A systemic analysis of the child welfare system: Understanding the strengths and needs of in-home and out-of-home children and examining the role of foster child factors on the fostering experience

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Abstract

This dissertation addresses gaps in the child welfare literature from a systemic perspective. The extant literature focuses primarily on children in care, which excludes 90% of children and families involved with the system. In addition, foster parent retention has become an area of primary concern because there are fewer individuals who are willing to foster. Research that examines all children involved with the child welfare system and ways to improve foster parent experiences is imperative to address these areas of need. The two studies herein address these gaps in the literature by examining children who are in contact with the child welfare system but largely remain out of care, children who are in care, and foster caregivers.

The first study compared two groups of children in the Ontario child welfare system: those who remain with their natural family and those in out-of-home care. The emotional and behavioural functioning, prosocial behaviour, education, health, and resources (internal and external) of these two groups of children were examined and relatively few significant differences were identified. However, it was found that, despite having comparable mental health and educational functioning, children who remained in their natural homes had significantly fewer external resources than children in out-of-home care. Children in out-of-home care may have increased access to community resources despite having similar needs to children who remain in their natural home environments. Additional research is needed to replicate and better understand these findings so that the child welfare system can best meet the needs of its children.

The second study examined how foster child characteristics, as well as other foster parent and agency factors, impact Canadian foster parents' experience of fostering, particularly related to agency workers, the fostering system, training, and foster children and their placements. Results identified that foster children's needs and maltreatment histories, as reported by foster

parents, were not significantly associated with perceptions about fostering. The factors that were the most highly associated with positive perceptions about fostering were increased practical and emotional support. These findings indicate that child welfare agencies can improve foster parents perceptions about fostering by providing sufficient practical and emotional support. A monitoring system that allows foster parents to provide regular feedback would be beneficial in continuing to evaluate their fostering experiences, assess the impact of interventions targeting foster parent support, and address any areas of concern. As a whole, the results of this dissertation highlight the importance of providing both children and foster parents in the child welfare system with appropriate supports that promote positive child functioning and foster parent experiences.

Keywords: child welfare services, in-home care, out-of-home care, foster parents, needs and strengths

Statement of Contributors, Collaborators, and Co-Authors

This dissertation contains two manuscript-style articles. Both manuscripts were prepared in collaboration with my thesis supervisor, Dr. John Lyons. In addition, Dr. Leschied, from Western University, was the principal investigator for both studies and facilitated access to the data, for the purpose of this dissertation, through his academic and professional affiliations. I worked as a research assistant and collaborator for both studies. Although data collection was not conducted for the purpose of my dissertation, I was able to include items on the measures used for each study to address my research questions. The manuscripts have not yet been submitted for publication. However, some of the results found in the first study were included in a final report submitted to the Ontario Association of Children's Aid Societies in April 2015, which was written by Dr. Leschied and myself.

In addition to Dr. Lyons and Dr. Leschied, the first manuscript was prepared in collaboration and consultation with Mr. Derrick Drouillard, the project manager who oversaw the data collection process and facilitated contact with child welfare agencies in southwestern Ontario, and the Ontario Association for Children's Aid Societies (OACAS), which provided the funding and resources required to conduct the study. The second manuscript was prepared in collaboration and consultation with Dr. Susan Rodger and Dr. Jason Brown, who are affiliated with Western University and were co-investigators on the research project. In addition, Ms. Laurel Pickel was a research assistant who was highly involved in reviewing the literature and the data collection process. The second manuscript was also prepared in collaboration and consultation with the Child Welfare League of Canada (CWLC), which provided the funding and resources required to conduct the study. Staff at the CWLC also coordinated data collection and facilitated contact with child welfare representatives throughout the country.

For both manuscripts, I was responsible for conceptualizing the studies, developing the hypotheses and research questions, coordinating data collection, planning and conducting the statistical analyses, and preparing the manuscripts. Dr. Lyons provided support and guidance throughout this process. In addition, my thesis committee, Drs. Robert Flynn, Veronika Huta, and Elisa Romano, contributed to the development of the literature review, methodology, statistical analyses, and interpretation of the results.

Acknowledgements

Statement of Originality

I hereby certify that all of the work described within this thesis is the original work of the author.

Any published (or unpublished) ideas and/or techniques from the work of others are fully

acknowledged in accordance with standard referencing practices.

Wendy den Dunnen

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Table of Contents

List of Tables

Chapter 1

General Introduction

General Introduction

The goal of the child welfare system in Ontario is to protect children from maltreatment and unsafe family environments and promote healthy development for all children involved [Ontario Association of Children's Aid Societies (OACAS), 2010]. This is not an easy task due to the complexity of providing effective care for society's most vulnerable children. First, an effective system needs to be engineered to protect children. Second, child welfare agencies need competent and devoted child welfare workers who put the needs of the children at the forefront of decision-making. Third, children who are removed from their homes need supportive and safe placements that will foster healthy development. Furthermore, children involved with the child welfare system often have significant behavioural and emotional problems, related to the troubling histories of these children, as well as their genetic background and other familial factors, which make providing care more challenging for parents and caregivers. These children also frequently require additional services to address their physical, developmental, and mental health needs (e.g., Bruskas, 2008; Leslie, Gordon, Lambros et al., 2005; Leslie, Gordon, Meneken et al., 2005; Marquis & Flynn, 2008; Minty, 1999; Newton, Litrownik, & Landsverk, 2000). These encompass just a few of the considerations that child welfare agencies face in caring for vulnerable children.

Additional factors, such as political and financial aspects, affect the provision of effective care as well. For example, in Canada, there is the added difficulty of fragmented services across the country. There are differences in how child welfare services are provided in each province and territory as a result of provincially—rather than federally—regulated child welfare (Bounajm, Beckman, & Thériault, 2014). Moreover, over the past few decades, the number of children involved with the child welfare system has increased, without a parallel increase in the

number of foster children. Nonetheless, the number of foster children remains high when the limited placement options available within the child welfare system are taken into consideration (e.g., Matheson, 2010; OACAS, 2013; Rodger, Cummings, & Leschied, 2006; Urquhart, 1989). This has resulted in overcrowding in foster homes and the inability to consistently place children in foster homes that match their needs. Foster parents are an essential component of the child welfare system but they are often difficult to recruit and retain (Denby, Rindfleisch, & Bean, 1999; Matheson, 2010; Rodger et al., 2006; Urquhart, 1989). In addition, there are high turnover rates for child welfare workers, with rates estimated between 23% and 60%. The average length of employment for these workers is less than 2 years (Strolin, McCarthy, & Caringi, 2006). Taking all of this into consideration, it is not surprising that the child welfare system has often struggled to provide children with the most advantageous care.

These challenges within the child welfare system impact the satisfaction and wellbeing of everyone involved with the system, including children, families of origin, foster parents, as well as agency workers. This dissertation will focus specifically on the wellbeing and experiences of children, especially children who remain with their natural families, and foster parents involved in the child welfare system in Canada. It will examine the characteristics of children involved with the child welfare system who remain in their natural homes and the experiences of foster parents through two separate quantitative studies.

The first study (please see Chapter 2) examines a broad range of characteristics (e.g., health, education, behavioural and emotional development, internal and external resources) of a random sample of children who remain in their natural homes and are involved with the child welfare system, and then compares these children with a random sample of children in out-of-home care. This study also examines predictors of case status 6-months following an initial

assessment. The second study (please see Chapter 3) examines the impact of foster child characteristics (i.e., needs, maltreatment histories, and the quantity of foster children in the home) on foster parents' perceptions about fostering. The main objectives of this dissertation are to increase the current understanding of: (1) the characteristics and functioning of children within the child welfare system who remain in their family homes (in-home), (2) how these characteristics vary by placement type (i.e., in-home vs. out-of-home placement), (3) factors that are associated with in-home cases remaining open or closing, (4) the association between foster child characteristics and foster parents' perceptions about fostering, and (5) the Canadian child welfare system. This general introduction provides a broad overview of the child welfare system. It describes the extant literature that examines the Canadian child welfare system, the effects of child maltreatment, the functioning of children within the child welfare system, and foster parenting. This chapter provides the basis for understanding each of the two individual studies.

The Child Welfare System

In Canada, all provinces and territories have their own child welfare system designed to protect children from unsafe family environments, promote placement permanence, and promote healthy child development. These systems are run through provincial governments rather than the federal government and there is no national office of child welfare in Canada (Bounajm et al., 2014; Courtney, Flynn, & Beaupré, 2013). These separate, provincial-level systems have resulted in differences in the provision of child welfare services throughout Canada. There are also differences in each province and territory in the amount of support provided to children and their families and the amount of support offered to children aging out of the system. Despite these differences, the primary goals of each child welfare system in Canada are to keep children safe, promote placement permanence, and promote healthy child development. Within these goals,

there are some common themes across provinces and territories, including consideration of the

best interests of the child, the views of the child, the culture and heritage of the child and family

(particularly Aboriginal heritage), and the parents as the primary caregivers responsible for

raising their children. In addition, continuity of care is viewed as essential to children regardless

of the province or territory (Bounajm et al., 2014).

Because there is no national office of child welfare in Canada, there is also no national

collection of statistical data on children involved with the child welfare system; thus, accurate,

up-to-date statistics on the number of children involved with the child welfare system in Canada

are virtually impossible to obtain. Despite this, Mulcahy and Trocmé (2010) provided a best

estimate of the number of children in out-of-home care in 2007. They estimated that, in Canada,

67,000 children were in out-of-home care, which represents a rate of 92 children in care per

10,000 children in the Canadian population aged 0 to 18 (nearly 1%). In 1992, there were 42,000

children in care, or 57 per 10,000. The rate of increase was highest between 1995 and 2003 and it

has been relatively stable since that time (Courtney et al., 2013).

Child Maltreatment

The first step to understanding the child welfare system, regardless of the province or

territory, is to understand the circumstances under which the system is activated, which in this

case refers to how child maltreatment is defined. *Child maltreatment* is a significant commission

or omission in care by a parent/caregiver that results in the threat of or actual harm (Gilbert,

Widom et al., 2009). There are four types of child maltreatment: physical, sexual, and emotional

abuse and neglect (Government of Ontario, 1990). *Physical abuse* refers to when a "child has

suffered physical harm [(e.g., broken bones, black eyes, ruptured ear drums)] inflicted by the

person having charge of the child" (Government of Ontario, 1990, Section 72.1). *Sexual abuse* is

when a "child has been sexually molested or sexually exploited . . . by the person having charge of the child or by another person" (Government of Ontario, 1990, Section 72.1). *Emotional abuse* is when a "child has suffered emotional harm . . . [that] results from the actions, failure to act, or pattern of neglect on the part of the child's [caregiver]" (Government of Ontario, 1990, Section 72.1). This type of abuse is often verbal (e.g., derogation and ostracism; Scannapieco & Connell-Carrick, 2005). Lastly, *neglect* refers to when a "child has suffered or is at risk of suffering . . . [due to the caregiver]'s pattern of neglect in caring for . . . the child" (Government of Ontario, 1990, Section 72.1). This may include the provision of inadequate nutrition, clothing, shelter, or medical care. Child neglect may be related to parental developmental, physical, psychological, or criminal problems (De Bellis, 2005; Whenan, Oxlad, & Lushington, 2009). In addition, witnessing intimate partner violence is increasingly being considered as a type of child maltreatment (Gilbert, Widom et al., 2009).

Child maltreatment is an unfortunate reality in close to a million households across North America (Gilbert, Widom et al., 2009; Teicher et al., 2003). In the United States, there were approximately 742,000 confirmed instances of child maltreatment in 2011 (9.9 investigations per 1,000 children; Children's Bureau, 2011). In 2008, there were an estimated 235,842 maltreatment related investigations across Canada (39.16 investigations per 1,000 children). Thirty-six percent (86,440 or 14.19 investigations per 1,000 children) were substantiated (i.e., sufficient evidence that maltreatment had occurred). Of these substantiated cases, 34% were due to intimate partner violence, 34% were a result of neglect, 20% were physical abuse cases, 9% were emotional abuse cases, and 3% were sexual abuse cases (National Clearinghouse on Family Violence, 2008). However, these numbers are an underestimate of the prevalence of maltreatment because numerous incidents are not reported (Gilbert, Kemp et al.,

2009). Given these statistics and the emotional costs (e.g., pain and suffering, quality of life,

mental health problems) and financial costs (e.g., medical expenses, reduced productivity,

treatment programs) associated with child maltreatment, it is not surprising that child

maltreatment has been identified as a major public-health and social-welfare problem (Cicchetti,

2007; Gilbert, Widom et al., 2009). In addition, Boivin and Hertzman (2012) have made the

claim that chronic exposure to child maltreatment is, by in large, the most severe form of

childhood adversity and it can have a detrimental impact on development.

Society's Response to Child Maltreatment

Child welfare agencies across Canada are located in local communities to help and

support children who have experienced maltreatment and their families. These agencies are made

aware of instances of child maltreatment through the assistance of members within the

community; professionals and citizens are obligated to call their local agencies whenever they

suspect abuse or neglect of a child. Families and children are also encouraged to call these

agencies if they need support within the home. When a referral is made regarding possible

neglect or abuse of a child, the child welfare agency commences an investigation of the family,

child, and other individuals involved with the reported abuse or neglect case. Agency workers

who respond to the calls determine how urgent the situation is and what type of intervention is

needed. If there is no evidence of child abuse or neglect following the investigation, the child

welfare agency will no longer be involved with the family. If the child is not considered in

imminent danger or risk of harm but there is some less severe indication of family problems, an

assigned agency worker will work with the family to provide them with appropriate community

services, such as parenting support and family counselling. This is referred to as an intermediate

level of involvement from the child welfare agency. In cases where the child is deemed in

imminent danger or risk of harm, the child is removed from his/her home and placed in out-of-home care, with the end goal being reunification with the family, if at all possible (OACAS, 2010). Whenever the child welfare system becomes involved with a family, the priority is to address the potential risk for the child(ren) and improve the family situation so that the child(ren) can remain with their family while also ensuring their safety (Bounajm et al., 2014).

When a child is removed from the home, which happens in less than 25% of all substantiated cases in Canada, the majority of children receive care in kinship or foster homes within or close to their community (Bounajm et al., 2014; National Clearinghouse on Family Violence, 2008; Pecora, Whittaker, Maluccio, & Barth, 2009). *Foster care* is typically a temporary care setting that provides a child with a safe, nurturing family-like environment. However, in some instances, foster care may become a longer-term care solution. *Kinship care* involves placing a child in the home of relatives (Farris-Manning & Zandstra, 2003; OACAS, 2010). Typically, the option of kinship care is explored initially. If there are no appropriate kinship placements available for a child, child welfare agency workers then consider placement in foster care because of its similarity to the family environment (OACAS, 2010). For Aboriginal children in Canada, the primary placement option is *customary care*, which refers to placing a child with a caregiver, typically a relative or person the child has formed a relationship with previously, who has been identified by the child's Aboriginal community. Children with special needs, such as medically fragile, developmentally disabled, or mentally ill children, may require more specialized placements, such as residential facilities or inpatient hospitalization (Bounajm et al., 2014). In 2008 in Canada, 19,599 children were placed in out-of-home care, of which about 48% were placed in foster homes, just under 45% were placed in kinship care, and 7%

were placed in a group home or residential treatment facility (National Clearinghouse on Family Violence, 2008).

