i>n</i> = 165 16 weeks 4-month average stay Day treatment unit		Significant reductions in mean problem scores as rated by parents, professionals and youth when comparing baseline to 1-month follow-up - youth with mixed conduct & emotional disorders significant reduction in mean problem scores from baseline to 1-month FU for all raters; significant difference between youth & parents at baseline; no significant reduction in overall scores from 1 month FU to 1-year FU or 2-year FU - Youth with emotional disorders showed a significant reduction in mean problem scores from baseline to 1-month FU for all raters, no significant changes at 1-year or 2-year FU; parents rated problems more severe at 1-month FU than youth 2-year FU: - youth rated as improved included 79% rated by youth, 74% as rated by parents, 69% as rated by professionals; 20%, 24%, & 29% were rated (respectively) as unchanged; 1%, 2%, & 2% were (respectively) rated as worse after treatment

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
Cognitive Behavioural Therapy (CBT) – The Clear-Thinking Programme					
Yeo, L. S., Wong, M., Gerken, K., & Ansley, T. (2005).	6-15 years-old • $m = 9.9$ 92.31% female USA (Midwest) QA: Weak	ADHD 54% ODD 23% Adj 15% ASD 8%	$n = 13$ 1 month		Clinical condition significantly improved as rated by clinicians ($F = 8.8$, $p = 0.002$) and teachers ($F = 6.56$, $p = 0.0249$) PTP significant improvements observed in: - Clinician rated global assessment of functioning (initial $M = 37.54$, post-treatment $M = 52.31$, FU $M = 54.25$), - Child reported : - BASC emotional symptom index (initial: $M = 60.25$; At-Risk Range; post-treatment: $M = 47.50$; Normal Range), - clinical maladjustment (initial: $M = 57.88$; Normal Range; post-treatment: 46.50; Normal Range), - Teacher reported: Achenbach TRF internalizing(initial $M = 71$, clinical range; posttreatment: $M = 61$, normal range) No significant improvements on parent reports (CBCL internalizing, externalizing, & total problems; BASC PRS behaviour symptom index, internalizing, externalizing, adaptive skills) - No significant changes in child reported BASC school maladjustment or adaptive skills - No significant changes on teacher rated TRF externalizing, total problems; BASC

Citation(s) ¹	Participant age, and sex	Presenting concerns	Sample size Length of treatment	Study Design Global QA Rating	Treatment outcomes
					behaviour symptom index, internalizing, externalizing, school problems, adaptive skills 62% successfully re-integrated into school
Note: ¹ Presenting concerns listed for the transdiagnostic intervention group only. ² Age and sex listed for transdiagnostic group. QA = quality assessment rating. GAD = generalized anxiety disorder; SAD = social anxiety disorder or social phobia; Sep = separation anxiety; SP = specific phobia; PD = panic disorder; Anx NOS = anxiety disorder not otherwise specified; MDD = major depressive disorder; PDD = persistent depressive disorder; ODD = oppositional defiance disorder; CD = conduct disorder; ADHD = attention deficit hyperactivity disorder; OCD = obsessive compulsive disorder; PTSD = post-traumatic stress disorder; ED = eating disorder; BN = bulimia nervosa; NOS = not otherwise specified; Adj = adjustment disorder; ASD = autism spectrum disorder; USA = United States of America; PTP = pre- to post-treatment; FU = Follow-up; CDI = Children's Depression Inventory; DASS = Depression Anxiety and Stress Scale; MFQ = Moods and Feelings Questionnaire; RCADS = Revised Children's Anxiety and Depression Scale; SCARED = Screen for Child Anxiety Related Disorders; SCL-90-R = Symptom Checklist-90-Revised; BASC = Behavior Assessment System for Children; CBCL = Child Behavior Checklist					

Table 7

Study 2 Presence of Intervention Components in Reviewed Studies

[illegible]

Total number of studies	18	22	9	21	22	10	3	2	22	11	15	10	6	5	2	9	14	15
%	69.23	84.62	34.62	80.77	84.62	38.46	11.54	7.69	84.62	42.31	57.69	38.46	23.08	19.23	7.69	34.62	53.85	57.69

Table 8*Performance and Change Objectives*

Performance Objective	Associated Change Objectives
1. Youth and caregivers will be able to identify emotions	1.1. Can list numerous emotions
	1.2. Can list somatic features of emotions (e.g., shakiness, sweating, racing heart, etc. with anxiety)
	1.3. Youth can list the elements of emotional experiences (thoughts, feelings, & behaviours; brain, body, behaviour; medicine wheel)
2. Youth and caregivers will be able to identify the cause or influential factors for emotions	2.1. Can discuss the function of emotions (e.g., motivating, guiding our behaviour, etc.)
	2.2. Demonstrate increased knowledge of biological factors that influence the development of emotions (e.g., hunger, sleep, screen time, being too warm/cold, feeling uncomfortable in clothing, etc.)
3. Youth will have an increased knowledge of the types of cultural interventions and practices available	3.1. Cultural teachings will be embedded into every session
	3.2. Cultural providers will deliver relevant teaching for each session
	3.3 Youth & caregivers are aware of available organizations and services
4. Youth will be able to communicate about emotions before they are dysregulated	4.1. Youth can engage in discussions about common/difficult emotional experiences
	4.2. Youth will be able to identify situations that are likely to cause intense/difficult emotions
	4.3. Youth will demonstrate an awareness of bodily cues that indicate one's emotions
	4.4. Youth will develop an awareness of autonomic nervous system function & how it is overactive (e.g., fire alarm analogy)
	4.5. Youth will demonstrate an awareness of how behaviour is learned overtime & through interactions with others
	4.6. Will have discussion of long-term vs short term effectiveness of avoidance (i.e., regarding experiential avoidance, anxiety sensitivity, mindfulness, negative appraisals (e.g., rumination) and attributions)
	4.7. Will engage in discussions & planning about strategies to try to decrease intensity of emotion (e.g., toolbox of things to try with depression)
5. Youth will be able to tolerate intense emotions without avoidance	5.1. Youth have an awareness of common avoidance strategies and the type(s) of avoidance they engage in (e.g., school avoidance, running away from residence, not engaging in interactions with caregivers, not attending treatment, not practicing skills at home)

	5.2 Youth is able to demonstrate mindfulness of emotion (i.e., identification of emotion & awareness of what it might be indicating) as he/she is experiencing it
	5.3. Youth demonstrate an understanding of emotional & experiential avoidance prolonging the emotional experience overtime (after-effects of emotions)
	5.4. Youth demonstrate a willingness to accept negative emotional states
	5.5. Youth demonstrate self-compassion/ understanding in why they are experiencing the emotions
	5.6. Youth demonstrate an understanding the difference between urge & action
6. Youth will develop emotional regulation strategies that are healthy for the long-term sustainability	6.1. Youth have identified strategies to use when emotions arise in order to remain present (create coping skills cards for different emotions; coping ahead - envisioning how they can use them in difficult situations; opposite actions)
	6.2. Youth have attempted these strategies and reflected on how well they work to refine their plans (e.g., paced breathing)
7. Youth will develop supportive peer relationships	7.1. Youth will identify activities or interactions they can engage in with friends during each session
8. Youth will engage in fulfilling, rewarding, and socially accepted recreational activities during each session	8.1. Having a list of activities to try and see if they are a good fit (e.g., land-based activities, beading, sewing, drumming, dancing, etc.)
	8.2. Awareness that practice may be needed to fully enjoy activities
9. Youth will not engage in self-harm or suicidal activities	9.1. Youth will develop a safety plan about how to cope when these arise
	9.2. Access to instruments used in self-harm or suicide attempts will be restricted
10. Caregivers will support the treatment process	10.1. Communication/education about the importance of caregiver involvement
	10.2. Regular communication with caregivers about current therapy strategies and goals
	10.3. Identification of how to generalize these at home
11. Youth will be engaged in the treatment process	11.1. Therapist will engage in cooperative goal setting and treatment delivery
	11.2. Therapist and treatment developers will view youth as personal experts
	11.3. Clinicians will prioritize relationship with client
	11.4. Therapist will engage in interactive and hands-on activities for knowledge and skill development

Table 9*Study 3 Daily Schedule for Transdiagnostic Group Intervention*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MORNING (10am-12pm)	Sharing circle Orientation Activity: Group rules and goals Cultural activity: Smudging teachings	Sharing circle Emotional awareness Activity: Scavenger hunt Cultural activity: medicines during scavenger hunt; feather teachings	Sharing circle Opposite action Activity: hopscotch/maze Cultural activity: Love teaching	Sharing circle Problem solving (discussion) Cultural activity: Storytelling & flute	Sharing circle Review of what has been learned (in a jeopardy game) Cultural: Medicine wheel scavenger hunt
LUNCH (12-1pm)	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
AFTERNOON (1-3pm)	Orientation Activity: Create tie dye t-shirts Cultural activity: painting rocks; medicine wheel painting Gratitude circle	Emotional awareness Activity: Coping skills box Cultural activity: Singing and drumming Gratitude circle	Opposite action Activity: role plays Cultural activity: Drum and dance Gratitude circle	Mindfulness Activity: Orange game/nature walk Cultural activity: 7 Grandfather teachings activity Gratitude circle	Qualitative interviews and questionnaires Gratitude circle

