LONG-TERM FOLLOW-UP OF MOTHERS AND CHILDREN TREATED FOR MATERNAL SUBSTANCE USE: A MIXED METHODS APPROACH

ELIZABETH DANUTA WACHALA

A DISSERTATION SUBMITTED TO
THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

GRADUATE PROGRAM IN CLINICAL-DEVELOPMENTAL PSYCHOLOGY
YORK UNIVERSITY
TORONTO, ONTARIO

AUGUST 2021

© ELIZABETH WACHALA, 2021

Abstract

Maternal substance use is a major public health concern that can lead to various negative outcomes for women, children, and society. Previous research has shown how integrated substance use interventions promote positive short-term outcomes for these families, although more long-term evidence is needed. Emerging evidence points to several treatment processes by which integrated programs enhance client outcomes, yet more research is needed here as well. For this research, I worked together with Mothercraft's Breaking the Cycle [BTC] to co-create a long-term follow-up evaluation of mothers who participated in BTC's integrated, relationship-based substance use intervention for pregnant or mothering women to examine the trajectories of mothers and children in the years following treatment, as well as to identify those elements of treatment mothers perceived as most helpful. Case studies and a general summary of outcomes are presented that detail the journeys of four women and their children through substance use and recovery, and themes that arose from interviews with these women are explored. In the years following treatment, each woman continued to abstain from problematic substance use and reported generally good physical and psychological health for themselves and their children. Where health challenges existed, they were actively coped with. Mothers reported good family and peer relationships for themselves and their children. Each family lived in stable housing and had consistent sources of income, and two mothers advanced their education post-treatment. Children were each enrolled in school at the appropriate grade for their age; where needed, accommodations had been arranged. No involuntary child protection or legal involvement was reported. Thematic analysis of the interviews yielded six central themes factoring into families' development post-treatment: *choosing change*, *coping is ongoing*, *healthy boundaries*, *self-advocacy*, *stigma*, and *continuum of harm reduction*. Intervention elements at BTC identified by

mothers as instrumental to positive post-treatment outcomes included: *acceptance and safety*, *open-door policy*, *wraparound services*, *quality of care and education*, *teaching and modelling healthy relationships*, and the *uniqueness of BTC*. The present results will inform larger scale follow-up research at BTC and will contribute to the literature on treatment processes and outcomes for women who participate in integrated substance use treatment.

Acknowledgements

"There can be no lotus flower without the mud." Thích Nhất Hạnh

Table of Contents

Abstract……………………………………………………………………………….. ii
Acknowledgements…………………………………………………………………... iv
Table of Contents……………………………………………………………………... v
List of Tables………………………………………………………………………… vii
List of Figures………………………………………………………………………. viii
Chapter 1: Introduction……………………………………………………………… 1
Research on Maternal Substance Use………………………………………………..4
Treatment Processes, Outcomes, and Mechanisms of Change……………………..9
Chapter 2: Methods…………………………………………………………………19
Mixed-Methods Design……………………………………………………………19
Positionality Statement………………………………………………………………19
Trauma-Informed Approach………………………………………………………..22
Participants…………………………………………………………………………...22
Procedure……………………………………………………………………………..24
Measures……………………………………………………………………………...27
Quantitative Analysis……………………………………………………………….. 30
Qualitative Analysis…………………………………………………………………31
Ethical Concerns……………………………………………………………………..32
Chapter 3: Results……………………………………………………………………34
Case Studies…………………………………………………………………………..34
Ann, 41 Years Old, and Elijah, 7 Years Old 34
Brooke, 33 Years Old, and Felix, 8 Years Old 42
Cindy, 37 Years Old, and Gregory, 10 Years Old 50
Diana, 43 Years Old, and Holly, 5 Years Old.. 57
General Findings 63
Substance Use 63
Health 63
Mother-Child Relationship 65
Family and Peer Relationships 66
Functioning in Society. 67
Themes 68
Choosing Change 68
Coping is Ongoing... 70

Healthy Boundaries. 72
Self-Advocacy.. 74
Stigma.......... 77
Continuum of Harm Reduction. 79
Treatment Processes and Mechanisms of Change 81
Acceptance and Safety 81
Open-Door Policy 82
Wraparound Services 83
Quality of Care and Education 84
Teaching and Modelling Healthy Relationships 85
Uniqueness of BTC 86
Chapter 4: Discussion 88
Limitations 104
Implications and Future Directions 106
References 109
Appendices 120
Appendix A: Informed Consent Form for Mothers 120
Appendix B: Consent to disclose information 123
Appendix C: Questionnaires for Participants 124
Appendix D: Interview Protocol for Mothers 125
Appendix E: Informed Consent Form for Teachers 126
Appendix F: Thematic Analysis Themes and Codes 128

List of Tables

Table 1. Expected outcomes for mothers and children when maternal substance use is not addressed in treatment compared to actual outcomes in this study following intervention at BTC. **91**

Table 2. Comparison of sample demographics and service utilization between present sample and larger sample from a recent study involving BTC clients.. **105**

List of Figures

Figure 1. Relational developmental systems model of factors impacting development and adaptation of mothers and children in the context of maternal substance use. **9**

Figure 2. Relational developmental systems model of factors impacting development and adaptation of mothers and children receiving comprehensive intervention services for maternal substance use. **13**

Figure 3. DTCQ results over time for Ann's confidence to resist problematic substance use. ... **37**

Figure 4. CESD and BAI results over time showing Ann's depressive and anxiety symptoms. **38**

Figure 5. PSI results over time showing Ann's experience of parenting related stress. **39**

Figure 6. CBCL and TRF results over time showing Elijah's socioemotional and behavioural functioning. **40**

Figure 7. Ann's ratings on R-AAS and PSS scales indicating relational wellbeing over time. .. **41**

Figure 8. DTCQ results over time for Brooke's confidence to resist problematic substance use **45**

Figure 9. CESD and BAI results over time showing Brooke's depressive and anxiety symptoms **46**

Figure 10. PSI results over time showing Brooke's experience of parenting related stress. **46**

Figure 11. CBCL and TRF results over time showing Felix's socioemotional and behavioural functioning. **47**

Figure 12. Brooke's ratings on R-AAS and PSS scales indicating relational wellbeing over time. **49**

Figure 13. DTCQ results over time for Cindy's confidence to resist problematic substance use. **52**

Figure 14. CESD and BAI results over time showing Cindy's depressive and anxiety symptoms. **53**

Figure 15. PSI results over time showing Cindy's experience of parenting related stress. **54**

Figure 16. CBCL and TRF results over time showing Gregory's socioemotional and behavioural functioning. **54**

Figure 17. Cindy's ratings on R-AAS and PSS scales indicating relational wellbeing over time. **56**

Figure 18. DTCQ results over time for Diana's confidence to resist problematic substance use. **59**

Figure 19. CESD and BAI results over time showing Diana's depressive and anxiety symptoms. **60**

Figure 20. PSI results over time showing Diana's experience of parenting related stress. **60**

Figure 21. CBCL and TRF results over time showing Holly's socioemotional and behavioural functioning. **61**

Figure 22. Diana's ratings on R-AAS and PSS scales indicating relational wellbeing over time. **62**

Long-term follow-up of mothers and children treated for maternal substance use: A mixed methods approach

Substance use is a major public health concern, with numerous negative outcomes affecting individual, group, and societal systems stemming directly and indirectly from substance use problems. Of particular concern to health professionals is parents' problematic substance use and its effects on their children, for whom relationships with their primary caregivers are the critical means through which they develop and adapt (Cataldo et al., 2019; Espinet et al., 2013). In recent decades, there has been an increase in rates of substance use worldwide; in developed countries (e.g., Western Europe, United States), recent data suggest women comprise one third to one half of all people with substance use problems (United Nations Office on Drugs and Crime [UNODC], 2018). Compared to men, women tend to report more complex substance use and trauma histories, as well as more negative health outcomes (Niccols, Dobbins, et al., 2010; UNODC, 2018). Although men are more likely to use illicit drugs, women who use drugs tend to present with more severe social, psychological, medical, and behavioural impairments (Cataldo et al., 2019; UNODC, 2018).

The focus of the present study was on exploring outcomes for women and their children who received intervention designed specifically for pregnant and/or parenting mothers involved with substance use. Research in the United States and United Kingdom has shown that the majority of women who engage in substance use treatment in these countries are pregnant and/or have children (Milligan et al., 2017). Mothers with substance use problems have a heightened risk for poor psychological and societal functioning (Niccols, Milligan, Sword et al., 2012). Pre- and postnatal substance exposure can have significant negative effects on a child's physical and psychological development – beginning in the womb and extending across the lifespan (Jones &

Streissguth, 2010; Niccols, Milligan, Smith et al., 2012). In Canada, it is estimated that approximately 20% of newborns experience prenatal exposure to alcohol (Niccols, Dobbins et al., 2010); data also show that the number of infants born in Canada who exhibit neonatal abstinence syndrome (NAS) increased 27% from 2013 to 2017 (Roussy, 2018). Maternal substance use post-pregnancy is associated with a host of environmental risk factors affecting children's development (Carta et al., 2001). Moreover, mothers' substance use problems cause disruptions in their role as primary caregivers, significantly impacting the formation of secure attachment relationships with their young children and introducing further risk for maladaptive child outcomes (Cataldo et al., 2019; Espinet et al., 2013; Mirick & Steenrod, 2016). Women affected by substance use problems are often more stigmatized than men and face more barriers to accessing treatment programs – many of which were designed based on men's needs and thus insufficiently address the needs of women (e.g., childcare) (Latuskie et al., 2019; Milligan et al., 2017; Motz et al., 2019; UNODC, 2016). Recent statistics indicate that only 1 in 6 people diagnosed with substance use disorders enter addictions treatment (Cataldo et al., 2019; UNODC, 2018).

The costs to society associated with maternal substance use problems are considerable, particularly those stemming from lost wages, unstable housing, insufficient prenatal and birth care, child protection and foster services, and legal involvement (Hubberstey & Rutman, 2020; Niccols, Milligan, Sword et al., 2012). According to a report released by the Canadian Centre on Substance Use and Addiction (CCSUA, 2018), estimated costs associated with substance use in Canada in 2014 (i.e., criminal justice system, lost productivity, health care, and other direct costs such as fire damage) totalled $38.4 billion. With growing awareness of the impact of substance use problems on mothers, children, and society, the development and evaluation of effective

treatment programs for maternal substance use has drawn increased attention and resources over the last several years (Niccols, Milligan, Sword et al., 2012; Espinet et al., 2013; Nota Bene Consulting Group, 2021).

A number of studies have shown that integrative, multi-service substance use intervention programs have positive effects on both mothers and children, such as improved psychological health and reduced maternal substance use (Niccols, Milligan, Sword et al., 2012; Espinet et al., 2016). Therapeutic components can vary significantly across treatment programs, with limited research on the mechanisms through which both mothers and children improve following substance use treatment (Niccols, Milligan, Smith et al., 2012). A few studies have begun to focus on these pathways (e.g., Espinet et al., 2016; Latuskie et al., 2019; Marcellus, 2017; Milligan et al., 2017; Nota Bene Consulting Group, 2021; Sword et al., 2009), but more research is needed in this area. Furthermore, there is a paucity of long-term follow-up research with mothers and children after completing substance use treatment to provide insights into how long effects persist or how they might interact with mothers' and children's physical and psychological development following treatment (Niccols, Milligan, Smith et al., 2012). Therefore, in this research, I followed up with a select group of women and their children who participated in Mothercraft's Breaking the Cycle (BTC) – an integrated, relationship-based early intervention program for mothers and children experiencing problems stemming from maternal substance use. My focus was on both the mothers' and children's trajectories in the years following intervention completion, as well as on the mechanisms of change which promoted positive development post-treatment. In alignment with research practices at BTC (Andrews et al., 2019), the conceptualization and implementation of my research was guided by relational developmental systems and trauma-informed theoretical frameworks.

Research on Maternal Substance Use

Human development is a dynamic, nonlinear, and relational process that is shaped by transactional factors related to person, place, and time in which individuals and the systems they inhabit grow through relationships with others (Lerner et al., 2013). According to this relational developmental systems perspective, humans are defined by agency and adaptation, with positive functioning facilitated by mutual adaptation between individuals and their environments. Researchers guided by this framework strive to identify which attributes of individuals, in relation to which characteristics of their environments, are associated with which facets of adaptive functioning (Lerner et al., 2013). Identifying instances of positive development helps us discover protective mechanisms that promote resilience in the face of significant challenges.

The histories of women seeking treatment for substance use comprise complex risk factors and needs, which disrupt positive development and adaptation for themselves and their children both directly and through the effects of increased cumulative stress (Bondi et al., 2020a; Bondi et al., 2020b). These women commonly report histories of polysubstance use, mental health problems (e.g., depression, anxiety, post-traumatic stress), medical problems, physical and/or sexual abuse, and relationship problems such as domestic violence and low social support (Espinet et al., 2013; Niccols, Milligan et al., 2010; Niccols, Milligan, Sword et al., 2012). They also often have family histories of substance use (Latuskie et al., 2019). Mothers with substance use problems are more likely to have lower educational levels and tend to be single parents, unemployed, and living at or below the poverty line (Andrews et al., 2018; Espinet et al., 2013; Haabrekke et al., 2018; Marshall et al., 2005). Maternal substance use is also associated with a higher risk of being involved with child protection services and/or the court system (Hubberstey & Rutman, 2020; Niccols, Dobbins et al., 2010). The risk of losing custody of children is at least

twice as high for mothers who use substances compared to those who do not (Cataldo et al., 2019). As such, these women struggle to maintain stable, nurturing caregiving environments for their children, putting them at higher risk for homelessness, family disruption, exposure to violence, and parental abuse – thus cumulatively impacting their children's developmental trajectories (Bondi et al., 2020a; Bondi et al., 2020b; Carta et al., 2001; Hser et al., 2014; Milligan et al., 2017; Motz et al., 2011; Niccols, Milligan, Smith et al., 2012). Indeed, researchers have found that cumulative environmental risks (e.g., low income, single parenthood) bear a greater negative influence on children's developmental trajectories than prenatal substance exposure on its own (Carta et al., 2001), perhaps owing to the continued proximity of these situational stressors following birth. Emerging evidence indicates that the effects of prenatal substance exposure on children are mediated by maternal psychiatric well-being and family relationships (Eiden et al., 2011; Hser et al., 2014). Moreover, the chronic and cumulative stress faced by mothers struggling with substance use further increases their risk of use, therefore, the risk of poor outcomes for themselves and their children (Gueta & Addad, 2015; Latuskie et al., 2019; Rutherford, Potenza, & Mayes, 2013).

The direct and indirect effects of substance exposure on children fall on a broad spectrum, with the most extreme being characterized by symptoms falling under the term Fetal Alcohol Spectrum Disorder (FASD) – such as key physical, cognitive, and motor deficiencies (Jones & Streissguth, 2010). Overall, the estimated prevalence of diagnosed FASD in the population is relatively low; previous estimates ranged from 0.01% to 0.1% (Jones & Streissguth, 2010), with more recent estimates based on Canadian research suggesting FASD is present among 2-3% of school-aged children (Popova et al., 2018). In contrast, other impacts of substance exposure on child development that do not constitute a diagnosis of FASD are more

frequently seen. Infants exposed to substances prenatally are at higher risk for low birth weight and premature delivery, impaired physical and neurobehavioural growth, poor health (e.g., infections, respiratory distress), difficulties with sleeping and feeding, irritability, impulsivity, and distractibility (Haabrekke et al., 2018; Kelly, Day, & Streissguth, 2000; Niccols, Dobbins et al., 2010; Niccols, Milligan, Smith et al., 2012). School-aged children and adolescents raised in the context of maternal substance use are at higher risk for emotional and behavioural difficulties, as well as problems in school achievement and cognitive functioning – particularly in learning, attention, memory, and problem-solving skills (Jones & Streissguth, 2010; Niccols, Milligan, Smith et al., 2012; Niccols, Dobbins et al., 2010). They are also more likely to have difficulties with interpersonal skills and modeling adaptive behaviour after others, as well as inappropriate sexual behaviours (Kelly et al., 2000). These children and youth experience further challenges in the community, being at higher risk for involvement with the law (Kelly et al., 2000). Among adolescent and adult children of mothers with substance use problems, there is a heightened risk of substance use and psychiatric disorders, such as depression, suicidality, and personality disorders (Jones & Streissguth, 2010; Kelly et al., 2000; Niccols, Milligan, Smith et al., 2012).

The mother-child relationship is a key influence on a child's development in the first years of life and is perhaps the most crucial developmental process impacted by mothers' substance use problems (Cataldo et al., 2019; Mirick & Steenrod, 2016). Research has demonstrated that maternal substance use issues can lead to disruptions in parenting behaviour, such as lower emotional availability, sensitivity, warmth, and monitoring, as well as to a higher risk of child maltreatment (Eiden et al., 2011; Haabrekke et al., 2018; Motz et al., 2006). In turn, these disruptions hinder the development of a secure attachment relationship between a mother

and her child (Cataldo et al., 2019; Lyden & Suchman, 2013). Attachment theory proposes that it is through infants' relationships with primary caregivers and safety figures that cognitive and emotional development occur, and that the attachment relationship shapes how infants first perceive others and their environments (Bowlby, 1969; Ainsworth et al., 1978). Through this relationship, infants also develop emotional understanding and affect regulation (Cataldo et al., 2019; Lyden & Suchman, 2013). Infants develop internal working models of self in relation to others and the environment through their earliest interactions with a primary caregiver. These models of relationships have robust implications for personal and social development across life; however, they are also dynamic and can be improved with corrective relational experiences (Lyden & Suchman, 2013; Motz et al., 2006). Insecure attachment hinders a child's ability to form healthy, adaptive mental constructs of self in relation to others; specifically, the child may learn to see others as unavailable or unhelpful and him or herself as unworthy of attention or care (Lyden & Suchman, 2013). Moreover, insecure attachment puts the child at higher risk for poor emotional intelligence and regulation, leading to increased psychological distress (Lyden & Suchman, 2013).

The intergenerational transmission of internal working models is an important consideration for this population: women with substance use problems, whose early working models of relationships may have formed through insecure attachments with their own primary caregivers, risk repeating these patterns with their own children (Huth-Bocks et al., 2004; Lyden & Suchman, 2013; Renk et al., 2016). Importantly, qualities of the mother-child relationship (e.g., warmth, availability) have been found to mediate the effects of cumulative risks – including prenatal exposure – on children's cognitive and behavioural development (Eiden et al., 2011; Motz et al., 2011).

Taken together, it is evident that the development and adaptation of mothers and children in the context of maternal substance use is influenced by a range of interacting individual, interpersonal, and environmental factors and associated cumulative stress (Bondi et al., 2020a; Bondi et al., 2020b; Motz et al., 2011; Rutherford et al., 2013). Viewed from a relational developmental systems perspective (Lerner et al., 2013), research findings regarding factors affecting mother and child outcomes in the context of maternal substance use can be modelled as in Figure 1. Pregnant or new mothers who struggle with substance use problems are at higher risk for poor functioning, stemming not only from their own histories but also from cumulative stress caused by poor caregiving conditions (e.g., housing status) and from disrupted mother-child relations. The child's functioning postnatally is also affected by caregiving conditions, and – particularly during this early stage of life – a child's development is directly shaped by the mother-child relationship. Disruptions in this relationship come from impairments in either or both mother and child functioning, as well as from cumulative environmental stress. Mothers' functioning during the pre/postnatal period predicts their own development and adaptation later on. Outcomes for their children are more multi-determined, influenced not only by neonatal and early functioning but also by processes within the mother-child relationship and caregiving milieu. Depending on the severity of poor outcomes in mothers and/or their children following maternal substance use, societal costs can be considerable.

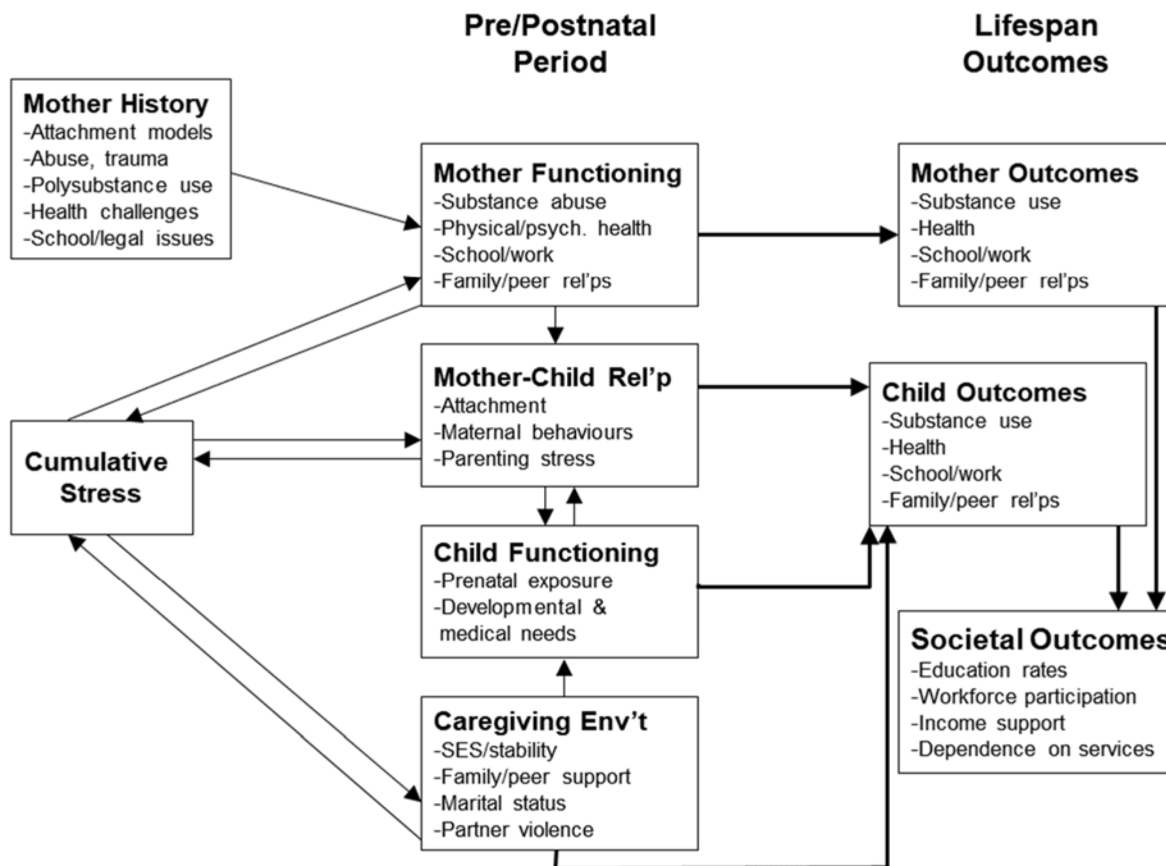

Figure 1. Relational developmental systems model of factors impacting development and adaptation of mothers and children in the context of maternal substance use.

Treatment Processes, Outcomes, and Mechanisms of Change

It is evident that treatment for women and children impacted by maternal substance use must address more than just the mothers' substance use behaviours. Not only do these women have complex histories and unique caregiving needs, they also face distinct barriers to treatment that are not typically addressed by traditional, single-service addictions treatments (Eiden et al., 2011; Haabrekke et al., 2018; Niccols et al., 2012; Espinet et al., 2016; Rutman et al., 2020). In contrast, integrated treatment programs for substance use offer a range of comprehensive, wraparound, "one-stop-shop" services that address women's and children's physical,

psychological, and socioeconomic needs and extend beyond mere reduction of substance use (Rutman et al., 2020; Urbanoski et al., 2018). Integrated treatment programs are designed to reduce barriers to treatment for these women, who have commonly faced obstacles to accessing healthcare and social services due to stigma, fear of child welfare and/or legal repercussions, lack of gender-specific programming, and difficulties with transportation and/or available childcare (Lefebvre et al., 2010; Marcellus, 2017; Motz et al., 2006; Stringer & Baker, 2018).

There is no universally defined model of an “integrated” intervention for substance use, but these programs typically offer similar combinations of services – or intervention processes – either directly or in partnership with other agencies (Urbanoski et al., 2018). These include substance use services, mental health care, parenting interventions, prenatal and primary care, childcare, and bridging connections with various social services (e.g., child protection, income and housing assistance) (Milligan et al., 2020; Rutman & Hubberstey, 2020; Urbanoski et al., 2018). By providing diverse essential necessary services under one roof, and by maintaining strong collaborative partnerships in the community – particularly with child protective services, integrated substance use programs can reduce barriers and better address the complex needs of pregnant and mothering women with substance use challenges (Marcellus et al., 2015; Rutman & Hubberstey, 2020; Urbanoski et al., 2018).

Research exploring women’s perspectives of what they value in substance use intervention programs has yielded findings that support such integrated models of care. The availability of multiple, wraparound services under one roof has frequently been cited as paramount for women accessing integrated substance use treatment (Rutman & Hubberstey, 2019; Rutman et al., 2020; Tarasoff et al., 2018). In particular, women have identified trauma counselling, substance use groups, home visits, childcare, and food/nutritional resources as

important intervention components (Kuo et al., 2013; Rutman & Hubberstey, 2019; Rutman et al., 2020; Tarasoff et al., 2018). The availability of health and developmental supports for children were also described as valuable for women accessing treatment (Rutman et al., 2020). Moreover, partnerships with and referrals to other services and agencies, such as housing support, were reported to be essential processes of intervention (Lefebvre et al., 2010; Rutman et al., 2020) – especially assistance in forging positive connections and advocacy with child protection services (Rutman & Hubberstey, 2019; Rutman et al., 2020). Women have additionally spoken about the importance of short wait times and tailored intervention services that meet them where they are, while also conveying respect and acceptance for cultural differences (Marcellus et al., 2015; Rutman et al., 2020; Tarasoff et al., 2018). The continuity of care available after formal discharge from treatment has likewise been identified as centrally important for women (Tarasoff et al., 2018).

Across Canada, there are a number of integrated, community-based, wraparound programs for women and their children impacted by maternal substance use. The present study was co-created with Breaking the Cycle (BTC), one of the first early prevention and integrated intervention programs in Canada. Established in 1995 in Toronto, Ontario, BTC offers comprehensive, "one stop" intervention and support services for women with substance use problems who are pregnant or who have children up to six years of age, and has helped over 1,500 clients since its inception. BTC is an accredited Children's Mental Health of Ontario agency whose research-informed services aim to promote positive outcomes for children exposed to substance use and to reduce the incidence of child maltreatment – primarily through improvements in maternal functioning and the mother-child relationship (Motz et al., 2006). Intervention is individually tailored to each mother-child dyad who, on average, receive 18

months of service that may comprise any or all of BTC's general services: pregnancy outreach; addictions treatment and trauma counselling; parenting support and skills development; child care; child health and developmental clinic (i.e., pediatric and developmental assessment services); and basic needs support (e.g., food, clothing). BTC also assists mothers in connecting to and maintaining supportive relationships with other agencies and services, including child protection and probation involvement. Addictions intervention at BTC follows a harm reduction model and all programming is informed by relational, attachment, developmental, and historical trauma theories (Motz et al., 2006). Addictions, mental health, and parenting services include both individual and group treatment, facilitating women's development through relationships with staff and other program mothers. Children are involved in treatment in several ways such as during parenting skills development programming and developmental assessments. Figure 2 expands on the developmental relational model presented in Figure 1 by depicting how the various treatment components at BTC support development and adaptation in the mother, child, their relationship, and the caregiving environment, leading to improved future outcomes.