Foster children who are the legal responsibility of the provincial government (i.e., their parents are unable to care for them and they are not adopted by other adult caretakers) are called Crown wards. In Ontario, about 50% of children in care are Crown wards (9,401/18,668 in 2007-2008; Expert Panel on Infertility and Adoption, 2009). These children are cared for by local child welfare agencies (OACAS, 2010), but do not necessarily remain under the care of the state until adulthood, as there is significant movement in and out of the foster care system. Those who do remain Crown wards typically remain under the care of the state until the age of 18. Some provinces also have programs for eligible youth that provide financial and support services for the transition to independent living. In Ontario, this program is referred to as the *Continued Care and Support for Youth* program. It provides financial and other types of support until the youth is 25 years of age (Bounajm et al., 2014).

Foster Care

In Ontario, foster homes are approved by child protection services and can provide care for up to four children at a time (Rodger et al., 2006). The ideal outcome for children in foster care is reunification with their natural families. When this is not possible, long-term foster care and adoption are considered. When a child is in a foster home, the legal responsibility for the child is still with the child welfare agency but foster parents are important figures in the foster child's daily life and care team (OACAS, 2010). The goal of a foster family is to provide a foster child with opportunities for growth and healthy development in an environment consisting of safe and nurturing relationships (Baum, Crase, & Crase, 2001).

Any adult can request to become a foster parent by contacting his/her local child welfare agency. The process of becoming a foster parent includes both an evaluation of the adult who wishes to become a foster parent and his/her home environment. For example, in Ontario the Structured Analysis, Family Evaluation (SAFE) Home Study is used to assess families for fostering. The SAFE Home Study is a standardized assessment tool that is completed by a child welfare worker for every family wishing to be involved in kinship care, fostering, or adoption. It includes a home safety checklist and questionnaires, a medical report, police and child welfare clearances, and references. It takes about 4 to 6 months to complete and is valid for up to 2 years (OACAS, 2015).

If an adult is deemed appropriate for foster parenting then formal pre-service training must be completed before a foster child can be placed in the home (OACAS, 2010). Pre-service training is provided to prepare potential foster parents for the difficult role of being a foster parent and also to allow potential foster parents the chance to determine whether fostering is a good fit for them. The training usually consists of an orientation to the agency and support for the potential foster parent, information on child development, and preparation for potential challenges that will occur when fostering (Baum et al., 2001). In Canada and the United States, a commonly used training program is the Parenting Resources Information Development Education (PRIDE; Child Welfare League of America, 1993; Nash & Flynn, 2016). This training program has both pre-service (Foster PRIDE/Adopt PRIDE) and in-service (Foster PRIDE Core) training components. These components are designed to provide knowledge in the following five areas: protecting and nurturing children; meeting children's developmental needs; supporting relationships between children and their biological families; providing safe, nurturing relationships for children; and working as part of a professional team [Child Welfare League of

Canada (CWLC), 2013; Nash & Flynn, 2016]. In Ontario, the PRIDE program has been adapted

to address a sixth area as well: reinforcing children's cultural identify (Nash & Flynn, 2016).

Foster care is the most common and least restrictive form of out-of-home care for

children in the child welfare system (Rosenwald & Bronstein, 2008). It has been reported that up

to three quarters of children in care are in foster homes (Urquhart, 1989). In Ontario, over 18,000

children were in out-of-home care each month, on average, during the 2009/2010 fiscal year. In

2010, there were 8,200 licensed foster homes and 12,100 foster care beds in the province. About

900 of these homes were kinship foster homes (Commission to Promote Sustainable Child

Welfare, 2010b).

Although foster care is the most common and, many argue, optimal form of out-of-home

placement, the number of foster care placements available has been described as inadequate to

serve the number of children requiring placement and their complex needs (MacGregor, Rodger,

Cummings, & Leschied, 2006; Matheson, 2010; Rodger et al., 2006; Urquhart, 1989). In the

United States, the foster care system grew from 276,000 foster children in 1985 to 429,000 foster

children in 1991, a growth of 55% in 6 years. However, the number of foster parents did not

increase at a comparable rate [United States Government Accountability Office (USGAO), 1993,

as cited in Denby et al., 1999]. More recently, statistics have shown that the number of children

in care has decreased and begun to plateau. For example, in Ontario, the number of children in

care decreased from 26,221 children, in the 2009-2010 fiscal year, to 24, 841 and 23,341

children, in the 2012-2013 and 2013-2014 fiscal years, respectively. OACAS credits their strong

focus on working with families and kin over the past 5 years as the reason for this decline

(OACAS, 2014). Nonetheless, concerns remain about the reduction in the number of foster

parents and having enough foster placements to address the specific needs of children in care

(Matheson, 2010). One likely reason for this reduction is societal changes that have reduced the number of individuals who are willing and able to foster, such as increases in the cost of living, divorce rates, the age of the population, and the rate of women entering the workforce over the last 25 years (Matheson, 2010).

Having a limited supply of foster parents has made it more challenging to find optimal foster care placements tailored to each foster child's specific needs and permanency plan (Baum et al., 2001; Rosenfeld et al., 1997). The complex needs of children in the child welfare system further exacerbate this dilemma facing the foster care system (Matheson, 2010, Urquhart, 1989). Research has found that foster children have increasingly complex developmental, psychological, and medical needs that make foster parenting an even more difficult endeavour. In fact, the stresses associated with parenting children with challenging problems have been found to increase the rate of foster parent attrition, further reducing the number of available foster parents (Baum et al., 2001; Farris-Manning & Zandstra, 2003; Sanchirico, Lau, Jablonka, & Russell, 1998).

In addition to the difficulty of working with challenging foster children, foster parenting in and of itself is not an easy undertaking (Rosenwald & Bronstein, 2008). Barth (2001) outlined three tasks that foster parents must perform simultaneously that demonstrate the complexity of being a foster parent: (1) nurture and guide child development, (2) promote reunification with the biological family, and (3) remain flexible to other permanency options for foster children. Due to the high number of foster children and the limited number of foster care placements, foster parent recruitment and retention are areas of significant concern across North America (e.g., Leschied, Rodger, Brown, den Dunnen, & Pickel, 2014; MacGregor et al., 2006; Matheson, 2010).

Aboriginal Communities

Addressing the needs of Aboriginal children and families in the child welfare system is also of primary concern. Aboriginal children are widely overrepresented in the Canadian child welfare system (Commission to Promote Sustainable Child Welfare, 2010a). They represent less than 7% of the general youth population and about 22% of child maltreatment cases that are substantiated in the Canadian child welfare system. In Manitoba and Saskatchewan, the rates are even higher, with 60 to 78% of children in the child welfare system being of Aboriginal heritage. Unfortunately, the rate of Aboriginal children in the Canadian child welfare system is projected to continue to increase (Bounajm et al., 2014).

Child welfare services for Aboriginal children differ from that of other children in Canada in that the federal government pays for child welfare services that are provided on reserves. Provinces and territories pay for these services if the Aboriginal children live off reserves. When working with Aboriginal children, the priority is community preservation and there is a strong value placed on ensuring that the Aboriginal community continues to be a part of the children's lives. Child welfare workers will frequently meet with Elders, band members, and extended family members before making placement decisions for these children (Commission to Promote Sustainable Child Welfare, 2010b).

Despite these efforts, Aboriginal children are still six to eight times more likely to be placed in out-of-home care than non-Aboriginal children (Auditor General of Canada, 2008). Working with the Aboriginal community and placing Aboriginal children in Aboriginal homes is a challenge due to the poverty, isolation, prevalent substance use and mental health problems, and the lack of social services often inherent within Aboriginal communities (Bounajm et al., 2014; Commission on Promoting Sustainable Child Welfare, 2012). Unfortunately, as a result,

many Aboriginal children are placed in non-Aboriginal homes, far from their communities

(Commission to Promote Sustainable Child Welfare, 2010c). In fact, in British Columbia, 53%

of Aboriginal children were placed in non-Aboriginal homes (Courtney et al., 2013). This

highlights the need for a closer examination of the child welfare system to identify ways to better

meet the needs of the continually increasing Aboriginal population.

<center>**Children in the Child Welfare System**</center>

Children in the child welfare system are one of society's most complex and high need

populations (Baum et al., 2001; Boivin & Hertzman, 2012; Burns et al., 2004). They not only

experience adverse family situations prior to involvement with the child welfare system (e.g.,

abuse or neglect), but also secondary effects within the system (Burge, 2007; Courtney, Piliavin,

Grogan-Kaylor, & Nesmith, 2001). For example, Burge (2007) examined case files of permanent

wards in the child welfare system and found that 79% had suspected maltreatment or had

experienced maltreatment in their family homes and 9% had also experienced maltreatment

while in out-of-home care. Similarly, Courtney and colleagues (2001) examined the experiences

of foster children before being placed in foster care and while in foster care. Seventy-six percent

had experienced at least one form of maltreatment prior to foster care placement. In addition,

33% percent of the youth reported experiencing neglect, 13% reported experiencing physical

abuse, and one male and one female reported experiencing sexual abuse from their foster

caregivers. The youth reports also indicated that 40% had foster parents with substance abuse

problems, 14% had foster parents who had mental illnesses, 18% witnessed domestic violence by

their foster parents, and 10% had a foster parent who had spent at least some time in jail/prison

(Burge, 2007). These studies demonstrate the large number of foster children who not only

experience maltreatment prior to care, but also following removal from the home in subsequent placements.

In regard to the secondary effects of foster care, Newton et al. (2000) examined the effect of multiple placements on the mental health of 415 foster children. The children and their foster families were interviewed 5 months and then 17 months following entry into foster care. It was found that the externalizing and internalizing behaviour of the children increased as the number of placements increased. Initial externalizing behaviour was the highest predictor of placement change, but when children without behavioural problems were exposed to multiple placement changes, their behaviour worsened. Therefore, even if children are resilient to the maltreatment they experienced prior to being involved with the child welfare system, the instability of placement in foster care can also negatively influence their functioning. These studies demonstrate that, unfortunately, children in the child welfare system frequently experience challenging life experiences, including maltreatment and caregiver disruption, both prior to and throughout their involvement with the system. Furthermore, research has identified that these difficult, and often traumatic events, can have significant effects on child development (e.g., Boivin & Hertzman, 2012).

Maltreatment and Child Development

Child maltreatment is most likely perceived and processed through a child's senses as profound anxiety or stress. In acute stress, the release of cortisol, the stress hormone, suppresses the limbic-hypothalamic-pituitary-adrenal (LHPA) axis and this leads to the restoration of baseline cortisol levels so that the stress response and its resulting immune suppression are controlled and homeostasis is achieved (De Bellis, 2005). The acute stress response is typically rapid and reversible. However, in situations where stress is chronic, which is often the case with

child maltreatment, the neurochemical systems change and become overly sensitive to future

stressful events that may seem relatively inconsequential to others (Perry, Pollard, Blakley,

Baker, & Vigilante, 1995). In support of this, research has found that maltreated children have

increased levels of stress hormones when compared to children who have not experienced

maltreatment (De Bellis, 2001; De Bellis, Lefter, Trickett, & Putnam, 1994; Perry, 2001; Wismer

Fries, Ziegler, Kurian, Jacoris, & Pollak, 2005), and this difference remains evident into

adulthood (Bremner et al., 2003; Lemieux & Coe, 1995).

It has been hypothesized that the consistently elevated stress hormones in individuals

who have been maltreated as children results in an altered development of the central nervous

system, including a dysregulated brainstem that is more easily startled (Grayson, Childress,

Ernst, & Webb, 2006). Chronic stress, such as repeated child maltreatment, results in higher

levels of dopamine, a neurotransmitter in the brain, than is needed. This impairs cortical

functioning, which is associated with difficulties with attention, hypervigilance, and learning

new material, as well as mental health problems, such as psychotic symptoms and paranoia (De

Bellis, 2005). In animal studies, it has been found that serotonin, another important

neurotransmitter involved in the stress response, decreases when chronic stress is experienced

(Fontenot, Kaplan, Manuck, Arango, & Mann, 1995; Petty, Kramer, & Wu, 1997). It is believed

that prolonged serotonin depletion results in emotional and behavioural dysregulation (De Bellis,

2005). Thus, although the biological stress response is an adaptive survival technique for

children experiencing maltreatment, a chronic stress response impedes the development and

integration of various brain systems (Boivin & Hertzman, 2012; Twardosz & Lutzker, 2010).

Maltreatment and brain development. In order for optimal learning and brain

development (i.e., neural connections), environments exhibiting consistent routines, responsive

interaction, and specific teaching experiences are required. These factors are much less likely to be present in environments where maltreatment occurs. Instead, learning opportunities focus on survival, and neural connections reflect this focus. When experiencing intense stress, other regions of the brain, such as those involved with complex thinking, are not activated or available for learning (De Bellis, 2005; Grayson et al., 2006; Perry, 2002). There is good reason to suspect that the stress of maltreatment during childhood results in a neural system that is prone to overreact to stress throughout life, given that the stress-related neural connections were strengthened and activated again and again for these children (Twardosz & Lutzker, 2010).

Although brain plasticity occurs throughout the lifespan, the brain is most malleable in the first few years of life, when there is an excess of neurons. This is when social, emotional, cognitive, and physical experiences shape neural pathways in ways that will influence future functioning (Boivin & Hertman, 2012; Perry, 2002). After the age of 3 or 4 years, the process of pruning synapses, known as apoptosis, begins and the opportunities for developing neural connections decrease. This increased malleability present only in early life is a great opportunity for development, but it also makes young children especially vulnerable to adverse environmental experiences, such as those characterized by abuse or neglect (Boivin & Hertzman, 2012; Grayson et al., 2006; Perry, 2002). It is believed that abuse, neglect, and the corresponding chronic stress response, lead to an "over-pruning" of the synapses (Grayson et al., 2006). Perry (2002) also indicated that when a child experiences maltreatment and does not experience a nurturing parental relationship early in life, the critical cues (e.g., neurotransmitters) needed by neurons for appropriate organization and connection do not occur and neurodevelopmental processes are altered. Some describe the shaping of the brain as a "use it or lose it" process (Grayson et al., 2006; Perry, 2002). Thus, for a maltreated child, apoptosis could lead to

significant deficiencies (Grayson et al., 2006). In support of this, research has found that children

with post-traumatic stress disorder (PTSD) have a smaller brain size than healthy controls (De

Bellis et al., 1999, 2002; Perry & Pollard, 1997; Strathearn, Gray, O'Callaghan, & Wood, 2001).

De Bellis et al. (1999) found that, for children who experienced maltreatment, the total brain

volume was 8% less than that of matched controls. In addition, they found that earlier onset

maltreatment and longer durations of maltreatment were associated with reduced brain volume.

The brain develops in a sequential fashion. Thus, the particular regions of the brain that

are affected by maltreatment depend on what aspect of the brain is developing at the time of

maltreatment. For young children, social and emotional development is the focus, for which a

nurturing caregiver is crucial. Therefore, brain regions related to social and emotional

development are most highly affected by child maltreatment and profound abnormalities in

neural connections occur in these areas (Perry, 2002). It is believed that, due to this altered brain

development, the behavioural and emotional responses of children who have experienced

maltreatment are directed by primitive brain processes, such as the brainstem and midbrain areas,

and lack more advanced thought processes that take place in the frontal lobe (Grayson et al.,

2006; Perry, 2009). In support of this, using magnetic response imaging, Eluvathingal et al.