Table 10*Study 3 Acute CANS Scores*

Item or Scale	Range (Upper – Lower)	<i>M</i>	<i>SD</i>
Mental Health Needs Total	5 - 16	10.4	4.83
Psychosis		0	0.00
Anxiety		1.8	0.45
Mood		0.8	0.84
Attention Deficit/ Impulse Control		1.2	1.10
Oppositional Behaviour		1	0.71
Conduct		0.6	0.89
Emotional Control		1.4	0.89
Parent-Child Relationship Problems		0.4	0.55
Adjustment to Trauma		0.8	0.84
Autism Spectrum Disorder		0.2	0.45
Situational Consistency		1	1.00
Temporal Consistency		1.2	1.10
Risk Behaviours Total	0 - 6	1.6	2.51
Family/Caregiver Needs and Strengths Total	0 - 3	1.2	1.30
Functioning Total	0 - 11	4.4	4.56
Care Intensity Total	0 - 1	0.2	0.45
Individual Strengths Total	8 - 18	13.2	3.96

Table 11*Study 3 BASC-SRP Raw Scores on Composite Scales for Each Child*

Child	School Problems		Internalizing Problems		Inattention/ Hyperactivity		Emotional Symptoms Index		Personal Adjustment	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
12	159	169	361	381	120	144	346	350	176	188
31	144	136	382	372	139	135	381	353	162	181
43	97	117	327	331	126	120	347	336	161	159
77	100	86	302	295	121	114	304	288	201	201
<i>M</i>	125	127	343	344.75	126.5	128.25	344.5	331.75	175	182.25
<i>SD</i>	31.23	34.77	35.51	39.67	8.74	13.72	31.52	30.09	18.64	17.58

Table 12*Reliable Change Indices for the BASC-3*

	BASC-SRP Reliable Change Indices					BASC-PRS Reliable Change Indices			
	School Problems	Internalizing	Inattention/ Hyperactivity	Emotional Symptoms	Personal Adjustment	Externalizing	Internalizing	Behavioural Symptoms	Adaptive Skills
Child 12	0.20	0.11	0.33	0.03	0.06	-0.23	-0.23	-0.06	-0.05
Child 31	-0.20	-0.06	-0.05	-0.15	0.13	0.19	0.50	0.17	0.18
Child 43	0.48	0.03	-0.08	-0.05	-0.02	-0.09	0.08	0.11	0.05
Child 77	-0.32	-0.03	-0.03	-0.10	0.00	-0.47	-0.57	-0.56	-0.05

Note: * $p < .10$; ** $p < .05$;

Table 13*Study 3 Group Level Scores on the FNCWM*

Subscale	<i>M</i>	<i>SD</i>
General Wellbeing	55.6	12.84
Traditional Activities	25.8	5.17
Social Engagement	20.4	2.30
Total Score	104	18.93

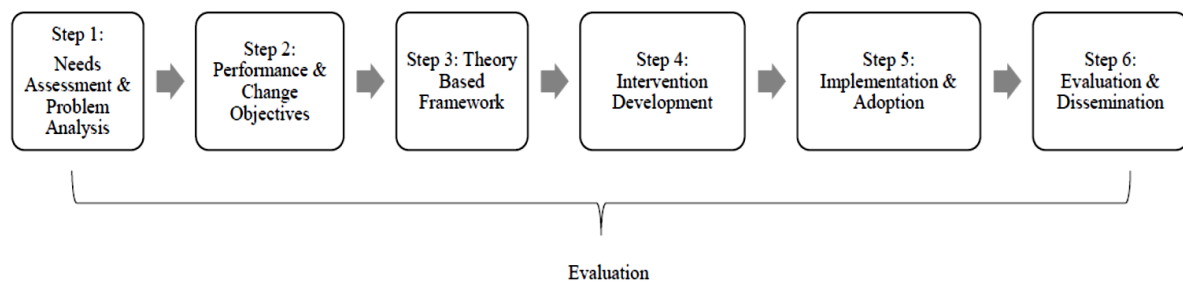
Figure 1*Overview of intervention mapping process*

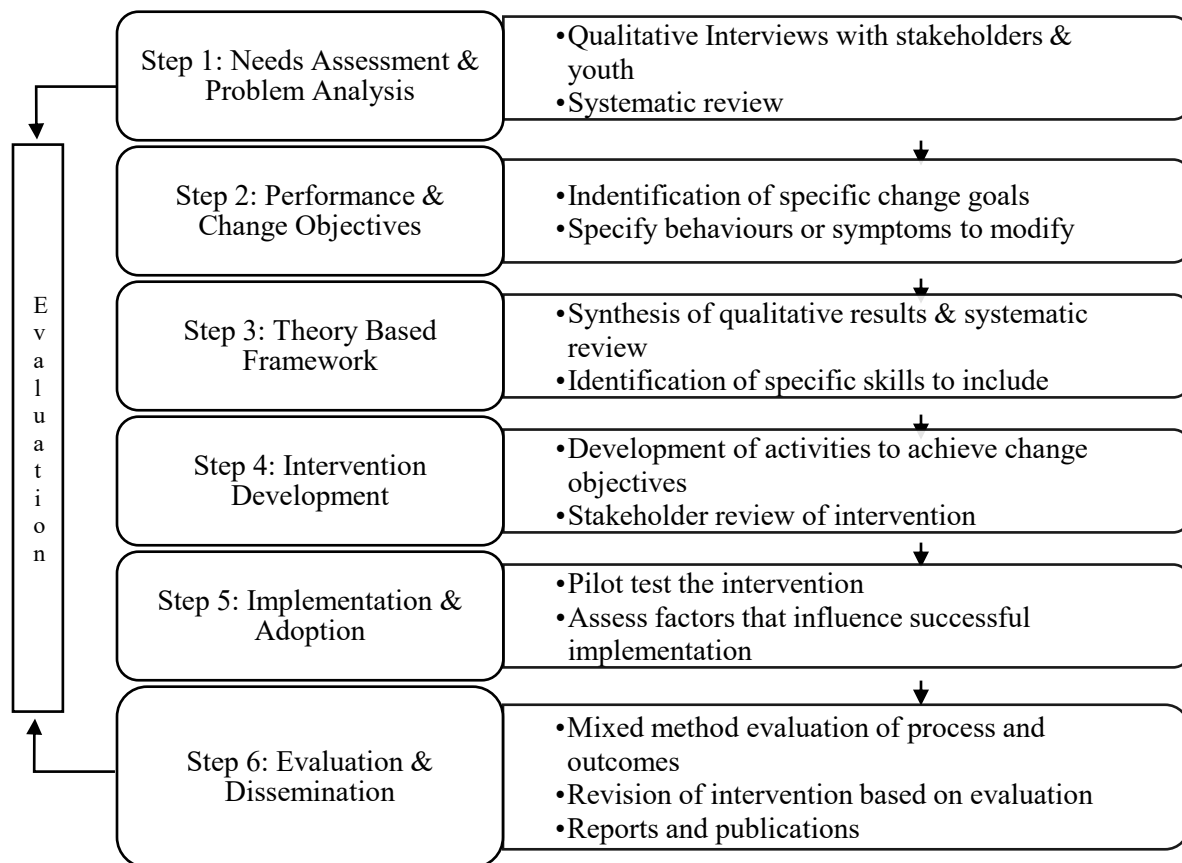
Figure 2*Intervention Mapping Steps for the Current Research*

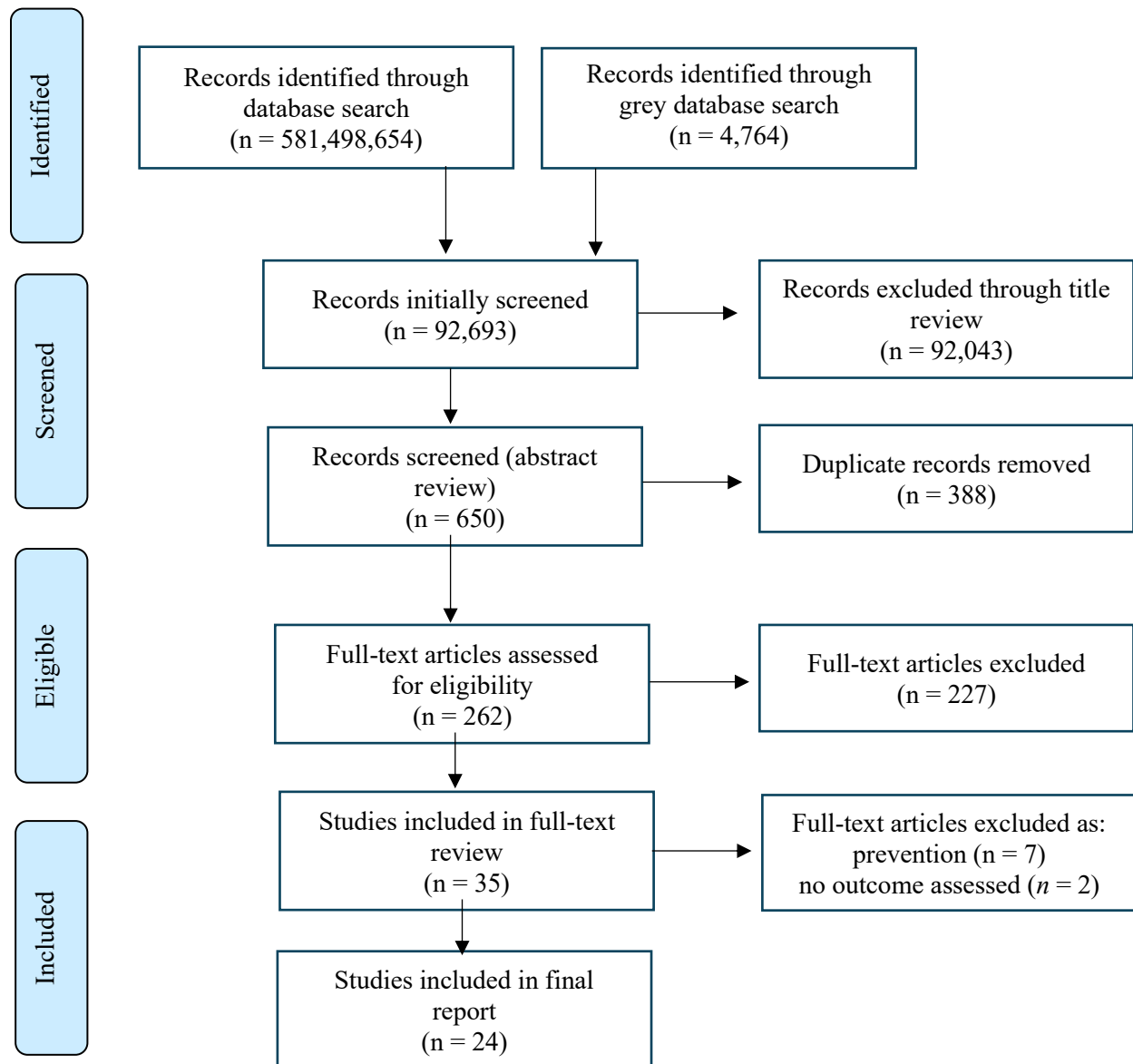
Figure 3*Study 2 PRISMA Diagram of Study Selection Process*