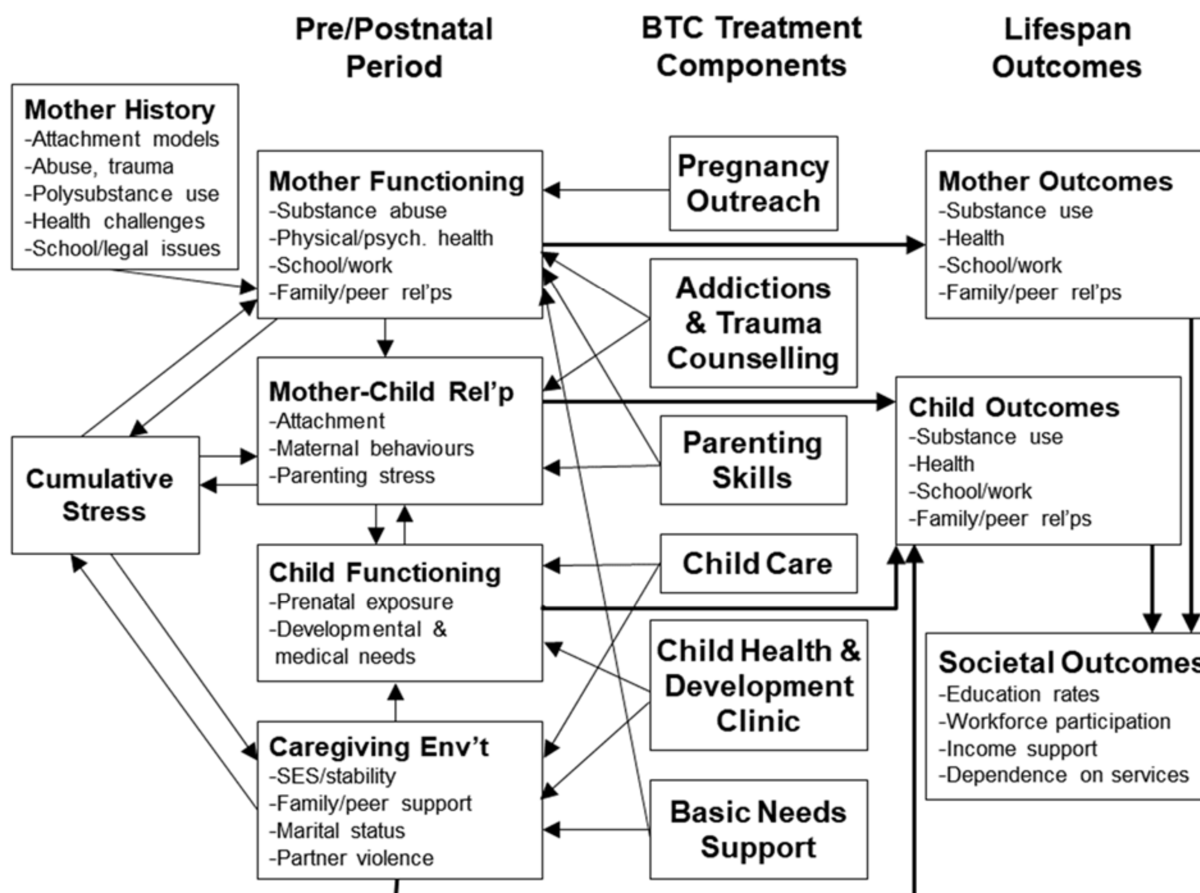

Figure 2. Relational developmental systems model of factors impacting development and adaptation of mothers and children receiving integrated intervention services for maternal substance use.

BTC and several other integrated programs were included in a recent national three-year evaluation project, Co-Creating Evidence: National Evaluation of Multi-Service Programs Reaching Women at Risk (CCE) (Nota Bene Consulting Group, 2021; Rutman & Hubberstey, 2019; Rutman et al., 2020). In addition to BTC, the participating programs were: HerWay Home (Victoria, BC), Sheway (Vancouver, BC), Maxxine Wright Place (Surrey, BC), H.E.R. Pregnancy Program (Edmonton, AB), Raising Hope (Regina, SK), Mother Project (Winnipeg, MB), and Kids First (New Glasgow, NS). Like BTC, each of these programs is guided by

relational, trauma-informed, and harm reduction approaches (Rutman et al., 2020).

The CCE project (Nota Bene Consulting Group, 2021) is among several studies that have provided compelling evidence for the efficacy of integrated, multi-service interventions in promoting positive outcomes for women and children impacted by maternal substance use struggles. Moreover, research indicates that interventions offering diverse and integrative services, and those that directly involve children, may lead to greater positive outcomes in mothers and children than stand-alone addictions services or treatment as usual (Niccols, Milligan et al., 2010; Niccols, Milligan, Smith et al., 2012; Niccols, Milligan, Sword et al., 2012). Reduced substance use is the most frequent outcome cited across both quantitative and qualitative evaluations of integrated treatments (e.g., Espinet et al., 2016; Hubberstey et al., 2019; Jeong et al., 2015; Marcellus, 2017; Milligan et al., 2010; Moreland & McRae-Clark, 2018; Tarasoff et al., 2018). Studies have commonly found improvements in women's mental health throughout and following intervention – particularly in regard to symptoms of depression and anxiety (Espinet et al., 2016; Hubberstey et al., 2019; Niccols, Milligan et al., 2010; Moreland & McRae-Clark, 2018). Research has also shown that women who received integrated substance use treatment report improvements in mother-child and social relationships, as well as improved parenting skills (Espinet et al., 2016; Hubberstey et al., 2019; Niccols, Milligan, Sword et al., 2012; Renk et al., 2016). They also report more stability in income and housing post-treatment, and higher rates of regaining or maintaining custody of their children (Hubberstey et al., 2019; Rutman & Hubberstey, 2020; Tarasoff et al., 2018). In terms of child outcomes, several studies have demonstrated that integrated substance use treatment promotes improved birth outcomes, cognitive and functional development, and emotional and behavioural development (Haabrekke et al., 2018; Marshall et al., 2005; Niccols, Milligan, Smith et al.,

2012).

In addition to measurable outcomes, qualitative research involving women who participated in integrated substance use programs has revealed women's own perceptions of important outcomes following treatment. In a study by Marcellus (2017), women spoke about the importance of restoring their sense of self (i.e., credibility, connection to others, recovery from addiction, self-care), becoming a strong center for their family (i.e., sensitive and structured parenting, dealing with partner and custody issues, and creating a sense of home (i.e., maintaining housing and income). In another qualitative follow-up study, women who received integrated treatment shared that they experienced increased self-confidence and self-compassion – in addition to outcomes such as reduced substance use, stronger relationships with children and social supports, improved mental health, and more stable housing (Hubberstey et al., 2019). A systematic review of qualitative research similarly identified that developing agency and an integrated sense of self, learning to self-disclose, recognizing disruptive patterns, and setting goals were important processes that women experienced during treatment and promoted ongoing adaptation (Sword et al., 2009).

Given the challenges of conducting longitudinal research with clinical populations, the majority of studies on integrated treatment for maternal substance use have not examined longer-term outcomes (i.e., beyond 6-12 months post-treatment). One exception to this is a study by Hser and colleagues (2014) that followed up with children 10 years following their mothers' participation in substance use treatment. They found that many of the children demonstrated normal development and health – with the majority not exhibiting significant internalizing or externalizing problems (Hser et al., 2014). The same researchers found that mothers' mental health and family relationships were stronger predictors of child behaviour than historical

maternal substance use (Hser et al., 2014). Gueta and Addad (2015) conducted a study with Israeli women who were interviewed about their long-term recovery experiences following community-based addictions treatment (Gueta & Addad, 2015). The authors identified three prominent outcome themes across their participants: awareness of the chronic nature of addiction and the need for daily recovery efforts; motherhood as a key motivator for overcoming substance use and reintegrating into society; and, the ongoing difficulty in maintaining stable income and safe housing (Gueta & Addad, 2015). There is a strong need for more long-term follow-up studies of intervention outcomes for pregnant and mothering women with substance use struggles to examine the course of treatment effects as they shape both mothers' and children's development over extended periods of time (Niccols, Milligan, Smith et al., 2012).

There is also a need for greater understanding of the therapeutic mechanisms through which substance use interventions lead to positive outcomes for mothers and children. An emergent body of research has identified several developmental mechanisms within treatment that contribute to better post-intervention adaptation in this population. Among integrated substance use intervention programs, there is growing evidence that an emphasis on relationship-focused, attachment-based intervention (i.e., mother-child dyad, maternal social support) leads to greater reduction in substance use and better mental health outcomes among mothers, as well as measurable improvements in children's development, compared to comprehensive treatments without such explicit relational focus (Espinet et al., 2016; Mirick & Steenrod, 2016; Renk et al., 2016). This finding is supported by qualitative research with mothers who themselves recognize the importance of learning how to build positive relationships with their children and others as a key therapeutic element (Pepler et al., 2014; Sword et al., 2009). The formation of strong, trusting relationships with program staff has also been highlighted as crucial for recovery among

mothers with substance use problems (Pepler et al., 2014; Rutman & Hubberstey, 2019; Rutman et al., 2020; Sword et al., 2009; Tarasoff et al., 2018), as has the presence of a safe, non-judgmental, empathic, and supportive intervention environment (Kuo et al., 2013; Latuskie et al., 2019; Lefebvre et al., 2010; Milligan, Usher, & Urbanoski, 2017; Rutman & Hubberstey, 2019; Tarasoff et al., 2018). Forming positive relationships with other intervention program participants has also been reported as motivating in the context of women's recovery from substance use and general wellbeing (Kuo et al., 2013; Rutman & Hubberstey, 2019; Rutman et al., 2020). Women involved with substance use interventions report that the presence of children during treatment is motivating (Sword et al., 2009). In addition, greater readiness for treatment has been found to predict more positive parenting attitudes among women (Jeong et al., 2015) and, coupled with early engagement (i.e., outreach), readiness has been associated with longer treatment length and, by association, higher attainment of treatment goals (Andrews et al., 2018). The process of learning to rely on helpful resources while also taking responsibility for their own behaviours has been identified by women as important to their ongoing recovery (Kuo et al., 2013; Lefebvre et al., 2010).

To summarize, substance use problems among mothers increase the risk of poor outcomes for themselves and their children – particularly through effects on the mother-child attachment relationship. Treatment for these mothers and children that addresses multiple domains of influence on development through integrated, wraparound services appears to promote positive outcomes in the short term, with some evidence showing that improvements can persist up to 10 years later (Hser et al., 2014). For the present study, I worked together with BTC – an established early prevention and integrated intervention program – to co-create a long-term follow-up evaluation of a small group of mothers who participated in integrated,

relationship-based intervention services for maternal substance use during pregnancy or early motherhood. The goals of this study were twofold. To begin, I was interested in how these mothers and their children had developed and adapted in the years following intervention, particularly in the areas of: substance use; physical and mental health; the mother-child relationship; social and family relationships; and functioning in school, work, and community settings. My second goal was to delve into mothers' perceptions of how BTC helped them and their children develop and adapt over the years. Both goals were exploratory and were thus addressed using mixed quantitative and qualitative methods to capture the dynamic process of development in mothers and their children following intervention for maternal substance use and related problems.

Methods

Mixed-Methods Design

To address the goals of the present study, I employed a mixed-methods convergent design wherein both quantitative and qualitative data were collected simultaneously, analyzed separately, then discussed comparatively as a means of comprehensively exploring the outcomes of interest (Wisdom & Creswell, 2013). A mixed-methods approach was chosen as it enables a “more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis” (Wisdom & Creswell, 2013, p. 1). Another notable advantage of a mixed-methods design that was particularly important for this study is that, by giving more “voice” to study participants, it helps ensure that findings are better grounded in their lived experiences (Wisdom & Creswell, 2013).

Quantitative data for this study consisted of scores from questionnaires administered at the time of data collection, which were later compared with historical questionnaire scores from participants’ archived case files. Qualitative data were collected via semi-structured interviews which were later analyzed thematically. Both types of data were reviewed to compose case studies of each of the participating mother-child dyads. Additionally, both questionnaire and interview data were examined in parallel to address the study’s two primary goals – i.e., to explore the long-term outcomes among women and children who had participated in interventions for maternal substance use and related struggles, and to learn which treatment components were considered by mothers to be most instrumental in promoting these outcomes.

Positionality Statement

When engaging in qualitative research, it is important to reflect on one’s positionality and dual insider/outsider roles in relation to the research setting, project stakeholders, and study

participants (Throne, 2012). In my relationship with BTC as an external researcher, my position began as primarily that of an outsider. However, to continue conducting my research in a valid and meaningful way, it was necessary to become more embedded within the relational and trauma-informed approach embodied by BTC and its staff. Being embedded both ensured non-harmful experiences for my study participants and informed my interpretation of the collected data. In other words, my position had to shift toward the insider end of the insider/outsider spectrum in order to be most sensitive and responsive to the needs of the participants, and for my research findings to be meaningful within the context of BTC. Based on lessons learned from prior research that had been conducted at BTC, it was paramount that the study participants felt as safe with me as they had been during their time at BTC.

Arguably, BTC is also the primary stakeholder in the context of this research, as its continual operation relies on obtaining public funding – a process heavily informed by research such as this study that explores the mechanisms and outcomes of BTC's intervention. Moreover, my study represents one of the first efforts to identify longer-term outcomes in clients who were involved with BTC in order to guide future research at the agency. In this context, my position as both an insider and outsider at BTC enabled me to apply an evidence-guided research framework to investigate those factors which the BTC staff and clients identified as most important in positive treatment outcomes. A related group of stakeholders are the women who received intervention at BTC – especially those who participated in this study. They, along with BTC staff, want to know that their experience with BTC was meaningful not just in their own personal lives but for all women and families who may become involved with BTC in the future. As an outsider, I had to ensure that the way I formulated and presented these women's lived experiences conveyed honour and respect for their journeys.

The other research setting to consider is that of my postsecondary institution. Through my education and practical training in evidence-based research, I was positioned as an insider within the academic research context. At the same time, there was a need to balance the requirements for rigorous doctoral research with the realities of conducting embedded clinical research within an agency like BTC, in which the traditional individualistic and hierarchical research approaches of academia are not the norm. In bridging these two worlds, I often stepped into more of an outsider role in relation to my academic institution. Overall, throughout the process of conducting this research, my positionality in relation to my academic institution shifted from insider to outsider, while my role as a researcher at BTC shifted from outsider to insider.

The participants in this research were women who had received intervention at BTC for their substance use and related struggles. There were many factors that placed me in an outsider position in relation to these women, namely: being an external researcher and trained clinician, not being a mother, and not having had the same life experiences and intensity of treatment that these women had. To ensure the best experience for the participants and validity of the data collected from them, I drew upon the ways in which I was positioned in more of an insider role: a woman who has experienced many of the same societal inequities as the participants, a person who has experienced trauma, and a clinician who provides an accepting and nonjudgmental space in which clients feel safe and encouraged to share their stories.

Reflecting on these dimensions of insider/outsider positionality with regard to BTC and its clients helped me be more aware of potential biases in my interpretation of the data that might have favoured an overemphasis of positive outcomes and overlooked some of the continuing struggles for these clients.

Trauma-Informed Approach

As stated earlier, two predominant frameworks guided the conceptualization and implementation of this research. The relational developmental systems perspective helped to identify which facets of post-treatment functioning would be most important to explore among the women participating in this study. Given the near universality of trauma histories among people experiencing problematic substance use, a trauma-informed approach was instrumental in guiding the procedures of this research (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). Four key assumptions comprise this approach: realizing how trauma can affect individuals and families, including their experiences, behaviours, and coping strategies; recognizing signs of trauma as they manifest in narratives or during interactions; responding sensitively and supportively when signs of trauma are detected; and, resisting the re-traumatization of individuals with trauma histories (SAMHSA, 2014). Across the processes of recruiting participants, formulating informed consent procedures, selecting questionnaires to administer, constructing interview questions, collecting questionnaire and interview data, and engaging with the BTC community in interpretation and presentation of results, the four assumptions of a trauma-informed approach (SAMHSA, 2014) were honoured throughout this research. All research conducted at BTC follows a similar trauma-informed approach that, above all, emphasizes safety at all levels of engagement with its clients and community partners (Andrews et al., 2019).

Participants

Five former BTC clients were contacted and recruited between September 2016 and March 2017 to participate in the present study, with a four-month gap in the middle to accommodate for time needed by the ethics board to review and approve amendments to the

initial study design that would allow for data collection to be conducted remotely (i.e., via phone and mail). Recruitment was conducted by BTC clinicians reaching out to former clients for whom they had current contact information (i.e., convenience sampling). The decision to have BTC staff initially contact potential participants was made under the guidance of a trauma-informed approach as the staff were more likely to embody a degree of safety and trustworthiness lacking in an external researcher such as myself, thus ensuring a greater likelihood of women feeling safe to participate in this research. Indeed, all five participants who were contacted agreed to participate; each had been part of prior research at BTC and each expressed both fondness for their experiences at BTC and eagerness to continue engaging in research at the centre. Similarly, the choice to contact only families for whom BTC had current contact information was made for related reasons: when women participate in intervention at BTC they are not customarily asked for consent to contact them for research purposes following discharge. As a result, to have reached out to women who were no longer in touch with BTC could have constituted unwanted contact and thus risked re-traumatization.

One participant who initially agreed to participate in this study chose to withdraw in May 2017 (i.e., two months following data collection); following procedures outlined in the informed consent form, data collected from this mother were deleted. I decided to continue the study with a reduced sample size for two reasons. First, the profile of the mother who withdrew was deemed by BTC clinicians as similar to the profiles of participants who remained in the study; therefore, her withdrawal did not negatively impact sample saturation. Second, due to time limits, it would not have been possible to recruit a new participant and obtain relevant teacher surveys for her child before the end of the current school year.

The final sample consisted of four mother-child dyads. The mothers ranged in age from

33 to 43 years (*M* = 39 years), and the ages of their identified children ranged from 5 to 10 years (*M* = 8 years). Of these four children, three were male (75%) and one was female (25%). All the children had attended BTC for intervention and were currently in their mothers' custodies. Collectively, these families attended intervention at BTC between 2006 and 2015. Total time of intervention ranged across mother-child dyads from 39 to 68 months (*M* = 55 months). Two families returned to BTC approximately six months following discharge – in one case for an additional 12 months and in the other case for six months.

All participating mothers were White and spoke English. Their education levels ranged from some high school to postgraduate degrees. Three of the families had remained in the same city as BTC since treatment discharge, and one mother and child had moved to a nearby city. All four children were attending school at the appropriate grade level for their age (from Kindergarten to Grade 5).

Procedure

Mothers who were contacted by BTC staff to participate in this research were asked for verbal consent to be contacted by me to arrange a time to speak in order to discuss informed consent and set up an interview in-person at BTC or over the phone. Two mothers were able to meet in person for data collection at BTC and two mothers were interviewed via phone and then sent questionnaire packages via post that also included self-addressed and stamped return envelopes.

Data collection consisted of standard questionnaires (Appendix C) and semi-structured interviews (Appendix D) aimed at assessing current functioning across different domains in both mothers and children. The questionnaires, which tap into several socioemotional domains, have been standardly administered with mothers at BTC at intake, throughout intervention, and post-

intervention. Because these measures were familiar to the former BTC clients, the risk for re-traumatization was greatly reduced. The semi-structured interview questions were designed with input from BTC staff to obtain a richer understanding of mothers' and children's trajectories in the years following intervention, as well as to gain insights into the mechanisms of change through treatment that the women believed contributed to their positive functioning. As with the questionnaires, efforts were made in the design of interview questions to balance problem-oriented with strengths-focused wording to avoid eliciting trauma reactions in the women. Another important goal in developing the interview questions and follow-up prompts was to minimize researcher bias in administration and interpretation of interview responses. In conversations with BTC clinicians I had throughout the conceptualization and pursuit of this research project, I was encouraged to identify and explore any misconceptions I had held around substance use among pregnant and mothering women. I was also prompted to consider how my background and life experiences might affect my ability to sensitively engage with and interpret the responses of these women. With these insights, I drafted interview questions and sought feedback from BTC clinicians on their revision in a collaborative, iterative process that resulted in the final set of questions and prompts (Appendix D). Additionally, I met with clinicians following participant interviews to debrief my interactions with the women and reflect on how the experience was for them based on their direct feedback and our observations.

Interviews ranged from 37 to 89 minutes (M = 70 minutes), with in-person interviews (M = 80 minutes) lasting longer than phone interviews (M = 60 minutes). The time to complete the questionnaires was, on average, one hour. Mothers who were able to meet in person at BTC were greeted by BTC staff and then met with me, at which point I gave them the informed consent form (Appendix A) and acquired written permission to participate in the study. Each mother

expressed preference to begin with the interview and complete the questionnaires directly afterward. Interviews were conducted one-on-one by me in a private room at BTC. While mothers completed the questionnaires, I remained nearby and available for any questions.

For mothers who were unable to travel to BTC, I phoned them to obtain verbal consent to participate in the study and to arrange a time to complete the interview via phone. I then sent written informed consent forms to the women via email, which they completed and returned prior to the scheduled phone interview. After the one-on-one phone interviews were completed, I sent a package of parent and teacher questionnaires to each mother, including teacher consent forms and prepaid envelopes addressed to BTC in which to send back completed paperwork. Mothers also completed consent forms to exchange information with their child's school (Appendix B). In the letter to teachers (Appendix E), the research was described as a follow-up study examining long-term development among families, and nowhere was it disclosed that these families participated in substance use intervention. One mother sent back teacher forms along with her own parent forms, and the other three teacher forms were sent directly by children's teachers.

Once interviews and questionnaires were complete and received, mothers were compensated with $55 in gift certificates to major food and home retailers. Teachers were also compensated with $25 in gift cards to major book retailers upon receipt of their completed questionnaires. Mothers who travelled to BTC for data collection were compensated with transit fare and were offered nourishment and childcare on site. This level of compensation is standard for participants who engage in research at BTC.

Mothers were asked to provide the last two report cards for their identified child. In two cases mothers were unable to fulfill this requirement; however, the questionnaires sent in by their

children's teachers provided ample information on the students' functioning in school, hence report card information was deemed redundant.

As part of the informed consent process, I asked participants for permission to view archived client records; all mothers agreed. Participants were also informed that should they choose to withdraw from the study their collected data would be destroyed and they would still be eligible for compensation. As such, the mother who withdrew consent was still compensated the same amount for the time she had initially committed to the study.

Measures

Mothers' Substance Use. Participants completed a short questionnaire to gauge substance use behaviours; adapted by BTC from an existing addiction severity index, these five questions measure participants' experiences of alcohol and drug related issues. Participants were also asked to complete the Drug Taking Confidence Questionnaire (DTCQ-8; Sklar & Turner, 1999). This 8-item survey has participants rate their confidence to resist using alcohol or another specified drug in eight different high-risk situations. Ratings are on a scale from 0% ("not at all confident") to 100% ("very confident"). Mean scores of 80% or above indicate high confidence to avoid substance use. The DTCQ-8 has demonstrated strong reliability (α = .89), and good construct and convergent validity (Sklar & Turner, 1999). Maternal substance use was also asked about in the interview (Appendix D).

Mothers' Physical and Psychological Health. Participants completed two measures of psychological symptoms. The Center for Epidemiological Study of Depression scale (CES-D; Radloff, 1977) was administered to assess depressive symptoms. This 20-item measure asks how often participants experienced depressive symptoms in the past week on a four-point scale ranging from 0 ("rarely or none of the time") to 3 ("most or all of the time"). Participants were

also administered the Beck Anxiety Inventory (Beck & Steer, 1993), a 21-item measure of symptoms of anxiety. Respondents are asked how often in the past week they have experienced the 21 listed symptoms on a 4-point scale ranging from 0 (“not at all”) to 3 (“severely (I could barely stand it)”). Both the CES-D and BAI have clinical cut-offs of 16 and total scores falling above these thresholds indicate significant psychological distress that requires further assessment. The CES-D has demonstrated reliability (α = .80 to .90) and validity (Radloff, 1977), as does the BAI (α = .92; Beck, Epstein, Brown, & Steer, 1988). Mothers’ psychological functioning was also asked about during the interviews, as was their physical well-being.

To measure the cumulative stress stemming from different domains that influence parental functioning, mothers completed the Parenting Stress Index – Short Form (PSI-SF; Abidin, 2012). This measure contains 36 items, rated on a 5-point scale from 1 (“strongly agree”) to 5 (“strongly disagree”). The PSI-SF has three main subscales: the Parental Distress subscale gauges perceived stress from factors related to the parental role but not stemming from children; the Parent-Child Dysfunctional Interaction subscale measures stress from expectations and interactions surrounding their children; and the Difficult Child subscale measures parental stress directly related to behavioural characteristics of children. The PSI-SF has been used widely with high-risk populations, has recommended clinical cut-off values to aid interpretation, and is reported to have very strong reliability (α = .95) and good validity (Abidin, 2012; Espinet et al., 2013). During the interviews, mothers were also asked about their sources of stress and methods of coping.

Child’s Physical and Psychological Health. To measure children’s current psychological well-being, mothers completed the Child Behavior Checklist (CBCL; Achenbach, 1991) and teachers completed the corresponding Teacher Report Form (TRF; Achenbach, 1991).

These are standardized, widely used report scales that assess social, emotional, and behavioural difficulties in children and adolescents aged 1.5-5 and 6-18 years. The CBCL and TRF each consist of 100 items (younger version) to 113 items (older version) that are scored on a 3-point scale ranging from 0 (“not true”) to 2 (“very true or often true”), with higher overall scores indicating greater distress. Scores are determined for the two broad dimensions of Internalizing and Externalizing problems. Raw scores are standardized according to age and sex norms; T-scores over 70 indicate clinically significant symptoms, while T-scores between 60 and 69 are considered borderline significant. Psychometric properties of the CBCL and TRF range from good to strong (Achenbach & Rescorla, 2000); internal consistency ranged from $\alpha = .63$ to $\alpha = .97$ across CBCL subscales, and from $\alpha = .72$ to $\alpha = .97$ across TRF subscales. Mothers were also asked to speak about their children’s physical and psychological functioning during the interview.

Mother-Child Relationship. Interview questions tapped into the mother-child relationship and its development during the time since BTC intervention. Responses on the PSI-SF also provided insights in this area.

Mothers’ Relationships with Others. Mothers completed two measures to gauge how they relate to family members, friends, and romantic partners. The Revised Adult Attachment Scale (R-AAS; Collins, 1996) gauges participants’ beliefs about themselves in the context of relationships (i.e., internal working models); 18 statements are rated on a 5-point scale ranging from 1 (“not at all characteristic”) to 5 (“very characteristic”). The R-AAS is broken down into three subscales: Close, measuring comfort with closeness and intimacy; Depend, measuring belief in the ability to depend on others when in need; and Anxiety, measuring level of worry about being rejected. The R-AAS has demonstrated strong reliability ($\alpha = .77$ to $\alpha = .85$ across

subscales) and good validity (Collins, 1996).

Participants were also asked to complete the Perceived Social Support scales (PSS; Procidano & Heller, 1983), which assess the extent to which they believe their needs for support, information, and feedback are fulfilled by friends (PSS-Fr) and family (PSS-Fa). Twenty statements are rated as either "No" (0), "Yes" (1), or "Don't know" (n/a) on separate scales for friends (PSS-Fr) and family (PSS-Fa), with higher overall scores suggesting greater social support. The PSS has been used with a variety of clinical adolescent and adult populations and is reported as having strong validity and reliability ($\alpha = .91$ among clinical samples) (Lyons et al., 1988). Additional insights into mothers' relational development and adaptation came from interviews.

Child's Relationships with Others. Information about children's relationships with family members and peers was obtained during the interviews.

Mothers' Societal Functioning. Data on mothers' employment status, educational history, housing situation, and community involvement were acquired during the interviews.

Child's Functioning at School/Work. The CBCL and TRF ask parents and teachers for information on children's involvement with extracurricular activities and jobs, as well as their adaptation in school. More information was gathered via interviews.

Quantitative Analysis

Participant questionnaires were scored and total scores were compared either to predetermined clinical cut-offs (e.g., CES-D) or to standardized norm samples (e.g., CBCL). De-identified quantitative data from the questionnaires and archived client records were entered into an Excel document, allowing for examination of general trends as well as the generation of graphs to depict the longitudinal changes within each mother-child dyad.