(2006) found that neural connections (white matter) in areas of the brain that are involved with

higher cognitive and emotional functioning (e.g., the amygdala and frontal lobe) were noticeably

diminished in adopted children who were previously in institutional care, when compared to

healthy comparisons. These findings are further supported by the high prevalence of emotional,

behavioural, and cognitive problems exhibited by children with histories of maltreatment.

Behavioural and Emotional Problems

Given the research findings related to the effects of child maltreatment on healthy development, it comes as no surprise that the maltreatment many children in the child welfare system experience during childhood has been associated with developmental and mental health problems, including serious behavioural, social, and educational difficulties (Boivin & Hertzman, 2012; Bruskas, 2008; Leslie, Gordon, Lambros et al., 2005; Leslie, Gordon, Meneken et al., 2005; Marquis & Flynn, 2008; Minty, 1999). In fact, children in the child welfare system have been found to have much higher levels of mental health problems (ranging from 10 to 80%, with a higher prevalence in older children) than children in the general population [about 10 to 20%; Burge, 2007; Canadian Mental Health Association (CMHA), 2010; Leslie, Gordon, Meneken et al., 2005; Milburn, Lynch, & Jackson, 2008]. For example, Heflinger, Simpkins, and Combs-Orme (2000) found that 34% of their sample of children in state care had significant behaviour problems, most commonly aggression, delinquency, and withdrawn behaviour. Zima and colleagues (2000) found that 27% of the children in their sample were in the clinical range for a behaviour problem. In addition, they found that 23% had severe delays in reading or math. Overall, 69% had a problem behaviour, academic skill delay, or school failure, demonstrating the high rates of both mental health and academic problems in children in the child welfare system. In addition, in Ontario, over 50% of children who were in care were considered high-risk for a likely psychiatric disorder, according to the Strength and Difficulties Questionnaire (SDQ), which assesses emotional symptoms, conduct problems, hyperactivity/inattention, and peer relational problems (Marquis & Flynn, 2008).

Leslie, Gordon, Meneken, and colleagues (2005) found results in contrast to most other studies examining the prevalence of mental illness for children within the child welfare system.

Only 9% of their sample had a mental health diagnosis. However, this study examined children aged 3 months to 6 years while most other studies examined both children and adolescents. Interestingly, 58% of the children were screened as likely having a developmental delay. The authors concluded that the higher rates of mental illness that are present among children in the child welfare system may not develop or be displayed until middle or late childhood; however, developmental delays may be easier to identify for younger age groups.

Burge (2007) found a 31% prevalence rate of mental illness in his sample of permanent wards, which is comparable to the findings of most other studies. Boys were twice as likely to have mental disorders as girls. In addition, 49% of those with a mental illness had comorbid disorders, which were most commonly learning disabilities and physical disabilities. This again demonstrates the high mental health and developmental needs of children in the child welfare population. This study also found that children with mental disorders were significantly older than those without, further supporting the low rates of mental illness found in younger children involved with the child welfare system (e.g., Leslie, Gordon, Meneken et al., 2005).

Another recent study found that 44% of children in foster care had a mental health problem. Again, age was found to be a predictor of mental illness, with younger children being less likely to have mental health issues. In addition, it was found that as the length of time in foster care and the number of placements increased, so did the mental health problems of the children (Sullivan & van Zyl, 2007). Therefore, not only are maltreatment and age important factors related to the prevalence of mental illness, but length of time in foster care and the number of placements are also important determinants. The fact that many children in the child welfare system have adverse experiences after being removed from their homes, such as additional maltreatment and disrupted relationships with caregivers, provides a possible

explanation for the association between longer lengths of time in the system and a higher number of placements on increased mental health problems (Courtney et al., 2001; Newton et al., 2000).

Post-traumatic stress disorder (PTSD). When examining the mental health outcomes of child maltreatment, one particularly relevant disorder is PTSD. Research has found that between one-third and one-half of all abused children meet criteria for PTSD (Ackerman, Newton, McPherson, Jones, & Dynman, 1998; Widom, 1999). PTSD is a cluster of symptoms that can occur following exposure to a traumatic event. According to the fifth edition of the Diagnostic and Statistical Manual (American Psychiatric Association, 2013), a *traumatic event* occurs when an individual witnesses or experiences an event that involves death or serious injury or threat of significant harm to self or others. The symptoms of PTSD fall under four broad categories: 1) recurring and intrusive memories of the event, 2) persistent avoidance of stimuli associated with the trauma and numbed responsiveness, 3) negative alterations in cognitions and mood (e.g., inability to recall key features of the traumatic event; persistent negative beliefs, emotions, self-blame; diminished interest), and 4) increased arousal (e.g., hypervigilance, sleep difficulties, irritability, anxiety, etc.).

In children, the symptoms of PTSD are generally less clear, although the symptoms do still roughly fit into the categories outlined above (Grayson et al., 2006). PTSD is often diagnosed with co-morbid disorders in childhood, such as learning disabilities, attention-deficit hyperactivity disorder (ADHD), conduct disorder, anxiety disorders, affective disorders, or even psychotic disorders, and it is often difficult to distinguish, particularly from ADHD and learning disabilities (Grayson et al., 2006; Perry, 1997). For example, Beers and De Bellis (2002) found that 14 maltreated children with PTSD performed worse on measures of attention and executive functioning than a matched control group. Furthermore, Carrey, Butter, Persinger, and Bialik

(1995) examined 18 children between the ages of 7 and 13 years who had been abused and compared them to a matched control group. They found that the children who had experienced abuse had lower intelligence scores than children who had not experienced abuse. Thus, it can be hard to determine whether the learning and attention difficulties are a result of abuse experiences or an underlying attention or learning problem.

Outcomes of Children in the Child Welfare System

From the extant literature, it is apparent that a wide range of mental health problems and developmental delays are prevalent in children in the child welfare system. Research has also found that many children in the child welfare system continue to have difficulty well into adulthood. Child welfare services have demonstrated some success at preparing these vulnerable children for life after exiting the child welfare system and some go on to lead successful lives. However, many children experience less than optimal outcomes following involvement with the system and are unable to overcome the difficulty of becoming a young adult without the support of a stable family (e.g., Courtney et al., 2001; Dworsky & Courtney, 2010). Unless children are eligible for extended care, many youth age out of the child welfare system by the age of 18 and do not have families to turn to for support and help. In Canada, young adults are living at home longer now than in previous generations. In fact, around 40% of adults between 20 and 29 years of age remain at home with their parents. Youth who age out of the child welfare system do not have this luxury. They may receive some financial and other supports until the age of 21 years, but this is when support services end in most jurisdictions in Canada. In Ontario, youth in post-secondary education and training may receive some financial support until the age of 25 years. Despite their high rates of physical, medical, behavioural, and emotional needs, these youth are often forced to make the transition to adulthood and find shelter and employment with little to no

support (Bounajm et al., 2014). Thus, it comes as little surprise that many former foster children experience many challenges transitioning to adulthood.

In Ontario, less than 45% of former foster children graduate from high school, while, in the general population, about 80% of individuals graduate (OACAS, 2012). Barber, Delfabbro, and Cooper (2000, as cited in Barber, Delfabbro, & Cooper, 2001) also found that involvement in the foster care system is associated with negative outcomes. In particular, children who were unable to find stable placements after 4 months in the foster care system had worse outcomes in young adulthood, such as unemployment, poor academic attainment, and poor social adjustment. This emphasizes the importance of stability in the lives of children and highlights the negative impact of frequent placement changes.

Courtney et al. (2001) examined the transition from foster care to independence for adolescents and young adults. The foster children were examined at two different time points: before they exited foster care in 1995, at the ages of 17 or 18 years, and in early 1998, 12 to 18 months after exiting foster care. Before exiting foster care, the average number of delinquent acts was 4.5 petty crimes. After foster care, 18% had been arrested at least once, and 27% of the males and 10% of the females had been incarcerated at least once. In addition, 37% of the youth had experienced physical or sexual assault since they had exited foster care. In regard to shelter, 14% of the males and 10% of the females were homeless at some point after foster care. Slightly less than half completed high school and 61% were employed at the time of the second interview. Lastly, 32% had received some form of public assistance (Courtney et al., 2001). Teenage pregnancy rates were also found to be higher in a sample of young women aging out of foster care than in the general population (Dworsky & Courtney, 2010).

Researchers have examined the longer-term outcomes of former foster children as well.

Hook and Courtney (2011) examined employment rates for 17- to 24-year-old young adults transitioning out of foster care and found that fewer than one third of their sample was employed in full-time positions. In addition, of those who were employed, 22% were classified as poor based on their income. When all 23- to 24-year-old young adults were examined, 56% were classified as poor. In addition, Dworsky, Napolitano, and Courtney (2013) found that between 31% and 46% of their sample of youth aging out of foster care was homeless at least once by the age of 26 years. Together, these results highlight the difficulty youth experience transitioning from foster care to adulthood. Those who transition out of care struggle with limited support from their natural families and foster families. This lack of support also increases their vulnerability to additional adverse events upon exiting the child welfare system.

It has been consistently found that young adults with histories of foster care have less education and higher rates of mental health problems than young adults in the general population. As a result, these individuals earn less income, pay less in taxes, and are more likely to use social assistance services. This suggests that the economic impact on each foster child, as well as at a societal level, is quite significant. To examine this further, Bounajm et al. (2014) estimated the outcomes of a group of 2,291 19-year-old children in care. The earnings they made, taxes they paid, and government assistance they received were estimated over their lifespan. The authors did this by creating a profile for a typical cohort of youth aging out of care using information available on the youth (e.g., mental health difficulties, education history). The profile was then used to estimate the economic outcomes of the cohort. The authors found that a youth aging out of the child welfare system would earn about $326,000 less over his or her lifetime than an average Canadian. When the cohort of 2,291 youth aging out of the system was considered, the economic gap between the cohort and the average Canadian cohort would be

$747 million. Over a 10-year period, the difference would be $7.5 billion, as each new cohort ages out of the system.

The authors concluded that investing in the education and mental health of a single cohort of young adults aging out of care would increase the overall income of the cohort by $747 million over the course of their lifetime. For the Canadian government, this would result in an increase in $289 million over the lifespan of one cohort. Per person, the average amount of savings that would accumulate over the lifespan would be more than $126,000. Thus, provincial and federal governments could improve foster children's education and mental health problems with investments of up to $126,000 per person and still receive a positive return, with the additional benefits of long-term gains in productivity and labour availability. To facilitate more positive outcomes for former foster children, the authors recommended government-led implementation projects focused on improving high school graduation rates and developing skills training and employment opportunities for youth aging out of care (Bounajm et al., 2014). Remaining in care past the age of 18 years has been found to reduce the likelihood of early pregnancy and unemployment, suggesting that extending care beyond the age of 18 is another approach that would be advantageous for children in care and the broader society (e.g., Dworsky & Courtney, 2010; Hook & Courtney, 2011).

Research has also examined the long-term impact of child maltreatment on the general population and not just on those involved with the system. Similar to research examining the effects of maltreatment on children involved with the child welfare system, exposure to maltreatment in childhood can also lead to numerous negative outcomes for the general population, including social, emotional, behavioural, and cognitive problems (e.g., lower intelligence and academic achievement), as well as increased risk of psychopathology (e.g.,

substance abuse, depression and suicidality, and anxiety) throughout the lifespan (e.g., Boivin &

Hertzman, 2012; Heffernan et al. 2000; Kendall-Tackett, Williams, & Finkelhor, 1993; Kendler

et al., 2000; Perez & Widom, 1994; Putnam, 2003; Sanchez, Ladd, & Plotsky, 2001; Scott,

McLaughlin, Smith, & Ellis, 2012; Strathearn et al., 2001; Widom, DuMont, & Czaja, 2007).

Childhood maltreatment has also been consistently associated with poor physical health,

academic functioning, and economic productivity (Gilbert, Widom et al., 2009), as well as

increased externalizing behaviour problems and antisocial behaviour in adulthood (De Bellis,

2005; Luntz & Widom, 1994).

Anda and colleagues (2006) examined 17,337 adults who visited the Health Appraisal

Centre in San Diego, California. Eight types of adverse childhood experiences were assessed,

including abuse, witnessing intimate partner violence, and serious household dysfunction. Each

individual was categorized based on the number of adverse childhood events he/she had

experienced. Sixty-four percent of respondents had experienced at least one adverse childhood

experience. The authors found that the risk of emotional problems (anxious or depressed affect),

physical problems (sleep disturbance, obesity), substance abuse, memory concerns, sexual

problems (early intercourse, promiscuity, and sexual dissatisfaction), and aggression problems

increased, in a graded fashion, as the number of adverse childhood events experienced by an

individual increased. This suggests a cumulative effect of childhood maltreatment, i.e., the more

adverse events a child experiences, the more severe the problems are likely to be throughout that

individual's life. Research has also identified that a child's degree of impairment following

maltreatment depends on the extent and duration of maltreatment, the child's degree of

impairment at birth, the age of the child at the time of maltreatment, and the stability and

resources of future placements (De Bellis, 2005; Shonkoff & Phillips, 2000, as cited in Grayson

et al., 2006). The extant literature on maltreatment, both in child welfare and general populations, has consistently demonstrated the adverse effects of maltreatment, especially chronic maltreatment, on psychosocial development and functioning throughout the lifespan.

Conclusion

The child welfare system is an organization set in place to create safe and nurturing living arrangements for children, help children return to their family of origin, if possible, and protect children from maltreatment. Unfortunately, thousands of children across North America experience maltreatment each year. Child maltreatment can have detrimental effects on the developing brain and has been associated with significantly higher rates of developmental, academic, emotional, social, and behavioural problems than the general population. Long-term outcomes for this population are less advantageous than those of the general population as well (e.g., Boivin & Hertzman, 2012). Many previous foster youth fail to complete high school and have minimal social support, which makes it challenging to find employment and attain basic needs (e.g., Courtney et al., 2001). Children in the child welfare system experience many hurdles throughout their lives, including those related to their individual experiences (e.g., mental health problems), family environment (e.g., abuse), and broader community experience (e.g., foster care, limited support, unemployment). This highlights the vulnerability of this population, as well as the importance of identifying and providing support for areas of difficulty as early as possible to reduce the potential long-term negative outcomes that many of these individuals experience (Boivin & Hertzman, 2012).

In recent decades, research examining the child welfare system has increased, resulting in a more comprehensive understanding of the challenges inherent within this system. That said, much of the extant literature examining the child welfare system relates to children in care

(Burns et al., 2004; Commission to Promote Sustainable Child Welfare, 2010b; Ringeisen, Casanueva, Urato, & Cross, 2008). Although this is understandable, given that these children are at the highest level of risk and they are the most costly group of children within the system, it does not change the fact that the child welfare system is a system that professes to provide a continuum of service and it would benefit from being studied as a system. The child welfare system provides a wealth of services to children and families that cannot be captured or understood by examining children in care in isolation. In fact, focusing only on children in care excludes 90% of children and families involved with the system (Commission to Promote Sustainable Child Welfare, 2010b). Thus, additional research that encompasses a systemic and comprehensive perspective of the system is important.