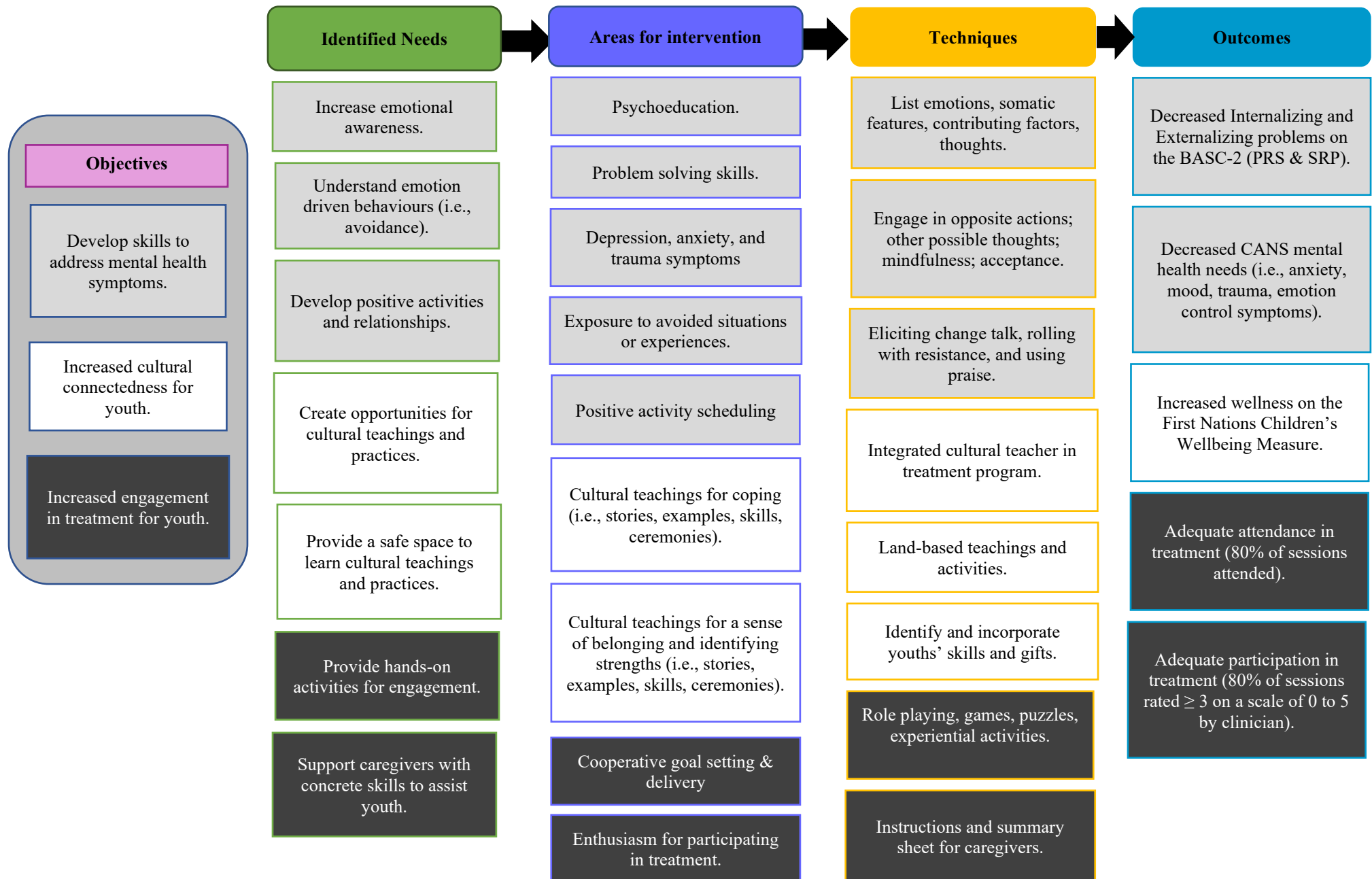
Figure 4*Study 3 Logic Model for Treatment Development*

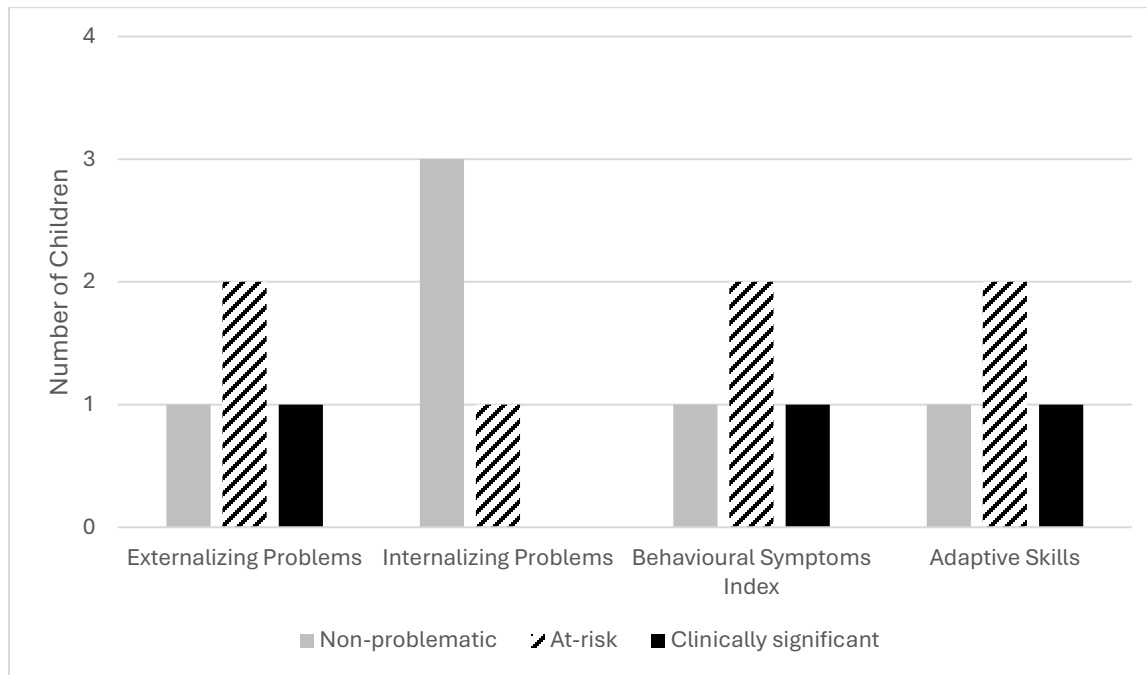
Figure 5*Study 3 Severity of Symptoms Rated by Parents Pre-Intervention*