Qualitative Analysis

Interviews were examined using the six-step thematic analysis (TA) approach (Braun & Clarke, 2006; Braun & Clarke, 2012; Braun, Clarke & Rance, 2015; Clarke & Braun, 2013). TA was chosen because it is theoretically flexible, works well with datasets both large and small, and can be applied to produce either data-driven (inductive) or theory-driven (deductive) analyses (Braun & Clarke, 2006). In the context of this study, TA was applied in an inductive manner and coding of the interviews was done primarily at the semantic (i.e., surface) level.

The first step of TA requires familiarization with the data (Braun & Clarke, 2006). I transcribed the four interviews and re-read them for errors. In the second step of TA, the researcher begins the coding process (Braun & Clarke, 2006). I entered the transcribed interviews into the computer-assisted qualitative data analysis software QDA Miner Lite (Provalis Research). I read through the interviews again and, as I did so, began generating a list of key words and phrases that were emphasized by each woman and across the women. With this list of codes (Appendix F), I went back and re-read each interview again, indicating in the software program each instance that a code applied to an interview segment.

The third step of TA involves searching for common themes across the generated codes (Braun & Clarke, 2006). I examined the codes for common underlying meanings and grouped the codes under broader themes (Appendix F). I performed another read-through of the interviews and labelled each instance that each of the themes applied. I then collated interview segments by theme in separate documents to assist with the fourth step of TA, which involves reviewing themes against the data set to determine if they tell a consistent and convincing story (Braun & Clarke, 2006). In reviewing the themes, the researcher also ensures the themes both fit together and stand apart from one another. In this step, I combined some themes that appeared

too closely related (Appendix F).

In the fifth step of TA, I proceeded to refine the themes by assigning them concise and informative names as well as defining more thoroughly what they represented (Braun & Clarke, 2006). The sixth and final step in TA is to write up the analyses, involving a weaving together of the theme analysis with interview excerpts in a context that ties into the research questions and existing literature (Braun & Clarke, 2006). This process is outlined in the following Results section.

To enhance reliability in my qualitative analysis, I engaged in several consultations throughout the process. During early stages of analysis, I presented preliminary codes and themes to the staff at BTC to gauge whether my interpretation of the data fit with their understanding of the women with whom they work. Subsequently, I shared two interviews (de-identified) with a colleague trained in qualitative analysis for the purpose of member-checking, which generated similar codes to my own. Additionally, my doctoral supervisor independently coded two of the interviews for my set of refined themes (step five in TA); we achieved 90% agreement in our coding.

Ethical Concerns

There were some potential minimal risks to the women participating in this study. Upon being asked to reflect on their experiences with substance use and treatment, there was a chance that participants may have felt some emotional discomfort and distress – or experienced re-traumatization. To mitigate this risk, before the interview I indicated that participants did not have to answer every question and could ask to move on. As a means of enhancing feelings of comfort and empowerment, I gave mothers the choice to complete either the questionnaires or interviews first. Clinical staff at the agency were on hand to provide support or referrals if

participants experienced distress or exhibited other signs of trauma. Participants were also offered breaks and refreshments to mitigate the risk of becoming bored or experiencing physical discomfort during data collection. In no case did any mother express significant discomfort, distress, or trauma reactions, and they each answered every question during the interviews.

To protect the privacy of participating mothers and children, I did not disclose the full purpose of the study to teachers asked to complete child behaviour questionnaires. They were informed this was a follow-up study examining long-term development of families, and were not told that these families had participated in substance use intervention. There was no foreseeable risk to teachers due to withholding this information.

The data and recordings collected through this study will be kept in a locked cabinet at BTC for 10 years, after which they will be archived by Iron Mountain for future research purposes. BTC has a longstanding partnership with Iron Mountain, who house all their archived client records.

Results

Results are presented at three levels, combining qualitative and quantitative data from questionnaires and interviews. I begin by presenting case studies for each participating family, with names changed to protect identity. Next, overall trends from the case studies are outlined to represent the range of outcomes often typical for women and children who complete intervention at BTC. Last, important qualitative themes that arose from thematic analysis of the mothers' stories are explored that relate to their personal journeys of healing as well as to their perceptions of the intervention processes that most promoted their positive transformations during and following intervention at BTC.

Case Studies

The names of the women and children presented below have been changed to protect their identities.

Ann, 41 Years Old, and Elijah, 7 Years Old

Ann was referred to postnatal intervention services at BTC when she was 33 years old and had just given birth to Elijah, her third child. She had been a client in the BTC Pregnancy Outreach Program (POP) from the time she was nine weeks pregnant with Elijah. At the time of referral to POP, Ann was homeless but staying with various friends, and she was detoxing from crack cocaine via a 28-day withdrawal program. During Ann's first trimester, Elijah was prenatally exposed to several substances; he was born full-term and healthy.

Ann had two older children from previous partners. Both children had prenatal exposure to substances and had been removed from Ann's custody during their early years and put in the care of their maternal grandmother. When they reached the age of maturity, each chose to live independently; however, they maintained contact with Ann throughout their lives and the oldest child was living with Ann during part of the time that she and Elijah were at BTC.

At the time of referral to BTC services, Ann's primary drugs of choice were crack cocaine and alcohol. She had a lengthy history of polysubstance use beginning at age 12 when she left home and began to work on the street in the sex trade. She reported using alcohol and nicotine since age 12, cocaine from 16, and crack cocaine from 29. She also reported a history of occasional use of hallucinogens, opiates, and cannabis during adolescence. Ann had a history of involvement with the law and incarceration.

Ann reported a lengthy history of physical, sexual, and emotional abuse across various relationships. She had experienced physical and emotional abuse from Elijah's father, with whom she continued to live until near the end of her pregnancy; during their cohabitation, he used alcohol and crack cocaine regularly. Ann also experienced physical and emotional abuse from the fathers of her two older children. Additionally, Ann reported a history of emotional abuse from her own mother; she never knew her biological father but reported a good relationship with her stepfather.

Prior to BTC, Ann struggled with mental health problems related to depression, anxiety, and post-traumatic stress disorder (PTSD). She also sustained an acquired brain injury as an adult from participation in extreme sports. She had some involvement with addictions services prior to BTC. Child protective services became involved with Ann during her third pregnancy but closed her file shortly after Ann and Elijah began intervention at BTC.

Before Ann received support from BTC's in helping to secure disability financial support (i.e., Ontario Disability Support Program, or ODSP), she relied on welfare (i.e., Ontario Works, or OW). She also had a history of working on the street. She had completed some high school as well as some college credits but was unable to complete a postsecondary diploma.

Ann and Elijah received services at BTC for almost six years, from mid-2009 to early

2015. During their involvement at BTC, they received a range of supports across the agency's services, including addictions and trauma counselling, parenting skills, child development assessments, childcare, and meals. Developmental assessments over the years revealed that Elijah's cognitive and physical development were progressing age appropriately but he struggled with emotion and behaviour regulation. With the support of BTC, Ann sought special education support for Elijah, and from kindergarten onward he has had a special education plan that addresses his needs. Ann and Elijah formed strong relationships with the staff at BTC and the family continued to keep in touch with the agency after their discharge.

Current substance use. Two years following treatment, Ann reported 100% confidence in her ability to resist problematic substance use on the DTCQ; in comparison, her confidence at the start of treatment was 60% (Figure 3). On the BTC substance use questionnaire, Ann reported experiencing no alcohol or drug-related problems in the past 30 days. She described herself as "pretty much sober" and abstinent from all drug use with the rare exception of having a drink while out at an event, as well as using cannabis medically to manage pain. Ann added she has also recently given up coffee. She reported having experienced two relapses in the past eight years, which she described as "super small."

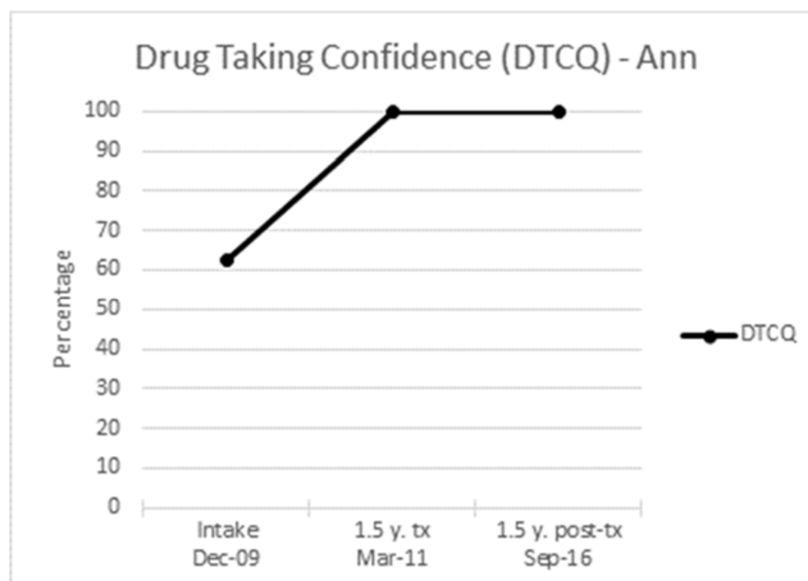

Figure 3. DTCQ results over time for Ann's confidence to resist problematic substance use.

Mother's current health. Ann described her current physical and mental health as improved compared to during treatment and continuing to improve with her growing self-care initiatives (e.g., nutrition, yoga, playing outdoors with Elijah). In particular, Ann spoke about her need to shift her expectations and self-care strategies following her sports injury several years ago that resulted in a concussion, whiplash, ocular dysfunction, and chronic pain. She described that, in addition to diet and physical activity improvements, she underwent received surgery to address the ocular injury and has been taking medical cannabis to minimize her chronic pain. Ann also described her current mental health as improved compared to during treatment, noting she continued to address her challenges with lingering post-traumatic stress symptoms through ongoing individual therapy support. Based on her self-report measures, Ann's level of depressive symptoms at the time of data collection was within the normal range; however, her experience of anxiety symptoms was in the clinical range (Figure 4). Both these findings reflect decreases in symptoms since their highest levels during treatment. Of note, Ann's ratings of depression and anxiety at treatment intake were both in the subclinical range. According to staff at BTC, it is

common for women who are first referred to underreport their socioemotional distress for various reasons (e.g., impression management, low self-awareness, lack of trust, coping with drug use).

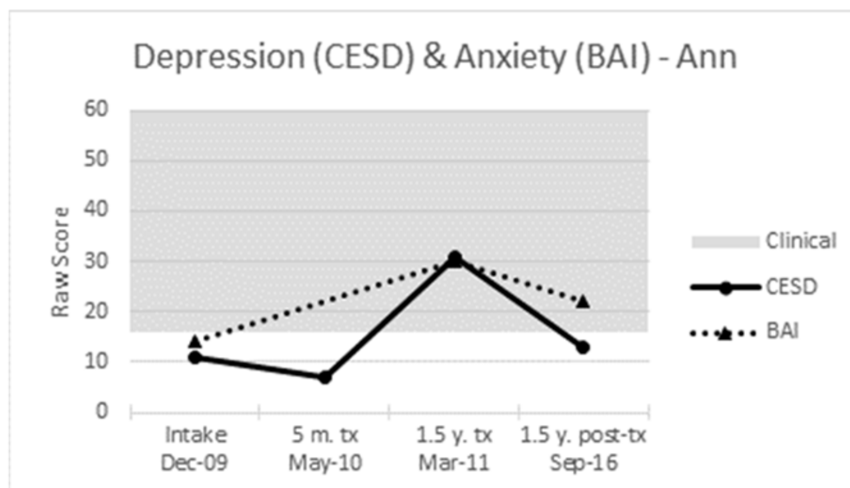

Figure 4. CESD and BAI results over time showing Ann’s depressive and anxiety symptoms.

Another indicator of Ann’s current psychosocial functioning came from her self-ratings on the PSI (Figure 5). On this scale, Ann appeared to be experiencing clinically significant levels of stress around Elijah’s current functioning and her interactions with him. Ann spoke about her son’s longstanding difficulties in school that were inadequately supported for too long until just prior to data collection, when he transferred to a new school and program better suited to his needs. In other words, Elijah was undergoing a significant transition at the time of data collection and it is likely this transition was reflected in Ann’s ratings on the PSI. Importantly, Ann’s ratings on the Parent Distress subscale of the PSI were in the normal range, indicating that despite recent elevations in parenting stress she continued to feel generally confident and capable in her abilities as a mother. It is also interesting to note that Ann’s ratings on the PSI at treatment intake were generally in the “low” range, suggesting again the possibility of underreporting.

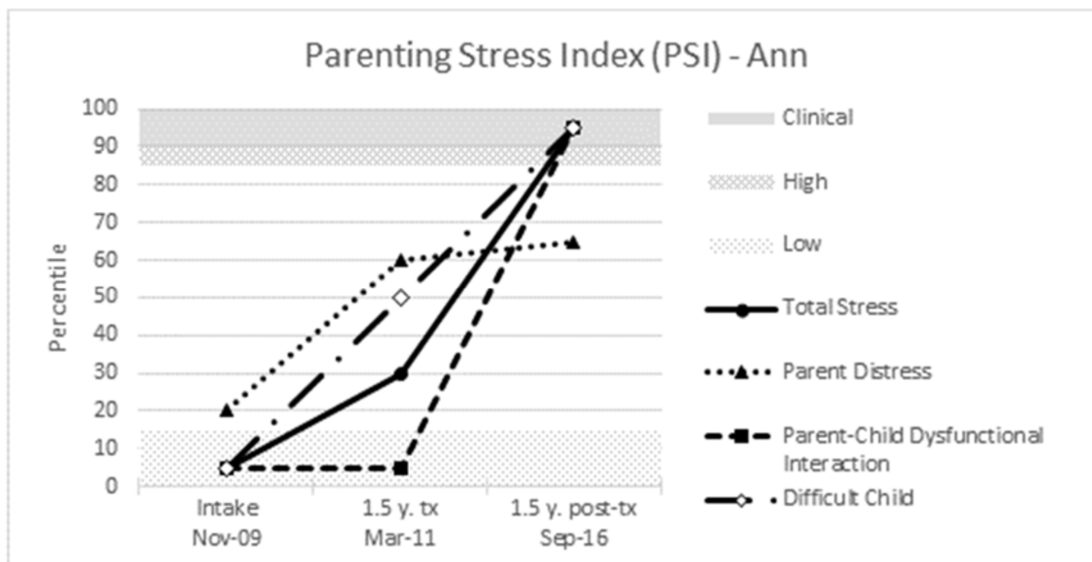

Figure 5. PSI results over time showing Ann's experience of parenting related stress.

Child's current health. Ann described Elijah's current physical health in positive terms, calling him an "active" child who enjoyed playing outdoors and participating in extracurricular sports such as skating and hockey. She noted he had not had any physical health complications. In terms of psychological health, Ann spoke about Elijah's socioemotional and behavioural difficulties stemming from the early childhood trauma he experienced. Ratings by Ann and her son's teacher on the CBCL and TRF, respectively, reflected Ann's acknowledgement of Elijah's challenges (Figure 6). Both mother and teacher ratings exhibited variability over time from intake to treatment. Notably, teacher ratings of the child's functioning showed the most difficulty just prior to his transition to a new school where there were better supports for his needs.

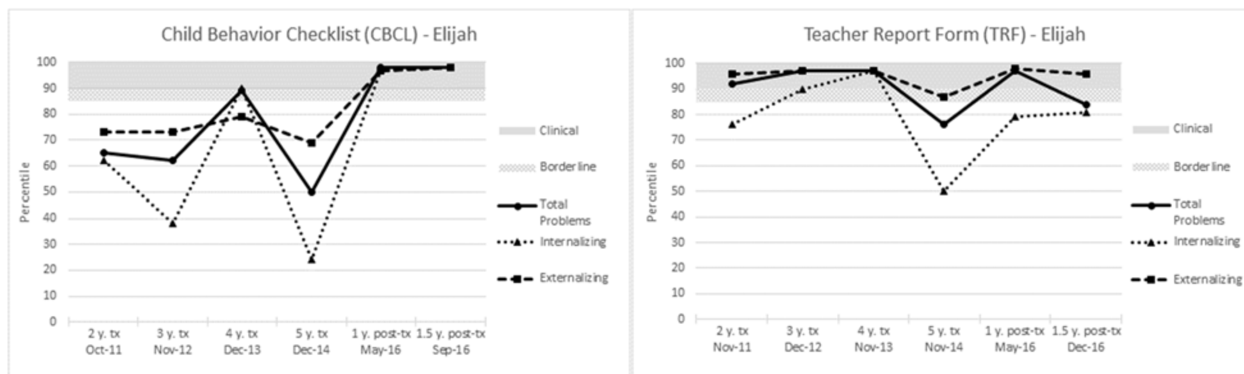

Figure 6. CBCL and TRF results over time showing Elijah's socioemotional and behavioural functioning.

Mother-child relationship. When asked about her relationship with Elijah, Ann responded, "Oh I love it so much…he's totally my kid," adding while laughing that "he pushes all my buttons." Ann spoke about how she prioritized spending time with her son and how they both enjoyed being outside together. Through her efforts to provide better conditions for her child at school and in his contact with his father, Ann demonstrated parental sensitivity and monitoring. In spite of some increasing tensions in the mother-child relationship as indicated on the PSI (Figure 5), Ann's dedication to Elijah's development appeared to remain strong.

Current family and peer relationships. Ann reported positive transformations in both family and social relationships since BTC. Her responses on the R-AAS (Figure 7) showed improved feelings of closeness and the ability to depend on significant others in her life, as well as decreased relationship anxiety (i.e., fears of rejection). Ann's ratings on the Perceived Social Support scale (PSS) echoed these improvements, with responses indicating greater perceived support from both friends and family since completing treatment (Figure 7). In the interview, Ann spoke about how BTC helped her learn to recognize and establish healthy relationship boundaries, including ceasing contact with people who previously encouraged substance use. As a result, Ann came to maintain a smaller but more supportive social circle than previously. Ann

reported she was in close and frequent contact with her oldest daughter and her own mother, but was not in contact with her older son or Elijah's father because they continued to use substances. She also spoke about recent involvement with the court system in which she successfully fought for safer visiting conditions between Elijah and his father. Ann reported recently becoming involved with a new romantic partner, whom she described as "very supportive and smart and compassionate and open." In terms of Elijah's relationships, Ann described that her son enjoyed playing with peers on the playground and visiting friends to play video games. She also reported he regularly spent time with his grandmother and half-sister.

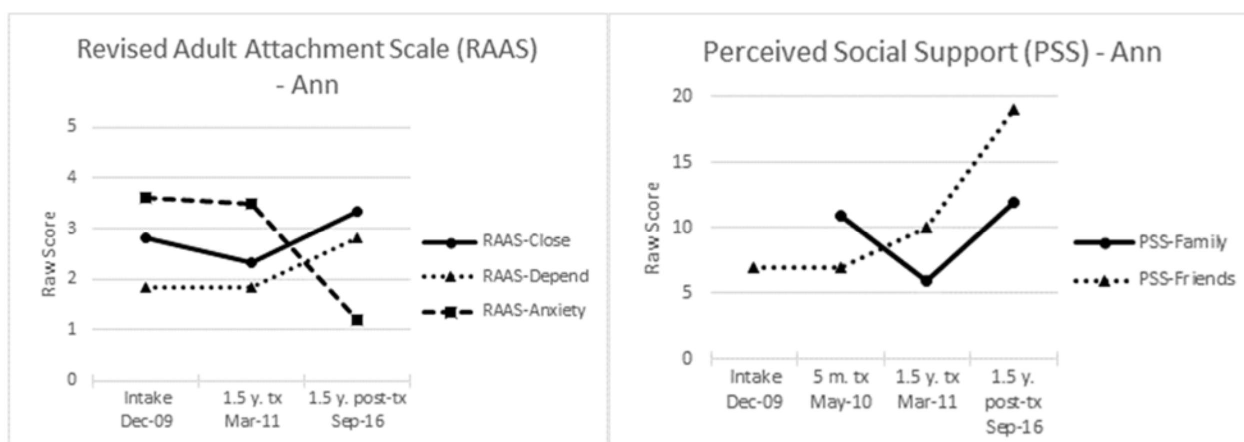

Figure 7. Ann's ratings on R-AAS and PSS scales indicating relational wellbeing over time.

Current functioning in society. Ann reported she and Elijah have lived in stable housing for the past six years – namely, an apartment in a safe neighbourhood close to community resources and playgrounds. Sources of income for the family comprised government disability and child support. Ann reported she occasionally assisted friends and neighbours with "small jobs" for minimal extra income. Ann acknowledged previous attempts to return to school on two occasions to complete her high school credits but said she was unable to keep up with the accelerated program while caring for Elijah. Ann spoke about being connected to her community

via extracurricular activities for her son (e.g., skating, hockey) and for herself (e.g., yoga classes), as well as through opportunities to connect with neighbouring families at the playground. Ann reported she maintained an open file with child protective services of her own volition because they had helped her advocate for her family's needs on several occasions. She noted, "I want them part of Elijah's care, in their village." Ann described how her son's previous school was unable to recognize the extent of his socioemotional needs, causing him to experience increasing distress and even develop symptoms of trauma. With the help of child protective services and BTC, Ann was able to secure a spot for Elijah in a treatment school just prior to data collection for the start of his Grade 2 year. Ann also spoke about staying connected to BTC and other professional health services (i.e., Women's College in Toronto) to support her mental health and continue her recovery from post-traumatic stress. No current police involvement was reported.

Brooke, 33 Years Old, and Felix, 8 Years Old

Brooke was referred to postnatal intervention services at BTC when she was 25 and had just given birth to Felix, her first child. She had been a client in the BTC POP from the time she was 25 weeks pregnant. At the time of referral to POP, Brooke was facing financial challenges and eviction. She was also in recovery from cocaine and prescription opiate use with the help of methadone. By the time of treatment intake at BTC, Brooke and Felix were living in a maternity home. During her first trimester, Felix was prenatally exposed to several substances and, throughout the prenatal period, was exposed to methadone and nicotine. He was born full-term but was diagnosed with clubfoot that required boots and bar treatment for several months.

At the time of referral to BTC services, Brooke's primary drugs of choice were cocaine and alcohol. She had a lengthy history of problematic polysubstance use beginning at age 11

when she first used alcohol and nicotine, continuing with use of marijuana from age 12, amphetamines and hallucinogens from age 16, cocaine from age 17, and sedatives from age 18. Brooke also had a history of problematic use of prescription opiates from age 15.

Brooke reported experiencing childhood physical and emotional abuse from her mother. She noted that both her mother and father had challenges around substance use, particularly alcohol, and that she was raised primarily by her older half-sister. Brooke described strained relationships with her siblings who also had histories of polysubstance use. Brooke also described emotionally abusive behaviours by Felix's father, including his problematic use of substances (e.g., crack cocaine). Brooke reportedly ended their relationship just prior to her BTC referral but they maintained regular contact throughout Brooke's time at BTC, even during times of his incarceration. Shortly after Brooke's discharge from BTC in 2012 following three years of treatment, Felix's father died from overdose, and Brooke and 3-year-old Felix returned to BTC for support. At the time, Brooke was in the early stages of pregnancy with her second child from the same father.

Brooke has ADHD and had a history of depression prior to BTC, including attempted suicide. Throughout adolescence and adulthood, she had engaged in several intervention services to address substance use and suicidality, including psychopharmalogical support. Brooke's struggles with impulse control meant she had a history of getting into conflicts with staff and other clients at some of these services. Child protection services became involved with Brooke after Felix's birth and remained in contact with the family throughout intervention at BTC.

In terms of income, Brooke relied on welfare (i.e., OW) and child benefit, as well as occasional reception work. She had completed Grade 12 and some college courses but was unable to complete a postsecondary diploma. Brooke had no history of involvement with the law,

although Felix's father had a long history of criminal activity and incarcerations.

Brooke and Felix attended two rounds of intervention at BTC across four years, from early 2009 to mid 2013 (excluding a period of five months between treatment in 2012). They received a range of supports across the agency's services during their involvement, including addictions and trauma counselling, parenting skills, child development assessments, and basic needs such as meals and clothing. Developmental assessments over the years revealed that Felix's cognitive development was progressing age appropriately, with a notable strength in language skills. He had some early struggles with motor development stemming from clubfoot, but by school entry age his motor abilities had developed to expected age norms. Assessments showed Felix's emotional and behavioural skills were also developing well, and he did not display significant challenges adapting to school.

In spite of a history of conflicts with staff at other agencies, Brooke and Felix formed strong and positive relationships with the staff at BTC, and the family had kept some contact with the agency since discharge.

Current substance use. Brooke's reported confidence in her current ability to resist problematic substance use on the DTCQ was 100%, the same level of confidence reported at her first treatment discharge after 1.5 years in the program. In comparison, when she first began treatment, and later when reengaging with BTC after 5 months for continued support, her confidence levels were at 70% and 80%, respectively (Figure 8). On the BTC substance use questionnaire, Brooke reported experiencing no alcohol or drug-related problems in the past 30 days. In describing her relationship to substances, Brooke said, "It's always going to be there, that I'm going to want to use." She reported that she abstained from all drug use except for cigarettes, medical cannabis for pain management, and the rare drink. She also noted that, when

she planned to have a drink at home, she ensured her children went to stay with extended family.

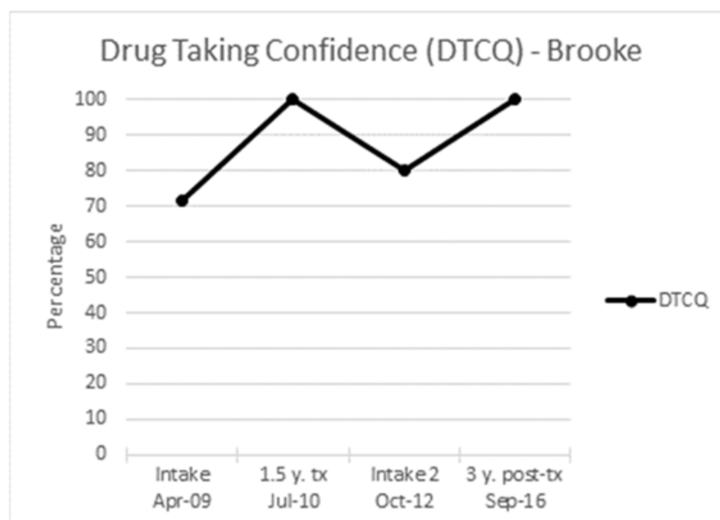

Figure 8. DTCQ results over time for Brooke's confidence to resist problematic substance use.

Mother's current health. Brooke described some challenges in her physical and mental health that she has been addressing with professional and social support. Since BTC, Brooke was diagnosed with fibromyalgia for which she has taken pain medication and medical cannabis. Brooke spoke about the difficulty in obtaining this diagnosis due to her doctor's suspicion she was merely drug-seeking. Brooke also spoke about how the passing of Felix's father led to significant mental health struggles for her, prompting her to re-enrol in treatment at BTC in 2012. She reported that, although she continued to cope with symptoms of anxiety and depression, she felt she has made significant progress in recent years – particularly noting she was not experiencing post-partum depression or sleep disturbances after the recent birth of her third child, as she had with her prior births. She also reported taking antidepressants to combat low mood. These improvements were evident in her responses on the CESD and BAI (Figure 9), which showed decreases in symptoms to below clinical levels since her time at BTC.