The current dissertation contributes to the existing literature by addressing this area of need and providing a systemic examination of the child welfare system through two separate studies (which are described in Chapters 2 and 3). Together, these studies add to the existing literature by comprehensively examining both the 90% of children who are in contact with the child welfare system but largely remain out of care and the 10% of children who are in care, as well as foster caregivers; thus, providing a broad examination of the Canadian child welfare system that values the system's desire to provide a continuum of service for children and families. More specifically, the first study contributes to the literature by providing a thorough, baseline description of children involved with the child welfare system who remain in their family home (in-home children). It then comprehensively compares these children to children in out-of-home care on measures of emotional and behavioural functioning, prosocial skills, education, health, and internal and external resources. Furthermore, it examines predictors of case status (open vs. closed) for in-home children 6-months following an initial assessment. The

overarching purpose of this initial study is to enhance the pre-existing literature and our understanding of in-home children.

The second study assesses the impact of foster child characteristics (such as needs and maltreatment histories), as well as foster parent and agency factors, on foster parents' perceptions about various aspects of fostering (i.e., agency workers, the fostering system, training, and foster children and their placements). The purpose of this study is to identify ways to improve the fostering experience and enhance foster parent retention, which is an area of concern within the system. In addition, this study is designed to address the extant literatures' inconsistent results on the role of foster child factors on the fostering experience (e.g., Denby et al., 1999; Whenan et al., 2009). The final chapter is a general discussion, describing and consolidating the results of these two studies and identifying the theoretical, clinical, and policy implications of these findings for the child welfare system.

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Chapter 2

Children in the Child Welfare System who Remain in their Natural Home: Who They Are and

How They Compare to Children in Out-of-Home Care

Abstract

Although 90% children in the child welfare system remain in their family home (in-home children), most research on the child welfare system has focused on the 10% of children who are in out-of-home care. This exploratory study begins to address this discrepancy through experiments that (1) provide detailed information on the characteristics of in-home children, (2) compare in-home children to out-of-home children, (3) examine a wide age range and array of outcomes, and (4) examine predictors of case status in in-home children. The first portion of this study provided baseline data to characterize 208 in-home children and then compared these children to 194 children in out-of-home care. Comparisons are made on measures of health, education, behavioural and emotional development, and internal and external assets (e.g., creative activities, self-regulation), as measured by the *Assessment and Action Record, Second Canadian Edition, 2010 version* (AAR-C2-2010; Flynn, Miller, Desjardins, Ghazal, & Legault, 2010). Both in-home and out-of-home children had high mental health and educational needs. However, in-home children had fewer internal assets (e.g., responsibility, self-esteem) and external assets (e.g., caregiver support, youth programs) than out-of-home children. Children who remain in their family homes may have decreased access to personal and community resources even though they have similar needs to children in out-of-home care. This suggests that children who remain in their family homes may benefit from additional support and resources. The second portion of this study examined the case status (i.e., open vs. closed) of in-home children 6-months following the completion of the AAR-C2-2010. No significant differences were found between children whose cases remained open and children whose cases were closed at the 6-month follow-up. More research is needed to better understand and expand

upon these findings (e.g., examine family and agency factors) so that the child welfare system can best meet the needs of in-home children.

     Keywords: in-home care, out-of-home care, mental health, academic achievement, developmental assets

Children in the Child Welfare System who Remain in their Natural Home: Who They are and

How They Compare to Children in Out-of-Home Care

The child welfare system is an organization set in place to protect children from

maltreatment and unsafe family environments, as well as to promote healthy development for all

children involved. *Child maltreatment* is defined as a significant commission or omission in care

by a parent/caregiver that results in the threat of or actual harm (Gilbert, Widom et al., 2009).

There are four types of child maltreatment: physical, sexual, and emotional abuse and neglect

(Government of Ontario, 1990). Each year, close to a million children and families become

involved with the child welfare system in North America as a result of maltreatment and unsafe

family environments. In addition, it has been well documented that the number of children and

families being served by the child welfare system each year continues to increase [Carney, 1997

as cited in Baum, Crase, & Crase, 2001; Hudson & Levesseur, 2002; Ontario Association of

Children's Aid Societies (OACAS), 2013; United States Government Accountability Office

(USGAO), 1995]. For example, in Ontario, the number of referrals requiring investigation

increased from 78,516 in 2009 to 84,219 in 2013. In addition, the number of families receiving

services rose from 43,419 in 2009 to 47,925 in 2013. However, this increase in numbers of

children being served by the system may not be reflective of increased instances of child

maltreatment in society; rather, it may stem from system changes in what constitutes child

maltreatment, system resources, and the focus of intervention (Gilbert, 2012; Gilbert et al., 2012;

Trocmé et al., 2011). This is supported by the fact that the number of children being served by

the Ontario child welfare system slightly decreased and plateaued in 2013 and 2014, which is a

time span during which no momentous system changes were made (OACAS, 2014).

In Ontario, the number of children in care has been decreasing slightly each year; despite the fact that the total number of children and families served by the child welfare system has either increased slightly each year or, more recently, plateaued (OACAS, 2013, 2014). More specifically, the number of children under the care of the child welfare system has declined 8% since 2009 (26,795 in 2009 to 24,841 in 2013; OACAS, 2013). OACAS attributes this trend to the recent focus on helping families keep children in their care, rather than removing children from the home. When these children do need to be removed from the home, they typically stay with a relative, friend, or temporary foster home for short periods of time (OACAS, 2013, 2014).

Although the focus on keeping children in their family homes is widespread, most of the extant literature examines children in out-of-home care. There has been less of a focus on children in the child welfare system who remain in their family homes (e.g., Burns et al., 2004; Commission to Promote Sustainable Child Welfare, 2010; Ringeisen, Casanueva, Urato, & Cross, 2008). This study addresses this gap in the literature by examining children who remain in their family homes. More specifically, this study provides baseline characteristics on in-home children and then compares these children to those in out-of-home care. It also examines the status of involvement with the child welfare system for in-home children 6-months following an initial assessment.

The purpose of the study is to better understand in-home children by obtaining a comprehensive assessment of their functioning and assessing how this compares to children in out-of-home care. Assessing whether out-of-home placements are helpful or harmful to children in the child welfare system was beyond the scope of this study. However, it does provide increased information about children who are placed in out-of-home care and how this information compares and contrasts with children who remain in their family homes. This could

be helpful in developing and providing more targeted assessment and intervention procedures for these two populations. An additional purpose of the study is to provide information on predictors of discontinued involvement with the child welfare system for children who remain in their natural family homes. Increased knowledge about predictors of case closure can aid in (1) identifying potential protective factors for discontinued involvement with the child welfare system, and (2) developing targeted intervention plans to prevent further penetration into the system.

Ontario Child Welfare System

In Canada, legislation, regulation, and funding of the child welfare system are provincial responsibilities. Therefore, Ontario's child welfare system, which is the focus of this study, is distinct from those of other provinces and territories in Canada. At the time of this study, there were 46 children's aid societies in Ontario; six of these were Aboriginal organizations (OACAS, 2013). These agencies served about 120,000 families and over 310,000 children each year. About 90% of these children resided at home with their families, and over 20,000 were in care settings, such as kinship or foster homes, group homes, or residential treatment facilities. In Ontario, there were about 8,000 registered foster families (Commission to Promote Sustainable Child Welfare, 2010).

The structure of the child welfare system has shifted considerably in Ontario over the past 15 years. Until the 1990s, child welfare in the province followed a "least intrusive" intervention policy. However, in the late 1990s, child welfare shifted to a more intrusive approach focused on child protection. As a result of this shift, the number of children placed in out-of-home care increased significantly between 1998 and 2004. This increased the workloads of staff and also the cost associated with child welfare in Ontario. In fact, child welfare spending grew at a rate

three times faster than that of all other Ontario government programs (Commission to Promote Sustainable Child Welfare, 2010).

In 2006, the government of Ontario introduced the Transformation Agenda, which shifted the focus of child welfare to a more balanced perspective between child protection and family preservation. The goal of this agenda was to have fewer children in care through an increased focus on family solutions, such as kinship care, and increased permanency for children. These approaches halted the growth of children placed in care and child welfare spending returned to a rate more consistent with other government programs (Commission to Promote Sustainable Child Welfare, 2010; OACAS, 2013).

Although the Transformation Agenda improved the financial sustainability of the child welfare system at the time, the global economic crisis that began in 2008 and the funding constraints placed on the child welfare system resulted in additional financial stress for many agencies and difficulties in providing adequate care. This led the Ontario Government to establish the Commission to Promote Sustainable Child Welfare in 2009. Over a 3-year period, the Commission sought to develop and implement changes that would promote a sustainable child welfare system for the province's children and families (Commission to Promote Sustainable Child Welfare, 2010). In the initial report, the child welfare agencies in Ontario were commended for many strengths, including strong community connections and worker commitment. Several challenges and areas for improvement were also identified. First, services available to children and families and the delivery of these services differed between child welfare agencies. In addition, accountability measures and the funding approach had unclear guidelines and focused on compliance rather than the outcomes of children and the performance of agencies (Commission to Promote Sustainable Child Welfare, 2010). The Commission

developed a strategy in 2010 that aimed to address these areas by reconfiguring the organization

and service delivery of child welfare agencies across the province, changing the funding and

accountability approaches, strengthening and improving service delivery, and integrating various

services for children and families (Commission to Promote Sustainable Child Welfare, 2010).

Following the development of the strategy, the Commission focused on implementing the

changes outlined by working closely with the OACAS and the various children's aid societies

throughout the province until 2012. The final report from the Commission and the 2013 OACAS

report documented the progress made by the child welfare system to address the Commission's

recommendations, which included reconfiguration of services, agency amalgamations,

accountability and governance changes, and agreed-upon performance indicators, to name a few

(Commission to Promote Sustainable Child Welfare, 2010; Commission to Promote Sustainable

Child Welfare, 2012; OACAS, 2013). The OACAS also reported that the changes made to the

system resulted in visible success. The number of children who came into care had declined in

each of the previous 5 years, despite an overall increase in ongoing protection services. In

addition, although the funding provided by the government had decreased, improved fiscal

management and measures taken to decrease expenditures had resulted in reduced spending. The

reports also indicated that progress was not yet complete. Increased assistance from the

government was needed to further implement the recommendations outlined in the

Commission's final report and further improve the services available to children and families

involved with the child welfare system in Ontario (OACAS, 2013). Therefore, the system would

continue to change as it strove to meet the remaining recommendations. In addition, given the

ongoing goal of OACAS to strive towards improved service delivery and a better child welfare

system, change will also be a consistent part of the Ontario child welfare system's future (Commission to Promote Sustainable Child Welfare, 2012; OACAS, 2013).

Literature Review

The Functioning of Children in the Child Welfare System

Children within the child welfare system are often victims of unstable and unsafe family situations, including maltreatment (Burge, 2007; Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001; Pecora, Whittaker, Maluccio, & Barth, 2009). These difficult childhood experiences have been associated with developmental and mental health problems, as well as severe behavioural, social, and educational difficulties (Bruskas, 2008; Leslie, Gordon, Lambros et al., 2005; Leslie, Gordon, Meneken et al., 2005; Minty, 1999). In fact, children in the child welfare system have been found to have much higher levels of mental health problems (ranging from 10 to 80%, with a higher prevalence in older children) than children in the general population (about 10 to 20%; e.g., Burge, 2007; Canadian Mental Health Association (CMHA), 2010; Heflinger, Simpkins, & Combs-Orme, 2000; Leslie, Gordon, Meneken et al., 2005; Milburn, Lynch, & Jackson, 2008; Zima et al., 2000). In Ontario, over 50% of children who were in care were found to be at high-risk for a likely psychiatric disorder, according to the Strength and Difficulties Questionnaire (SDQ), which assesses emotional symptoms, conduct problems, hyperactivity/inattention, and peer relational problems (Marquis & Flynn, 2008). In addition, it has been found that as the length of time in foster care and the number of placements increases, so do the mental health problems of foster children (Sullivan & van Zyl, 2007). Therefore, not only are maltreatment and age important factors related to the prevalence of mental illness, but the length of time in foster care and the number of placements are also important correlates of emotional and behavioural functioning.

Furthermore, research has found that children in the child welfare system continue to have difficulty well into adulthood (e.g., Barber, Delfabbro, & Cooper, 2001; Bounajm, Beckman, & Thériault, 2014; OACAS, 2012; Vinnerljung & Sallnas, 2008). Courtney et al. (2001) examined the transition from foster care to independence for adolescents and young adults. The participants were examined at two different time points: before they exited foster care, at 17 to 18 years of age, and 3 years later, which was 12 to 18 months after they had exited foster care. After exiting foster care, a large minority of the young adults had interactions with law enforcement, including being arrested and incarcerated; struggled with homelessness; did not complete high school; and were unemployed. Longer-term outcomes of former foster children have also been examined, and similar results were found. Young adults in their mid-to-late twenties, who had previous involvement with the child welfare system, had high rates of unemployment, poor educational attainment, and high rates of homelessness (e.g., Dworsky, Napolitano, & Courtney, 2013; Hook & Courtney, 2011; Vinnerljung, Oman, & Gunnerson, 2005). Vinnerljung and colleagues (2005), for example, compared the educational attainments of Swedish young adults (aged 20 to 27 years), who were former clients of the child welfare system, with young adults in the general population. They found that young adults who had previous child welfare involvement were four times more likely than the general population to have attained only basic education requirements, which is comparable to elementary school in Ontario. Together, these results highlight the difficulty youth experience transitioning from foster care to adulthood. They often have limited support from their natural and foster families, which increases their vulnerability to experiencing additional adverse events upon exiting the child welfare system.

Resilience. The majority of research examining children in the child welfare system has focused on their adverse outcomes; however, there are also studies that provide a more balanced perspective. These studies examine both the positive and negative characteristics of children in out-of-home care and identify areas of resilience (Flynn & Biro, 1998; Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004; Legault, Anawati, & Flynn, 2006). *Resilience* refers to positive adjustment despite experiencing severe adversity (Luthar, Cicchetti, & Becker, 2000; Masten, 2001).

One such study examined 5- to 15-year-old youth in care in Ontario and found that they had similar levels of health, self-esteem, current happiness, hope for the future, prosocial behaviour, and positive friendships as the general Canadian population. Less positive functioning was found in educational performance and emotional distress when compared to the general population (Flynn et al., 2004). Thus, children in care do not experience difficulty in all areas of functioning. Furthermore, Legault et al. (2006) examined predictors of positive functioning in 220 14- to 17-year-old adolescents in care in Ontario, Canada. They found that a positive caregiver-adolescent relationship, a higher number of close friendships, and higher self-esteem predicted lower levels of anxiety problems. Having a smaller number of primary caregivers, a positive caregiver-adolescent relationship, a higher number of close friendships, higher self-esteem, use of adaptive coping strategies, and less frequent use of avoidant coping strategies were associated with lower levels of physically aggressive behaviour. These findings highlight the importance of high self-esteem, positive adult and peer support networks, and adaptive coping in fostering resilience. Similarly, Guibord, Bell, Romano, and Rouillard (2011) examined 122 12- to 15-year-old children in care and found that increased quality of the youth-caregiver relationship, as well as participation in extracurricular activities, lowered the risk for both

depression and substance use. Together, these studies demonstrate the importance of support

networks, both adult and peer, on resilience among children in care. In addition, these findings

indicate that fostering resilience and healthy development requires a focus on individual, peer,

and caregiver factors.