Figure 6

Study 3 Pre-Intervention Symptom Severity as rated on the SRP

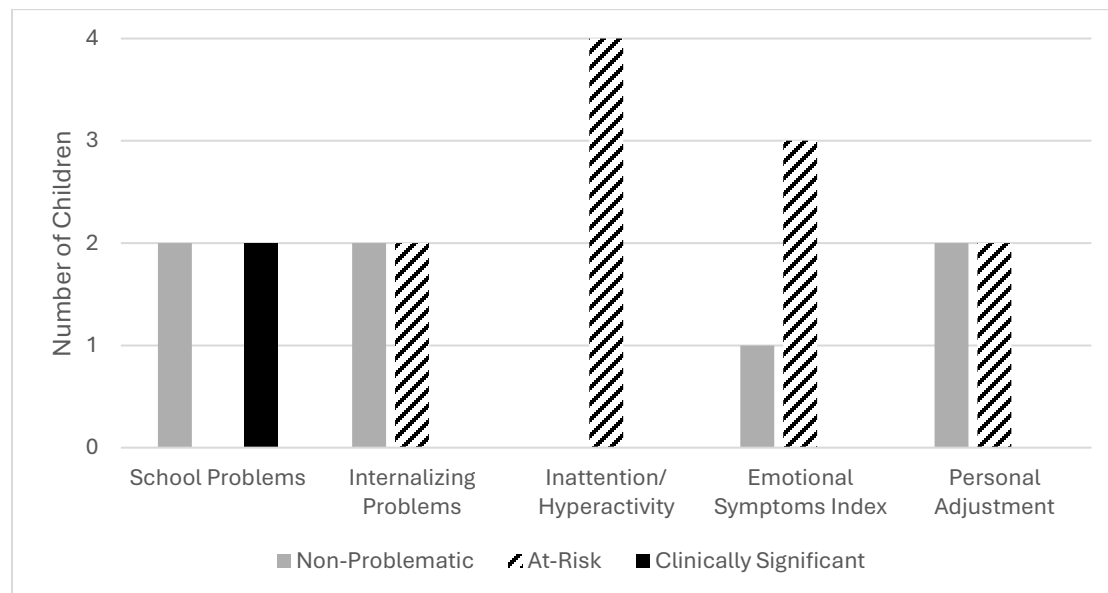


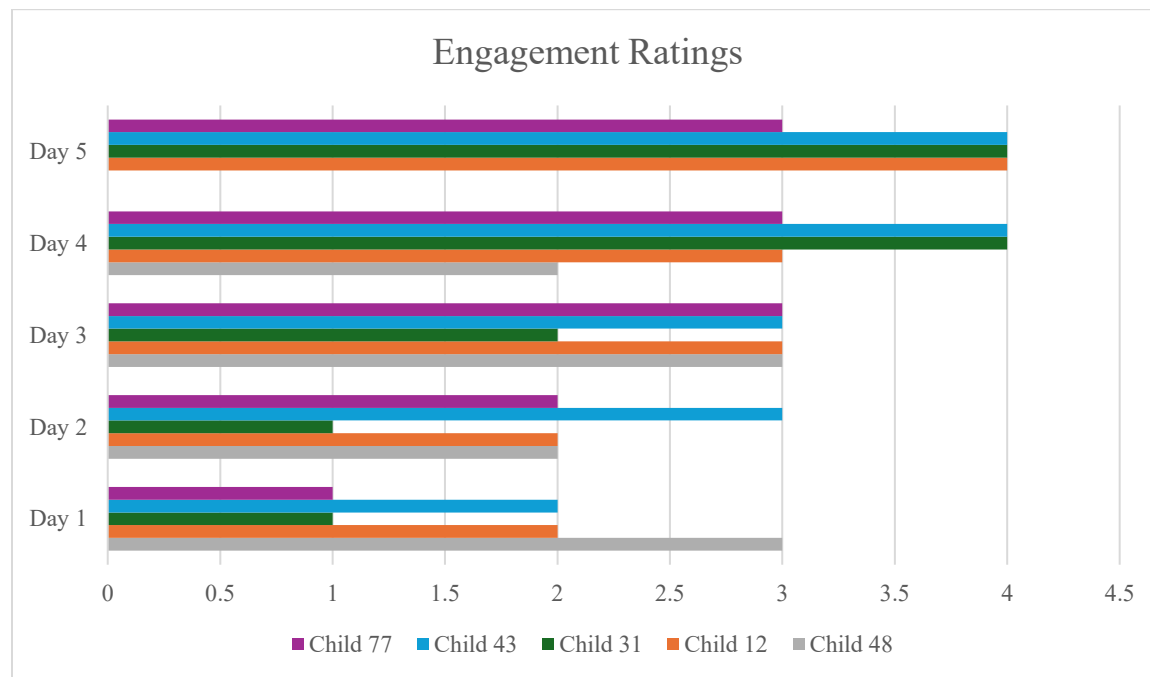
Figure 7*Study 3 Engagement Ratings During Summer Camp Treatment*