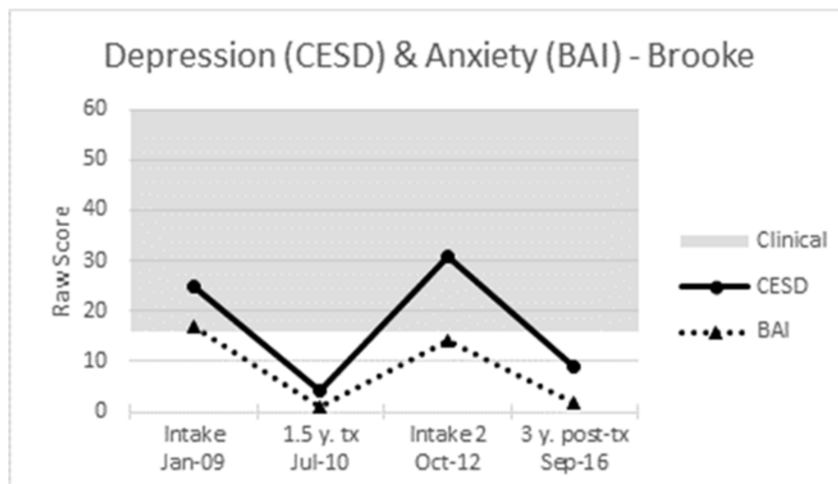

Figure 9. CESD and BAI results over time showing Brooke's depressive and anxiety symptoms.

Brooke's ratings of parenting-related stress also showed improvements from their highest levels throughout treatment (Figure 10). Of note, the sizable decrease in parent distress aligned with Brooke's reflections on her increased parenting confidence during the interview. She described how her overall anxiety has decreased since becoming more aware and in control of her worry-driven thoughts and behaviours around childcare. In her own words, "I just have to kind of flow."

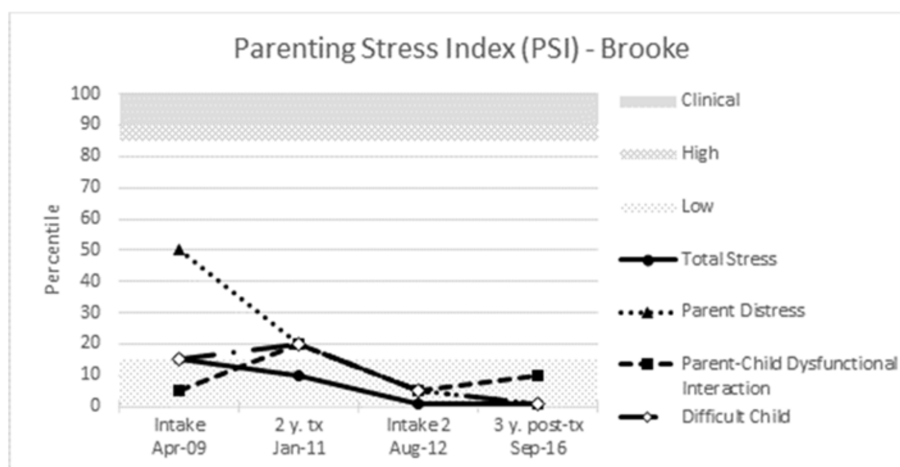

Figure 10. PSI results over time showing Brooke's experience of parenting related stress.

Child's current health. Brooke described Felix's physical and psychological health as

generally good, with the exception of being born with clubfoot that was corrected after two years of wearing boots and braces. She described him as an active child who had been enrolled in such extracurricular activities as karate. In terms of mental health, Brooke's ratings on the CBCL indicated her son's socioemotional and behavioural functioning was within the normal range for his age (Figure 11). In comparison, his teacher noted concerns around Felix's internalizing symptoms (Figure 11). Brooke spoke about how her son had recently been struggling somewhat at school and with his homework, noting his attention tended to wander and he needed frequent reminders to attend to his work.

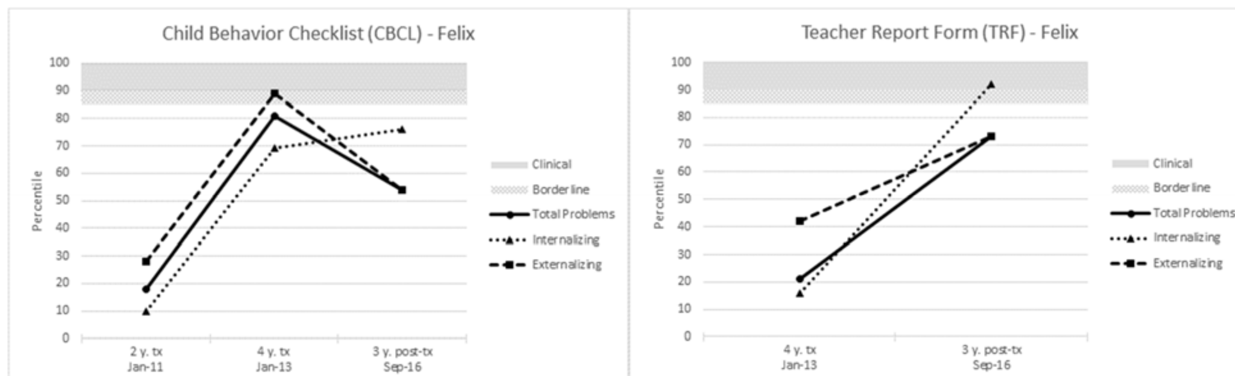

Figure 11. CBCL and TRF results over time showing Felix's socioemotional and behavioural functioning.

Mother-child relationship. When asked to describe her relationship with Felix, Brooke said, "I'm his constant…no matter what." She spoke about the similarities to herself she saw in him: "I don't know if this is a strength or a weakness, but he's got my attitude and my mouth." She added that the two loved reading together. Brooke shared how her strong desire to be there for her children was a driving force in her own self-care: "They're the reason I get up." She described her parenting style as one that included giving her son freedom to grow and helping

him make good choices. Brooke's responses on the PSI indicated overall low parenting stress levels, reflecting her insights into how she had learned over time to recognize and adapt to her children's developing needs.

Current family and peer relationships. Brooke's ratings on the R-AAS and PSS showed improvements in her relational wellbeing with family and friends since BTC (Figure 12). She endorsed feeling more relational closeness and less relational anxiety than previously; her perception of being able to depend on others decreased slightly since her second intake at BTC, but was higher than the previous two data points. Likewise, Brooke rated more perceived support from family and friends currently than at any previous point during treatment. The father of Brooke's two older children died suddenly of a drug overdose when Brooke was pregnant with her second child, prompting her to reconnect with BTC services in 2012. Brooke said that, at the same time, her male friend of many years "really stepped up" and became a bigger part of her family's life, eventually becoming romantically involved with Brooke. Brooke noted, "there is a big difference because he doesn't use drugs" and she considered it her "first ever healthy relationship" – which she concluded after recently reviewing handouts from her time at BTC. Brooke reported she had a good relationship with her father and grandmother, noting that she and one of her sisters had been "learning how to speak to each other." Brooke has an older sister with whom she was no longer in touch after historical tensions. Brooke also described her relationship with her mother as difficult, saying "she's caused so much of my…mental health problems as is." However, Brooke added that her children loved spending time with their grandmother. Brooke reported that, in addition to her family members and partner, she had a best friend and a small group of acquaintances on whom she could depend, none of whom engaged in problematic substance use. Brooke described her oldest son as "personable" and "friendly" and said he loved

to take care of his younger siblings. She added that her son had warmed up to Brooke's partner after some initial wariness of his role in the family (i.e., "You're not my father").

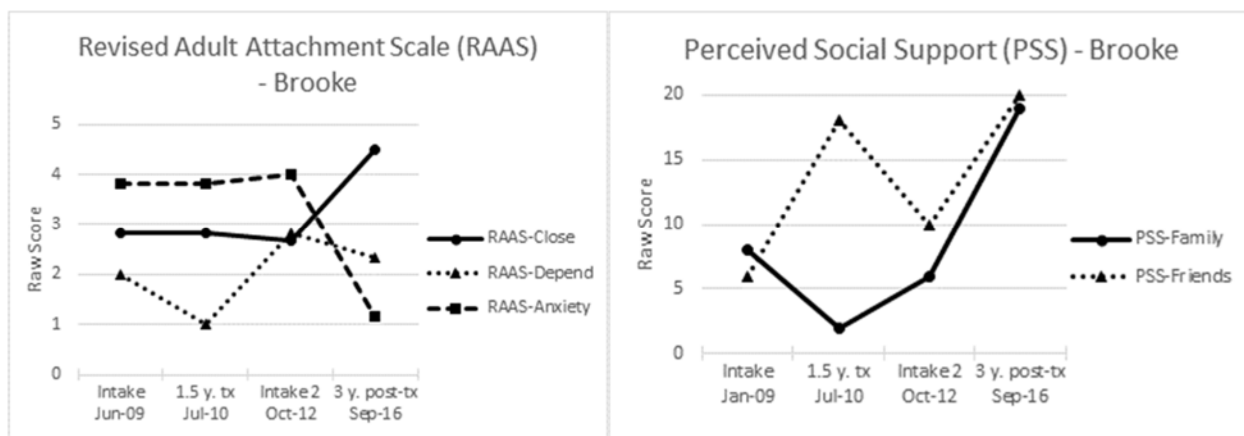

Figure 12. Brooke's ratings on R-AAS and PSS scales indicating relational wellbeing over time.

Current functioning in society. Brooke reported stable housing for the past four years, with her family having moved almost two years ago to better accommodations nearer to community resources and nature. Sources of income for the family comprised government disability, child support, and employment income from Brooke's current partner. Brooke reported she obtained her high school equivalency (i.e., GED) and had previously attempted to complete college but found it difficult to balance with family demands; she said she planned to return to complete a college diploma once her infant was older. Brooke spoke about being connected to her community via extracurricular activities for her children (e.g., karate), noting that she herself used to be more active with clubs and events while attending BTC but more recently stayed connected by attending drop-in community events with her infant. Brooke reported she was no longer involved with child protection services; likewise, no current police involvement was reported. Felix was doing well in Grade 2 according to Brooke.

Cindy, 37 Years Old, and Gregory, 10 Years Old

Cindy was referred to postnatal intervention services at BTC when she was 26 and was about to give birth to her first child. She had been a client in the BTC POP from the time she was six months pregnant. At the time of referral to POP, Cindy had stopped using crack cocaine and marijuana one week earlier. During her time with POP, Cindy began addiction treatment and was living in a group home. During her pregnancy, Cindy's child was prenatally exposed to crack cocaine, alcohol, and nicotine. He was born at 39 weeks with no complications and tested positive for THC.

At the time of referral to BTC services, Cindy's primary drugs of choice were crack cocaine and marijuana. She had a lengthy history of problematic polysubstance use beginning at age 14 when she first used alcohol, cocaine, hallucinogens, nicotine, and marijuana. She began using crack cocaine at 24 years old and increased to daily use at 25. Cindy had a history of working in the sex trade and drug trafficking, as well as some other minor criminal involvement, but had no history of incarceration.

Cindy reported a lengthy history of physical, sexual, and emotional abuse across various relationships. As a pre-adolescent, she experienced sexual abuse from her father, and later as an adolescent and young adult she was sexually abused by a peer and stranger. Cindy also reported experiencing physical abuse from all her past partners and emotional abuse from all her close family members. Cindy reported that both her parents struggled with mental health problems, and despite strained family relationships she established regular contact with her mother. She also reported difficult relationships with her siblings. She described her relationship with Gregory's father as supportive but noted he also struggled with substance use and other health challenges. At the same time, he had urged and supported her to go into treatment. Cindy did not

report any history of substance use in her close family. At the time of referral to BTC, Cindy identified Gregory's father, and her own mother, as her primary supports.

Prior to BTC, Cindy had a history of mental health challenges relating to ADHD, PTSD, BP, and BPD. She also reported a history of attempted suicide. Cindy had a lengthy history of seeking treatment prior to BTC that was described as unhelpful. She had also received psychopharmacological support for her mental health struggles. Cindy was engaged with Jewish Child and Family Services from the time of Gregory's birth. Due to challenges with emotion regulation, Cindy had a history of getting into conflict with staff and clients at the group home where she temporarily lived with her son.

Prior to BTC, Cindy had completed high school and a university degree. Following university, Cindy worked in sex and drug trafficking for two years. Cindy continued to live in a group home for several months following Gregory's birth but then moved in with his father. Her primary source of income at the time of referral to BTC was government disability support (i.e., ODSP).

Cindy and Gregory received intervention services at BTC for over five years, from late 2006 to mid 2012 (excluding 6 months in 2011 while Cindy moved away for school). During their involvement at BTC, they received a range of supports across the agency's services, including addictions and trauma counselling, parenting skills, child development assessments, and basic needs such as meals and childcare. Developmental assessments over the years revealed that Gregory was largely meeting cognitive and motor developmental milestones, and his general cognitive abilities were assessed to be in the gifted range; however, he exhibited some language delays. It was also observed that he struggled with emotion regulation, social interactions, and adapting to transitions – particularly at school. Cindy and her child formed strong relationships

with the staff at BTC and the family has kept some contact with the agency since discharge.

Current substance use. On the DTCQ, Cindy reported she felt 100% confidence in resisting problematic substance use; when she first engaged with BTC, and thereafter reengaged five years later, her confidence levels were at 90% and 98%, respectively (Figure 13). On the BTC substance use questionnaire, Cindy reported experiencing no alcohol or drug-related problems in the past 30 days. When asked about her relationship with substances, Cindy replied, "They were something that controlled me" and that, currently, "It's not something that I have to worry about." She reported maintaining 100% abstinence to alcohol and all drugs for the past decade, which she attributed to "better awareness" and "better self acceptance." Cindy acknowledged "one small relapse" in the past several years comprising two instances of drug use, immediately after which she reached out to BTC and her psychiatrist.

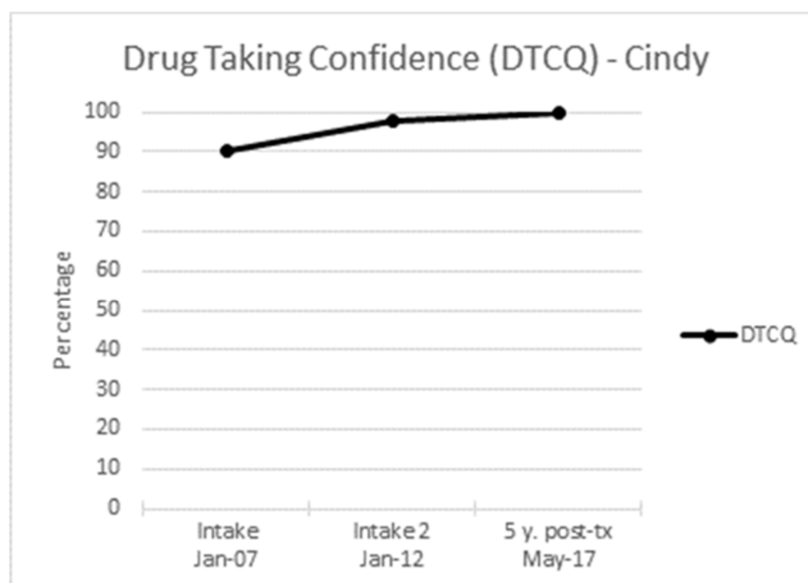

Figure 13. DTCQ results over time for Cindy's confidence to resist problematic substance use.

Mother's current health. Cindy reported no difficulties with her physical health, noting she had previously engaged regularly with physical activity groups in her community. She described her mental health as "relatively stable," noting that symptoms had come and gone but

that she continued to seek support from her psychiatrist. She spoke about past trauma with her youngest child's father, noting he became abusive when the two separated. Cindy's responses on measures of depression and anxiety indicated below clinical levels of symptoms, compared to during treatment when her depressive symptoms were in the clinical range (Figure 14). Likewise, her ratings of parenting-related stress were in the average range and globally showed improvements since she was in treatment (Figure 15).

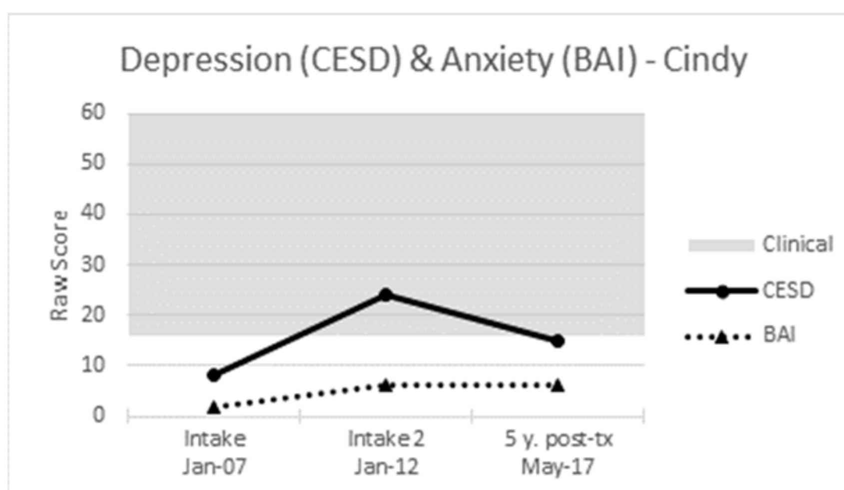

Figure 14. CESD and BAI results over time showing Cindy's depressive and anxiety symptoms.

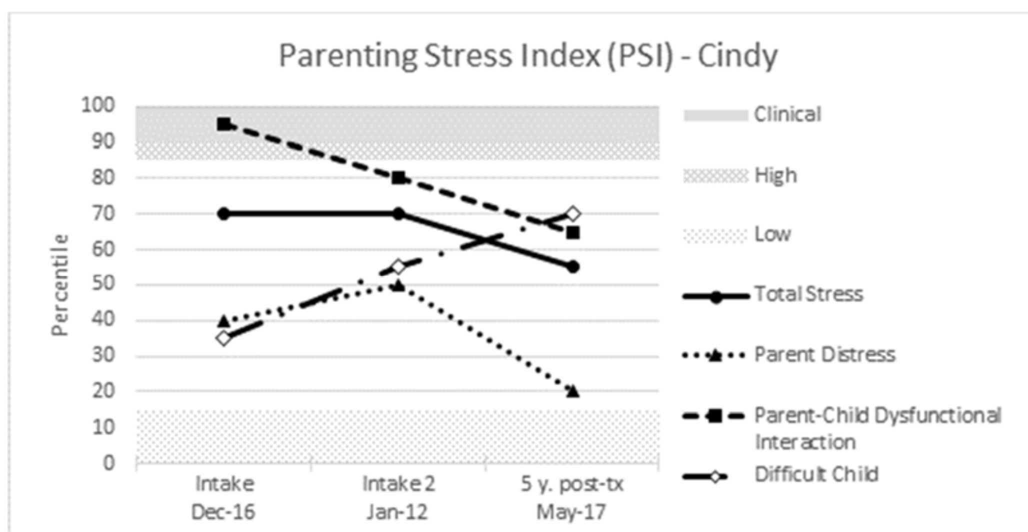

Figure 15. PSI results over time showing Cindy's experience of parenting related stress.

Child's current health. Cindy described Gregory's physical health as good, but noted he had struggled with anxiety and low mood. She reported that he first met his biological father two years ago and that it was not easy for him to adjust to his father coming back into the family fold after reconciling with Cindy. Mother and teacher reports of Gregory's socioemotional and behavioural functioning reflected these insights, both rating him as struggling significantly with mental health difficulties in the last two years (Figure 16). Historical teacher and daycare provider ratings showed elevated concerns across time, whereas Cindy's historical ratings indicated her son struggled more at the recent time of data collection than in the past. Cindy noted Gregory would soon receive mental health support to address his struggles, and added that ADHD was recently ruled out for him.

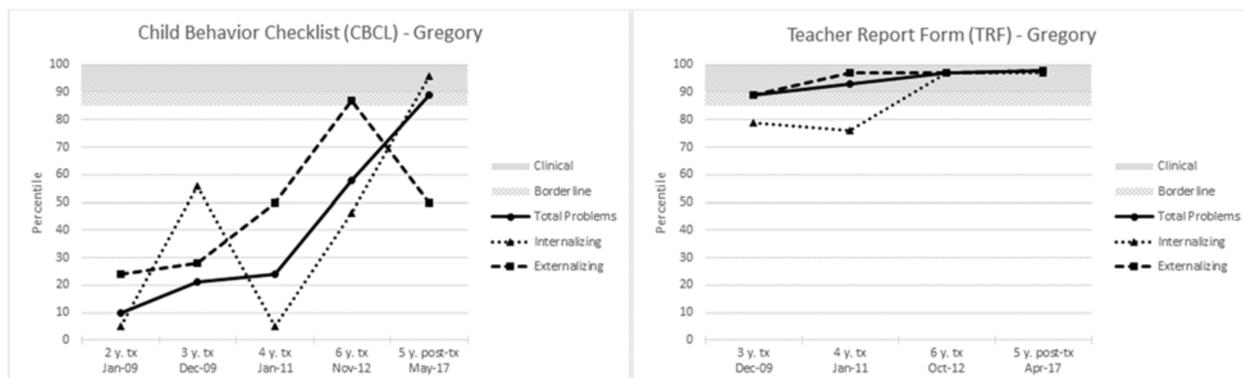

Figure 16. CBCL and TRF results over time showing Gregory's socioemotional and behavioural functioning.

Mother-child relationship. When speaking about her relationship with Gregory, Cindy described it as "really good" and added, "I think we've just become more in tune with each other as the years have gone on." This was also evident in her responses on the PSI Parent-Child Dysfunctional Interaction subscale, which showed that over time she and her son had experienced more positive and attuned interactions with each other (Figure 15). She reported that

the two had very open communication with each other in which Cindy conveyed warmth and acceptance. She added that they attended therapy together with her psychiatrist for a while following discharge from BTC. Cindy also conveyed sensitivity and attunement to her son's needs when describing his growing social and emotional challenges. Her responses on the PSI reflected Gregory's difficulties, (Figure 15), as she rated increased levels on the Difficult Child subscale compared to past time points; however, the improvements over time on the PSI in the other measured domains suggested that Cindy continued to grow in her parenting confidence and generally experienced less parenting stress compared to before.

Current family and peer relationships. Cindy's responses on the R-AAS and PSS showed improvements among almost all measured relational domains since her time with BTC, including increased ability to depend on others, decreased relationship anxiety, and increased support from family and friends (Figure 17). Cindy's parents had both passed away; she described having "got to a good place" with her mother before she passed and said her relationship with her father had been "still pretty rocky." Cindy said her sisters were "always important" to her and described their relationship as very close. Cindy spoke about how she and Gregory's father reconciled roughly two years ago, following eight years of separation. Prior to that, Cindy had a "rather abusive" short-term relationship with her youngest child's father. Socially, Cindy said she had "never really had close friends" and said she was no longer in touch with any friends she "partied with." She added that she had started making new friends in the past couple of years, and that she had one friend since adolescence with whom her relationship has changed in positive ways. As for Gregory, Cindy described him as finding it "hard to relate to others sometimes," noting he struggled to read social cues and had always been slow to warm; however, she added that "he has his own group of friends that he gets along with." Cindy also

reported her son loved to laugh and play with his little sister. She reported that she and her children had some contact with her partner's family but that their relationship was not very close.

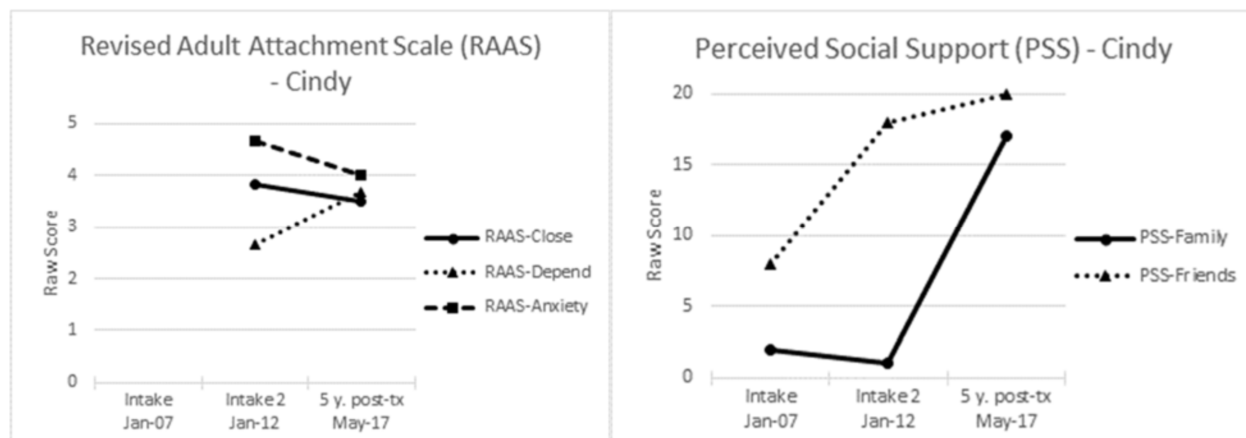

Figure 17. Cindy's ratings on R-AAS and PSS scales indicating relational wellbeing over time.

Current functioning in society. At the time of data collection, Cindy had been living for almost three years in stable housing with her two children and Gregory's father, with whom she reconciled two years prior. Before that, Cindy and her children lived in an apartment for almost three years. Since BTC, Cindy returned to school to obtain her Master's degree in social work, and as of recently was employed full-time in her field. Cindy reported that her son was enrolled in the gifted program at his school and that he particularly excelled in math. The family's sources of income included her and her partner's employment along with government disability and child benefits. In terms of community ties, Cindy reported her son was actively involved in community sports and attended Hebrew school on the weekends. Her younger daughter was also enrolled in daycare. Cindy reported benefiting from ongoing support from her psychiatrist and reported no recent child protection or police involvement. In her words, "We kind of know where to reach out if we need to."

Diana, 43 Years Old, and Holly, 5 Years Old

Diana was referred to postnatal intervention services at BTC when she was age 36, when child protection services had apprehended Diana's 2-month-old child, Holly, and placed her in foster care due to parental substance use. At the time of referral to BTC, Diana was using crack cocaine and was living in subsidized housing with Holly's father. Diana was incarcerated during the first few months of her pregnancy with Holly. In utero, Holly was exposed to crack cocaine, cannabis, alcohol, and nicotine; however, she was born at 38 weeks with no complications and no indications of substance exposure. At a follow-up appointment two months later, the doctor contacted child protection services with suspicions that parents were using drugs; subsequently Holly was removed from the custody of her parents. Diana had access visits with Holly in foster care during her first few months with BTC, and after a year Holly was transitioned back to live with Diana and her partner.

At the time of referral to BTC services, Diana's primary drugs of choice were crack and alcohol. She had a lengthy history of problematic polysubstance use beginning at age 12 when she first used alcohol and nicotine, followed by cannabis at 17 and crack at 21.

Diana reported a lengthy history of physical, sexual, and emotional abuse across various relationships. She experienced sexual abuse in her childhood from a teacher and a cousin. Diana also reported emotional abuse from her mother in adolescence. She reported physical and emotional abuse across different partners, including Holly's father who also had a history of substance use. However, she described him as supportive of her sobriety and parenting capacity. Diana's own mother misused alcohol during Diana's childhood though had been abstinent since Diana was 12 years old. Diana reported never meeting her father but recalled learning later in life that he also struggled with alcohol abuse. Diana previously had another child, who was age 19

when Diana began intervention at BTC. When this daughter was young, her custody and care were taken over by Diana's mother, and Diana and this daughter have had very little contact since.

Prior to BTC, Diana had a history of self-harm and suicide attempts, and some engagement with counselling and addictions services over the years. Diana had completed some high school credits though was unable to complete a diploma. She had a history of working in the sex and drug trafficking trades. Additionally, Diana had several prior convictions and a history of incarceration. At the time of referral to BTC, she relied on welfare subsidies for income.

Diana and Holly received intervention services at BTC for just over three years, from late 2011 to early 2015. During their involvement at BTC, they received a range of supports across the agency's services, including addictions and trauma counselling, parenting skills, child development assessments, and basic needs such as childcare and clothing. With the support of BTC and child protection services, Diana regained custody of Holly; they were supervised by protection services for a year afterward. Developmental assessments over the years revealed that Holly's cognitive and physical development were progressing age appropriately, but she struggled a bit with language. Assessments also showed she was developing well psychologically, with no emotional or behavioural challenges evident. Diana and Holly formed strong relationships with the staff at BTC and the family continued to keep in touch with the agency since their discharge, even after moving to another city.