Bronfenbrenner (1979) viewed the process of human development as dependent on the

relationship between the individual and various systems within his/her environment, such as the

family, school, community, and broader cultural systems and the associations between them.

This theory provides a fitting explanation for the impact of child maltreatment and involvement

in the child welfare system on child development and later functioning. Child development is not

only affected by microsystem and mesosystem variables, such as family and school

environments and the relationships between these environments, but also broader exosystem

variables, such as government and society-level services like the child welfare system. This also

highlights the importance of intervening at both an individual and environmental level to foster

healthy development.

Children Who Remain in the Family Home

Most research examining children involved in the child welfare system focuses on

children in out-of-home care, despite the fact that the majority of children involved with the child

welfare system remain in their natural family homes (Burns et al., 2004; Commission to Promote

Sustainable Child Welfare, 2010; Ringeisen et al., 2008). In the National Survey of Child and

Adolescent Well-being (NSCAW[1]) study, 84% of the sample lived with their natural caregivers.

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[1] The NSCAW is a longitudinal, American study with a representative, random sample of 5,504
children (15 years of age and younger) whose families were investigated for allegations of child
maltreatment between October 1999 and December 2000. Stratified random sampling was used
to select 92 counties and create a representative sample of the national child welfare population.
Caregiver and case worker interviews and child assessments were completed at baseline (i.e.,

In addition, 74% of the sample had never been placed outside the family home (Burns et al.,

2004). The lack of research with children who remain in their natural family homes is likely

related to the fact that child welfare involvement varies greatly, with some children and families

receiving services for very short periods of time, making assessment for any length of time

difficult. In addition, some of these children end up being removed from the home and placed in

kinship or foster care. Thus, obtaining and maintaining a sufficient sample size for research

purposes is challenging. Children in out-of-home care are considered at higher risk as well and,

thus, attract more research attention in regard to preventing negative outcomes and ensuring

high-quality care.

During the 1980s, 1990s, and early 2000s, the focus of the child welfare system across

Canada and the United States shifted to a more family-focused approach to service. This was the

result of a re-examination of child welfare approaches due to increases in the rates of child

maltreatment and the number of children in care. The objective was to have fewer children in

care by finding solutions within the family, which included kinship care, and to find permanent

family-based placements more quickly for children who did come into state care (Chaffin,

Bonner, & Hill, 2001; OACAS, 2013). This spurred research interest on the subset of children

involved with the child welfare system that had been largely ignored until this time: children

who remain in their natural family home.

In the United States, the government funded family preservation and family support

services to address the increased number of children in care. These services are generally short-

term (averaging less than 3 months) alternatives to out-of-home placement. Children can remain

in their family homes while services are provided to the family (Chaffin et al., 2001; Fraser,

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maltreatment investigation) and then 12 months, 18 months, and 36 months after the maltreat-
ment investigation (Burns et al., 2004).

Nelson, & Rivard, 1997). The services emphasize early intervention with at-risk families, rather than waiting until a crisis occurs. Family support services are community-based preventative activities that are aimed at alleviating stress and improving parenting skills so that a more nurturing family environment can be developed (e.g., parenting groups, home visits, respite care). There is a large emphasis on linking families to resources and creating supportive social networks. Family preservation services target families in which abuse or neglect has already occurred but the services provided may appear very similar to general family support services found in the community (Chaffin et al., 2001). However, family preservation programs are generally distinguishable from typical family-based services by its combined case management and intensive therapy and supports (Schweitzer, Pecora, Nelson, Walters, & Blythe, 2015)

Early studies of family preservation approaches to care demonstrated its effectiveness in preventing out-of-home placement (Bath & Haapala, 1993; Berry, 1992). Berry (1992) examined the effect of intensive family preservation services on 367 families with at least one child at risk of out-of-home placement. Eighty-eight percent of families were still intact 1-year after having received services, which is comparable to other studies examining this type of service. However, not all families benefited equally. Berry (1992) found that families who received a higher proportion of service in the home were more likely to remain intact at follow-up. In addition, concrete services, such as teaching family care, respite care, medical care, help in securing food, and financial service, were more successful in achieving family preservation. Parental intellectual difficulties and neglect were associated with a higher likelihood of out-of-home placement. More studies have also found that intensive family preservation is not as effective with children who have been neglected. In fact, Bath and Haapala (1993) found that children from neglectful families were almost twice as likely to be placed in an out-of-home placement

than children from abusive families. Children who experienced both abuse and neglect were at the highest risk for placement. These findings suggested that family preservation programs were not effective for all families and situations, which spurred questions about the overall effectiveness of these approaches (Dore & Alexander, 1995).

More recently, research has found additional, unfavourable outcomes for family preservation and family support programs. It is argued that earlier studies examining family preservation services had numerous methodological shortcomings (Heneghan, Horwitz, & Leventhal, 1996; Rossi, 1992). In fact, Rossi (1992) argued that, due to the extent of methodological problems, including small sample sizes and the use of placement avoidance as a measure of success, the evaluations could not support or contradict whether family preservation was an effective strategy. However, even studies that did use placement avoidance as a measure of success did not consistently find positive outcomes. For example, a review of 10 studies examining family preservation found that family preservation did not prevent out-of-home placement for eight of these studies (Heneghan et al., 1996). Similarly, Chaffin et al. (2001) examined the efficacy of 74 family preservation and/or family support services that served 1601 participants over a 3-year period and found little support for these initiatives. Families who completed the program did not have lower rates of future maltreatment or children in out-of-home placement than families who dropped out or received only a one-time service. In contrast, a recent review examined three comparison-group studies and found that family preservation reduced the likelihood that a child was placed in out-of-home care, but primarily only for high-risk samples (Schweitzer et al., 2015). These findings indicate that family preservation programs may not be as effective as research initially indicated, or are only effective for targeted child welfare populations. Thus, as a best-case scenario, this approach may be effective for a select

subset of families (Fraser et al., 1997); family preservation programs should not be used with all families. In fact, it is likely that no single strategy can address all the needs of children who have been maltreated. Children may not always be best cared for by their parents, and applying family preservation services universally may expose some children to increased risk.

A review of the literature examined various types of family-centered interventions in the child welfare system and found that there were mixed findings for all types of interventions (i.e., family preservation, cognitive behavioural, home visits, and group therapy (O'Reilly, Wilkes, Luck, & Jackson, 2010). However, family preservation and cognitive behavioural techniques had more consistent positive findings than traditional approaches, such as home visits and group therapy. The authors concluded that family preservation and cognitive behavioural interventions were more effective in the prevention of child maltreatment among high-risk families in the child welfare system. The most successful family-centered interventions, however, were those that provided a combination of services simultaneously, rather than a single intervention (O'Reilly et al., 2010). This highlights the importance of individualized services for families at risk for child maltreatment, rather than a one-size-fits-all approach. Heneghan et al. (1996) recommended a case-by-case, individualized approach to determine whether the level of risk of the child, family, and social factors present would be better served through family or out-of-home care. For example, families with longstanding problems related to social, economic, and family problems might need more than a short-term intensive intervention like family preservation to produce positive effects (Lindsey, Martin, & Doh, 2002). Further research examining how individual, family, and societal factors impact the effectiveness of family preservation services is needed before any definitive conclusions can be made regarding its value in the child welfare system (Heneghan et al., 1996).

The Impact of Out-of-Home Care

Recently, with the focus on family-based care and reducing the number of children placed in out-of-home care, there has been an increased interest in examining the impact of placing a child in out-of-home care and whether it increases the developmental risk of children who have experienced maltreatment. The difficulty in pursuing this line of research is overcoming the issue of selection bias, given that random assignment to out-of-home placement is unethical. Children placed in out-of-home care are likely to differ from children who remain in their homes on a number of observable and also unobservable factors, including sociodemographic factors, maltreatment severity, and parental factors. There have been several ways in which researchers have attempted to address the issue of selection bias (e.g., pre-placement ecological adversity and maltreatment experiences). The most commonly used strategy is to control for observable confounding factors while comparing children who have experienced out-of-home placement with children who have not. However, these studies fail to take into consideration the impact of baseline differences in children's scores on the outcome (Berger, Bruch, Johnson, James, & Rubin, 2009).

Propensity score matching methods, which aim to create groups that are statistically equivalent on observable background characteristics and differ only in terms of whether children have experienced out-of-home placement, have also been used. Associations between out-of-home placement and child outcomes are then estimated for the matched groups. Matching methods are preferable to simply controlling for confounding covariates because they ensure appropriate overlap in the covariate distributions of the two groups and do not under or over exaggerate them. However, this approach, as well as comparison-group studies, only accounts for observable selection factors. Estimates continue to be biased due to unobserved factors. A

study by Berzin (2008) illustrates the strengths and limitations of propensity score matching. She

compared 136 young adults who had at some point during childhood experienced foster care

placement with those of matched and unmatched samples of youth who had not. When compared

to unmatched adults, adults who had experienced foster care had lower levels of educational

attainment and higher levels of social assistance use, teen parenting, and criminal justice

involvement. However, when adults who had been in out-of-home placements were matched to

those who had not, using one-to-one nearest neighbour propensity score matching, no differences

were identified. This suggests that the differences found using the unmatched sample are due to

differences in the characteristics between the two groups and not out-of-home placement. The

author notes though that many factors were not included in her matching model, including

parental substance use, parental criminal activity, and the nature of the maltreatment the children

experienced (Berzin, 2008). Thus, these findings are biased as a result of the omitted and

unobserved factors.

Font and Maguire-Jack (2013) also used propensity score matching to examine the

impact of out-of-home care on academic engagement and performance. These authors examined

children who were part of NSCAW over the first two waves of data collection (N = 5,872). Only

children over the age of 6 years were included, and children who were not in out-of-home care

were only eligible if the initial investigation for maltreatment was substantiated. Children who

had been exposed to maltreatment but had never been placed in out-of-home care were compared

to children in out-of-home placements. The two samples were matched using propensity score

matching to create a sample that differed on placement status but was similar on demographic,

geographic, case characteristics (e.g., risk factors, service involvement), and school engagement

at baseline. Analyses were completed on both the matched and unmatched samples. There were

no differences found between children who had never been in care and children who were in care during both waves of data collection, nor were there any differences between children who had never been in care and children who were reunified with their family at the second wave. However, for both the matched and unmatched samples, children who had been removed from their home at the second wave had higher levels of emotional and cognitive engagement in school when compared to children who had never been removed from their home. Therefore, a positive influence of recent foster care placement was found on school engagement. The authors suggested that this may be due to movement to better schools and increased support received from child welfare workers and other services during the initial year following a placement, which highlights the importance of continuity of care. No relationships between placement status and behavioural engagement and school performance were found (Font & Maguire-Jack, 2013). These results suggest possible positive effects of placement on school factors, although these findings are limited by unexamined aspects that may influence placement. Nonetheless, this study did include a longitudinal component, which allowed for the inclusion of baseline levels of functioning, unlike the previous study.

        In regard to the impact of out-of-home care on school functioning, O'Higgins, Sebba, and Luke (2015) conducted a review of studies comparing out-of-home samples to the general population. In contrast to Font and Maguire-Jack (2013), they found little support that being in out-of-home care was damaging or helpful, on average, to a child's educational functioning. Children who were in care did have more educational problems than the general population, but various individual, family, and environmental risk factors mediated this correlational relationship (O'Higgins et al., 2015). However, it is important to note that this study did not compare two vulnerable populations: an out-of-home child welfare sample and an in-home child welfare

sample. Rather it compared an out-of-home sample with the general child population, which may account for the difference in findings.

The optimal method for decreasing selection bias is to estimate changes in wellbeing associated with out-of-home placement by using longitudinal data. Longitudinal studies reduce bias by accounting for baseline levels of functioning when examining functioning over time. This approach adjusts for pre-existing differences between children who are removed from their home and those who are not. Berger et al. (2009) used data from NSCAW and five analytic methods of adjusting for selection factors to examine the impact of out-of-home placement on child wellbeing. They examined 2,453 4- to 17-year-old children using both matched and unmatched treatment and comparison samples. When the unmatched samples were examined, children who were placed were more likely to have a U.S.-born caregiver, older caregivers with lower levels of educational attainment, lower family income, and higher family risk scores. They were less likely to have had an initial investigation due to sexual abuse and to have been removed from the home prior to their baseline assessment but more likely to have had their initial investigation substantiated. Children who had been placed were also more likely to have had internalizing and externalizing problems both at baseline and follow-up time periods. The authors used five different analytic methods for matching. Taking into account the results of the various matching methods, it was found that out-of-home placement did not increase the cognitive or behavioural difficulties of children involved with the child welfare system (Berger et al., 2009).

Another similar study found contrasting results; foster care in Illinois was associated with increased criminal activity later in life and short-term emergency healthcare use. Doyle (2013) used *instrumental-variables estimation*, a naturally occurring randomization technique beneficial

for situations where actual randomization is not possible (e.g., placement decisions made within

the child welfare system). The approximation of randomization was the rotational assignment of

cases to child protection investigators. All 5- to 15-year-old children investigated for abuse or

neglect between July 1990 and December 2000 were eligible for the analysis, which resulted in a

sample of 15,681 children. The author found that placing children in foster care increased the

likelihood that the children would engage in criminal activity during adolescence and require

emergency healthcare. He concluded that in regard to juvenile justice involvement and

healthcare, foster care did not appear to play a protective role (Doyle, 2013).

Warburton, Warburton, Sweetman, and Hertzman (2014) used a similar instrumental-

variables, quasi-experimental approach to Doyle (2013) with a Canadian sample (in British

Columbia) to separate the impact of placement in care and factors that lead to out-of-home

placement. In addition to using the rotational assignment of cases to child-protection workers, a

one-time purposeful increase and then, a few years later, a decrease in child apprehension rates

was also examined. In British Columbia, when a child's family is investigated for allegations of

abuse and/or neglect, the fact that a file has been opened for the child and whether the child was

placed in care is linked to records for the same child from other ministries in the province, such

as employment, education, public safety. This study focused only on adolescent boys between

the ages of 16 and 18 years. Adolescent boys were only included if they had a baseline record in

the database after the age of 16 and before the age of 18. Those who were included were not in

care when the baseline record was made. In the database, there were 20,727 adolescent boys who

met these criteria and 2,260 of these adolescents were placed in care. The authors found that high

school graduation became less likely and/or delayed as a result of out-of-home placement. In

addition, income assistance use increased dramatically, and conviction rates increased for

marginal youth taken into care as a result of increasing the child apprehension rate. Thus, the findings of this study are consistent with Doyle (2013), suggesting that placement decisions of the child welfare system are important and can lead to less than positive outcomes for children placed in out-of-home care.

Understanding the causal effects of placing children in out-of-home care is an area of research that is still in its infancy. Despite attempts to use robust study designs and advanced statistical procedures to account for selection bias, there continue to be conflicting findings. However, recent attempts by Doyle (2013) and Warburton et al. (2014) provide some evidence that out-of-home placement may cause negative outcomes above and beyond any pre-existing factors of the children who are placed. Additional research building on the current findings is needed. It would be advantageous for these studies to use similar robust statistical and longitudinal designs with different samples so that the effects of out-of-home placement can be consistently and clearly identified.