Figure 8:
Child 12 PRS Scores

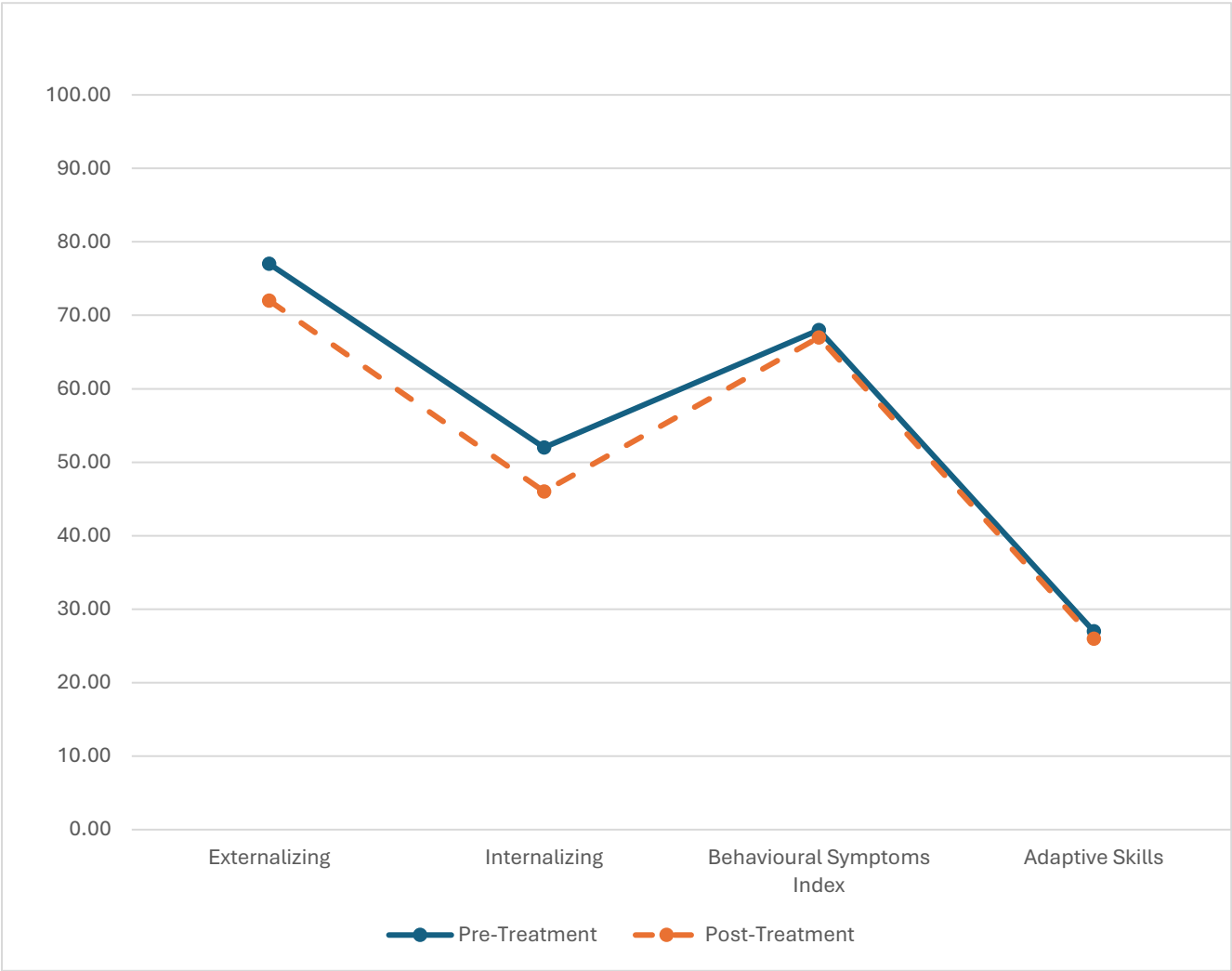


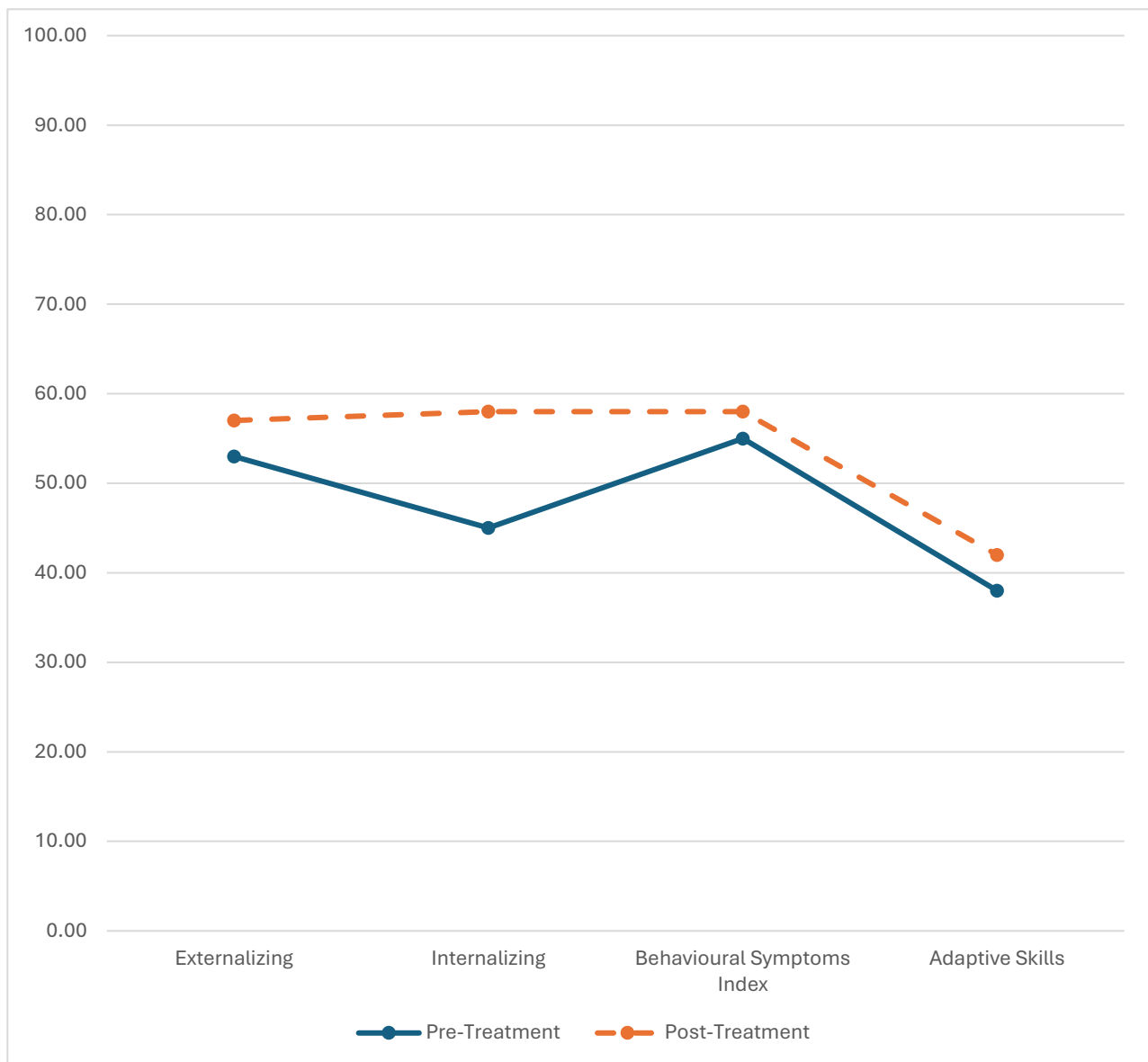
Figure 9*Child 31 PRS Scores*

Figure 10:

Child 43 PRS Scores

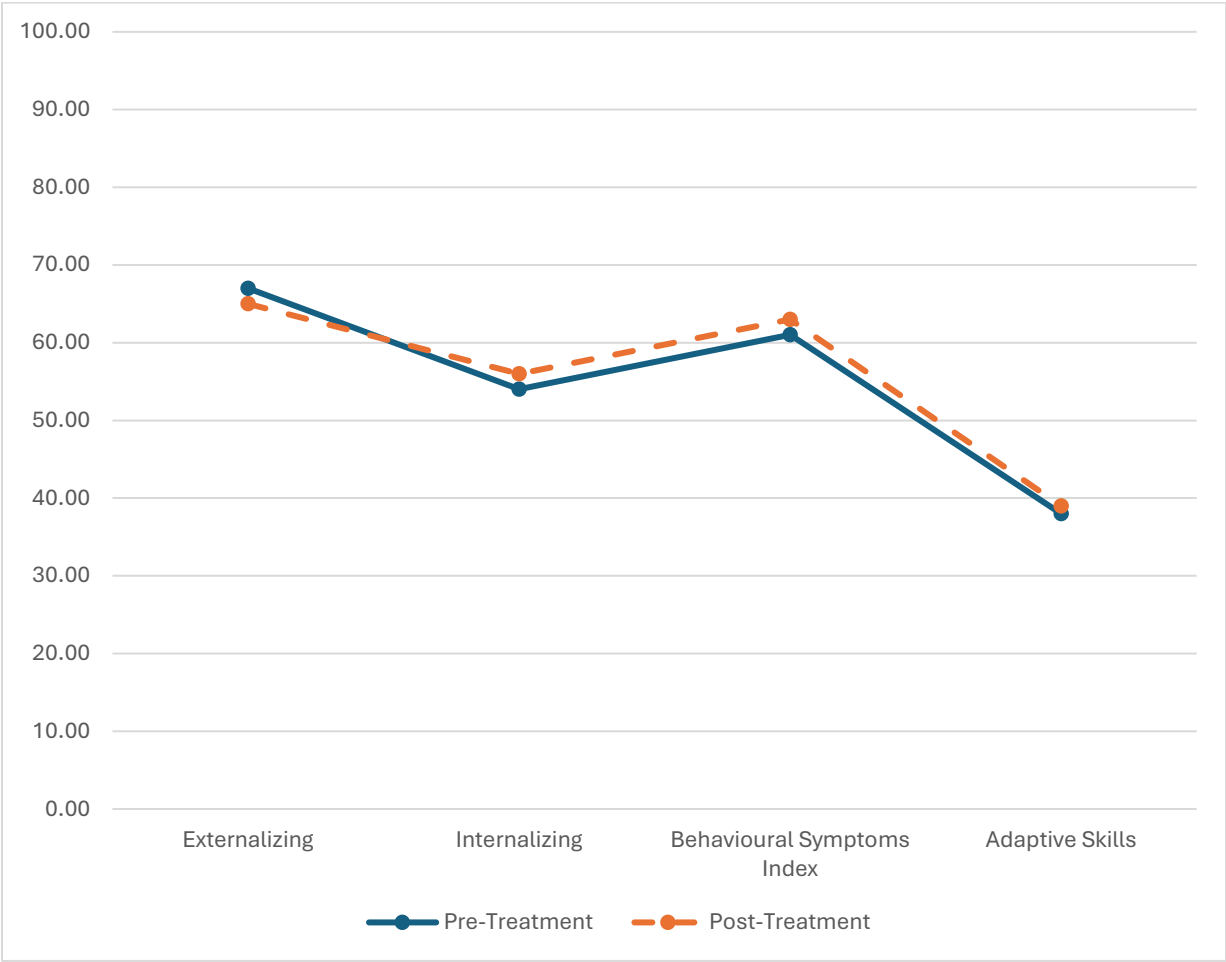


Figure 11

Child 77 PRS Scores

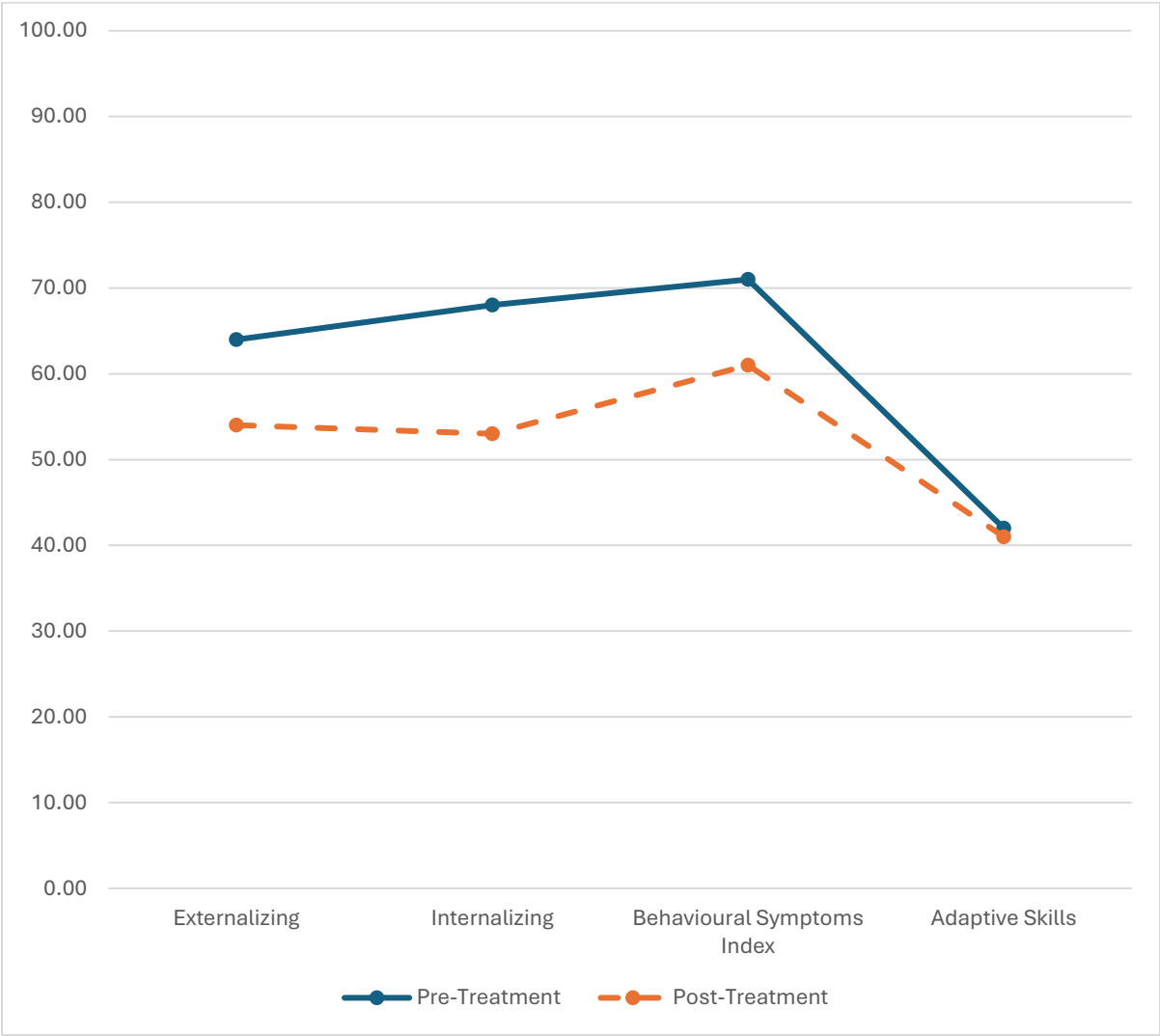


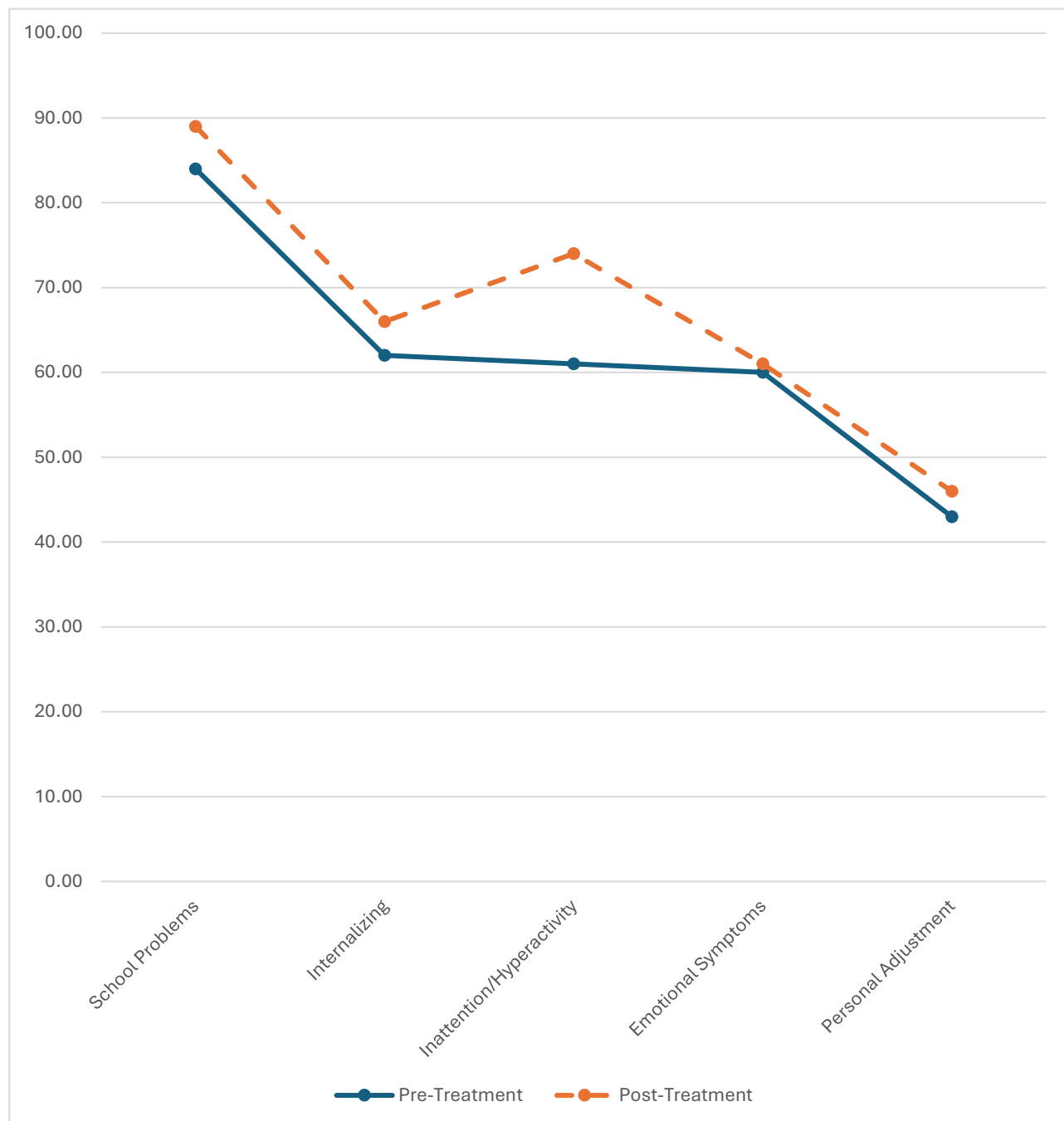
Figure 12*Child 12 SRP Scores*

Figure 13*Child 31 SRP Scores*

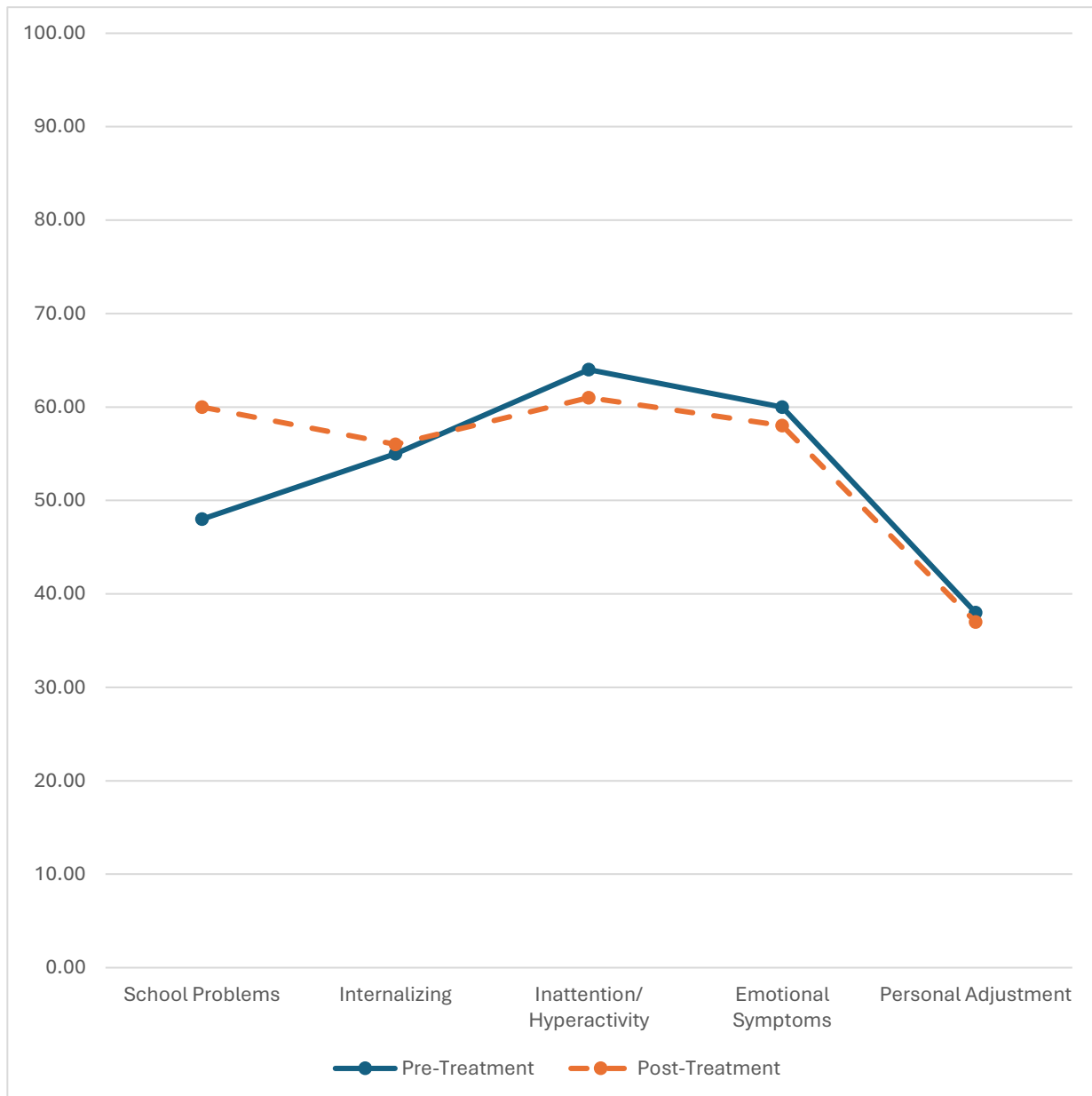
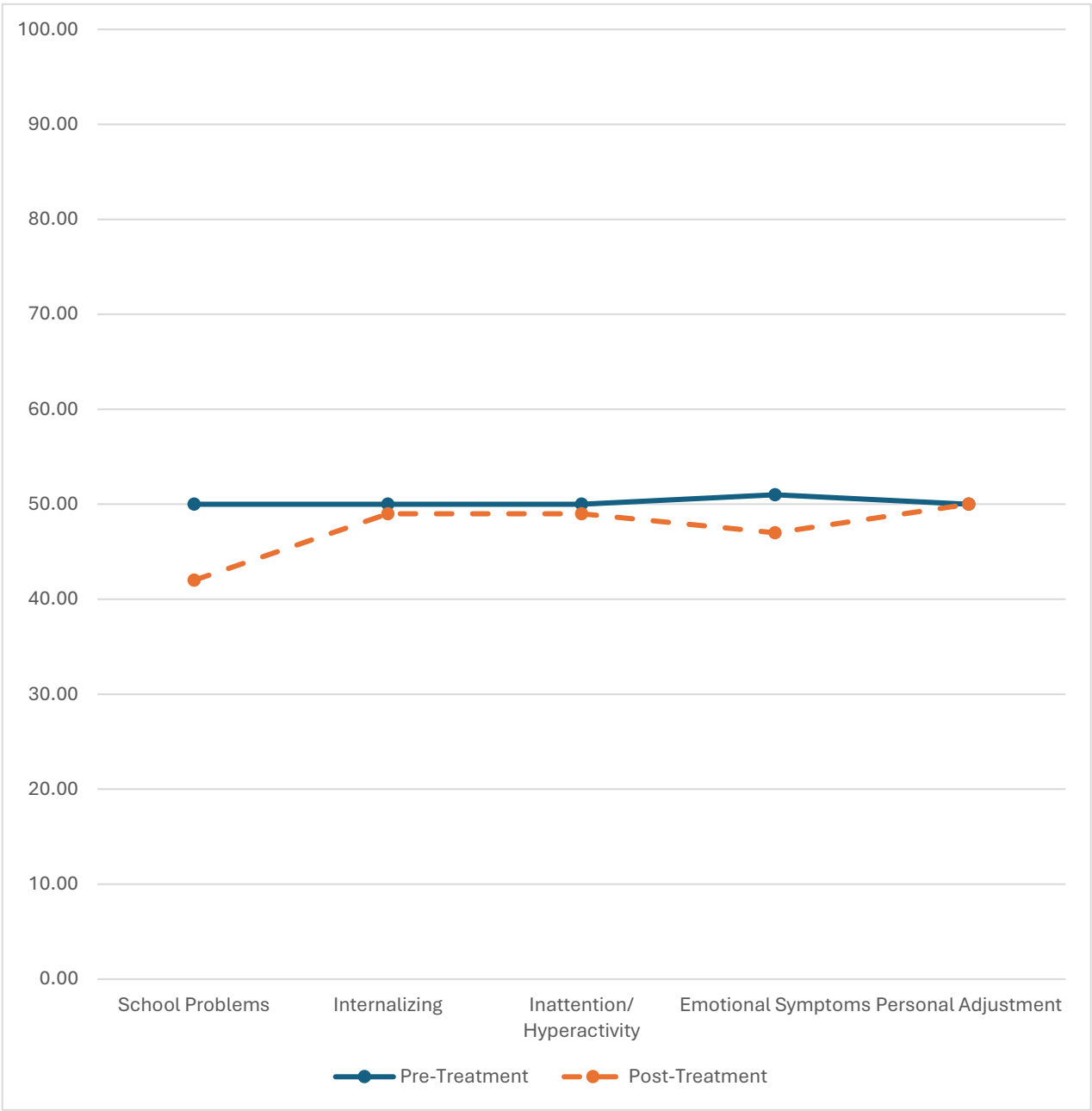
Figure 14*Child 43 SRP Scores*