Current substance use. Two years following treatment, Diana's reported confidence in resisting problematic substance use on the DTCQ was 100%, compared to 90% at treatment intake (Figure 18). On the BTC substance use questionnaire, Diana reported experiencing no

alcohol or drug-related problems in the past 30 days. She described currently being completely abstinent from all drug and alcohol use except for smoking cigarettes, noting, “The way my life is now, I cannot even picture drinking or drugging.” Diana reported that, in addition to BTC, she drew strength to abstain from her mother, who had been a member of Alcoholics Anonymous (AA) for 36 years.

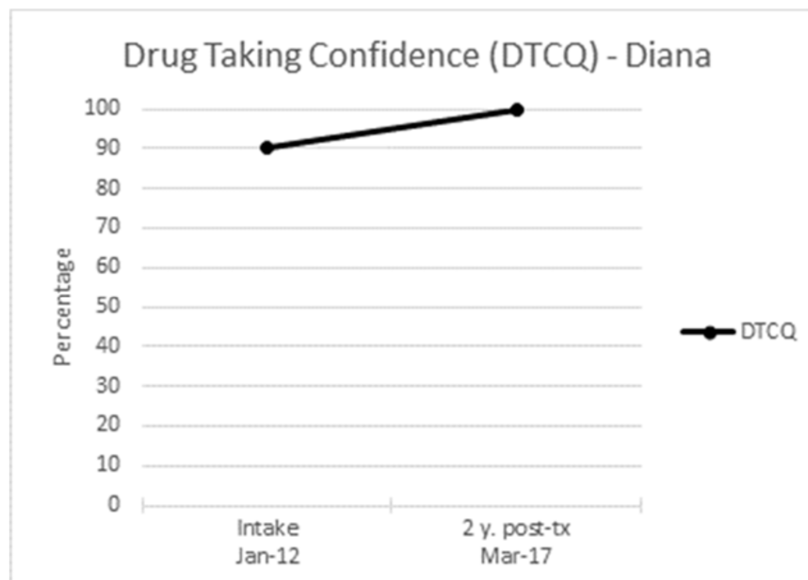

Figure 18. DTCQ results over time for Diana’s confidence to resist problematic substance use.

Mother’s current health. Diana reported she had experienced generally good physical health, though she had all her upper teeth removed due to complications from historical drug use and irregular dental visits. She reported generally good mental health as well, noting some lingering struggles with “self-esteem issues.” She added that her reengagement with academic studies had made her “into a totally different person.” Her responses on scales of depression and anxiety reflected these insights (Figure 19), showing decreases in both domains since beginning intervention at BTC. Likewise, her levels of parenting stress were within the normal range, with a notable improvement in her confidence as a parent as indicated on the Parent Distress subscale of the PSI (Figure 20).

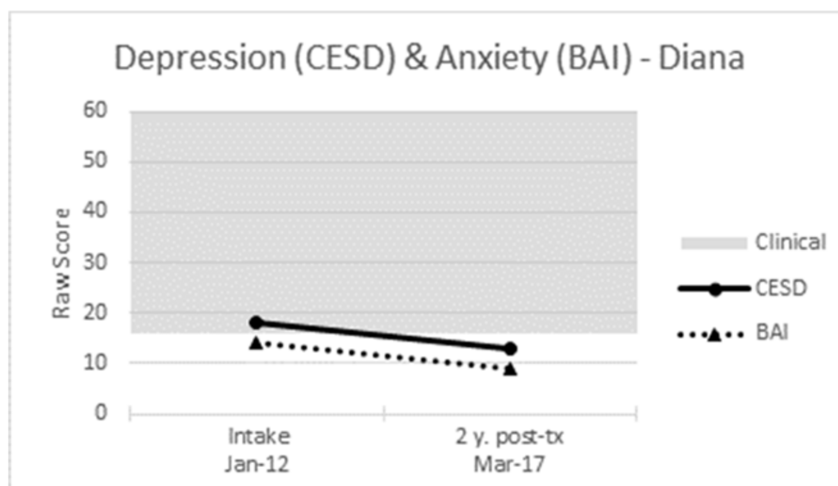

Figure 19. CESD and BAI results over time showing Diana's depressive and anxiety symptoms.

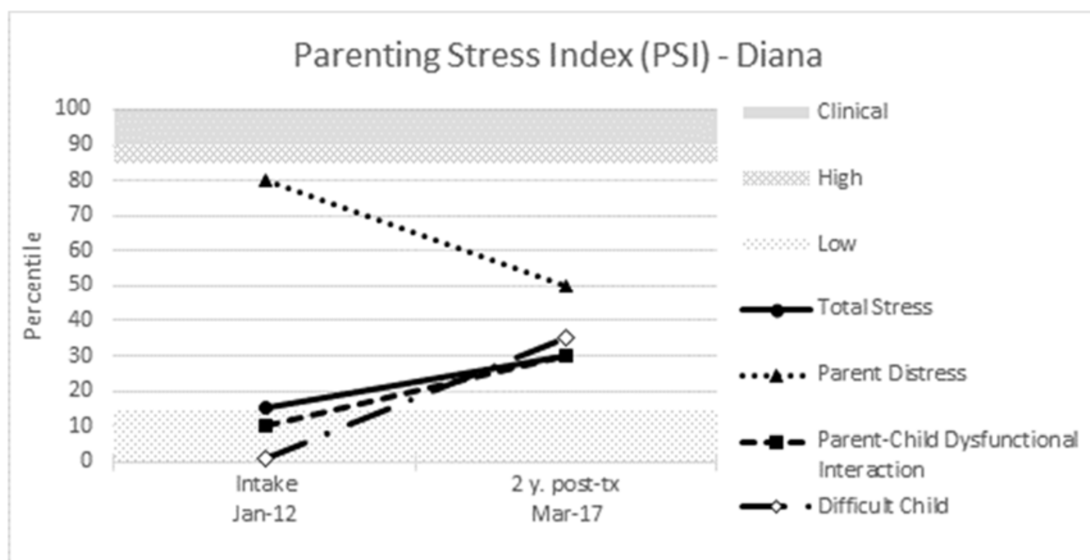

Figure 20. PSI results over time showing Diana's experience of parenting related stress.

Child's current health. Diana described Holly as "doing great" with "no issues at all." Mother's and teacher's ratings on measures of socioemotional and behavioural functioning echoed this testimony (Figure 21).

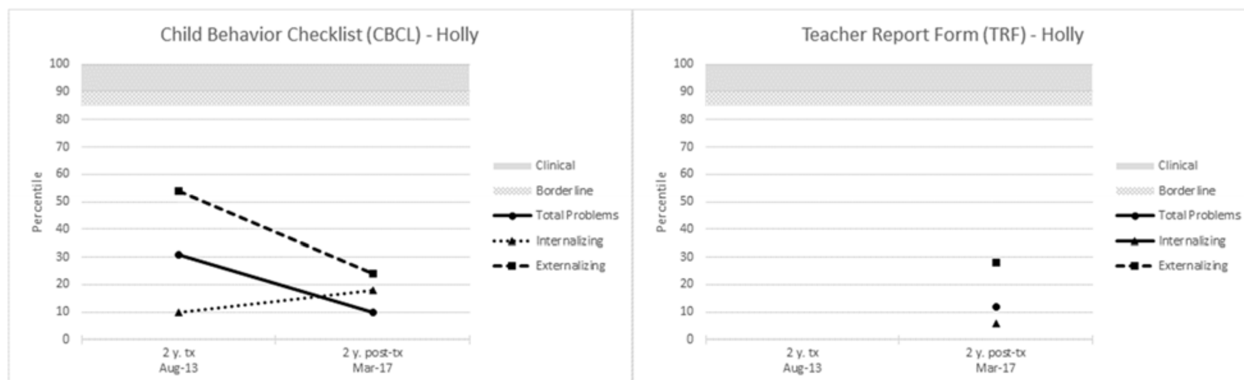

Figure 21. CBCL and TRF results over time showing Holly's socioemotional and behavioural functioning.

Mother-child relationship. Diana characterized her relationship with Holly as "very open" and described Holly as "a great kid," noting that her daughter comes to her with any kind of stress or issue. Diana said, "It's just her and I…so we do a lot of talking." Diana noted she and Holly preferred to talk about things first to prevent misunderstandings, but said when discipline was needed, her daughter would go to time-out in her room then come back to her mom to talk about what happened. Diana's ratings of parenting stress indicated marked improvements in her stress and parenting confidence since BTC (Figure 20).

Current family and peer relationships. Diana's ratings on the R-AAS and PSS indicated improvements across the board in her relational wellbeing (Figure 22). She endorsed increased ability to feel close to and depend on others, decreased relationship anxiety, and increased support from family and friends since she began intervention at BTC. Diana spoke in the interview about how her situation had improved since deciding to separate from Holly's father. Since Diana and her daughter moved back to Diana's hometown following discharge from BTC, they reportedly received good support from Diana's family – particularly her mother and her aunt. Diana also noted having good relationships with her cousins. She added that she was able to reconnect with a childhood friend since moving back and noted additional good friendships

she had made through school. In her words, “I don’t have anybody in my life that is not kind.” Diana reported that Holly had been learning to negotiate conflicts with peers at school, but that “she has a lot of friends in the townhouse complex…that she plays with on a regular basis.” Holly also reportedly enjoyed playing with her cousins and liked to help out other classmates at school.

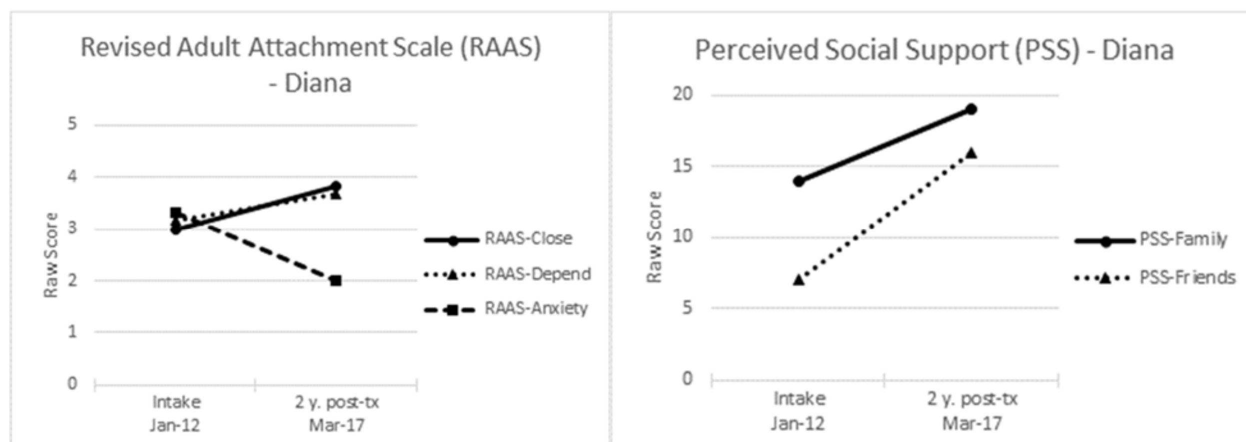

Figure 22. Diana’s ratings on R-AAS and PSS scales indicating relational wellbeing over time.

Current functioning in society. Diana reported she and Holly had stable living conditions for two years in an affordable housing complex, prior to which they relied on staying with family after Diana left Holly’s father and moved cities. At the time of data collection, Diana was enrolled full-time in school to finish her high school diploma and had already received early acceptance to college. For income, the family relied on government financial assistance; Diana noted she received no financial support from Holly’s father. Holly reportedly enjoyed taking dance lessons at their local community centre, and Diana herself occasionally attended clubs and groups. Diana reported that she was no longer involved with child protection services or the police and added that she was in the process of obtaining a legal pardon for past convictions with the support of pro bono legal services in her community. Diana described Holly as doing “very

well in school" in her current Kindergarten year and characterized her relationship with her daughter's teacher as close.

General Findings

It is evident from these rich case studies that, despite ongoing and new stressors, the trajectories of these families have been relatively positive in the years following intervention at BTC (range of time since treatment = 18-60 months; *M* = 35 months). Overall trends from these case studies are now outlined as a means of representing both the range and commonality of outcomes often typical for women and children who complete intervention at BTC. Summarized outcomes are organized by ecological domain (i.e., from personal to interpersonal to societal): substance use, physical and mental health, the mother-child relationship, social and family relationships, and societal functioning (i.e., school, work, community).

Substance Use

Each mother had a history of polysubstance use beginning in adolescence. At the time of data collection, each mother reported 100% confidence on the DTCQ in her ability to resist problematic substance use. No mother reported problems with alcohol or drugs in the past 30 days. Current patterns of substance use ranged from complete abstinence to minimal, mindful use of legal substances including use for medicinal purposes; no woman reported continued use of dangerous or illicit substances (e.g., crack cocaine, heroin). Moreover, the mothers could name several factors that help them maintain healthy substance use patterns – many of which related to their children.

Health

Families' current health functioning was measured via interviews and inventories of mothers' anxiety (BAI), depression (CESD), and parenting stress (PSI), as well as mothers' and

teachers' ratings of children's socioemotional and behavioural well-being (CBCL and TRF). Three of the four women reported levels of anxiety below the clinical cutoff on the BAI, and all four reported sub-clinical levels of depression on the CESD. Improvements in these measures were seen across the board compared to before and during treatment. Overall parenting stress levels (PSI) ranged from low to clinical ranges, with two mothers reporting average levels of parenting stress. Of the four types of parenting stress measured by the PSI (i.e., total stress, parent distress, parent-child dysfunctional interaction, and difficult child), parent distress showed the most noticeable and consistent improvement since treatment for the four women.

Physically, all four mothers reported being in relatively good health compared to the past, and each spoke about having implemented better self-care habits to maintain their gains in this domain – namely, learning to prioritize their health by regularly checking in with their physicians, engaging in healthy exercise (e.g., yoga, pilates), eating well, and taking vitamins. For two of the mothers, improved self-care also included using medical marijuana to cope with chronic pain. Each spoke about having to thoughtfully reconcile this coping strategy with their historical substance use. Two mothers had surgical interventions to address health complications stemming from a sports injury and historical drug use.

Based on mothers' CBCL ratings, children's psychological health ranged from average to clinical levels of functioning across internalizing and externalizing domains, with two of the four children not exhibiting notable concerns. These results aligned with mothers' qualitative reflections on their children's psychological well-being during the interviews. Teachers' ratings on the TRF generally corresponded with mothers' ratings but did show some variation in ratings for two of the children, in one case showing more concern and in the other showing less concern compared to the mothers.

Mothers' reports of their children's physical health indicated all were currently doing well in this domain. Three of the four children were described as regularly physically active, and two were involved in regularly scheduled extracurricular activities. One child had physical complications at birth that were corrected by early childhood.

Taken together, the mothers and children in this study were experiencing generally good physical and psychological health since treatment discharge and, more importantly, had implemented strategies to maintain ongoing good health.

Mother-Child Relationship

Given the relational and attachment focus of intervention services at BTC, I was interested in how the mother-child relationship had developed among former clients. For the majority of the women, overall levels of parenting stress measured by the PSI were in the low to normal range – including the Parent-Child Dysfunction subscale which taps into the quality of the parent-child relationship. One mother reported high levels of parenting stress across all but one PSI subscale (i.e., Parent Distress), which was not unexpected in the context of her son's recent school transition. In interviews, all four women easily described their children's biggest strengths and challenges, suggesting sensitivity and availability in their attachment relationships. The mothers also uniformly spoke about ways they have become aware of and adapted to their children's developing needs over time, including prioritizing spending time with their children over other activities. These shifts indicate improved maternal attunement and responsiveness. Likewise, all four women shared examples of how their children in turn responded and adapted positively to the mothers' own needs and behaviours, underscoring the closeness that appears to have been maintained in the mother-child relationships since treatment.

Family and Peer Relationships

The next domain I examined was mothers' and children's family and social relationships following treatment. All four women in this study – and, indeed, most of the women who seek treatment at BTC – have histories of abuse and trauma stemming from family and partner relationships. All four women in this study reported shifts in their relationships following treatment – namely, cutting or readjusting ties with negative influences and people who historically enabled their substance use, and forming new relationships with thoughtfulness for how these connections impact them and their children. Regarding family relationships in particular, each participant described the different ways she navigated establishing healthy boundaries with parents and siblings, who had often been linked to the women's psychological distress, trauma, and substance use. At the same time, the women reported trying to ensure healthy ongoing contact between their children and extended family members. Each mother described her vigilance around protecting her children from the same negative influences she experienced growing up.

Three mothers reported being in romantic relationships with men, which they described as healthy and supportive. In two of these cases, the partner was living with the mother and her children and supported the family financially. On the R-AAS, all four mothers reported decreases in relationship anxiety compared to before treatment, and all reported increased ability to depend on others. Moreover, three mothers indicated they feel closer to significant others in their lives now compared to before and during treatment. Results from the PSS likewise indicated that all four mothers felt more supported through their current family and peer relationships compared to before and throughout treatment. Importantly, each mother spoke about how her experience at BTC was instrumental in fostering deeper understanding of and

involvement in healthy adult relationships. The women also all reported that their children have regular contact with extended family members, including those with whom the mothers continued to experience tension. Three of the four women described their children's social skills development as good; one mother noted that her son experiences difficulties understanding social cues, but added that he has a small group of good friends. Teachers' responses on the TRF indicated all children exhibited prosocial behaviours with classmates.

Functioning in Society

Finally, I examined how the mothers and children were functioning in society – specifically in the areas of housing, school, work, income, and community involvement. All four participants reported being in stable housing situations for at least two years, living in what they described as safe, family-friendly neighbourhoods (range 2 – 6 years, M = 3 years). One mother completed a Master's degree following BTC intervention and is currently employed full-time in her vocational field. One mother was completing her high school credits and had been granted early acceptance to college. The two other mothers reported having completed some high school and college courses, but had been unable to finish a postsecondary diploma while caring for their children. Furthermore, all four children were enrolled in and regularly attended school at the grade appropriate for their age. For two children, academic accommodations had been implemented to support their school achievement amid recognized learning and mental health challenges. Two of the four children were also referred for psychological assessments to identify potential learning barriers.

All four mothers reported steady sources of income, including government support, partners' earnings, occasional small jobs, and/or full-time employment. All four mothers described having positive ties to their communities through such means as activity groups,

regular visits to neighbourhood playgrounds or arranged playdates, and – in the case of one mother – voluntary connection with child protection services. No mother-child dyad was currently involved with police services, and one mother was in the process of obtaining a pardon for past convictions. In other words, all the families in this study maintained supportive networks in their communities that helped foster ongoing adaptation and growth for the mothers and their children. For each family, this also included maintaining relationships with health professionals on a regular basis as well as in times of acute need.

Considering the significant historical barriers faced by the mothers and children in this study, in the years following services at BTC they appeared to be functioning well personally, socially, and developmentally. In the interviews, all four women spoke about how they believed they were leading very different lives than before treatment.

Themes

The interviews with the four women highlighted the many ways in which they and their children have developed and adapted positively since BTC. Interviews also revealed the ways in which the women and their children experienced and navigated ongoing stressors. The interviews were examined using thematic analysis to provide deeper insight into how women's experiences before, during, and after treatment have shaped their current situations. Six primary themes emerged: choosing change, coping is ongoing, healthy boundaries, self-advocacy, stigma, and the continuum of harm reduction.

Choosing Change

All four women spoke about how and why they made a choice to change their trajectories of substance use, either before or during intervention at BTC. That is, they each experienced a shift in personal agency that allowed them to be in better control of their situations, which each

identified as an integral process toward breaking historical cycles of harmful substance use and relationship patterns.

Ann said, "…when you hit rock bottom, you really hit it, then you make a choice…I wasn't in the best of places when I got pregnant. But I made a choice...I needed to face my shit. All of it. Brutal. Everything." Throughout treatment, she also came to recognize the choices she had made in the past that underlay her historical substance use: "I was…using medication …to like launch myself away from my problems…like when I started doing the hard drugs, I made a choice."

Brooke framed her choice to have children as a cornerstone of why she no longer wanted to use substances: "Before I had my son, I didn't actually see a reason why I shouldn't use drugs…[it] would be a very selfish decision…I made the decision to have kids." Brooke also talked about the decisions she continues to make that allow her and her children to live their lives free of the influences of substance use: "I don't want that around my kids...it's a whole lifestyle and a culture…I don't want that for my kids. I don't want it either." For Brooke, this meant also limiting her family's exposure to her own parents:

> "I have to kind of screen [my mother] before she comes over and make sure that she's ok…I'm an adult, I have my own family, and I want my children to be better off than I was…I've made a conscious decision not to have people who use in my life, you know what I mean? Like see my dad…if he's using, he just, he can't be present."

Brooke also spoke about an altercation between Felix's father and a child protection worker a week prior to Felix's birth, which led to protection services giving Brooke an ultimatum to either leave her partner or have Felix removed from her custody; she said, "…it was my decision to

make so I chose to go to a shelter."

Cindy shared how her decision to pursue postsecondary education led to a number of further positive changes for her and her son:

> "…you start going to college, and you start meeting people, and you start going to university, and many things happen. You start to feel better about yourself, society starts to look better at you, you start attracting more of the people you wanted to hang out with anyway, right? Like I just think kind of like forward momentum builds almost upon itself."

Likewise, Diana spoke about how her decision to commit to intervention at BTC led to further positive changes for her and Holly: "I started to get clean and sober…things started to open up for me more and I started to have hopes and dreams and knew that there was a future…[BTC] really pulled that out of me." For Diana, the choice to change involved leaving Holly's father, who "had no willingness to change." She said, "I had pre-planned a week in advance with my mom that she was going to come and get me and when [Holly's father] happened to leave so it worked out perfectly...I just packed all of my stuff and I left and I never went back."

Coping is Ongoing

Though all the mothers spoke about the significant positive changes for themselves and their children that occurred during intervention at BTC, each mother also acknowledged that her continued positive trajectory relied upon continuously coping with stressors – particularly those which historically promoted substance use. In other words, all four women recognized that the coping process is ongoing and ever evolving.

On coping with challenges, Ann said, "You have to work it, you have to work all your tools…people have to constantly be looking for therapy to produce healing, and find the tools to

fix and build…Fix and build, fix and build…And it's been brutal, like it's been a lot of hard work."

Brooke reflected on facing stressors that, in the past, would have elicited substance use as a coping mechanism: "…because life is changing…It's been up and down, as with anything…But as long as I stay online, focus, I don't have to worry about it." She added, "It's always going to be there, that I'm going to want to use…[but] I recognized that I was planning to go and use, so then set up stuff to counteract my plan." She also talked about important transformations in how she handles her anxiety:

> "So it's retraining myself to recognize what is a problem…what can I actually cope with, what can I not cope with, which steps can I take that will help me…I still get anxiety, but I'm able to curb it…and recognize it for what it is…even though I'm anxious, and then if my chest starts going I don't think I'm having a heart attack…I realize, ok this is your anxiety…stop for a minute, take a couple deep breaths, like what you're doing is too much. Like maybe take a step back, so you can deal with it."

Brooke has also brought the mindset that coping is ongoing to her current romantic relationship, noting, "If we have an issue we bring it to the table right away. So that we can both deal with it... we agreed that when we started that…[if] we're going to do this, we're actually going to do this. We're going to be together and work things out when we have issues."

Cindy reflected on how her journey to recovery required a shift in expectations of herself: "[It] took a lot, a lot of years. It is not an easy road… it's not like what people will tell you in the movies, like the person does rehab and everyone jumps around and then hugs them and life is beautiful. No… I will not underestimate that it has been a journey." In regard to the urge to use

substances, she said, “[It']s something I mean that I'm still mindful of and that I still have to work on every day, because life's not easy... But at the same time, like, that one lapse still lets me know there's work to do.” Cindy also shared how she has come to better accept and manage her struggles with depression by reaching out to her psychiatrist, noting, “I do have an illness that flares up at times, and so instead of when it's flaring up, trying to find somebody and getting sicker, at least I just have the person that I go to, you know? I don't have to get that sick before someone will step in, right?”

In her interview, Diana shared a powerful mantra that helps remind her how to keep going in spite of life stressors: “I just…put one foot in front of the other and just kind of move along.”

Healthy Boundaries

Another transformation that all the women voiced as integral to their recovery and continued positive functioning was the need to establish and maintain healthy boundaries in their closest relationships. For many, this meant limited or diminished interactions with family members and former partners.

Ann spoke about making the hard decision to establish some distance with her oldest son, who had his own ongoing struggles with substance use, for herself and for Elijah: “I'm like, I need time to process and vacate some space, this is too weird for me, I can't deal with that…my mom told me [son] is mad at me...but I can't fix this, so everybody has to go through their motions and learning.” Ann also talked about the process of coming to realize how much of herself she was giving away in previous relationships: “I've always taken so much on from my friends…I've given a lot more, giving giving giving…[not] all of myself, but too much of myself, and not getting anything in return.” She reflected on how hard it was to shift that pattern

once she recognized it: “I felt selfish about it. But then I woke up to, that it's ok. And so I have [a] way smaller circle of people…all my circles have gotten a lot smaller…because it's kind of enabling for people…you give them a piece, and then if they take it and then they keep doing it.” Ann said that, since establishing healthy boundaries, she has been better able to prioritize caring for herself and Elijah: “You know, taking my energy and finding things for myself and Elijah…I'm there for other things now.” As for her expectations of close relationships moving forward, Ann said, “I expect people to treat me, you know…at least do you for you what I'm doing for you...I mean, if we're hanging out, then if we're going to have a friendship, let's grow together, let's be happy, let's have joy, let's support each other and be healthy.”

Brooke also experienced significant shifts in what she now looks for in close relationships. She described her current romantic partnership as her “first ever healthy relationship,” adding that “it's very different being on the same page with someone…it's just completely different than what I'm used to.” She compared this to her partnership with Felix’s father, whom she described as “an all-consuming love, and that messed me up mentally more than anything else because I wasn't able to take care of myself.” Brooke spoke about establishing healthy boundaries in her relationship with her sister who also struggles with mental health, saying, “We're learning how to speak to each other…we're trying to meet in the middle. So to keep my own mental health and to keep my own sanity, I have to cut her off and just say no, I can't.” Brooke added that she has also implemented rules around her parents’ contact with her children: “I have to kind of screen [mother] before she comes over and make sure that she's ok,” adding, “my dad has always had substance abuse issues, but he just can't have that around. If he's using, he just, he can't be present.” As for her own friendships, Brooke said, “I've made a conscious decision not to have people who use in my life… I don't want that for my kids. I don't

want it either."

Cindy spoke about having to separate from her youngest child's father shortly following her birth, noting "the relationship had been rather abusive." Subsequently, she took steps to reconcile with Gregory's father, saying "we were separated probably for the first eight years of Gregory's life" and that, with the support of couples counselling and negotiating healthy boundaries, he was slowly becoming part of their family: "I'm leaving my kids alone with Gregory's father, who had never met Gregory until he was 8 years old." Cindy described how she historically did not have many friendships, and reflected on how her own process of substance use recovery and moving forward allowed for positive social changes as well: "You start to feel better about yourself, society starts to look better at you, you start attracting more of the people you wanted to hang out with anyway."

Following Diana and Holly's move, Diana has worked hard to ensure ongoing safety for her family, even involving legal services following threats made by her former partner. She added, "for him to have any contact with [Holly] he needs to go to Child & Parent Place here in [city]." As for her own relationships, Diana said, "I don't have anybody in my life that is not kind…I only have positive people…that have goals."

Self-Advocacy

Throughout and following treatment at BTC, the women in this study made greater efforts to advocate for their own and their children's needs in order to maintain positive treatment gains. In each case, this involved a greater openness to recruiting allies to help them overcome barriers – particularly the stigmatization they continued to experience due to their histories of substance use challenges.