Differences between Children in In-Home and Out-of-Home Care

Aside from studies examining family preservation services and the impact of out-of-home care, the majority of studies examining children who reside with their natural caregivers and are involved with the child welfare system compare these children to children in out-of-home care (Farmer et al., 2001; Farmer, Mustillo, Burns, & Holden, 2008; Leslie, Gordon, Meneken et al., 2005; Mennen, Brensilver, & Trickett, 2010), and many examine the NSCAW sample (Burns et al., 2004; McCue Horwitz, Hurlburt, Cohen, Zhang, & Landsverk, 2011; Raghavan, Inoue, Ettner, Hamilton, & Landsverk, 2010; Ringeisen et al., 2008). Studies examining the NSCAW sample have found that children involved with the child welfare system who remain with their natural caregivers are less likely to receive mental health services (Burns

et al., 2004; Raghavan et al., 2010) and have less severe health problems (Ringeisen et al., 2008) than children in out-of-home care. For example, one study found that one third of the total NSCAW sample had chronic health conditions or special needs (i.e., learning problems or developmental disabilities), and the risk for special health care needs increased with a history of out-of-home placement. Children living with their natural caregivers or relatives were less likely to have special health care needs (Ringeisen et al., 2008). In addition, Burns et al. (2004) found that children in out-of-home care were significantly more likely to receive mental health services than children who remained in their natural homes.

Raghavan et al. (2010) were interested in examining whether the mental health care received by children in the child welfare system was consistent with national standards. They found that about half of all children received services consistent with at least one national standard, and less than one tenth received care consistent with all the standards. Children in out-of-home care were significantly more likely to receive care consistent with national standards. Together, these findings indicate that children involved with the child welfare system, particularly those who remain in family homes, may be at heightened risk for not receiving adequate mental health care.

McCue Horwitz et al. (2011) exclusively examined children in the NSCAW sample who initially remained in their homes after an investigation of abuse or neglect (n = 3,593), which represented 82% of the total sample. At the final follow-up time period, just over 9% of the children had been placed in out-of-home care. They found that family and maltreatment factors were more predictive of placement at follow-up than child factors. More specifically, lower family income, intimate partner violence, a higher number of family risk factors (e.g., parental criminal activity, mental health problems, substance use, intellectual disability, and physical

disability; the absence of a supportive caregiver; high family stress level, low level of social

support; etc.), prior maltreatment reports, and a higher likelihood of subsequent abuse, according

to the case worker, were associated with out-of-home placement. Case substantiation and the

delivery of child welfare services were not related to future placement. The authors suggested

that maltreatment, family, and case-related variables available at the time of investigation are

helpful as identifiers of higher risk families and that child welfare agencies should target these

risk factors to decrease the likelihood of out-of-home placement.

Although differences have consistently been found between the health care needs and

levels of family risk for children in out-of-home care and those who remain with their families,

studies examining the mental health problems of children involved with the child welfare system

have not consistently found significant differences in mental health problems and service needs

between the two groups (Farmer et al., 2001, 2008; Leslie, Gordon, Meneken et al., 2005;

Mennen et al., 2010). For example, Mennen and colleagues (2010) examined placement type and

maltreatment in relation to mental health problems within the child welfare system. A sample of

302 maltreated children and 151 non-maltreated children aged 9 to 12 years in Los Angeles was

assessed. The authors found that gender, ethnicity, and maltreatment type were not related to

placement type. However, placement was significantly related to child functioning in regard to

social competence, friendship competence, and delinquency by child report and internalizing,

externalizing, and level of impairment by parent report. These differences were only significant

for non-maltreated children. The functioning of maltreated children did not differ by placement

type but maltreated children did score higher than non-maltreated children on various measures

of mental health problems. Thus, it appears maltreated children have more severe mental health

problems than non-maltreated children and may have a higher need for mental health services,

regardless of their placement type. These findings also suggest that children's level of

functioning does not play a major role in placement decisions when maltreatment has occurred.

Farmer et al. (2001) further examined the association between the mental health needs of

children in the child welfare system and placement type. This study randomly sampled 9, 11, and

13-year-old children from all public schools in 11 participating counties. All children who had

parental consent and scored above a predetermined cutoff point on the externalizing items on the

Child Behaviour Checklist (CBCL) participated in the study (N = 1075). The child and his/her

caregiver were interviewed at baseline and annually thereafter. The caregivers were also

contacted every 3 months for information on service use. For this particular study, three

subgroups of children were examined: children who had been in foster care (n = 142), children

who had been in contact with child welfare services but had never been placed in care (n = 218),

and children living in poverty with no child welfare contact (n = 419). The rates of some types of

mental health problems were similar across all groups but children who had some involvement

with child welfare services, with or without foster care, were more likely to meet criteria for a

serious emotional disorder than children living in poverty who had not had contact with child

welfare services. Children involved with child welfare services, with or without foster care, were

also more likely to receive services for mental health, education, or health problems than

children in poverty who had no contact with child welfare services. There were no differences

found between children involved with the child welfare system who remained with their families

and foster children; the rates of mental health problems and services received were comparable

between these two groups of children.

Similarly, a retrospective study of 1,542 children, aged 3 months to 6 years, whose

families were investigated for alleged maltreatment from April 1998 to June 1999, examined the

physical, developmental, and mental health needs of these children and the relation of these needs to initial placement type (i.e., biological parents, kin, or nonrelative foster care). Leslie, Gordon, Meneken, and colleagues (2005) found few differences in physical, developmental, or mental health concerns by placement type, indicating that young children placed with natural caregivers have similar needs to young children placed in kinship care and out-of-home care.

In contrast, Farmer et al. (2008) found differences in mental health problems by placement type, which is consistent with Berger et al. (2009) when they used an unmatched sample of children in the child welfare system. Farmer et al. (2008) examined a sample of 5- to 18-year-old children living at home when they entered the child welfare system and followed them for a period of 2 years (N = 3066). Throughout this period, 32% of the children were placed in out-of-home care. They found that the children placed in out-of-home care were more likely to be older, be male, have increased internalizing and externalizing problems (according to the CBCL), and have fewer strengths [according to the Behavioural and Emotional Rating Scale (BERS), which assesses behavioural and emotional strengths]. However, these factors only significantly predicted placement when they were all assessed together. The authors indicated that it may be the cumulative effect of multiple risk factors rather than the effect of individual risk factors that increase the likelihood of out-of-home placement.

In summary, the research findings from studies comparing the functioning of children involved with the child welfare system who remain in the home to children in out-of-home care are inconclusive. Some studies have found increased problems for children in out-of-home care while most studies have found no significant differences between the two groups. In addition, previous research has focused mostly on examining internalizing and externalizing mental health problems and has provided little information on functioning in other areas. Studies that do

examine a variety of aspects of child functioning, such as social functioning and self-esteem, have found some differences in placement type, but only for young adolescents and those who have not experienced maltreatment (Farmer et al., 2001; 2008; Mennen et al., 2010). In contrast to the mixed findings for children related to placements within the child welfare system, research has consistently found that children involved with the child welfare system, regardless of placement status, experience more difficulties than children in the general population. This highlights the profound and lasting impact maltreatment and family difficulties have on a child, as well as their family and the broader society.

Bronfenbrenner's ecological systems theory (1979), which views the process of human development as dependent on the individual and various systems within the individual's environment, provides a theoretical explanation as to why maltreatment and family difficulties have such lasting effects. Additional research with a representative sample (i.e., children of all ages) is needed to clarify the individual, family, and community level needs and strengths of children in different placement situations within the child welfare system. Previous research has also mostly been based in the United States, limiting its applicability to other countries. Lastly, there is a large gap in the literature for the largest proportion of children involved in the child welfare system (i.e., children who remain in their natural homes).

Current Study

The current study adds to the existing literature by comprehensively assessing in-home children, aged 0 to 15 years old (which is a wider age range than previous studies), who are involved with the child welfare system in Ontario, Canada. More specifically, this study provides a thorough description of 208 in-home children and then compares them to 194 children in out-of-home care. These two groups of children are compared on measures of health, education (if

applicable), behavioural and emotional development, and internal assets (e.g., self-esteem,

honesty) and external assets (e.g., caregiver support, creative activities). Factors that significantly

differentiate in-home and out-of-home care are further assessed through a multivariate analysis

to determine the factors that are most highly associated with placement. Based on previous

research, it was predicted that the number of changes in caregivers, reason for admission to

services, and child health problems would be associated with placement, such that in-home

children would have a lower number of changes in caregivers, be less likely to be admitted to

services for abuse and neglect, and have less health problems. The extant literature is unclear on

the impact of placement on mental health difficulties and there is very little research examining

education and developmental assets so these analyses are exploratory. This study examines a

wider array of outcomes than most of the extant literature.

The second portion of the study focused only on the sample of 208 children who

remained in their natural family home. They were also assessed 6-months later to determine

whether they were still involved with the child welfare system. The second part of the study

compared children who continued to be involved with the child welfare system to those whose

cases were closed at the 6-month follow-up on measures of health, education (if applicable),

behavioural and emotional development, developmental assets, and family situation (i.e., single

vs. two-parent family). Risk and protective factors related to case closure were also assessed.

There are no known studies that examine predictors of case status (i.e., open vs. closed) for

children involved with the child welfare system who remain in their family homes. Therefore,

these analyses were exploratory.

The main purpose of this study was to provide in-depth information on the functioning of

children who remain in their family homes and have ongoing involvement with the child welfare

system in Ontario. Increased understanding of the characteristics of children who remain in their

family home, how they compare to children in out-of-home care, and factors associated with in-

home children's involvement with the child welfare system can aid in: (1) providing appropriate

care to in-home children, (2) improving assessment procedures used to determine whether a child

will be removed from their family home by identifying important factors that distinguish

children in home settings and children in out-of-home care, and (3) preventing children who

remain in the family home from being placed in care by targeting factors associated with case

closure and developing intervention plans to improve the functioning of children and their

families. The findings of this study may be used to support evidence-based practice and develop

individualized plans of service for children in the child welfare system. Outcomes may also be

used to inform policy decisions and funding allocations for core services for children in different

care settings.

Method

This study draws on two different sets of data generated through the collaboration of staff

at the OACAS, as well as researchers at Western University and the University of Ottawa. Two

separate samples of children involved with the child welfare system were examined: (1) children

who remain at home with their natural families and (2) children in out-of-home care. Ethics

approval was granted by the Office of Research Ethics and Integrity at the University of Ottawa

(please see Appendix A).

In Ontario, the placement of children involved with the child welfare system is

determined by a structured procedure that is followed by children's aid societies (CAS). Cases

are brought to the attention of the CAS through an initial response team made up of child service

workers. These child service workers take the calls made by the public regarding possible child

maltreatment. These first-response workers complete a screening process to determine whether there is a risk to the child(ren) in question. If the assessment concludes a "no risk" rating, the case is closed. If the assessment finds that the child is "at risk", then the case is kept open and assigned to an intake worker. The intake worker then conducts more in-depth interviews with the family to determine a level of risk and decides together, with his/her supervisor, whether the file will be kept open or closed based on the level of risk. If the file remains open, it is assigned to an ongoing worker who will work with the family and link them to appropriate ongoing services. If the child is deemed unsafe or at immediate risk at any point by the intake or ongoing worker, then the child may be apprehended and placed in out-of-home care. However, most of the children on the workers' caseloads remain in the family home. Apprehension is considered a method of last resort (OACAS, 2013).

Participants

     In-Home Sample. The data for children who remain in their natural family home were collected at eight CAS agencies across southwestern Ontario. Data were collected at two time points, once at the beginning of the study (Time 1) and then again 6-months later (Time 2). Each agency generated a list of all cases of children who remained in their natural family homes and met inclusion criteria. To be eligible for this study, children had to be 15 years old or younger and living in their natural family home (kinship care cases were excluded). The length of time that a case had been open was not included as part of the eligibility criteria. Therefore, some children may have been involved with the child welfare system for extended periods of time and had previous out-of-home placements. Taken together, the eight agencies had 5005 open cases of families whose children remained in the home at Time 1. Cases were randomly selected from the

agency lists, and then one sibling was randomly sampled from each family to ensure independence of observations.

A sampling calculator, G*Power (Buchner, Erdfelder, & Faul, 1996), was used to determine an appropriate sample size for each agency, with the understanding that the samples from the eight agencies would be combined into one sample for analysis. A sample size of 35 was deemed adequate for each agency. Therefore, a total sample of 280 was considered an optimal sample size. Due to high rates of case closure within the in-home sample and difficulty with recruiting participants, a total sample of 213 cases was obtained. Of the original sample, 210 were evaluated at follow-up. For administrative purposes, three cases were not available for follow-up and their data were excluded from analyses. In addition, two children were administered the incorrect measure at Time 1 and, thus, were eliminated from analysis, leaving a final sample of 208.

A review of the 208 children revealed a mean age of 6.65 years ($SD = 4.90$) at Time 1. Of the 208 children, 87 were 0- to 4-year-olds, 64 were 5- to 9-year-olds, and 57 were 10- to 15-year-olds. Fifty-three percent of the sample was male and 47% was female. For the 208 children, the average number of caregiver changes was 1.67 ($SD = 2.21$). This suggests that a portion of the sample had previous out-of-home placements. This variable was further examined and it was identified that 63 children (45.3%) had no previous caregiver changes and 76 children (54.7%) had one or more previous caregiver changes. Sixty-nine children (33.2%) had missing data for this variable. These findings indicate that many children who remain in their natural environments have had previous out-of-home placements. Due to the high amount of missing data for the changes in caregiver variable, it was not feasible to split the in-home sample into two groups: (1) children who have experienced no previous caregiver changes and (2) children who

have experienced one or more caregiver changes for the analyses; and compare these two groups of children to children in out-of-home care.

   Out-of-Home Sample. The out-of-home sample consisted of a subsample of children in out-of-home care in Ontario. In Ontario, all children in out-of-home care are required to have an AAR-C2-2010 completed after 1-year in out-of-home care and annually thereafter until they are no longer in care. The data are collected as part of the Ontario Looking After Children (OnLAC) project, which is conducted by Dr. Robert Flynn and his OnLAC team at the Centre for Research on Educational and Community Services (CRECS) at the University of Ottawa.

   In Ontario, there are about 7,500 children in care at any given time. A stratified random sample of children was selected from the total sample of children in care. The same number of out-of-home children as in-home children was randomly selected from each of the eight agencies. For example, if one of the agencies had a sample size of 20 for the in-home sample, then 20 children were randomly selected from all the children who had been in out-of-home care for at least 1 year at that particular agency. Therefore, whenever possible, there was the same number of children in the in-home and out-of-home samples for each of the eight agencies. The total sample size for the out-of-home children was 194 because, for a few of the agencies, the total sample of out-of-home children was smaller than the in-home sample. A review of these children revealed a mean age of 6.77 years ($SD = 4.82$). Of the 194 children, 83 were 0- to 4-year-olds, 56 were 5- to 9-year-olds, and 55 were 10- to 15-year-olds. Forty-nine percent of the sample was male and 51% was female.

Measures

   Assessment and Action Record, Second Canadian Edition – 2010 version (AAR-C2-2010). With permission from the OACAS, the AAR-C2-2010 (Flynn, Miller, Desjardins, Ghazal,

& Legault, 2010) was used to measure the adjustment of children in the care of his/her natural

caregiver. The OACAS also permitted the use of secondary AAR-C2-2010 data for children in

out-of-home care in 2013. The AAR was first developed for the British child welfare system as

part of their progressive renewal process regarding policy, practice, and research (Ward, 1995).