Figure 15
Child 77 SRP Scores



Appendix A: Research Ethics Board Approval Letter for Study 1 Qualitative Needs**Assessment**

Research Ethics Board
t: (807) 343-8283
research@lakeheadu.ca

July 10, 2019

Principal Investigator: Dr. Christopher Mushquash
Co-Investigator: John Dixon
Research Assistant: Abbey Radford
Student: Kristy Kowatch
Faculty of Health and Behavioural Sciences\Psychology
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1

Dear Dr. Mushquash and research team members:

Re: Romeo File No: 1467224
Granting Agency: CIHR project grant/CIHR Doctoral Research Award
Agency Reference #: 1466374/146635

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Qualitative assessment of perceived treatment needs for First Nations' children".

Ethics approval is valid until July 10, 2020. Please submit a Request for Renewal to the Office of Research Services via the Romeo Research Portal by June 10, 2020 if your research involving human participants will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Access the Romeo Research Portal by logging into myInfo at:

<https://erpwp.lakeheadu.ca/>

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Best wishes for a successful research project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kristin Burnett".

Dr. Kristin Burnett
Chair, Research Ethics Board

/sm

Appendix B: Demographic Questionnaires for Needs Assessment**Cultural and Community Worker Questions (service providers/program developers)**

Age _____

Gender: Female Male I identify as: _____ Prefer not to say

Organization of employment: _____

Length of employment: 1-2 years 2-5 years 6 -10 years 10-15 years 16+ years

Traditional knowledge keeper: Yes No

Elder: Yes No

Education (select all that apply):

☐ Less than high school☐ High school diploma☐ College certificate or degree☐ Bachelor's degree☐ Master's degree☐ Doctorate**Parent/Caregiver Demographic Questions:**

Age: _____

Gender: Male Female Other

Relation to youth:

☐ Biological parent☐ Biological grandparent☐ Biological aunt or uncle☐ Kinship caregiver☐ Other: _____

Appendix C: Semi-structured Interview Questions for Cultural and Community Workers

- Tell me about the children that you see who would benefit from mental health treatment:
 - What indicates to you that they would need mental health treatment?
 - What types of difficulties do they experience?
 - What kinds of symptoms do they have?
 - What kinds of treatments do they currently receive?
 - How well do they seem to work?
 - What are some things that tend to work well?
 - What doesn't usually work well?
 - Are there any differences in what works for who? (*If yes*) Tell about those differences
 - Tell me about the spiritual and cultural healing practices that are integrated into treatments you provide.
 - Do you think this is adequate?
 - What practices do you find resonate with most people?
 - Tell me about the needs of your clients that are not being met with the current treatments
- If you could develop an ideal treatment for the types of youth you see, what would you include?
 - what are the top 3 things you would want to have in a treatment?
 - What kind of activities would get them excited (or involved) in treatment?
 - What kinds of strategies work the best?
 - Who do they work for?
 - Should culture be included? How? And why?

- What is the best way to implement these services?
- What should be avoided in implementing services?
- What kind of organizational obstacles might get in the way?
 - Do you have adequate resources to conduct the type of treatment you wish? For example, enough space or enough resources (e.g., booklets/workbooks)
 - What can be done to lessen the effects of these?

Cultural and community worker Questions (cultural knowledge keepers/Elders):

- Tell me about the children in your community that might not be doing as well as other children:
 - What areas are they not doing well in?
 - Why do you think they might not be doing quite as well?
 - How do their thoughts influence how they are doing?
 - How do their interactions with others affect how well they are doing?
 - How does their involvement in family and community events or activities influence how they are doing?
- What can be done by mental health workers and organizations to help them do better?
 - What types of skills would be most helpful to most people?
 - What types of lessons should be included?
 - Should culture be included in treatments? (*If yes*) How should it be included?
 - What types of activities should be included?
 - Are these appropriate for everyone? Is it okay for people from both sexes to engage in the activity?
- What types of things should be avoided in providing children with mental health services?

- Explain why

Appendix D: Semi-Structured Interview Questions for Community Members

- Tell me about your child or children:
 - What types of activities do they like doing?
 - What are they good at?
 - What is their health like?
 - Physically
 - Emotionally
 - Mentally
 - Spiritually
- Tell me what helps your child calm down when he/she/they are upset
 - When does it work (all the time, some of the time?)
 - Who does it work for (if the person has more than one child)? Why do you think it works for them & not others?
- What makes them more upset?
 - When does it upset them (all the time, some of the time)?
 - What's going on when this happens?
- What types of mental health services have you or your child/children been involved with?
 - Were they helpful or not helpful?
 - What made them helpful/not helpful?
 - What would you like to see changed about those services?
- Tell me about your experiences of your spiritual needs being met through treatments.
How well were they met?

- What kind of cultural healing practices were implemented in therapy that you found beneficial?
- What are some things that might get in the way of using mental health services for your child?
- What could your child learn to help them cope with their emotions better?
 - Why do you think that would work?
 - Would cultural skills be helpful? If so, which ones and for whom?

Appendix E: Semi-Structured Interview Questions for Youth

- What activities do you do that make you feel good?
 - What makes you feel happy?
 - What makes you feel like you know what you're doing?
 - What makes you feel like you're strong or tough?
- Do you engage in traditional or cultural activities? (*If yes*)
 - How do you feel when you are doing them?
- What kind of emotions and feelings do you feel most often?
 - How do you experience them? (e.g., in your body, your attitude, etc.)
 - Are these emotions that you want to feel?
 - What kinds of things do you do to change how you're feeling?
 - How well does that work?
 - What works the best?
 - What makes things even worse?
- What would you like to be able to learn about emotions and changing or controlling them?
- What are you the most excited about in life right now?

Appendix F: Acute Child and Adolescent Needs and Strengths Assessment

CHILD AND ADOLESCENT NEEDS AND STRENGTHS (CANS)				CANS-MENTAL HEALTH ACUTE			
Child's Name:		DOB:		Gender: [] M [] F		Race/Ethnicity:	
Caregiver(s):			Form Status:	[] Initial	[] Subsequent	[] Annual	[] Discharge
			Case Name:				
			File #:				
Assessor:		Date of Assessment					

Insert an X into appropriate box

MENTAL HEALTH NEEDS				
0 = no evidence	1 = history, mild, suspicion			
2 = moderate, action needed	3 = severe, disabling, dangerous, immediate action needed			
	0	1	2	3
Psychosis				
Anxiety				
Mood				
Attention Deficit/Impulse Control				
Oppositional Behaviour				
Conduct Behaviour				
Emotional Control				
Parent-Child Relational Problems				
Adjustment to Trauma				
Autism Spectrum				
Situational Consistency				
Temporal Consistency				
Comments:				

RISK BEHAVIOURS				
0 = no evidence	1 = history, mild, suspicion			
2 = moderate, action needed	3 = severe, disabling, dangerous, immediate action needed			
	0	1	2	3
Suicide Risk				
Self-Injuring Behaviour				
Danger to Others				
Elopement				
Substance Abuse				
Social Behaviour				
Crime/Delinquency				
Involvement in Treatment				
Comments:				