Ann described her rationale behind voluntarily maintaining an open file with child

protection services: “[At] the beginning I didn't welcome them, but after I'm like, yeah stay, be involved. 'Cause they have backing…they've never been against me…they're definitely a good agency to have on your side…I want them part of Elijah's care. In our village.” She emphasized her point by describing how child protection services recently helped her and Elijah establish safer visitation and access with Elijah's father following a disclosure Elijah made at daycare. Ann also spoke about how BTC has continued to help her advocate for Elijah's educational needs, resulting in his recent transfer to a school that provides better learning and mental health supports for him.

Like Ann, Brooke also voluntarily reconnected with child protection services when pregnant with her third child, after they had closed the file on Felix: “I self-referred when I was pregnant because I knew there was a red flag. And they said that I'm stable at this time, and they're choosing not to investigate.” Thus, for Brooke, child protection had also come to represent a powerful ally over time. Additionally, Brooke had learned to better advocate for her health needs with her family physician, noting that “when I was with, pregnant with my daughter, I spoke to my doctor about not being on medications that are going to harm the baby. So I got, I lowered my dose.” Previously, Brooke had to fight harder to have her needs understood by her doctor when she was experiencing chronic pain. Brooke had the following to say about this experience:

> “I kept going to the walk-in doctor, and I'm like, “Look I'm in pain, like my back is killing me, like I just, you know, can I have painkillers?” And he's going, “Well you're you know, you're drug seeking.” And I'm trying to explain to him like, “No, I'm not drug seeking.” Like if I was drug seeking I could go out on the street and buy it. Like, I'm trying to relieve my pain, this is what

> works. And I kept going to him, and I kept going to him, and finally one day he's like, he said, “Just go over the table.” I got mad at him…and I'm like… “I am coming to you in pain, asking for fucking pain medication. If I just wanted to abuse fucking drugs or abuse pain medication, I could go buy it off the fucking street. And it would be a hell of a lot easier than this.” You know what I mean? And my doctor set it up that I was having a weekly pee test. And it was like, ok, that's fine, I just want you to understand, like I'm coming to you in pain, this is what works, it's not about me wanting to get high.”

After Brooke received the diagnosis of fibromyalgia, she returned to her physician: “And I looked at my doctor and I'm like, “I'm not making this up to get high…What do you have to say to me now?” You know. And they were like, “Well…we can give you this…” I'm just like, it's fucking ridiculous.”

Cindy also spoke about having to put extra effort into advocating for her rights because of her history with substance use and mental health difficulties, namely when fighting for custody of her children in court after false accusations were made by her youngest child’s father, from whom she separated due to his abusive behaviours. According to Cindy, it was difficult for the court to recognize she had come a long way in managing those challenges. She said, “I think in the end they do [recognize it], but they only do because you are willing to prove it. Which you shouldn't have to do.” Cindy added that “all that fighting was definitely worth it…in the end I have custody of both my kids…I think says everything about what was actually happening. And I also know now that I'm made of some pretty strong stuff, you know? Like stronger than the average bear.” Cindy described how she has also had to advocate for Gregory to receive adequate socioemotional support at school, noting that despite awareness by some educational

supports “a lot of other teachers don’t see that.”

When Diana left her partner and moved with Holly to another city, she recognized that there was still a way to go in advocating for their safety, noting that “within two days I was on the phone to a lawyer…because he was continuing to use.” Diana continued to recruit legal support in advocating for a full pardon of her prior convictions: “They help you through the whole thing...I went and I booked an appointment with them and I went and did all the applications with them and then they sent me off to do my fingerprints…Now they just send it to the courts.”

Stigma

In their interviews, several of the women expressed to varying degrees how their awareness of the stigma surrounding substance use among mothers continues to play out in their lives – even years following successful treatment completion. Indeed, one woman who initially agreed to participate in this study withdrew her consent due to concerns around this very topic: she feared her child’s teachers would guess about her past struggles with substance use when completing the study materials.

Ann, over the years, has come to embrace her past identity as someone with substance use challenges. Prior to participation in this study, Ann eagerly lent her voice to various BTC research and promotion initiatives, even agreeing to speak about her experiences on video. By coming to accept and work through the stigma, she has become a staunch advocate for BTC and for women who struggle in the same way she did. She said she will even “go up to people on the street” whom she suspects may benefit from BTC services (i.e., “anybody who’s ever used drugs and they’re a mother”) and give them the phone number.

Brooke’s experience of having to advocate forcefully for pain medication to address her

fibromyalgia exemplified the effects of structural stigma around substance use. Her doctor, who believed she was "just drug seeking," inadvertently caused Brooke more harm by refusing to believe she was in genuine need of medical intervention. It took persistence on Brooke's part that she was "not making this up to get high" to penetrate her doctor's stigmatizing attitude and finally receive the treatment she needed.

Cindy spoke very directly about her awareness and experience of being stigmatized due to her past struggles with substance use. In her words, "I think what I've noticed for myself over the years is like, having been labelled as a drug addict, as someone with mental health issues, that label will follow you. And it can come out in some of the most…inopportune times." She added that, as a result, "you kind of almost need someone to vouch for you…once you've worn those labels, you could be seen as being deceptive or lacking insight or like, it can be framed really well but could, there is a stigma that I think remains." For Cindy, the stigma most prominently played out when she fought in court for custody of her children: "because I had that history I had to undergo a hair follicle test, I had to get a letter from my psychiatrist to bring to the judge saying I was fit to have my own children." Cindy summed up what she took from this experience as follows:

> "[It] was one of the times when I realized that that stigma, even though it had been, you know, nine years since any of that kind of involvement, that stigma was real and alive … it also feels like you will wear a mark for a long time. Like forever, right? Which is sucky, it's just really sucky. And even if you understand why it happened, it still sucks that it happened."

After that experience, Cindy was able to become more accepting of the stigma, saying "now I like worry less too about like if people find out…if people find out…I might be really

embarrassed and ashamed, but it'll be ok. No matter who finds out what, they find out, it's so far in the past, it'll be ok." She described how, in the context of all her struggles and progress, it is "[only] the stigma that's left in my way now. If that was gone, I would be free…if there was no stigma you wouldn't feel so disgusting about things you'd done in your life." To this she added a profound insight about how she has come to internalize all those experiences: "But you stigmatize yourself just as much as anything else, and the more you feel horrible about yourself the more it pushes you toward substance."

Continuum of Harm Reduction

When asked about their relationship to substance use following treatment, the women's answers ranged from total abstinence to minimal and careful use of legal substances (i.e., alcohol and medical marijuana). This range of answers embodies the harm reduction approach used by BTC in addressing problematic substance use and, importantly, indicates that no woman felt she was any longer controlled by the urge to turn to substance use as in the past.

Ann described herself as "pretty much sober." She reflected that she had "two relapses in eight years that were super small…like one night things" and emphasized that her "kids were taken care of." She said of these relapses, "I needed a reminder kind of, that's how I look back. I needed a reminder that I really don't like being on drugs." As for her outlook on future substance use, Ann said, "I'm not worried about it. I'm not worried about ever doing them, or drinking…I cannot drink like I used to…rarely do I go out and have a drink." She also expressed interest in the medicinal benefits of cannabis. Moreover, Ann felt like she doesn't "need to avoid it" if she is in a social setting where others are drinking or using cannabis.

Brooke reflected, "before I had my son, I didn't actually see a reason why I shouldn't use drugs…I'd been doing it since I was 16. After I had [Felix], that changed…I found something to

look forward, I found a reason not to use." She recognized that substance use was historically a coping mechanism: "Like before I had Felix I had a miscarriage, and that also led to more drug use…I was coping with [it]." She elaborated, "addiction is a disease. It's a very real disease... It's always going to be there, that I'm going to want to use…But as long as I stay online, focus, I don't have to worry about it." Brooke noted that both her and her partner are "medical marijuana users" for pain, despite having "never supported marijuana use before, ever." She said the decision to try cannabis for pain management came because, "Before my doctor would give me anything for pain, she was throwing painkillers down my throat…it was horrible because I've had a prescription drug use, or drug abuse, in the past." Brooke also acknowledged she drinks alcohol "occasionally" but added "if I do drink, my kids go to their grandfather's…[they] don't see me drink, you know."

When asked about her relationship to substance use, Cindy said, "my relationship before I was [at BTC] wasn't really a relationship…They were something that controlled me." She shared the following insight:

> "You don't do drugs because you love yourself. You do drugs because you're self-destructive. And I found out why I was self destructive, and…and now I don't want to destroy myself. Every once in a while, there's still like hints of like the old me in my head that…plays the old self-destructive tape, but…it's now voices in the background instead of like the main event on the stage."

Cindy attributed her current total sobriety to "better awareness" and "better self acceptance."

Like Cindy, Diana also reported she completely abstained from substances now, saying "I don't have any relationship whatsoever [to substances]" and that her current focus was "Just getting myself back into public and doing that sober." She reflected, "…my life for the past 20

years has been drug use, on the streets, drinking, just a mess. And now…I'm living on my own again, I'm back in school, I have a routine, and I'm doing very well.” Diana added that, “I know if I pick up a drink it’ll lead me to darker places” even though several of her close family members drink at gatherings. She described, “the way my life is now, I cannot even picture drinking or drugging...it doesn't seem like that part of my life even existed, it's so far behind me.”

Treatment Processes and Mechanisms of Change

Participating mothers were asked what factors impacted them the most during their engagement with services at BTC as a way to tap into the treatment processes and mechanisms of change that contributed to their engagement with treatment and subsequent improved functioning. Their responses were examined and coded into six themes based on themes endorsed by at least three of the four women: acceptance and safety; open-door policy; wraparound services; quality of care and education; teaching and modelling healthy relationships; and BTC’s overall uniqueness.

Acceptance and Safety

Each mother expressed the ways in which they felt unconditionally accepted by the staff at BTC, regardless of their past or current struggles. They also emphasized how important it was to their recovery that they felt safe in the environment and among the clinicians.

Ann described BTC as “safe place” both inside and out, adding that when she has told others about the agency they “don’t believe that it’s not like some skeezy [area].” Ann said one of the things that stood out for her most about BTC was “[the] way that they make you feel…kind of like you’re welcome.”

Brooke verbalized how the atmosphere of acceptance helped her “realize I wasn’t just a drug addict…I’m an actual person that has value.” She said BTC excelled at “teaching me to

love myself and teaching me that it's ok to have issues."

Like Ann, Cindy also shared how important it was to her that BTC was located in a safe area, noting "you didn't have to go into those crummy neighbourhoods with your kids." Cindy further expressed how feeling fully accepted by the staff helped her believe "they always had your back."

Diana voiced how the accepting and safe atmosphere helped her more easily engage and continue with treatment: "I just really took to them and they were very kind, very friendly. It was…a very welcome atmosphere, so I stayed there." She elaborated, "you don't feel intimidated or nervous or…beneath them."

Open-Door Policy

Another important characteristic of BTC identified by each participant was that, despite having completed treatment and successfully been discharged, they felt able and even encouraged to keep in touch with the agency and its staff – whether regularly or on an as-needed basis.

Ann said that when she and Elijah encountered school or court related challenges, she could always reach out to BTC "even though I'm not technically like still coming here…like calling for support to talk to them."

Brooke said that, in addition to attending the agency's Christmas parties, she is able to call her previous clinician any time if she has a parenting question and is not sure what to do. She said, "having that as a backup is still amazing to know, that I still have that one place where I know…they're still here. No matter what."

Cindy also reflected that "even though I hadn't been working with BTC for a few years, when things started to go bad I knew to call them. I knew it was ok." Cindy spoke about how her

own foray into social work and mental health policy enabled even greater appreciation for BTC's open-door policy, noting "in a culture of like limited service… and everything's funded for specific niches and this and that, it's strange to find a place where you can call that many years later and they still know your name, and the door is still open. No matter how bad it is or it isn't."

Diana has likewise kept in touch with BTC since discharge, but spoke more about their consistent availability to her while an active client, saying BTC "were my lifeline…when I was having problems at home with Holly's father, and just my life, trying to figure out where I go from where I was at. They were there, you know? Through the whole thing." She added that, without BTC, "I really don't know where I'd be today."

Wraparound Services

A third core component of BTC endorsed as important by three of the four mothers was its "one-stop shop" model that offered everything clients needed in one location. Moreover, the diversity of individual and group treatments offered allowed for the women's needs to be comprehensively met.

Ann said that not only was it important that it was "everything in one place" but also that the services are "organized, this is researched, this is everything put together."

Brooke attributed her and Felix's successful treatment to "[all] of the treatment programs that I went through, all of the groups that I did through BTC…helped me heal." She specified, "they helped with so many aspects like my parenting. Teaching me how to relate to my child. Teaching me bonding…teaching me how to do things with my kids."

Cindy spoke about "the fact that like they just made it easy to come in, you had daycare right there, and you had meals, and all of that stuff." She added, "they had probation officers

there, so if you had to do probation you could go see a probation officer there…you didn't have to go to…a special addictions doctor about your kid. They brought a doctor in there." Also important to Cindy were the outreach services offered, like "the pregnancy outreach where they just came to you wherever you were" as well as "having someone who came into my home, the parent-infant therapist." She spoke additionally about the importance of "the continuity of service" noting how "invaluable" it was that "everything was together...I learned everything from how to make my own baby food…to how to deal with a craving in the middle of the night at that one place."

Quality of Care and Education

All four women reflected upon the high standards by which BTC developed and delivered their services, including the quality of staff, the soundness of the information shared, and the consistency with which treatment progressed as a result.

Ann described BTC a place where "everybody is all on the same page…there's no bullshit information. Everything adds up…[the] information is solid...the way that you're learning." She added that "everybody's a doer, not like a procrastinator…[the] counsellors are primo." Ann also recognized the high quality put into developing the physical agency itself, saying "Every single brick and wiring, it's done perfectly. Insulation, everything has been perfectly wonderfully thought out."

Brooke spoke about how she continues to benefit from the quality information learned at BTC, in particular about healthy relationships. She described how she came to recognize her current romantic partnership as her "first ever healthy relationship" by looking through "one of the healthy relationship emails from BTC;" Brooke said, "we both looked and we were both like, look we meet all this stuff!"

Cindy emphasized BTC staff's "willingness to…go a bit beyond their scope" and spoke about how the speediness of BTC's response made all the difference for her treatment progress. She said, "when I contacted them, because I was pregnant, the clock was literally ticking. And they ensured through the pregnancy outreach worker that I got the bed." She added, "that was a huge reason why I got to take my son home...that set the stage for an appropriate attachment, and an appropriate delivery…for all of those things to happen." Cindy also reflected on how BTC helped her increase in resourcefulness, saying they taught her "where to find…and how to access those resources" that she and her children would need throughout and after treatment.

Diana spoke about how the quality of care and services not only helped her and Holly but inspired her goals for a future career, saying BTC "really helped me to want to give back, for my decision to want to become a social worker and to help people, you know? They played a big part in that."

Teaching and Modelling Healthy Relationships

Each participant highlighted BTC's focus on relationships as integral to their treatment, both in terms of how BTC taught the women how to have healthy relationships with their children and others, and in terms of the staff modelling healthy relationships by the ways they interacted with clients and with each other.

According to Ann, BTC's staff "model how relationships are supposed to work." She reflected on how that modelling of relationships continues to impact her, saying, "I kind of expect everybody to treat me like this now."

Brooke's experiences of learning how to relate to and bond with her children, as well as her learning how to tell what healthy partnerships look like, were also manifestations of the relationship focus taken at BTC. Of her current partnership, she said, "it's very different being on

the same page with someone…working towards parenting goals and working towards, ok well we want a car, we want to do this, and this is what we need to do…we discuss things."

Cindy said of her connection to BTC, "through having a relationship with them, they kept me out of a lot of different probably bad positions." She also described their treatment approach having "always a lens of the fact that we were a family and that what was happening to me was happening to [Gregory], and what was happening to him was happening to me."

Diana highlighted how important to her and Holly "all the staff" were, describing them as "kind" and "friendly." She added, "I know they're not just there just for the sake of having a good job. I know they truly care, you can feel it from them."

Uniqueness of BTC

Finally, three of the four women indicated in some way that the staff and approach at BTC are unlike those found at any other agency, and that without their engagement at BTC in particular they would not have experienced the same treatment success.

In Ann's words, "You can't ever pick another place like this." Ann has become a strong advocate for BTC, saying "I tell everybody about this place. Everybody. Everybody should know about this place," Indeed, BTC is so unique that, according to Ann, "people don't believe that a place even exists like this."

Brooke shared her conviction that "[if] BTC wasn't here, I wouldn't have my kids." In reflecting on BTC's open-door policy, she also acknowledged, "it's strange to find a place where you can call that many years later and they still know your name." Notable too was Brooke's ability to form trusting and positive relationships with the staff at BTC in spite of her history of conflictual relationships with staff at other services.

Cindy reflected in a similar way on BTC, saying, "how many places could you do research with where they can track down a 10-year-old client and give you their number?" She shared additional insights about the unique workplace quality: "I think it speaks a lot more about the organization as a whole, because having worked in this industry I know that like two to three years, five years, is like the max people stay in one organization…people are still [at BTC] for 10 years."

Discussion

In this research, I was interested in learning how mothers and their children had developed and adapted in the years following treatment for maternal substance use at Mothercraft's Breaking the Cycle (BTC), an integrated early intervention program in Toronto, Canada. This study focused on current maternal substance use behaviours and attitudes, physical and mental health of the mothers and their children, the mother-child relationship, social and family relationships, and societal functioning (i.e., school, work, income, community participation, and service involvement). I also wanted to learn about mothers' perceptions of what helped them and their children develop and adapt over the years by highlighting themes that came out in the women's interviews and by examining which treatment processes and developmental mechanisms of change at BTC the women believed helped them most in their journeys. This research was exploratory and the goals were addressed with a mixed methods research design combining quantitative and qualitative methods. Participants were given questionnaires and engaged in semi-structured interviews, the data from which are presented in this research in the form of case studies, a general descriptive summary, and thematic analyses.

The approach adopted by BTC in the treatment and research of maternal substance use is grounded in relational, attachment, developmental, and historical trauma theories (Motz et al., 2006; Andrews et al., 2019). Correspondingly, the present study was guided by relational developmental systems and trauma-informed frameworks. Relational developmental systems theory (Lerner et al., 2013) recognizes that human development is a dynamic and relational process shaped by transactional factors related to person, place, and time in which individuals and the systems they inhabit grow through relationships with others. Under this theoretical framework, the present study identified several attributes of BTC clients (i.e., mothers and

children treated for maternal substance use and related struggles) in relation to numerous environmental and systems factors that were part of families' developmental trajectories in the years following treatment. Adopting a trauma-informed approach (SAMHSA, 2014) to research procedures was important to ensure safety and comfort for all participants and BTC staff who were part of this research (Andrews et al., 2019).

Figure 2, inserted again below, illustrates how the varying components of BTC provide support at different personal, relational, and environmental levels for mothers-child dyads who seek treatment for maternal substance use. It also illustrates how integrated services like those at BTC and several other programs across Canada and around the world are designed to lead to more optimal outcomes for the mothers, their children, and society than would be possible without intervention.

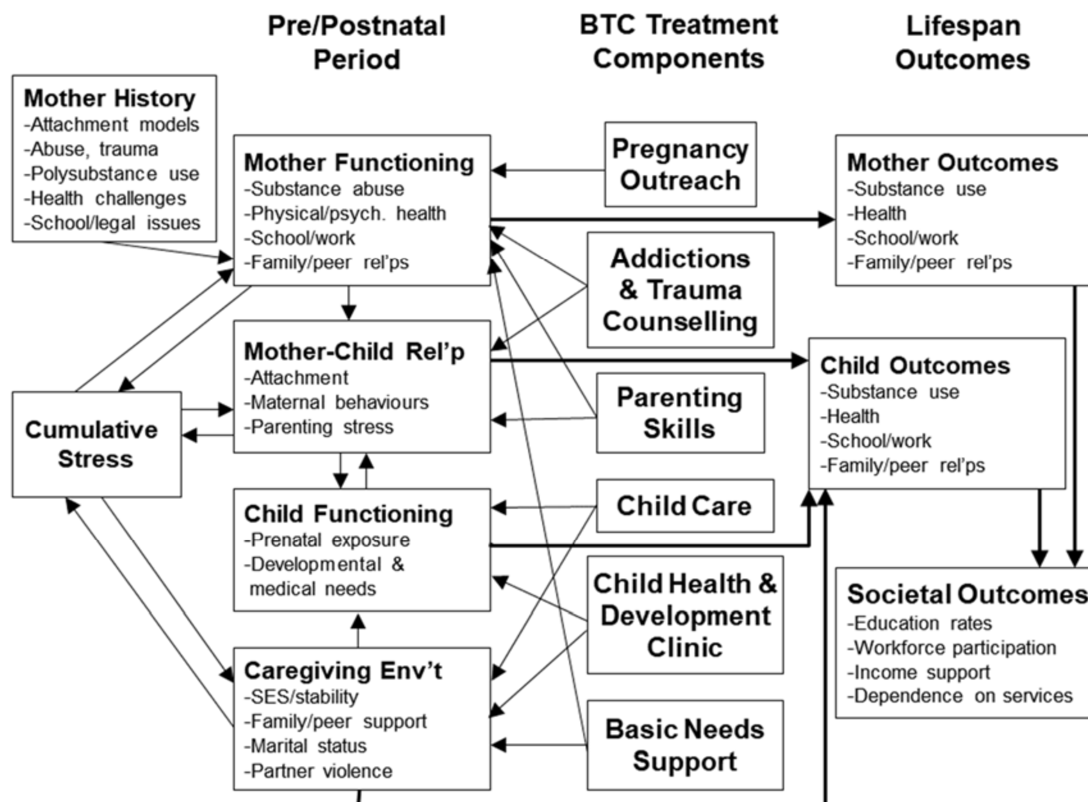

Figure 2. Relational developmental systems model of factors impacting development and adaptation of mothers and children receiving comprehensive intervention services for maternal substance use.

It became evident when reviewing the case studies, general outcomes, and interview themes that, despite the unique journey on which each mother-child dyad has travelled, the women had many common experiences and insights. Notably, the outcomes for these women following treatment have, in so many ways, "broken the cycle" of trauma and substance use for themselves and their children. Each woman spoke to varying extent about how she and her child(ren) were functioning in substantially better ways than before treatment. As summarized in Table 1, the results of the present study indicate prominent and promising differences between the expected outcomes for mothers and children affected by maternal substance use who do not

receive treatment versus the actual outcomes for current participants.

	Expected Outcomes (no treatment)	Actual Outcomes (BTC treatment)
Mothers	- Continued substance use - Significant health challenges - Negative family/peer relationships - Limited education - Limited employment - Transient housing - Repeated, unwanted involvement in child protection and legal systems	- Abstinence or safe substance use - Managed health challenges - Healthy family/peer boundaries - Limited to advanced education - Limited to full employment - Stable housing - Limited and voluntary contact with child protection and legal systems
Children	- Exposure to maternal substance use; future risk of substance use problems - Significant health challenges - Exposure to negative/abusive family members; poor peer relationships - Significant school challenges - Removal from parents' custody	- Protected from maternal/family substance use; future risk unknown - Limited, managed health challenges - Protected from negative family interactions; good peer relationships - Managed school challenges - Remain in mothers' custody

Table 1. Expected outcomes for mothers and children when maternal substance use is not addressed in treatment compared to actual outcomes in this study following intervention at BTC.

Women with histories of polysubstance use who do not engage in integrated substance use treatment are less likely to reduce or cease their use of substances than those who receive such intervention (Niccols, Milligan, Smith et al., 2012). Reduced substance use is the most frequent outcome cited across both quantitative and qualitative evaluations of integrated substance use interventions (e.g., Espinet et al., 2016; Hubberstey et al., 2019; Marcellus, 2017; Milligan et al., 2010; Moreland & McRae-Clark, 2018; Tarasoff et al., 2018). Since treatment at BTC, each mother in the present study reported having developed and maintained either abstinence from or judicious, periodic use of substances away from their children. None of the women reported ongoing use of the more illicit and dangerous substances which formed

significant elements of their previous problematic substance use patterns. Additionally, no women reported problems with alcohol or drugs in the past 30 days; all endorsed 100% confidence around resisting problematic substance use now and in the future. Thus, despite the continued presence of limited substance use in the lives of some of these women, the use was not seen as problematic or interfering with their lives in the ways that it had been before. Based on how the women spoke about substance use in the quotes highlighted under the *continuum of harm reduction* theme, the harm reduction approach adopted by BTC appeared integral to their continued recovery from past addictions and ability to function well regardless of whether substance use was still in the picture or not. Children who are raised in the context of maternal substance use problems are, themselves, at risk of future substance use struggles (Niccols, Milligan, Smith et al., 2012); therefore, this finding also suggests that the children who participate in intervention at BTC are less likely to develop their own substance use challenges in the future. Future long-term research is needed to investigate these children's trajectories in regard to substance use as they mature and become exposed to substance use in peer and other environments.

Women with significant histories of trauma and substance use are known to be at higher risk for physical and mental health challenges (Espinet et al., 2013; Niccols, Milligan et al., 2010; Niccols, Milligan, Sword et al., 2012). The high levels of cumulative stress experienced by these women, stemming from varying personal, interpersonal, and environmental factors (Figure 1) perpetuate their mental health challenges (Bondi et al., 2020a; Bondi et al., 2020b; Gueta & Addad, 2015; Haabrekke et al., 2018; Rutherford et al., 2013; Sword et al., 2009). The women in the present study showed improvements on the mental health and stress measures administered for this research compared to before and during treatment. In the years following treatment, none

of the current participants reported clinical levels of depressive symptoms (CESD) and only one reported significant anxiety levels (BAI) – yet at a lower level than during treatment (Figure 4). The reduction in symptoms of depression and anxiety has been demonstrated in other research examining outcomes among women who engaged in integrated substance use treatment (e.g., Espinet et al., 2016; Hubberstey et al., 2019; Moreland & McRae, 2018). Additionally, overall parenting stress levels (PSI) among participants in the present study were in the low to normal range for three of the four women, echoing other research findings that showed improvements in parenting stress (e.g., Espinet et al., 2016).

In terms of physical health, each woman was either in reportedly good health or shared ways in which she was actively managing chronic health conditions that arose independently of her history of substance use (e.g., fibromyalgia, traumatic brain injury). One mother (Diana) received surgical intervention to address dental damage caused by drug use. Importantly, all women spoke about how they had improved the way they cope with and manage cumulative stress stemming from both physical and mental health challenges since treatment, even longstanding challenges which predated – and even contributed to – their development of substance use behaviours. The theme of *coping is ongoing* that arose from the interviews is not only reflective of the positive strides made by these women in managing their physical and psychological health needs, it also represents a meaningful evolution from reliance on short-term coping strategies such as substance use (Latuskie et al., 2019).

The children involved in this study were described by their mothers as exhibiting good physical health. In terms of psychological health, the children were rated as having a range of socioemotional functioning according to their mothers and teachers. Two children were rated by mothers as showing average socioemotional functioning, one was rated as struggling with

internalizing symptoms, and one was reported to have both internalizing and externalizing challenges. This finding resembles that in the study by Hser and colleagues (2014) where they found that, 10 years following mothers' treatment for substance use, the majority of their children did not show significant internalizing or externalizing problems, yet some continued to face some socioemotional challenges. Other studies with shorter follow-up periods have also demonstrated that integrated substance use treatment for mothers promotes improved physical and psychological health outcomes for their children (e.g., Haabrekke et al., 2018; Marshall et al., 2015; Niccols, Milligan, Smith et al., 2012). Notably, the children in the present study who were rated as having at-risk or clinical levels of difficulties were reportedly having their needs recognized and addressed at home and at school. Thus, mothers had not only learned ways to effectively manage their own health needs but also those of their children. Indeed, several of the mothers spoke about how they learned in treatment that it was necessary to meet their own needs in order to be more sensitive to and available for their children. To this end, the theme of *self-advocacy* highlighted how, in many cases, the women learned how to both identify and assert their needs or those of their children to receive the necessary support, such as appropriate medical intervention or learning assistance at school. The theme of *coping is ongoing* also showcased mothers' recognition that, as their children grow and face new developmental challenges (e.g., social interactions at school), the women need to continue adopting and implementing support strategies that best support their children's changing needs to foster their ongoing adaptation.