In 2001, Drs. Robert Flynn and Hayat Ghazal created the initial Canadian edition of the AAR for

use with young people from 0 to 21 years of age in out-of-home care in Ontario (Flynn, Ghazal

et al., 2004; Flynn, Vincent, & Miller, 2011). The tool was then revised annually between 2001

and 2006, based on feedback received from individuals involved with and using the AAR. The

2006 version was used until the 2010 version was released in May 2010. (A new version of the

AAR was introduced in January 2016.) The changes made to the 2006 and 2010 versions were

based on meetings held with a wide range of stakeholders between 2008 and 2010. Since 2006,

the Ministry of Children and Youth Services (MCYS) in Ontario has required that all care plans

for children and youth in out-of-home care for more than a year must be based on a completed

AAR (Flynn, Vincent, & Miller, 2011).

There are three overarching purposes of the AAR-C2-2010: 1) to comprehensively assess

the needs of children and adolescents, develop appropriate plans of care, and monitor the child's

annual progress; 2) to assess the progress of children and youth at an agency level annually and

compare the results to agency goals to improve service delivery; and 3) to evaluate out-of-home

care at a provincial level to inform policy and practices. The AAR-C2-2010 assesses background

information and eight dimensions of functioning: health, education, identity, family and social

relations, social presentation, emotional and behavioural development, self-care skills, and

developmental assets, as well as transition to young adulthood for older adolescents. A shorter

version of the AAR-C2-2010 was completed for the in-home sample in the present study. Only

the health, education, emotional and behavioural development, and developmental asset profile

dimensions were completed. There are eight age-appropriate versions of the AAR-C2-2010, with

one for each age group: 0-11 months, 1-2 years, 3-4 years, 5-9 years, 10-11 years, 12-15 years,

16-17 years, and 18-21 years. The questions included in each dimension vary depending on the

version of the AAR-C2-2010. For example, for the 0-11 months and 1-2 years versions, there are

no questions related to education since these children are not yet attending school (Flynn et al.,

2010; Flynn, Vincent, & Miller, 2011).

The AAR-C2-2010 is completed by case workers in interview format with the primary

caregiver and child in care, if the child is over the age of 9 years. For children aged 0 to 9 years,

the caregiver is asked to answer the questions contained in the various dimensions. However, for

youth aged 10 years and older, the youth is asked to participate in responding to the questions

contained in various dimensions, with continued involvement and assistance from their caregiver

and child welfare worker.

Several recent studies have reported on the satisfactory reliability and validity of the

AAR-C2-2010 item content measured against the Canadian National Longitudinal Survey of

Children and Youth (NLSCY; Flynn, Ghazal et al., 2004); mental health indicators within a child

welfare sample (Marquis & Flynn, 2008); and its utility in service planning for children in care

(Rasmusson, Hyvonen, Nygren & Khoo, 2010). In addition, Flynn et al. (2011) reported strong

internal consistency scores for the subscales on the AAR-C2-2010 using data collected from

children in out-of-home care in Ontario between 2010 and 2011.

Background information. The background information section assesses basic information

about the children, child welfare worker, and caregiver. For the current study, only questions

related to the child were examined, including his/her age and gender. In addition, this section

asks about the primary reason for admission to service and the number of previous caregivers, i.e., "Primary reasons for current admission to service (Mark all that apply.): Physical harm, sexual harm, neglect, emotional harm, domestic violence, abandonment/separation, problematic behaviour, other" and "How many changes in main caregivers has _____ (i.e., child) experienced since birth?"

Health dimension. The health dimension assesses the health of the child and the services he/she is receiving to remain well. It also asks questions about aspects that affect the child's health, such as diet and safety issues. For example, the first question in this section asks, "In general, would you say _____'s health is: excellent, very good, good, fair, or poor?" (Flynn et al., 2010, 2011).

Education dimension. The education dimension is only included in the AAR-C2-2010 for preschool children, school-age children, and adolescents. This section asks about the child's experiences at school. Some sample questions are: "During the previous year, how many days was _____ absent from school, preschool, or daycare for any reason?" (0 days, 1-3 days, 4-6 days, 7-10 days, more than 20 days, not in daycare or child care program)" and "Does _____ have possible learning-related difficulties? Yes or no." As demonstrated in the examples listed, the response options for each dimension vary depending on the particular question.

For children aged 5 years and older, the Academic Performance Scale is completed. This scale was adopted from the NLSCY (Statistics Canada, 1999). It consists of four items rated on a 3-point scale: 3 (*very well or well*), 2 (*average*), and 1 (*poorly or very poorly*). The scale asks the caregiver to rate how the child is doing at school this year, taking his/her performance and report cards into consideration, in three areas: reading and other language arts, mathematics, and science, and then overall. The scale score ranges from zero to eight, with higher scores indicating

better academic performance (Flynn et al., 2010; 2011). For the current sample (5- to 15-year-olds), the internal consistency score for this scale was .89, which is very good.

Emotional and behavioural development dimension. This dimension includes different scales of mental health functioning that depend on the age of the child. For newborn to 2-year-old children, the dimension contains an Infant Temperament Scale (0-11 months) and Child Temperament Scale (1-2 years), which were taken from the NLSCY (Statistics Canada, 1999). The scales consist of 11 items (which are similar but not identical) that assess temperament (e.g., ease of soothing the child, irritability of the child, amount of time the child cries, etc.). The response options vary depending on the question. The total score for this scale ranges from 0 to 22, with a higher score indicating an easier temperament (Flynn et al., 2010; 2011). The internal consistency for the Infant Temperament Scale and Child Temperament Scale were both good, with scores of .73, and .78, respectively.

For 2- to 4-year-old children, the Prosocial Behaviour Scale assesses a child's positive behaviour (e.g., attentiveness, perseverance, and independence) and ranges from a score of 0 to 10 for 2-year-olds and 0 to 16 for 3- and 4-year-olds. An example question is, "How often would you say he/she will invite bystanders to join a game?" 2 (*often*), 1 (*sometimes*), 0 (*never*). Higher scores on this scale indicate a greater level of prosocial behaviour (Flynn et al., 2010; 2011). This scale had an internal consistency of .80 (very good) for 2-year-olds and .82 (very good) for 3- and 4-year-olds.

The AAR-C2-2010 assesses the emotional and behavioural functioning of 2- to 4-year-old children using a variety of scales, including the Anxiety/Emotional Distress Scale (e.g., "How often would you say he/she: seems to be unhappy, sad, or depressed; is to fearful or anxious?") and the Physical Aggression/Opposition Scale (e.g., "How often would you say

he/she: is defiant, has temper tantrums or hot temper?"). For these scales, items are rated on a

three-point scale [2 (*often*), 1 (*sometimes*), 0 (*never*)], and higher scores on these scales indicate a

higher prevalence of problem behaviours. The Anxiety/Emotional Distress Scale assesses the

prevalence of behaviours associated with anxiety and emotional disorders in 2- to 4-year-olds,

with scores that range from zero to 14 for 2-year-olds and zero to 16 for 3- to 4-year-olds. This

scale had an internal consistency of .53 (poor) for 2-year-olds and .73 (good) for 3- and 4-year-

olds. The Physical Aggression/Opposition Scale assesses the prevalence of behaviours associated

with physical aggression and opposition, with scores ranging from zero to 14 for 2-year-olds and

zero to 20 for 2- and 3-year-olds (Flynn et al., 2010; 2011). This scale had an internal

consistency of .80 (very good) for 2-year-olds and .77 (good) for 3- and 4-year-olds.

For children aged 5 to 15 years, the Strengths and Difficulties Questionnaire (SDQ;

Goodman, Ford, Simmons, Gatward, & Meltzer, 2000; Goodman, Meltzer, & Bailey, 2003) was

used to assess emotional and behavioural functioning. The SDQ is a 25-item behavioural

screening measure for children aged 3 to 16 years of age. The 25 items make up five subscales,

each composed of five items: (1) Emotional Symptoms Scale (e.g., "many worries or often

seems worried"), (2) Conduct Problems Scale (e.g., "often fights with other youth or bullies

them"), (3) Hyperactivity/Inattention Scale (e.g., "restless, overactive, cannot stay still for

long"), (4) Peer Problems Scale (e.g., "picked on or bullied by other youth"), and (5) Prosocial

Behaviour Scale [e.g., "often offers to help others (parents, teachers, youth)"]. Each item is rated

on a 3-point scale: 2 (*true*), 1 (*somewhat true*), and 0 (*not true*). The first four subscales (i.e.,

excluding the Prosocial Behaviour Scale) can be added together to generate a Total Difficulties

score. A higher score indicates a greater level of problem behaviour for all subscales except the

Prosocial Behaviour Scale. A higher score on this subscale indicates a greater level of prosocial

behaviour. The caregiver completes this scale for children aged 5 to 15 years (Flynn et al., 2011).

The SDQ has demonstrated adequate psychometric properties, including internal

consistency (Flynn et al., 2011; van Widenfelt, Goedhart, Treffers, & Goodman, 2003) and

construct validity, both convergent and discriminant, when compared to the CBCL (Goodman &

Scott, 1999; Klasen et al., 2000) and Rutter Behaviour Questionnaire (Goodman, 1997). It is able

to accurately differentiate between clinical and community samples as well (Klasen et al., 2000).

For the current sample, the Prosocial Behaviour Scale had an internal consistency of .72 (good)

and the Total Difficulties score had an internal consistency of .89 (very good).

Developmental assets dimension. Lastly, the Developmental Assets Profile section

examines the child's opportunities (external assets: support, empowerment, boundaries and

expectations, and constructive use of time) and personal strengths (internal assets: commitment

to learning, positive values, social competencies, and positive identity), as rated by the child's

case worker. Developmental assets are the building blocks that help children and adolescents

achieve success in life (e.g., at school, at home, with peers). The Developmental Assets Profile is

based on the work of the Search Institute (1990; Scales, 1999). It consists of 40 items, each with

three response options: *yes*, *uncertain*, and *no*. The 40 items can be divided into two subscales,

each consisting of 20 items: an External Developmental Assets Profile (e.g., caregiver support,

youth programs, and creative activities) and an Internal Developmental Assets Profile (e.g.,

responsibility, self-esteem, and self-regulation). These profiles have scores that range from 0 to

20. A higher score indicates that the child has a greater number of developmental assets. The

particular items included in the profile differ depending on the version (i.e., age group) of the

AAR-C2-2010, but all versions contain 40 developmental assets. Flynn et al. (2011) has

demonstrated that the scale has good internal consistency across age groups. For the current

sample, the internal consistencies were also strong. The internal consistency scores for the 0- to

4-year-old age group were as follows: External Developmental Assets Profile = .87 (very good)

and Internal Developmental Assets Profile = .93 (excellent). For children aged 5 to 9 years, the

internal consistency was .85 (very good) for the External Developmental Assets Profile and .90

(excellent) for the Internal Developmental Assets Profile. Lastly, for youth aged 10 to 15 years,

the internal consistency was .81 (very good) for the External Developmental Assets Profile and

.91 (excellent) for the Internal Developmental Assets Profile.

Follow-up Questionnaire. A follow-up questionnaire was developed to assess contextual

information relevant to the child welfare system and additional child-related services (Leschied,

2014). This measure was designed to provide information about the child's family situation,

reason for case opening, safety, well being at school, placement and case status, service

involvement, as well as parent and family service involvement 6-months following the

completion of the AAR-C2-2010 (see Appendix A). Two questions from the Follow-up

Questionnaire were examined in the current study: (1) Type of family (single vs. two-parent

family) and (2) "Was the case closed since the AAR was completed?" Yes or no.

Procedure

In-Home Sample. The Faculty of Education's Ethics Review Committee at Western

University approved data collection for the in-home sample (see Appendix B). Data for the

initial phase was collected between September 1, 2013 and April 15, 2014 by the family case

workers in collaboration with the primary caregiver and the identified child if they were above

the age of 9 years. The family case workers all received training on completing the AAR-C2-

2010 prior to administering the measure with the families. They explained the purpose of the

study to the primary caregiver of the randomly selected families and provided them with a letter

of information (see Appendix C). Written informed consent was then obtained prior to

commencing the AAR-C2-2010 (see Appendix D). If consent was obtained, the AAR-C2-2010

was completed over the course of two or three 90-minute interview sessions with the caregiver

and child (if aged 10 or above). The Follow-Up Questionnaire was completed 6-months

following the completion of the AAR-C2-2010. The case workers completed the questionnaire

based on case files and in collaboration with the primary caregiver of the identified child, if

additional information was required.

       Out-of-Home Sample. The OnLAC project received full approval from the University of

Ottawa Office of Ethics and Research Integrity when it initially began. Currently, each study

using the OnLAC data applies for ethics approval individually. Thus, ethics approval for

secondary data analysis from the University of Ottawa was obtained for the current comparison

study (see Appendix E). Data collected between January 1, 2013 and December 31, 2013 were

used to match the in-home sample's data collection period as closely as possible and to ensure

that the same version of the AAR-C2-2010 was administered to the two samples. Data were

collected by case workers in collaboration with the primary caregiver and the child in care if the

latter was above the age of 9 years. The case workers had all received training on completing the

AAR-C2-2010 prior to administering the measure. Because the Government of Ontario requires

that the AAR-C2-2010 be completed annually for each child in care in Ontario (who has been in

care for a year or more), informed consent from the primary caregiver was not required for this

sample. The dimensions of the AAR-C2-2010 were completed over the course of two to six 90-

minute interview sessions with the caregiver (and child).

Design

Cross-sectional comparisons. This study included both a cross-sectional and longitudinal (6-month follow-up) component. The cross-sectional component examined children who resided in their family homes and compared them to children in out-of-home care at a single point in time (when the AAR-C2-2010 was completed). The independent variable was placement status at the time the AAR-C2-2010 was completed.

Dependent variables. Twenty-one variables from the health, education, emotional and behavioural, and developmental assets sections of the AAR-C2-2010 were examined to determine the characteristics of in-home children and identify the differences and similarities between in-home and out-of-home children. A large number of variables were examined because some variables were only applicable to certain age groups. For example, many of the age groups have different scales for determining behavioural and emotional problems (e.g., Infant Temperament Scale, Child Temperament Scale, Strength and Difficulties Questionnaire, etc.). Seven variables were identical on all versions of the AAR-C2-2010. The remaining variables corresponded to particular age-related versions of the AAR-C2-2010. Please see Table 1.1 for a breakdown of the variables examined for each age group and the associated sample sizes.