FAMILY/CAREGIVER NEEDS AND STRENGTHS				
0 = no evidence	1 = history, mild, suspicion			
2 = moderate, action needed	3 = severe, disabling, dangerous, immediate action needed			
	0	1	2	3
Physical/Mental Health				
Knowledge				
Residential Stability				
Resources				
Safety				
Comments:				

Functioning				
0=no evidence	1=history, mild, suspicion			
2=moderate, action needed	3=severe, disabling, dangerous, immediate action needed			
	0	1	2	3
Sensory Processing				
Communication				
Motor				
Self-Care				
Sleep				
Family				
Peer				
School Achievement				
School Behaviour				
School Attendance				
Sexual Development				
Culture Stress				
Comments:				

CARE INTENSITY AND ORGANIZATION				
0 = no evidence	1 = history, mild, suspicion			
2 = moderate, action needed	3 = severe, disabling, dangerous, immediate action needed			
	0	1	2	3
Monitoring				
Service Permanence				
Educational				
Comments:				

INDIVIDUAL STRENGTHS				
0 = Center-piece strength	1 = Useful strength			
2 = Identified strength	3 = No strength identified			
	0	1	2	3
Family				
Interpersonal				
Relationship Permanence				
Life Skills				
Well-Being				
Optimism				
Spiritual/Religious				
Talents/Interests				
Community Involvement				
Self-Expression				
Flexibility/Adaptability to Change				
Comments:				

Other Comments:

Appendix G: First Nation Child Wellbeing Measure

The FNCWM tool will assist with measuring a child's mental wellness at the time of administration. The tool was developed by Dilico Anishinabek Family Care and is applicable for use with Anishinabek children between the ages of 6 and 18 years of age.

Please read each statement below carefully. These represent behaviours that children sometimes engage in. Then, rate how often or how well the child engages in the stated behaviour on the following scale:

Not Applicable (1), Never (2), Sometimes (3), Usually (4), Almost Always (5)

- | | |
|--|----------------------|
| 1. Respects themselves | <input type="text"/> |
| 2. Respects others in the community | <input type="text"/> |
| 3. Is truthful | <input type="text"/> |
| 4. Shows humility | <input type="text"/> |
| 5. Congratulates and celebrates others' successes | <input type="text"/> |
| 6. Does what is right, despite consequences | <input type="text"/> |
| 7. Shows love for friends/family/caregivers | <input type="text"/> |
| 8. Expresses/vocalizes/communicates their feelings and needs (to caregivers) | <input type="text"/> |
| 9. Refrains from saying or doing things that will upset others | <input type="text"/> |
| 10. Listens when being talked to | <input type="text"/> |
| 11. Has pride in who they are | <input type="text"/> |
| 12. Takes care of themselves (physically; ex. brushes teeth, bathes, dresses themselves) | <input type="text"/> |
| 13. Has healthy coping skills to manage emotions | <input type="text"/> |
| 14. Identifies emotions that they are experiencing | <input type="text"/> |
| 15. Has positive adult role models | <input type="text"/> |
| 16. Abides by/has experience with/has instruction in/has mentorship in the seven grandfather teachings | <input type="text"/> |

17. Attends traditional ceremonies and activities (ex. smudging, sweat lodges)

What ceremonies:

Form for item 17: A box with a dropdown arrow, and a larger box with a grid of smaller boxes and arrows for recording responses.

18. Likes being on the land

Form for item 18: A box with a dropdown arrow.

19. Knows what community they are from

Form for item 19: A box with a dropdown arrow.

20. Knows their spirit name or clan

Form for item 20: A box with a dropdown arrow.

21. Demonstrates an understanding of their First Nations history and culture

Form for item 21: A box with a dropdown arrow.

22. Explores their First Nations culture and history

Form for item 22: A box with a dropdown arrow.

23. Understands, speaks, or is interested their First Nations language

Form for item 23: A box with a dropdown arrow.

24. Demonstrates spirituality

Form for item 24: A box with a dropdown arrow.

25. Thinks carefully before acting

Form for item 25: A box with a dropdown arrow.

26. Keeps promises that they make

Form for item 26: A box with a dropdown arrow.

27. Participates in physical activity, through formal or informal means (ex. playing in an organized sports league OR playing outdoors)

Form for item 27: A box with a dropdown arrow.

28. Plays appropriately with friends the same age (cousins, at school, in the community)

Form for item 28: A box with a dropdown arrow.

Total score:

Form for total score: A box for recording the total score.

Scale 1 (1-10 + 12-14 + 25 + 26):

Form for scale 1: A box for recording the scale 1 score.

Scale 2 (16 + 17 + 19-24):

Form for scale 2: A box for recording the scale 2 score.

Scale 3 (11 + 15 + 18 + 27 + 28):

Form for scale 3: A box for recording the scale 3 score.

Appendix H: Post-Treatment Qualitative Questions for Children

Tell me about your experience with the group:

- What did you like about it? And why?
- What types of activities did you like?
- What didn't you like about it? And why?
- What types of activities did you dislike?
- What did you think of the traditional/cultural skills?
 - How familiar were you with them before this group?
 - Did you enjoy them? Why or why not?

How did you feel about having to talk and do activities with other kids?

- Did you worry about anything? (e.g., people repeating what you said, making fun of you for things that you said, embarrassing yourself in front of others, etc.)
 - Did any of these things happen? Please explain.

How has it affected you?

- Are you feeling better?
- How has it influenced your relationships with other people, if at all?
- How has it influenced your school, if at all?

Appendix I: Critical Incident Questionnaire and Group Counselling Helpful Impacts Scale

Critical Incidence Questionnaire:

Of all the things that happened during the treatment, which one do you feel was the most important for you personally?

- Describe the event, what actually took place, the group members involved, and your own reaction.

Why was it important for you? How was it helpful?

Group Counselling Helpful Impacts Scale

	Not at all	Slightly	Somewhat	Pretty Much
1. Realized something new about myself	1	2	3	4
2. Realized something new about someone else	1	2	3	4
3. More aware of or clearer about feelings, experiences	1	2	3	4
4. Definition of problems for me to work on	1	2	3	4
5. Progress toward knowing what to do about problems	1	2	3	4
6. Feeling my therapist or other group members understand me	1	2	3	4
7. Feel supported or encouraged	1	2	3	4
8. Feel relieved, more comfortable	1	2	3	4

9. Feel more involved in therapy or inclined to work harder	1	2	3	4
10. Feel closer to my therapist or other group members	1	2	3	4
11. Provision of significant material about self and/or interpersonal relationships	1	2	3	4
12. Description-exploration of the personal nature and meaning of feelings	1	2	3	4
13. Emergence of previously warded-off material	1	2	3	4
14. Expression of insight/understanding	1	2	3	4
15. Expressive communication	1	2	3	4
16. Expression of good working relationship with therapist or other group members	1	2	3	4
17. Expression of strong feelings toward therapist or other group members	1	2	3	4
18. Undertaking new ways of being and behaving in the imminent extratherapy life situation	1	2	3	4
19. Expression or report of changes in target behaviors	1	2	3	4
20. Expression of a welcomed general state of well- being	1	2	3	4
21. Catharsis	1	2	3	4
22. Self-disclosure	1	2	3	4

23. Universality	1	2	3	4
24. Acceptance	1	2	3	4
25. Altruism	1	2	3	4
26. Self-understanding	1	2	3	4
27. Vicarious learning	1	2	3	4
28. Instillation of hope	1	2	3	4

Appendix J: Field Case Note Form

Participant Number _____
 Date _____

Session (circle): 1 2 3 4 5 6 7 8 9 10
 Present? (circle) Y / N

Please rate each item below on a scale of 0 to 4 by circling the number that best represents the child's behaviour in the **current session**:

Homework*	0 Did not complete homework	1 Completed approx. 25% or effort was minimal	2 Completed approx. 50% or effort was moderate	3 Completed approx. 75% or effort was substantial	4 Completed all homework and effort was clear
Participation	0 Was not participating (appeared distracted and/or did not discuss relevant examples or ideas)	1	2 Participated adequately (was listening to facilitators, engaged in activities, and/or provided some examples/ideas)	3	4 Enthusiastically participated (was fully engaged throughout the session, engaged in activities, and provided very insightful examples/ideas)
Case Notes Make note of: • Level of enjoyment • Culturally appropriate? • Developmentally appropriate? • Acceptability of different activities by sex • Anything else					

* This portion of the form was not completed due to the summer camp style delivery

Appendix K: Research Ethics Board Approval Letter for Pilot Treatment

Research Ethics Board
t: 807-343-8010 x.8283
research@lakeheadu.ca

August 08, 2023

Principal Investigator: Dr. Christopher Mushquash
Partner: John Dixon
Project Staff/Research Assistants: Erika Puiras and Trent Lynds
Student: Kristy Kowatch

Health and Behavioural Sciences\Psychology
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1

Dear Dr. Christopher Mushquash and team:

Re: Romeo File No: 1469902
Granting Agency: CIHR
Agency Reference #: 1466635

On behalf of the Research Ethics Board, I am pleased to grant ethical approval to your research project titled, "Evaluation of a transdiagnostic culturally-based group intervention for First Nation children".

Ethics approval is valid until August 8, 2024. Please submit a Request for Renewal to the Office of Research Services via the Romeo Research Portal by July 8, 2024, if your research involving human participants will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Access the Romeo Research Portal by logging into myInfo at:

<https://erpwp.lakeheadu.ca/>

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Best wishes for a successful research project.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Pousa".

Dr. Claudio Pousa
Chair, Research Ethics Board

/sa