The themes of *coping is ongoing* and *self-advocacy* also arose when the women spoke about the mother-child relationship. Central to maintaining strong bonds with their children were mothers' efforts to understand their children's needs and to provide appropriate support. These

behaviours reflect maternal sensitivity, availability, and responsiveness – necessary ingredients for strong attachment (Eiden et al., 2011). In addition, they reflect the mothers' increased efforts to take care of their own needs in order to be more available to their children, as well as mothers' awareness of the dynamic nature of working with their children through challenges (i.e., *coping is ongoing*). In advocating for their children's needs, these women strove toward sensitivity and responsiveness, thus bolstering the mother-child relationship further. To engage sensitively with her child, a mother must have the capacity to detect and understand her child's signals and respond to her child's needs appropriately – a skill which requires reflective abilities that are often impaired by substance use and low parental competencies (Cataldo et al., 2019). Previous research indicates that integrated substance use treatment leads to improvements in parenting skills and in the mother-child relationship (e.g., Espinet et al., 2016; Hubberstey et al., 2019; Nicols, Milligan, Sword et al., 2012; Renk et al., 2016). In the present study, self-reports of overall parenting stress on the PSI tended to be in the average range for most women in this study, with the exception of one mother (Ann) whose son (Elijah) was experiencing a major transition at school at the time of data collection. For the other three women, a notable positive trend was observed since treatment on the Parent Distress subscale of the PSI, which measures parents' confidence in their ability to provide for their children. In other words, through treatment, these mothers came to develop stronger competence and confidence in their parenting skills. Taken together, it was clear from the interviews and questionnaire data that each mother had - in Brooke's words - arrived at a place where she could become her child's "constant."

A commonly difficult dynamic among women struggling with substance use problems is the presence of negative family and peer relationships (Kuo et al., 2013; Latuskie et al., 2019; Niccols, Milligan, Sword et al., 2012). The majority of women who engage with BTC have

experienced physical, sexual, and emotional abuse at the hands of trusted family members and romantic partners (Espinet et al., 2013). Many of these relationships are with people who themselves have substance use problems, thus perpetuating women's substance use on many levels (Espinet et al., 2013; Latuskie et al., 2019). Women with substance use challenges have limited exposure to role models for healthy relationships (Andrews et al., 2018). Without treatment, it is likely that women will continue experiencing negative interactions (i.e., abuse, substance use promotion) and that their children will be exposed to these interactions, putting them at risk for witnessing violence and forming unhealthy working models of relationships (Carta et al., 2001; Motz et al., 2011). Moreover, unhealthy partner relationships have been identified as a significant stressor that promotes substance use among mothers (Latuskie et al., 2019). All of the mothers in the present study reported that they were no longer closely involved in relationships with family members or peers who had previously been abusive toward them or promoted substance use, unless efforts had been made to establish and maintain appropriate boundaries with those people. Results from the social support and adult attachment measures corroborated these acknowledgments. For each woman, perceived supports from both family members and peers were rated at the highest levels compared to before and during BTC intervention. All of the women reported decreased relationship anxiety compared to historical levels. Three women rated their ability to depend on others and feel close to others as higher than before or throughout treatment. All of the women identified the importance of learning how to establish and negotiate *healthy boundaries* in both their established and new relationships, particularly with romantic partners. These findings echo other qualitative research outcomes indicating that having supportive and positive relationships was key to reducing substance use and increasing psychological well-being (Kuo et al., 2013; Latuskie et al., 2019; Pepler et al.,

2014; Sword et al., 2009). The mothers in this study also expressed how important it is to shield their children from the types of abusive family relationships they themselves experienced growing up, in some cases meaning limited or no exposure to immediate family members. Stated another way, these mothers were *choosing change*, thereby actively breaking the cycle of intergenerational trauma. Additionally, all the mothers indicated that their children had at least some good social relationships. This was even the case for Gregory, whose mother Cindy described as having challenges reading social cues.

Research has shown that individuals with histories of substance use struggles are at elevated risk for poor educational attainment and workforce participation, as well as unstable or transient housing (Andrews et al., 2018; Espinet et al., 2013; Haabrekke et al., 2018; Marshall et al., 2015). When young women become trapped in a cycle of substance use and are unable to engage in educational and employment opportunities, community development is also hindered (UNODC, 2016). These barriers were faced by all of the mothers in the present study and by most women who walk through the doors of BTC (Andrews et al., 2018). Following treatment, however, all four participants in this study reported stable housing and income for their families, and two of the women had returned to school to advance their education. Other research has similarly shown that women who receive integrated substance use intervention report more stability in income and housing post-treatment (Hubberstey et al., 2019; Rutman & Hubberstey, 2020).

Children of mothers struggling with substance use are also at heightened risk of academic struggles (Jones & Streissguth, 2010). In the present study, all four children were attending school at the grade level appropriate for their age; two were rated as doing well at school, and the other two were managing with appropriate supports. The two themes that emerged from the

women's interviews which seemed to strongly contribute to these achievements were *choosing change* and *self-advocacy*. After treatment, each mother felt she had reached a place where she could make better choices for herself and her children. Moreover, for some of the women, pursuing a different path for themselves or their children in relation to education and work often involved strongly advocating for their needs, in some cases recruiting support from BTC or other agencies – including child protection services – to achieve their goals. These themes relate to findings from other research which indicated that women's self-efficacy and confidence in their ability to achieve their goals (Latuskie et al., 2019), as well as their growing agency and sense of self and personal responsibility (Kuo et al., 2013; Lefebvre et al., 2010; Sword et al., 2009), were instrumental to adaptive functioning following recovery from substance use struggles.

Without intervention, women with substance use problems are more likely to have ongoing repeated involvement with child protection and legal systems, are at higher risk of having their children removed from custody, and have a greater chance of being incarcerated (Niccols, Dobbins et al., 2010). All four women in the present study had histories of involuntary contact with child protective and/or criminal justice services. Following intervention at BTC, all the mothers had maintained custody of their young children and were only in contact with protection or forensic agencies of their own volition – typically recruiting them as allies in their *self-advocacy* efforts to improve circumstances for themselves and their children. This finding echoes other research indicating that integrated substance use treatment for women promoted higher rates of regaining or maintaining child custody (e.g., Hubberstey et al., 2019; Rutman & Huberstey, 2020; Tarasoff et al., 2018).

In Canada, the costs associated with substance use (e.g., criminal justice system, lost productivity, health care, and other direct costs such as fire damage) total over $38 billion per

year, averaging to almost $1,100 per capita (Canadian Centre on Substance Use and Addiction [CCSUA], 2018). A recent study of Ontario hospital admissions found that, between 2003 and 2016, emergency room visits attributed to alcohol use increased more than four times the rate of overall increases in all emergency admissions (Myran et al., 2019). Additional costs are incurred by the ongoing involvement of child protective and foster/adoption services, as well as other financial burdens stemming from non-tangible costs such as loss of life and impaired quality of life, which are frequently not quantified (UNODC, 2016). To compare, comprehensive treatment services at BTC are estimated to cost $3,400 to $3,600 per mother-child dyad per year; multiplied by the average treatment length for the present sample (i.e., 55 months), that total equals just over $16,000 as the costs invested for a family affected by maternal substance use. Given the present findings indicating generally positive long-term adaptation for women who completed treatment (i.e., maintain custody of children, limited to no involvement with legal system or child protection, increased education and employment opportunities, better quality of life), it is evident that the overall social return on investment for funding such intervention programs has the potential to be vast. Indeed, recent research with the HerWay Home substance use intervention program in Victoria, BC indicated that, for every dollar invested in the program, the annual social return on investment is approximately $4.45 – based on costs associated with housing, child custody, and prenatal care (Hubberstey & Rutman, 2020).

In light of the findings of this and numerous other studies showing benefits of integrated maternal substance use treatment for both family and societal functioning, many women do not seek help for themselves and their children (UNDOC, 2016). One major reason behind this is the *stigma* experienced by people with substance use problems (Birak, 2018; Latuskie et al., 2019; Milligan et al., 2017; Motz et al., 2019) – a theme which was prominent in the women's

interviews. The way stigma manifested as a barrier looked somewhat different for each of these women, yet the stigma they experienced was generally rooted in how society thinks and speaks about mental health and addictions. The Government of Canada has developed a web resource entitled "Stigma around substance use" (2019), which helps differentiate three forms of stigmatization: social stigma, structural stigma, and self-stigma. Social stigma, which involves holding adverse attitudes and using negative labels toward people with substance use problems – as well as their family members and friends – was arguably the barrier faced by the woman who withdrew from this study due to concerns about her child's school developing an undesirable view of the family. Similar concerns were noted by Haabrekke and colleagues (2018) who reported that some participants in their study (i.e., mothers with substance use and/or mental health challenges) did not submit school questionnaires on child functioning because they did not want teachers to know about their children's backgrounds. The second type, structural stigma, includes ignoring or not taking seriously the requests of people who use drugs, such as withholding health or social services indefinitely or until the substance use is better managed. In Brooke's interview, she spoke at length of the battle she fought with her physician to obtain the proper diagnosis and medication for her chronic pain, an experience which is grounded in structural stigma. Self-stigma, the third type, occurs when individuals have internalized the social and structural stigma they have faced and apply those negative attitudes and labels to themselves – as was reflected in Cindy's interview when she noted: "But you stigmatize yourself just as much as anything else".

Through their outreach and research initiatives, intervention agencies like BTC have worked persistently to combat stigma around substance use and to break through this and other barriers preventing individuals from seeking help. More than just addictions treatment, BTC's

overarching mission is to recreate the healthy developmental pathways that their clients did not experience while growing up due to trauma and abuse. In this way, BTC prevents child maltreatment and promotes child development by empowering women to reclaim their wellbeing and their parental agency. The responses by participants to the interview questions yielded six themes that offer a glimpse into how BTC achieves its goal of helping mothers and children overcome the adverse effects of maternal substance use.

In terms of treatment processes at BTC, the women in this study identified the following five components as most important to their recovery journey: BTC's *open-door policy, wraparound services, quality of care and education, teaching and modelling healthy relationships, and the overall uniqueness of BTC*. Two of these themes – *quality of care and education,* and *teaching and modelling healthy relationships* – could also be conceptualized as mechanisms of change through which mothers and their children were able to achieve positive outcomes during and following treatment, along with the mechanism of *acceptance and safety* endorsed in each of the four interviews.

The ability to access support from a program following discharge (i.e., *open-door policy*) has been highlighted in previous research as important to women who sought treatment for substance use (Tarasoff et al., 2018). Moreover, the availability of multiple, *wraparound services* under one roof has frequently been identified by women in other evaluation studies as vital to them being able to access and remain in substance use treatment programs (Latuskie et al., 2019; Rutman & Hubberstey, 2019; Rutman et al., 2020). To offer comprehensive wraparound services, BTC maintains strong and consistent relationships with external agencies and services with which mothers are in contact throughout their treatment. A majority of women at BTC are involved with child protection services (Andrews et al., 2018). By fulfilling the role of

intermediary between the women and child protection, BTC models for the women how to trust and rely on a service that, for most, has historically been viewed as an adversary. As a result of BTC's strong partnerships, mothers in this study were able to transform their relationships to child protective services and voluntarily reach out to them for help in advocating for their families' needs – an outcome that is difficult to imagine without the role played by BTC.

BTC's *open-door policy* and *wraparound services*, together with the clients' feelings of *acceptance and safety*, draw attention to BTC's efforts to offer non-judgmental support and meet clients wherever they are at. From the interviews, it is evident that these processes were vital in engaging these women in prolonged and successful treatment. Other studies on substance use treatment processes have likewise identified the key role that tailored services provided in a safe, accepting, non-judgmental, and empathic environment has in promoting engagement and positive outcomes in treatment for women with substance use issues (Kuo et al., 2013; Latuskie et al., 2019; Lefebvre et al., 2010; Milligan et al., 2017; Rutman & Hubberstey, 2019; Tarasoff et al., 2018).

The *quality of care and education* and the *teaching and modelling of healthy relationships* that form core components of BTC's intervention were identified by the women as helpful to their recovery. When the content of an intervention and its delivery are perceived as both pertinent and efficacious, it increases trust and buy-in from clients. The theme of *supportive commitment* identified in a study by Milligan and colleagues (2017) is similar to the present study's theme of *quality of care and education,* as both reflect how clients feel a commitment to their success by the agency's staff. In a recent study conducted by BTC with focus groups consisting of active clients, women also identified that psychoeducation around relationships and raising healthy children were important for their discontinuation of substance use (Latuskie et al.,

2019). More important, however, is the relationship that clinicians build with their clients – particularly vulnerable women whose own histories of relationships have negatively affected their ability to trust in and depend on others. A cornerstone of BTC's philosophy is to promote and model safe and healthy relationships for women and their children (Andrews et al., 2018; Motz et al., 2006). Similar qualitative research has identified supportive and non-judgmental relationships with agency staff as key to substance use recovery (Latuskie et al., 2019; Pepler et al., 2014; Rutman & Hubberstey, 2019; Rutman et al., 2020; Sword et al., 2009; Tarasoff et al., 2018). Through its relational approach to treatment and emphasis on the teaching and modelling of healthy relationships, BTC is better able to recreate developmental pathways for their clients to repair their attachment schemas.

A sixth element of BTC identified by the mothers in this study was the agency's *overall uniqueness*. Consistent with other research at BTC (e.g., Latuskie et al., 2019), the women in this study had had some prior contact with substance use intervention before BTC and generally did not find they were able to experience the same type of help or supportive relationships as at BTC. While it is true that BTC's relational approach to substance use intervention is still somewhat unique among agencies with similar mandates (Andrews et al., 2018; Espinet et al., 2016), a growing number of integrated substance use programs identify as relationally informed (particularly in Canada; Nota Bene Consulting Group, 2021), pointing to a rising recognition of the importance of a treatment approach that is not only trauma-informed but also relationship-based. That said, it seems apparent that BTC is perceived by its clients as a greater whole than the sum of its parts. Much of this is likely due to BTC's grounding in an embedded, scientist-practitioner approach in which evaluation research and feedback from clients are fundamental to its operating procedures (Andrews et al., 2019). In particular, the research that BTC and other

embedded scholars have undertaken in recent years to examine the treatment processes and mechanisms of change that promote treatment gains among clients – as those identified in the present study – will continue to be valuable contributions to the literature and to the development of best practices around maternal substance use intervention in all parts of the world.

Limitations

Due to the small sample size and use of convenience sampling, data obtained on the selected women and children in this study were likely biased and not generalizable to all families who participate in integrated intervention services for maternal substance use and related problems. I did not have consent to contact all families who participated in treatment at BTC in the past; therefore, participants for this study comprised a small number of women who had maintained contact with BTC since treatment. This decision was primarily guided by the trauma-informed approach of this study, in which all efforts were made to avoid re-traumatization of former clients – which could have occurred as a result of cold-calls made after many years following treatment discharge. The mothers who were contacted and agreed to participate in this study were likely to have had positive experiences in treatment; consequently, the present findings may overestimate the positive outcomes of BTC programming.

As a preliminary assessment of sample bias, I was able to compare the demographic characteristics and service duration of the four women in the present study to those in a recent study examining service utilization and short-term outcomes among 160 BTC clients (Andrews et al., 2018). The two samples are compared in Table 2.

	Wachala (2021) $n = 4$	Andrews et al. (2018) $n = 160$
Age at first substance use	Adolescence for all cases	Adolescence for majority of cases
Education	50% completed high school	45% completed high school
Age at treatment intake	25-36 years ($M = 30$)	16-50 years ($M = 29.80$)
Service duration	39-68 months ($M = 54.5$)	0-93 months ($M = 17.43$)

Table 2. Comparison of sample demographics and service utilization between present sample and larger sample from a recent study involving BTC clients.

Considering these select demographic and service factors, the present sample appears to constitute a fair representation of BTC's client base. The notable difference in treatment length between the present sample and that of the larger study (Andrews et al., 2018) may represent their finding that increased treatment length was significantly associated with successful completion of treatment (i.e., treatment goals were met). As such, it makes sense that the women who participated in the present research – all of whom successfully met their service goals – were engaged in treatment for longer than the average span for a large sample of BTC clients.

Another limitation inherent in working with clinical samples is the non-uniformity in data collection, both historically and presently (e.g., Marshall et al., 2005). There were more historical datapoints available for some of the mothers in this study compared to others, based on their length of engagement with BTC and the facility with which questionnaires could be completed. For this research, two of the mothers were unable to provide report cards for their children; however, the teacher questionnaires provided sufficient data to gauge how the children were functioning at school. The phenomenon of the two in-person interviews lasting longer than the two phone interviews could raise concern about the quality of information gathered from each pair of mothers. Under a trauma-informed research approach, however, it was deemed more

important to accommodate the needs of participants (i.e., inability to physically come to BTC to participate in the study) than to ensure uniformity in the data collection procedure. It is also important to consider the likelihood that mothers underreported on certain measures, both in the past and present, due to factors such as impression management, low self-awareness, or minimization of struggles as a coping mechanism. Similarly, there were some variations between mothers' and teachers' reports of children's socioemotional functioning on the CBCL and TRF, respectively. This is not uncommon, given that each rater tends to see the child in different contexts that can present divergent challenges to a child's functioning (Haabrekke et al., 2018).

Although the present sample may have limited generalizability to other groups of women with histories of substance use, conducting research embedded in a treatment program enables us to study vulnerable populations and contribute insights to the growing body of research on efficacious interventions for maternal substance use.

Implications and Future Directions

The findings stemming from this research contribute to our understanding of the long-term development of mothers and children who received early intervention for maternal substance use. The women and children followed in this study have made great strides in the years following treatment, but are also not without ongoing challenges – some unique to families with histories of trauma and substance use, yet some common to many families raising young children. The findings of the present study bring attention to those elements of intervention that mothers perceived as having facilitated their own and their children's adaptation following treatment. Identifying treatment processes and mechanisms of change that promote successful intervention outcomes is key to implementing best practices, as well as to supporting future evaluation and program development. The process of conducting this study and the examination

of its results will help inform the future development of a larger scale long-term follow-up of former clients at BTC that could statistically examine the variance in mother and child outcomes explained by the various protective factors identified in this and other studies. With larger samples and administration of appropriate questionnaires, researchers could estimate statistical significance and effect sizes associated with different treatment processes and mechanisms of change that have been shown to contribute to positive outcomes for clients.

This study also offers opportunities to inform further delineation of the social returns on investment that are likely to occur by subsidizing such programs. A more precise economical breakdown, in turn, can inform policy and funding at higher levels (e.g., provincial and federal government). Research endeavours that involve multidisciplinary professionals involved at various levels of public service – particularly university-affiliated scholars with whom research partnerships can be formed – have great potential in continuing to expand on this emergent body of embedded research.

It is well recognized that the first six years of life are crucial for establishing healthy attachment relationships that help pave the way for positive functioning throughout the lifespan (Cataldo et al., 2019; Espinet et al., 2016). Mothers and children affected by substance use problems continue to face challenges beyond these early years – particularly as children first enter formal education and are faced with novel experiences that often require shifts in coping strategies (Cataldo et al., 2019; Haabrekke et al., 2018). Research on maternal substance use with mothers who have more than one child indicates that these mothers often struggle to adapt to the developmental needs of their older children (e.g., educational support) (Cataldo et al., 2019). In the present study, one mother spoke emphatically about the need to extend services at BTC to children over the age of six ("There needs to be a Phase 2!"). BTC, as other early intervention

agencies, is limited by funding mandates in its ability to provide services to families with older children. It is recommended that funding bodies (e.g., provincial and federal governments) consider the increased returns on investment that are all but guaranteed by extending financing to allow BTC and other agencies to widen their target demographic to provide ongoing support for healthy development and relationships for these marginalized women and children.

The stigmatization of substance use by mothers constitutes a significant barrier to seeking treatment and there is a need for attitudes in society to change – particularly among healthcare professionals (Latuskie et al., 2019). In line with their goal to achieve gender equality and empower attitudes all women and girls, the United Nations Office on Drugs and Crime (2016) has called for worldwide efforts to address substance use among women by designing treatment programs and deliver criminal justice response efforts in a gender-sensitive way "so as to consider the special needs of women and their greater level of stigmatization." The web resource maintained by the Government of Canada (*Stigma around substance use*, 2019) represents growing recognition of how the manner in which substance use is viewed and spoken about in society can either raise or diminish barriers to treatment. Qualitative and mixed-methods research projects, such as the present study and other recent projects (e.g., Latuskie et al., 2019; Pepler et al., 2014; Rutman & Hubberstey, 2020; Tarasoff et al., 2018), are important sources of evidence-based information to address stigma by showcasing the journeys of women who have bravely opened up about their experiences with substance use and treatment, hopefully encouraging others to make the choice to take that difficult yet life altering step to seek treatment of their own. Truly, it was a privilege to be so warmly and openly invited to hear the stories of each of these women.

References

Abidin, R. R. (2012). *Parenting stress index* (4th ed.). Psychological Assessment Resources.

Achenbach, T., & Rescorla, L. (2000). *Manual for the ASEBA preschool forms and profiles*. VT: University of Vermont, Research Centre for Children, Youth, & Families.

Ainsworth, M. D. S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment.* Erlbaum. doi:10.4324/9781315802428

Andrews, N. C. Z., Motz, M., Pepler, D. J., Jeong, J. J., & Khoury, J. (2018). Engaging mothers with substance use issues and their children in early intervention: Understanding use of service and outcomes. *Child Abuse & Neglect, 83,* 10-20. doi: 10.1016/j.chiabu.2018.06.011

Andrews, N. C. Z., Pepler, D. J., & Motz, M. (2019). Research and evaluation with community-based projects: Approaches, considerations, and strategies. *American Journal of Evaluation, 40(4)*, 548-561. doi: 10.1177/1098214019835821.

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology, 56(6),* 893-897. doi:10.1037/0022-006x.56.6.893

Beck, A., & Steer, R. (1993). *Beck Anxiety Inventory: Manual.* The Psychological Corporation.

Birak, C. (2018, December 13). *How the way we talk about addiction can make it harder for people to recover*. CBC News. https://www.cbc.ca/news/health/addiction-language-1.4942780

Bondi, B. C., Pepler, D. J., Motz, M., & Andrews, N. C. Z. (2021). A qualitative framework of cumulative risk and protection for understanding neurodevelopment and clinical progress: A multiple case study approach. *Evidence-Based Practice in Child and Adolescent Mental Health, 6(1)*, 83–98. doi:10.1080/23794925.2020.1855612

Bondi, B. C., Pepler, D. J., Motz, M., & Andrews, N. C. Z. (2020). Establishing clinically and theoretically grounded cross-domain cumulative risk and protection scores in sibling groups exposed prenatally to substances. *Child Abuse & Neglect, 108*, 104631. doi:10.1016/j.chiabu.2020.104631

Bowlby, J. (1969). *Attachment and loss: Volume 1. Attachment.* Basic Books.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(2)*, 77–101. doi:10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. doi:10.1037/13620-004

Braun, V., Clarke, V., & Rance, N. (2015). How to use thematic analysis with interview data. In A. Vossler & N. Moller (Eds.), *The Counselling and psychotherapy research handbook* (pp. 183–197). SAGE Publications Ltd. doi:10.4135/9781473909847.n13

Canadian Centre on Substance Use and Addiction (2018). *Canadian Substance Use Costs and Harms*. https://www.ccsa.ca/

Carta, J. J., Atwater, J. B., Greenwood, C. R., McConnell, S. R., McEvoy, M. A., & Williams, R. (2001). Effects of cumulative prenatal substance exposure and environmental risks on children's developmental trajectories. *Journal of Clinical Child Psychology, 3(3),* 327-337. doi: 10.1207/S15374424JCCP3003_5

Cataldo, I., Azhari, A., Coppola, A., Bornstein, M. H., & Esposito, G. (2019). The influences of drug abuse on mother-infant interaction through the lens of the biopsychosocial model of health and illness: A review. *Frontiers in Public Health, 7,* 1-8.

doi:10.3398/fpubh.2019.00045

Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist, 26(2)*, 120-123.

Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71(4)*, 810-832. doi:10.1037/0022-3514.71.4.810

Eiden, R. D., Granger, D. A., Schuetze, P. & Veira, Y. (2011). Child behavior problems among cocaine-exposed toddlers: Indirect and interactive effects. *Development and Psychopathology, 23(2),* 539-550. doi:10.1017/s0954579411000058

Espinet, S. D., Jeong, J. J., Motz, M., Racine, N., Major, D., & Pepler, D. (2013). Multimodal assessment of the mother-child relationship in a substance-exposed sample: Divergent associations with the emotional availability scales. *Infant Mental Health Journal, 34(6),* 496-507. doi:10.1002/imhj.21409

Espinet, S., Motz, M., Jeong, J., Jenkins, J. M., & Pepler, D. (2016). 'Breaking the Cycle' of maternal substance use through relationships: A comparison of integrated approaches. *Addiction Research and Theory, 24(5),* 375-388. doi:10.3109/16066359.2016.1140148

Government of Canada. (2019). *Stigma around substance use*. https://www.canada.ca/en/health-canada/services/substance-use/problematic-prescription-drug-use/opioids/stigma.html

Gueta, K., & Addad, M. (2015). A house of cards: The long-term recovery experience of former drug-dependent Israeli women. *Women's Studies International Forum, 48*, 18–28. doi:10.1016/j.wsif.2014.10.003

Haabrekke, K., Siqveland, T., Nygaaard, E., Bjornebekk, A., Slinning, K., Wentzel-Larsen, T.,…Moe, V. (2018). Cognitive and socioemotional functioning at 4½ years in children

born to mothers who have received treatment for substance-abuse problems while pregnant. *Infant Mental Health Journal, 39(5),* 1-13. doi: 10.1002/imhj.21733

Hser, Y-I., Evans, E., Li, L., Metchik-Gaddis, A., & Messina, N. (2014). Children of treated substance-abusing mothers: A 10-year prospective study. *Clinical Child Psychology and Pschiatry, 19(2),* 217-232. doi:10.1177/1359104513486999

Hser, Y-I., Lanza, I. L., Li, L., Kahn, E., Evans, E., & Schulte, M. (2015). Maternal mental health and children's internalizing and externalizing behaviors: Beyond maternal substance use disorders. *Journal of Child and Family Studies, 24(3),* 638-648. doi:10.1007/s10826-013-9874-3

Hubberstey, C., & Rutman, D. (2020). HerWay Home program for pregnant and parenting women using substances: A brief social return on investment analysis. *Canadian Journal of Addiction, 11(3)*, 6–14. doi:10.1097/cxa.0000000000000086

Hubberstey, C., Rutman, D., Schmidt, R. A., Van Bibber, M., & Poole, N. (2019). Multi-service programs for pregnant and parenting women with substance use concerns: Women's perspectives on why they seek help and their significant changes. *International Journal of Environmental Research and Public Health, 16(18)*, 3299-3316. doi:10.3390/ijerph16183299

Huth-Bocks, A. C., Levendosky, A. A., Bogat, G. A., & von Eye, A. (2004). The impact of maternal characteristics and contextual variables on infant-mother attachment. *Child Development, 75(2),* 480-496. doi:10.1111/j.1467-8624.2004.00688.x

Jeong, J. J., Pepler, D. J., Motz, M., DeMarchi, G., & Espinet, S. (2015). Readiness for treatment: Does it matter for women with substance use problems who are parenting? *Journal of Social Work Practice in the Addictions, 15(4),* 394-417.

doi:10.1080/1533256x.2015.1091002

Jones, K. L., & Streissguth, A. P. (2010). Fetal alcohol syndrome and fetal alcohol spectrum disorders: A brief history. *Journal of Psychiatry & Law, 38(4),* 373-382. doi:10.1177/009318531003800402

Kelly, S. J., Day, N., & Streissguth, A. P. (2000). Effects of prenatal alcohol exposure on social behavior in humans and other species. *Neurotoxicology and Teratology, 22(2),* 143-149. doi:10.1016/s0892-0362(99)00073-2

Kuo, C., Schonbrun, Y. C., Zlotnick, C., Bates, N., Todorova, R., Kao, J. C.-W., & Johnson, J. (2013). A qualitative study of treatment needs among pregnant and postpartum women with substance use and depression. *Substance Use & Misuse, 48(14)*, 1498–1508. doi:10.3109/10826084.2013.800116

Latuskie, K. A., Andrews, N. C. Z., Motz, M., Leibson, T., Austin, Z., Ito, S., & Pepler, D. J. (2019). Reasons for substance use continuation and discontinuation during pregnancy: A qualitative study. *Women and Birth, 32(1),* e57-e64. doi:10.1016/j.wombi.2018.04.001

Lefebvre, L., Midmer, D., Boyd, J. A., Ordean, A., Graves, L., Kahan, M., & Pantea, L. (2010). Participant perception of an integrated program for substance abuse in pregnancy. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 39(1)*, 46–52. doi:10.1111/j.1552-6909.2009.01083.x

Lerner, R. M., Agans, J. P., DeSouza, L. M., & Gasca, S. (2013). Describing, explaining, and optimizing within-individual change across the life span: A relational developmental systems perspective. *Review of General Psychology*, *17*(2), 179–183. doi:10.1037/a0032931

Lyden, H. M., & Suchman, N. E. (2013). Transmission of parenting models at the level of representation. In N. E. Suchman, M. Pajulo, & L. C. Mayes (Eds.), *Parenting and*

Substance Abuse: Developmental Approaches to Intervention (pp. 24–43). Oxford University Press. doi: Parenting and Substance Abuse. doi:10.1093/med:psych/9780199743100.001.0001

Lyons, J. S., Perrotta, P., & Hancher-Kvam, S. (1988). Perceived social support from family and friends: Measurement across disparate samples. *Journal of Personality Assessment, 52(1),* 42-47. doi:10.1207/s15327752jpa5201_3

Malbeuf, J. (2018, November 14). *Substance use costs $1,000 to $2,600 per person in Canada each year, study says*. CBC News. https://www.cbc.ca/news/canada/north/territories-canada-substance-use-1.4905376

Marcellus, L. (2017). A grounded theory of mothering in the early years for women recovering from substance use. *Journal of Family Nursing, 23(3)*, 341–365. doi:10.1177/1074840717709366

Marcellus, L., MacKinnon, K., Benoit, C., Phillips, R., & Stengel, C. (2014). Reenvisioning success for programs supporting pregnant women with problematic substance use. *Qualitative Health Research, 25(4)*, 500–512. doi:10.1177/1049732314551058

Marshall, S. K., Charles, G., Hare, J., Ponzetti, J. J., & Stokl, M. (2005). Sheway's services for substance using pregnant and parenting women: Evaluating the outcomes for infants. *Canadian Journal of Community Mental Health, 24(1)* 19-33. doi:10.7870/cjcmh-2005-0002

Milligan, K., Meixner, T., Tremblay, M., Tarasoff, L. A., Usher, A., Smith, A., … Urbanoski, K. A. (2020). Parenting interventions for mothers with problematic substance use: A systematic review of research and community practice. *Child Maltreatment, 25(3)*, 247–262. doi:10.1177/1077559519873047

Milligan, K., Niccols, A., Sword, W., Thabane, L., Henderson, J., Smith, A., & Liu, J. (2010). Maternal substance use and integrated treatment programs for women with substance abuse issues and their children: A meta-analysis. *Substance Abuse Treatment, Prevention, and Policy, 5(1),* 1-14. doi:10.1186/1747-597x-5-21

Milligan, K., Usher, A. M., & Urbanoski, K. A. (2017). Supporting pregnant and parenting women with substance-related problems by addressing emotion regulation and executive function needs. *Addiction Research & Theory, 25(3),* 251-261. doi:10.1080/16066359.2016.1259617

Mirick, R. G., & Steenrod, S. A. (2016). Opioid use disorder, attachment, and parenting: Key concerns for practitioners. *Child and Adolescent Social Work Journal, 33(6)*, 547–557. doi:10.1007/s10560-016-0449-1

Moreland, A. D., & McRae-Clark, A. (2018). Parenting outcomes of parenting interventions in integrated substance-use treatment programs: A systematic review. *Journal of Substance Abuse Treatment, 89,* 52-59. doi:10.1016/j.jsat.2018.03.005

Motz, M., Andrews, N. C. Z., Bondi, B. C., Leslie, M., & Pepler, D. J. (2019). Addressing the impact of interpersonal violence in women who struggle with substance use through developmental-relational strategies in a community program. *International Journal of Environmental Research and Public Health, 16(21),* 4197-4205. doi:10.3390/ijerph16214197

Motz, M., Leslie, M., Pepler, D., Moore, T., & Freeman, P. (2006). Breaking the Cycle: Measures of progress 1995–2005. *Journal of Fetal Alcohol Syndrome*, *4*, S1–S138.

Motz, M., Espinet, S. D., Jeong, J. J., Major, D., Racine, N., Chamberlin, J., & Pepler, D. J. (2011). The role of the mother-child relationship in developmental outcomes of infants

and young children with and without prenatal alcohol exposure. *The Journal of Population Therapeutics and Clinical Pharmacology*, *18(3)*, p. e544–e563.

Myran, D. T., Hsu, A. T., Smith, G., & Tanuseputro, P. (2019). Rates of emergency department visits attributable to alcohol use in Ontario from 2003 to 2016: A retrospective population-level study. *Canadian Medical Association Journal, 191(29)*, E804-E810. doi: 10.1503/cmaj.181575/

Niccols, A., Dobbins, M., Sword, W., Smith, A., Henderson, J., & Milligan, K. (2010). A national survey of services for women with substance use issues and their children in Canada: challenges for knowledge translation. *International Journal of Mental Health and Addiction, 8(2),* 310-319. doi:10.1007/s11469-009-9267-4

Niccols, A., Milligan, K., Smith, A., Sword, W., Thabane, L., & Henderson, J. (2012). Integrated programs for mothers with substance abuse issues and their children: A systematic review of studies reporting on child outcomes. *Child Abuse & Neglect, 36(4),* 308-322. doi:10.1016/j.chiabu.2011.10.007

Niccols, A., Milligan, K., Sword, W., Thabane, L., Henderson, J., & Smith, A. (2012). Integrated programs for mothers with substance abuse issues: A systematic review of studies reporting on parenting outcomes. *Harm Reduction Journal, 9(1),* 1-11. doi:10.1186/1477-7517-9-14

Niccols, A., Milligan, K., Sword, W., Thabane, L., Henderson, J., & Smith, A., Liu, J., & Jack, S. (2010). Maternal mental health and integrated programs for mothers with substance abuse issues. *Psychology of Addictive Behaviors, 24(3),* 466-474. doi:10.1037/a0020139

Nota Bene Consulting Group (2021). *Co-creating evidence evaluation report: Stories and outcomes of wraparound programs reaching pregnant and parenting women at risk* [executive summary]. Centre of Excellence for Women's Health. https://bccewh.bc.ca/wp-

content/uploads/2021/03/FINAL-CCE_Executive-Summary_Mar-10-for-web.pdf

Pepler, D., Motz, M., Leslie, M., Jenkins, J., Espinet, S. D., & Reynolds, W. (2014). *The Mother-Child Study: Evaluating treatments for substance-using women. A focus on relationships*. Mothercraft Press.

Popova, S., Lange, S., Chudley, A. E., Reynolds, J. N., & Rehm, J. (2018). *World Health Organization international study on the prevalence of fetal alcohol spectrum disorder (FASD): Canadian component.* Centre for Addiction and Mental Health.

Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, *11*, 1–24. doi:10.1007/BF00898416

Radloff L. S. (1977) The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1(3)*, 385-401. doi:10.1177/014662167700100306

Renk, K., Boris, N. W., Kolomeyer, E., Lowell, A., Puff, J., Cunningham, A., … McSwiggan, M. (2016). The state of evidence-based parenting interventions for parents who are substance-involved. *Pediatric Research, 79(1-2),* 177-183. doi: 10.1038/pr.2015.201.

Reid, C., Greaves, L., & Poole, N. (2008). Good, bad, thwarted, or addicted? Discourses of substance-using mothers. *Critical Social Policy Ltd., 28,* 211-234. doi: 10.1177/0261018307087990

Rutherford, H. J. V., Potenza, M. N., & Mayes, L. C. (2013). The Neurobiology of Addiction and Attachment. In N. E. Suchman, M. Pajulo, & L. C. Mayes (Eds.), *Parenting and substance abuse: Developmental approaches to intervention* (pp. 24–43). Oxford University Press. doi:10.1093/med:psych/9780199743100.001.0001

Rutman, D., & Hubberstey, C. (2019). National evaluation of Canadian multi-service FASD prevention programs: Interim findings from the Co-Creating Evidence study. *International Journal of Environmental Research and Public Health, 16(10)*, 1767-1787. doi:10.3390/ijerph16101767

Rutman, D., & Hubberstey, C. (2020). Cross-sectoral collaboration working with perinatal women who use substances: Outcomes and lessons from HerWay Home. *Journal of Social Work Practice in the Addictions, 20(3)*, 179–193. doi:10.1080/1533256x.2020.1793068

Rutman, D., Hubberstey, C., Poole, N., Schmidt, R. A., & Van Bibber, M. (2020). Multi-service prevention programs for pregnant and parenting women with substance use and multiple vulnerabilities: Program structure and clients' perspectives on wraparound programming. *BMC Pregnancy and Childbirth, 20(1)*, 1-14. doi:10.1186/s12884-020-03109-1

Sklar, S. M., & Turner, N. E. (1999). A brief measure for the assessment of coping self-efficacy among alcohol and other drug users. *Addiction, 94(5)*, 723-729. doi:10.1046/j.1360-0443.1999.94572310.x

Stringer, K. L., & Baker, E. H. (2015). Stigma as a barrier to substance abuse treatment among those with unmet need: An analysis of parenthood and marital status. *Journal of Family Issues, 39(1)*, 3–27. doi:10.1177/0192513x15581659

Substance Abuse and Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. (HHS Publication No. [SMA] 14-4884). Substance Abuse and Mental Health Services Administration.

Sword, W., Jack, S., Niccols, A., Milligan, K., Henderson, J., & Thabane, L. (2009). Integrated programs for women with substance use issues and their children: A qualitative meta-synthesis of processes and outcomes. *Harm Reduction Journal, 6(1),* 1-17.

doi:10.1186/1477-7517-6-32

Tarasoff, L. A., Milligan, K., Le, T. L., Usher, A. M., & Urbanoski, K. (2018). Integrated treatment programs for pregnant and parenting women with problematic substance use: Service descriptions and client perceptions of care. *Journal of Substance Abuse Treatment, 90,* 9–18. doi:10.1016/j.jsat.2018.04.008

Throne, R. (2012). Positionality. In R. Throne (Ed.), *Practitioner research in doctoral education* (pp. 55-77). Kendall Hunt.

United Nations Office on Drugs and Crime (2016). *World drug report*. https://www.unodc.org/wdr2016/

United Nations Office on Drugs and Crime (2018). *Women and drugs: Drug use, drug supply, and their consequences*. https://www.unodc.org/wdr2018/en/women-and-drugs.html

Urbanoski, K., Joordens, C., Kolla, G., & Milligan, K. (2018). Community networks of services for pregnant and parenting women with problematic substance use. *PLOS ONE, 13(11)*, 1-16. doi:10.1371/journal.pone.0206671

Wisdom, J., & Creswell, J. (2013). *Mixed methods: Integrating quantitative and qualitative data collection and analysis while studying patient-centered medical home models*. Agency for Healthcare Research and Quality. AHRQ Publication No. 13-0028-EF. https://pcmh.ahrq.gov/ sites/default/files/attachments/MixedMethods032513comp.pdf

Appendices

Appendix A: Informed Consent Form for Mothers

Study name: Long-term follow-up of mothers and children treated for maternal substance misuse: A case study approach

Researchers:

Elizabeth Wachala, M.A., Doctoral Candidate
Graduate Program in Clinical-Developmental Psychology, York University
Email address: ewachala@yorku.ca

Debra Pepler, Ph.D., C.Psych.
Distinguished Research Professor in Psychology, York University
Email address: pepler@yorku.ca Office phone: 416-736-2100 x66155

Mary Motz, Ph.D., C.Psych.
Clinical Psychologist, Mothercraft/Breaking the Cycle
Email address: MMotz@mothercraft.org Office phone: 416-364-7373

Purpose of the research:

Our main goal in this study is to find out how mothers and children have developed in the years following treatment for substance use problems at Breaking the Cycle (BTC). We want to find out how you and your children are doing in a few areas, such as housing, work, school, your physical and psychological health, and relationships with others. We also want to see how you are doing now in relation to how you were doing before, during, and following your participation in BTC by looking at past client records for you and your child – specifically, any questionnaires you completed during intake and treatment and following discharge, as well as your child's developmental assessments. Another goal in this study is to find out what mothers think was most helpful to them and their children in their experiences at BTC. You will be asked to fill out a few questionnaires and answer some additional questions in a one-on-one interview with the principal researcher. We will also ask you to share the two most recent report cards from the child who attended BTC with you, as well as ask you for permission to pass along a questionnaire to his or her current teacher. The information we gather from you will be used to develop case studies (with your identifying information removed), which will be reported in the principal researcher's doctoral dissertation. We also plan on sharing findings with all participating mothers in this research, the staff at BTC, and the scientific community.

What you will be asked to do in the research:

You will be asked to complete eight questionnaires that will ask about you and your child who attended BTC with you, as well as to provide us with two recent report cards for this child. This should take between one and two hours. You will also be asked a few more questions in an interview that will last approximately one hour, prior to or following questionnaire completion.

To express our gratitude for your time and commitment to participating in this research, we will compensate you with TTC fare and $50 in gift cards to major food and home retailers.

Risks and discomforts:

By participating in this study, there is a small risk that you may feel some discomfort or distress when being asked to think about your experiences with substance use and other struggles. At any time, you may ask to move on to the next question or you may stop participating. The staff at BTC will be on hand to provide support or referrals if needed. You will also be offered breaks and refreshments.

Benefits of the research and benefits to you:

The findings from this study will help us better understand the long-term outcomes after participating in a program like BTC for mothers who had substance use problems and their children. Your participation will also help us better understand which parts of treatment were most helpful to you and your children over time. We hope the results of this research will help BTC to follow up with even more mothers and children in future studies. You will have the opportunity to learn about our findings and provide feedback on participating in this research. It is our hope you will enjoy the opportunity to reconnect with BTC staff.

Voluntary participation:

Your participation in this study is completely voluntary and you may choose to stop participating at any time. You will still be compensated for your travel to and from BTC and will receive gift cards.

Withdrawal from the study:

You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York University, or Breaking the Cycle, either now or in the future. If you decide to stop participating, you will still be eligible to receive the promised reimbursements for agreeing to be in the project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality:

All information that you provide through your participation in this study will be kept confidential. The one-on-one interviews will be audio recorded for later transcription. You or your children will not be identified in the doctoral thesis or in any report or publication based on this research. Any direct quotes taken from the interviews will also be presented without identifying information. The data and recordings collected through this study will be kept in a locked cabinet at BTC for 10 years, after which it will be archived by Iron Mountain for future research purposes. Confidentiality will be provided to the fullest extent possible by the law.

Questions about the research?

If you have any questions about this research or the researchers, please do not hesitate to contact the principal researcher, Elizabeth Wachala, at ewachala@yorku.ca or her doctoral supervisor, Debra Pepler, at pepler@yorku.ca. You may also contact the Psychology Graduate Program at York University by email at gradpsych@yorku.ca or telephone at 416-736-5814.

This research has been reviewed and approved by the Human Participants Review Sub-Committee, York University's Ethics Review Board, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, you may contact the Senior Manager and Policy Advisor for the Office of Research Ethics, 5th Floor, York Research Tower, York University (ore@yorku.ca or 416-736-5914).

Legal rights and signatures:

I, ____, consent to participate in this research study entitled "Long-term follow-up of mothers and children treated for maternal substance misuse: A case study approach" conducted by Elizabeth Wachala, Doctoral Candidate at York University. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

_________________________________ _________________________

Participant's Signature Date

_________________________________ _________________________

Principal Investigator's Signature Date

Appendix B: Consent to disclose information

Early Intervention Programs
Consent to Release Information

I, ______________________________ ____________________________________ of
(PRINT FULL NAME)

____
(PRINT FULL ADDRESS)

hereby consent to the Release of Information compiled by ____________________________

pertaining to myself and my child(ren):

Name: __________________________________Date of birth:______________
Name: __________________________________Date of birth:______________
Name: __________________________________Date of birth:______________
Name: __________________________________Date of birth:______________

for the purpose of ____

The information will be disclosed to:

1. ________________________________ 3. _________________________________
2. ________________________________ 4. _________________________________

The information that will be disclosed will include the following:

1. ________________________________ 3. _________________________________
2. ________________________________ 4. _________________________________

This consent shall remain in effect from _________________ to _____________________

My signature means that:

1. I have read this authorization or have had this authorization read to me. I understand and agree to its contents.
2. I have been informed that no other information may be released without my written consent (with certain exceptions that have been explained to me).
3. I have been informed that I may revoke this authorization by written statement at any time.

____________________ ____________________ ____________________
Signature Witness Date

Appendix C: Questionnaires for Participants

Parenting Stress Index – Short Form (PSI-SF; Abidin, 1995) (copyrighted)

Breaking the Cycle Substance Use Survey

Alcohol Questions:
How much would you say you spent during the past 30 days on alcohol? ____________

How many days in the past 30 have you experienced alcohol-related problems? __________
(Include: craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to)

How troubled or bothered have you been in the past 30 days by these alcohol problems?
(0)[ ] not at all
(1)[ ] slightly
(2)[ ] moderately
(3)[ ] considerably
(4)[ ] extremely

Other drug questions:
How many days in the past 30 have you experienced drug-related problems? __________
(Include: craving, withdrawal symptoms, disturbing effects of use, or wanting to stop and being unable to)

How troubled or bothered have you been in the past 30 days by these drug problems?
(0)[ ] not at all
(1)[ ] slightly
(2)[ ] moderately
(3)[ ] considerably
(4)[ ] extremely

How important to you now is treatment for these drug problems?
(0)[ ] not at all
(1)[ ] slightly
(2)[ ] moderately
(3)[ ] considerably
(4)[ ] extremely

Drug Taking Confidence Questionnaire (DTCQ-8; Sklar & Turner, 1999) (copyrighted)

Center for Epidemiological Study of Depression scale (CES-D; Radloff, 1977) (copyrighted)

Beck Anxiety Inventory (Beck & Steer, 1993) (copyrighted)

Revised Adult Attachment Scale (R-AAS; Collins, 1996) (copyrighted)

Perceived Social Support scales (PSS; Procidano & Heller, 1983) (copyrighted)

Child Behaviour Checklist (CBCL; Achenbach, 1991) (copyrighted)

Teacher Report Form (TRF; Achenbach, 1991) (copyrighted)

Appendix D: Interview Protocol for Mothers

“**I would like to have a chat about how you and your child are doing. If I ask anything that makes you uncomfortable or that you do not wish to answer, please tell me and we will move on.**”

1. “**What kind of place are you living now, and who lives there with you?**” (children’s names & ages, relatives, spouse/partner, contact with father, changes in accommodation)
2. “**Have you been employed or gone back to school?**” (sources of income, educational attainment or other training)
3. “**Are you part of any community groups or clubs, or are there other ways you’re involved with your community? Or public services?**” (CAS or police involvement)
4. “**What has your physical and mental health been like, and how have you coped with any problems that came up in either?**” (diagnoses, treatments, traumas, stress)
5. “**What are your relationships like with family members and friends?**” (types of support, positive influence)
6. “**Compared to the struggles you had with substance use before BTC, what is your relationship to substances like now?**” (ability to avoid, coping mechanisms)

“**Now I’d like to talk a bit about your child, [name].**”

7. “**Tell me about your child – what is he/she like? How does he/she get along with others? What are his/her biggest strengths, and biggest challenges?**” (interests, activities, personality, peer and family relationships, police involvement, substance use, coping skills)
8. “**How has he/she done in school?**” (grades, IEPs, communications from teachers/staff)
9. “**What has your child’s physical and mental health been like?**” (diagnoses, treatments, traumas, stress)
10. “**What is your relationship with your child like now, and how has it changed over the years?**” (closeness, dependence/mutuality, stressors, how repair after conflicts)

“**I want to thank you for sharing your story with me and for helping out with this research study. The last thing I want to ask you about relates to the treatment you took part in here at BTC.**”

11. “**When you reflect back on your experiences at BTC, what do you think has made a difference for you and your child**?” (mechanisms of change for self, children, relationship)

“**Thank you so much for meeting with me today and taking the time to participate in our research. It means a lot to me and to BTC to hear from families years later; this kind of research is important for programs like BTC to keep helping mothers with struggles like you once had. Do you have any questions for me?**”

Appendix E: Informed Consent Form for Teachers

Study name: Long-term follow-up of mothers and children: A case study approach

Researchers:
Elizabeth Wachala, M.A., Doctoral Candidate
Graduate Program in Clinical-Developmental Psychology, York University
Email address: ewachala@yorku.ca

Debra Pepler, Ph.D., C.Psych.
Distinguished Research Professor in Psychology, York University
Email address: pepler@yorku.ca Office phone: 416-736-2100 x66155

Mary Motz, Ph.D., C.Psych.
Clinical Psychologist, Mothercraft
Email address: MMotz@mothercraft.org Office phone: 416-364-7373

Purpose of the research:

Our goal in this study is to track the development of families in various areas, such as school, work, and physical and psychological health. You will be asked to fill out a questionnaire on a child in your class. The information we gather will be used to develop case studies of mothers and children for the principal researcher's doctoral dissertation. We also plan on sharing findings with all participating families in this research and with the scientific community.

What you will be asked to do in the research:

You will be asked to complete a questionnaire on which you will provide basic academic information for the child, as well as rate how often you see him or her exhibit certain behaviours. You will then send this signed consent form and the completed questionnaire by mail, using the self-addressed and stamped envelope provided. To express our gratitude for your time and commitment to participating in this study, you will be compensated with a $25 Indigo gift card.

Risks and discomforts:

We do not foresee any risks or discomforts for you during participation in this research.

Benefits of the research and benefits to you:

The findings from this study will help us better understand the trajectories of development in families of diverse backgrounds.

Voluntary participation:

Your participation in this study is completely voluntary and you may choose to stop participating at any time.

Withdrawal from the study:

You can stop participating in the study at any time, for any reason, if you so decide. Your decision not to volunteer will not influence the relationship you may have with the researchers, York University, or the child in your class and his or her family, either now or in the future. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality:

All information that you provide through your participation in this study will be kept confidential. You will not be identified in the doctoral thesis or in any report or publication based on this research. The data and recordings collected through this study will be kept in a locked cabinet for 10 years, after which it will be archived by Iron Mountain for future research purposes. Confidentiality will be provided to the fullest extent possible by the law.

Questions about the research?

If you have any questions about this research or the researchers, please do not hesitate to contact the principal researcher, Elizabeth Wachala, at ewachala@yorku.ca or her doctoral supervisor, Debra Pepler, at pepler@yorku.ca. You may also contact the Psychology Graduate Program at York University by email at gradpsych@yorku.ca or telephone at 416-736-5814.

This research has been reviewed and approved by the Human Participants Review Sub-Committee, York University's Ethics Review Board, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, you may contact the Senior Manager and Policy Advisor for the Office of Research Ethics, 5th Floor, York Research Tower, York University (ore@yorku.ca or 416-736-5914).

Legal rights and signatures:

I, ____, consent to participate in this research study entitled "Long-term follow-up of mothers and children: A case study approach" conducted by Elizabeth Wachala, Doctoral Candidate at York University. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

________________________________ ________________________

Participant's Signature Date

________________________________ ________________________

Principal Investigator's Signature Date

Appendix F: Thematic Analysis Themes and Codes

Outcomes for Women and Children

Theme	Subthemes	Codes
Choosing change	Breaking patterns	Breaking past personal patterns
		Breaking intergenerational patterns
		Making own choices
	Agency/empowerment	Taking responsibility for choices/actions
		Substance use as a choice
		Having children as a choice
		Making own choices
	Knowing what they don't want	Knowing what they don't want
	Domino effect of choices	Domino effect of choices
Coping is ongoing	Life is a long, hard journey	Long and bumpy road
		Hard work
		Journey
		Life is changing/dynamic
		Stress is consistent
		Mental health issues don't disappear
	One step at a time	Moving forward, getting unstuck
		Tackling issues as they arise
		Setbacks are not the end
	Coping toolkit is always growing	Connecting with therapy
		Connecting with other resources
		Retraining self
	Awareness and acceptance	Awareness and acceptance

Healthy boundaries	Valuing self in relationships	Reciprocity
		Preserving energy for self
		Collaboration/growth in relationships
		Not taking on others' problems
	Protect children and self	Not allowing abuse
		Prioritizing children
		Cutting ties
		Shrinking social circles
		No drug users in life
Self-advocacy	It takes a village	Voluntary child protection involvement
		Asking for help
		Telling others about BTC
	Agency/empowerment	Speaking up for self and children
		Asserting health needs
		Asserting societal needs
		Having children assessed for cognitive/learning needs
		Calling others out
		Tapping into resilience
		Healthy anger
		Proving oneself
Stigma	Systemic barriers	Unhelpful medical attitudes about drug use
		Inability to get needed medical help
		Complex legal involvements
	Societal barriers	Unhelpful attitudes from others
		Needing someone to vouch for you

		Telling others about BTC
	Self stigma	Labels affect self-image
		Inability to be open and authentic
		Fear of judgment
		Internalized stigma
		Constrains on freedom
Continuum of harm reduction	Conscious awareness of substances and their effects	Knowing own limits
		Conscious substance use
		Medical marijuana
		No drug users in life
		Cutting ties
		Avoiding certain medications
		Urge to use always there
		Controlled by substances
		Not exposing children to substance use
	Breaking cycle of substance use	Relapses are normal
		Judgment on self, others
		Children as motivation to abstain
		Self-destruction
		Living a new life

BTC Mechanisms of Change

Theme	Subthemes	Codes
Acceptance and safety	Acceptance	Feel welcome
		Feel valued as a person
		No power dynamics/hierarchy

	Safety	Safe space
		Safe neighbourhood
		They're always there
Open-door policy	Open-door policy	Welcoming
		Clients can reconnect after treatment
		Client parties/events
		They're always there
		Returning clients
		Long-term services
		Good memories
Wrap-around services	Everything in one place	Multiple services
		Childcare
		Outreach
		Agency connections
	Continuity of care	Continuity of care
	Organized, planned out	Organized and planned out
Quality of care and education	Quality of care	Cohesive and organized clinical team
		Action-oriented staff
		Well-planned space
		Access to resources
		Staff go above and beyond
		Outreach
		Customized care
		Advocacy
		Inspirational
	Quality of education	Relevant information
		Helpful materials (e.g., handouts)

		Good learning
		Good teaching
		Sets the stage for further learning/growth
Teaching and modelling healthy relationships	Child/family/personal relationships	Showed how relationships should work
		Helpful materials
		Learned how to build attachment with child
		Learned about effects of substance use on family
	BTC relationships	They're always there
		Reliable
		Protective relationship with BTC staff
		Friendly, welcoming
		Authenticity
Uniqueness of BTC	Uniqueness of BTC	Nowhere else like BTC
		Multiple previous contacts with other services, none compare
		Unbelievable
		Ongoing research
		Long-term services
		Low staff turnover