The first two variables were demographic factors, including the child's age and gender (*male, female*). The next two variables examined a child's reason for admission to child welfare services. One variable identified whether the child was admitted as a result of abuse (*no, yes*), which included physical, sexual, and emotional abuse. These three types of abuse variables were combined as one variable because only nine children in the total sample had experienced sexual abuse. By combining the three variables, more adequate sample sizes were obtained. The other variable identified whether a child was admitted to child welfare services as a result of neglect

Table 1.1

Description of the Variables for the Cross-Sectional Comparisons and the Associated Sample Sizes

Variable	Values	0- to 4-year-olds		5- to 9-year-olds		10- to 15-year-olds	
		In-Home	Out-of-Home	In-Home	Out-of-Home	In-Home	Out-of-Home
Demographic Characteristics							
Age (0- to 15-year-olds)	(Number)	77	78	60	53	44	50
Gender (0- to 15-year-olds)	0 = Male, 1 = Female	74	78	59	53	44	50
Reason for admission - Abuse (0- to 15-year-olds)	0 = No, 1 = Yes	77	78	60	53	44	50
Reason for admission – Neglect (0- to 15-year-olds)	0 = No, 1 = Yes	77	78	60	53	44	50
# of changes in caregiver (0- to 15-year-olds)	(Number)	45	75	50	43	44	50
General health (0- to 15-year-olds)	1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent	77	78	60	53	44	50
Educational Factors							
# of absences from daycare/school (3- to 15-year-olds)	1 = 0 days, 2 = 1-3 days, 3 = 4-6 days, 4 = 7-10 days, 5 = 11-20 days, 6 = More than 20 days	77	78	60	53	44	50
Academic Performance Scale (5- to 15-year-olds)	(Number ranging from 0 to 8, higher score indicates better academic performance)			37	30	31	32
Developmental Assets Profiles							
External Assets Profile	(Number ranging from 0 to 20, higher score indicates increased external assets)	77	78	60	53	44	50
Internal Assets Profile	(Number ranging from 0 to 20, higher score indicates increased internal assets)	77	78	60	53	44	50
Mental Health Factors							

Variable	Values	0- to 4-year-olds		5- to 9-year-olds		10- to 15-year-olds	
		In-Home	Out-of-Home	In-Home	Out-of-Home	In-Home	Out-of-Home
Mental health service use (0- to 15-year-olds)	0 = No, 1 = Yes	52	78	52	43	27	48
Infant Temperament Scale (0- to 1-year-olds)	(Number ranging from 0 to 22, higher score indicates an easier temperament)	19	5				
Child Temperament Scale (1- to 2-year-olds)	(Number ranging from 0 to 22, higher score indicates an easier temperament)	37	32				
Emotional Distress Scale (2-year-olds)	(Number ranging from 0 to 14, higher score indicates increased emotional concerns)	20	14				
Emotional Distress Scale (3- to 4-year-olds)	(Number ranging from 0 to 16, higher score indicates increased emotional concerns)	21	40				
Physical Aggression Scale (2-year-olds)	(Number ranging from 0 to 14, higher score indicates increased aggression concerns)	23	17				
Physical Aggression Scale (3 to 4 years)	(Number ranging from 0 to 20, higher score indicates increased aggression concerns)	21	41				
Prosocial Behaviour Scale (2-year-olds)	(Number ranging from 0 to 10, higher score indicates increased prosocial behaviour)	21	13				
Prosocial Behaviour Scale (3- to 4-year-olds)	(Number ranging from 0 to 16, higher score indicates increased prosocial behaviour)	21	41				
SDQ Prosocial Behaviour (5- to 15-year-olds)	(Number ranging from 0 to 10, higher score indicates increased prosocial behaviour)			60	53	44	50
SDQ Total Score (5- to 15-year-olds)	(Number ranging from 0 to 40, higher score indicates increased problem behaviour)			60	53	44	50

(*no*, *yes*). Other reasons for admission included abandonment/separation, problematic behaviour, and domestic violence. However, too few children were admitted to child welfare services for these reasons (i.e., significantly less than 10% of sample) so they were not further examined. A quantitative variable identified the number of changes in caregivers that a child had experienced. There was another variable related to health: general perception of health (5-point scale from *excellent* to *poor*). These six variables pertained to all age groups.

There were two education variables for children aged 5 years and older: the Academic Performance Scale and the number of days the child had been absent from school and/or preschool or daycare. This final school-related variable was also applicable to 3- and 4-year-old children. For each age group (0- to 4-year-olds, 5- to 9-year-olds, and 10- to 15-year-olds), two variables were examined for the developmental assets dimension: the child's Internal and External Developmental Assets Profile.

There was one variable related to emotional and behavioural development that was assessed for all age groups: whether the child had received mental health services during the last 12 months (*no*, *yes*). The remaining emotional and behavioural development variables varied depending on the age group. For infants younger than 1 year, the total score on the Infant Temperament Scale was used as a measure of mental health functioning. For children aged 1 to 2 years, the Child Temperament Scale was used as a measure of mental health functioning. There were two variables that examined mental health functioning for 2-year-old children: Physical Aggression/Opposition Scale and Anxiety/Emotional Distress Scale. There was also a Physical Aggression/Opposition Scale and Anxiety/Emotional Distress Scale that assessed mental health functioning for 3- to 4-year-olds. In addition, the Prosocial Behaviour Scale was included as an assessment of strengths. There were separate Prosocial Behaviour Scales for 2-year-olds and 3-

to 4-year-olds. For children aged 5 to 15 years, there were two variables used to assess

psychosocial functioning: the Total Difficulties Score and the Prosocial Behaviour Scale from

the SDQ.

6-month follow-up comparisons. The longitudinal portion of the study focused only on

the in-home sample. It compared children who continued to be involved with the child welfare

system at Time 2 (6-months following completion of the AAR-C2-2010) to children whose cases

had been closed at Time 2. Therefore, the variable of interest was case status (open versus

closed) on the follow-up measure. Originally, examining whether or not children had been

placed in out-of-home care by the 6-month follow-up assessment was the outcome variable of

interest. However, only 4% of children came into care. In order to conduct a robust analysis

examining placement status at follow-up, at least 10% of the sample would need to be in out-of-

home placement (Tabachnick & Fidell, 2007). Case status provided an alternative, appropriate

measure of child outcome.

Predictor variables. Children who remained involved with the child welfare system and

children whose cases were closed were compared on the same 21 variables that had been

examined in the cross-sectional portion of the study and one additional family factor [whether

the caregiver was a single parent (*no*, *yes*)], for a total of 22 predictor variables. All the predictor

variables were assessed at Time 1, except for the family situation variable, which was assessed at

Time 2.

Analysis

Statistical analyses were conducted in three steps using IBM SPSS Statistics, version 22.

First, descriptive analyses were calculated (i.e., frequencies and mean scores) for sample

characteristics on all the variables of interest. In addition, to determine whether the eight

agencies had comparable samples, one analysis of variance (ANOVA) and two chi-square tests

were conducted, depending on whether the dependent variables were continuous or categorical.

The agency was the independent variable and the following factors were the dependent variables:

child's age, child's gender, and reason for the most recent episode of admission (*abuse*, *neglect*,

abuse and neglect, or *other*). These three variables were chosen because they were consistently

administered across all three age groups. No differences between agencies were anticipated for

these dependent variables.

     Cross-sectional comparisons. The second and third steps of the analysis were completed

separately for the cross-sectional and longitudinal portions of the study. For the cross-sectional

sample, the second step consisted of bivariate analyses examining the association between the

independent variable, placement (in-home or out-of-home at Time 1), and the various child,

family, and agency variables described previously. The purpose of the bivariate analyses was to

compare and contrast the in-home sample with the out-of-home sample. Fifteen *t*-tests, four chi-

square tests, and three MANOVAs were performed. Two MANOVAs combined the Physical

Aggression and the Emotional Distress subscale scores into separate linear combinations for 2-

year-old and 3- to 4-year-old children. The second MANOVA combined the Total and Prosocial

scale scores of the SDQ into a linear combination for 5- to 15-year-olds. The MANOVA

analyses were chosen to reduce six separate bivariate analyses into three analyses.

     Finally, the variables with a *p*-value less than .05 at the bivariate level were further

examined using a multivariate analysis. Hierarchical linear modeling (HLM) was considered as a

potential method of analysis for the cross-sectional component. This was especially important

given the possibility of nesting within the out-of-home sample (i.e., multiple children from the

same foster or biological home). Since one child was randomly selected from each home for the

in-home sample, the problem of nesting at the family level was not a concern. Unfortunately, nesting within the out-of-home sample could not be further examined due to data collection limitations. In addition, it was unlikely that there would be enough children within each foster or biological home to complete an HLM analysis that examined the various child, family, and agency factors. Therefore, a multivariate analysis of variance (MANOVA) was chosen as the preferred method of analysis. In order to control for the potential for nested data, which would increase the risk of Type I error, the p-value for the MANOVA was reduced to $p < .025$.

A MANOVA was chosen because the independent variable consisted of two groups and the purpose of the analysis was to examine how various child, family, and agency variables differentiated the two groups while controlling for all other factors (i.e., there were multiple dependent variables). A MANOVA is also optimal compared to an ANOVA, because running multiple analyses would increase the risk of Type 1 error (i.e., the more analyses completed, the greater the likelihood of finding significant results, even when no significant differences are present). A MANOVA adjusts for this increased risk of Type 1 error (Tabachnick & Fidell, 2007).

6-month follow-up comparisons. For the longitudinal portion of the study, the second step for the analysis was bivariate analyses examining the association between the outcome variable, case status (open versus closed at Time 2), and the various child, family, and agency variables. The purpose of the bivariate analyses was to identify factors associated with case status at the 6-month follow-up assessment for the in-home sample.

Chi-square analyses were conducted for categorical variables and t-tests were conducted for continuous variables. Twenty-one t-tests and five chi-square tests were performed. The

purpose of these analyses was to identify which variables were significantly associated ($p < .05$)

with case status, to reduce the total number of variables included in the multivariate analysis.

For the longitudinal portion, logistic regression was chosen to examine which child,

family, and agency variables continue to predict case status, after controlling for all other factors.

Logistic regression was chosen because it requires meeting fewer statistical assumptions and is

suitable in predicting the occurrence of an event using a set of explanatory variables that may be

continuous, categorical, or a combination of the two (Tabachnick & Fidell, 2007). A logistic

regression analysis was only conducted for 5- to 9-year-old children and 10- to 15-year-old

children because these are the age groups for which most of the predictor variables were

applicable.

In summary, there were four separate groups of analyses (bivariate and multivariate

analyses for the cross-sectional portion and bivariate and logistic regression analyses for the

longitudinal portion). For each of the three age groups, the significance level was set at $p < .05$

for the bivariate analyses for the cross-sectional component and at $p < .05$ for the bivariate

analyses for the longitudinal component to control for Type I error (Tabachnick & Fidell, 2007).

In order to determine the specific p-value required for each analysis, techniques to control

for Type I error were considered. One possibility was the Bonferroni correction, but it has been

widely criticized for being too conservative. In addition, the Bonferroni correction results in a

loss of power for finding real effects (Glickman, Rao, & Schultz, 2014). A study comparing five

different alternatives to the Bonferroni correction found that the Holland-Copenhaver and

Hochberg procedures were most advantageous for studies with numerous hypotheses (Olejnik,

Li, Supattathum, & Huberty, 1997). Similarly, another study recommended the use of the

Benjamini-Hochberg false discovery rate correction. This approach focuses specifically on

analyses with a *p*-value below a predetermined amount (which is typically .05). Then it sets the

significance levels for these analyses lower for the smallest *p*-values and progressively higher for

the larger *p*-values (i.e., $d(i/n)$, where $d = .05$; $i =$ the rank given to each *p*-value, which were

sequenced from smallest to largest with the smallest *p*-value being given an *i*-value of 1, the

second smallest being given an *i*-value of 2, and so on until all the *p*-values have a value; and $n =$

the total number of *p*-values/analyses). This approach is more conservative than applying a *p*-

value of .05 to all analyses but less conservative than using the Bonferroni correction (i.e., $.05/n$).

The computations for this approach are also logical and simple (Glickman et al., 2014). Thus, it

was chosen as the method to control for Type I error for the bivariate analyses for the cross-

sectional and 6-month follow-up comparisons.

Results

Cross-Sectional Comparisons: In-Home and Out-of-Home Samples

For the cross-sectional comparisons, the data from the in-home and out-of-home samples

were merged into one dataset for each age group: 0- to 4-year-olds, 5- to 9-year-olds, and 10- to

15-year-olds. All three age groups of the in-home and out-of-home samples were also combined

into one dataset to allow for the completion of analyses for data that were collected for all three

age groups. A 5- to 15-year-old dataset was created as well for analyses pertaining only to these

two age groups (i.e., the Academic Performance and SDQ scales).

Preliminary analyses. Prior to running the various analyses, univariate, bivariate, and

multivariate screening and cleaning were completed to ensure no violation of assumptions, such

as normality, linearity, multicollinearity, and heterogeneity of variance. All univariate outliers

were winsorized in accordance with a *p*-value of .001. Various continuous variables were

skewed. For the 0- to 4-year-old database, the External Assets Profile score and Emotional

Distress Scale were skewed and they were both transformed using square root transformations. The Internal Asset Profile score was also skewed; it was corrected with an inverse transformation. For the 5- to 9-year-old dataset, the External Assets Profile score was skewed and required a square root transformation. The Internal Assets Profile score was skewed as well and required a log transformation.

When the data were examined, there were some cases that displayed excessive missing or questionable data. These problematic cases were consistently cases that had greater than 20% missing data [although the majority of these cases (84%) were missing greater than 30% of the data]. Thus, rather than using multiple imputation to address the missing data, these identified problematic cases were excluded from analyses to prevent inaccurate results. A total of 15 problematic cases were deleted from the 0- to 4-year-old database, leaving a sample of 155 children. Seven cases were deleted from the 5- to 9-year-old database, leaving a sample of 113 children. Lastly, 16 cases were deleted from the 10- to 15-year-old database, leaving a sample of 94 children.

From the remaining samples, all variables except for the Academic Performance Scale, mental health services, and number of previous caregivers (only for 0- to 9-year-olds) variables had less than 15% missing data, with the majority of variables having less than 5% missing data. Due to the relatively small amount of missing data, expectation maximization algorithm was used to address the missing data, rather than mean substitution or multiple imputation.

Mean substitution, which imputes the mean value for any missing data, is less desirable than expectation maximization and multiple imputation methods because it reduces the variance of a variable (i.e., the imputed mean value is closer to the mean than the missing value likely would have been). When there is a significant amount of missing data, multiple imputation is the

preferred method as it allows for more variation in the generated values (i.e., it generates various potential values and not just the best possible value). Expectation maximization methods identify the best possible value based on the variables included in the algorithm. However, when there are relatively small amounts of missing data, the differences between the values computed by expectation maximization and multiple imputation are minimal. Given that multiple imputation is a much more complex and labour intensive process, expectation maximization is considered a more optimal approach when there is a relatively small amount of missing data and the values are missing randomly (Tabachnick & Fidell, 2007). With the current dataset, there is no evidence to suggest that the data was missing nonrandomly. Thus, expectation maximization algorithm was considered the optimal approach to address the missing data for the current sample for all variables except for the Academic Performance Scale, mental health services, and the number of previous caregivers (only for 0- to 9-year-olds) variables. Although these variables, as well as gender, were included in the expectation maximization algorithm, missing data was not replaced for gender, Academic Performance Scale, mental health services, and the number of previous caregivers variables.

    Descriptive statistics. Table 1.2 displays the descriptive information for all the variables included in the analyses for the three age groups. The descriptive information is provided for the entire sample, the in-home sample, and the out-of-home sample.

    Sample characteristics. The entire sample consists of 362 children with a mean age of 6.52 ($SD = 4.70$). One hundred and eighty-one children were in their natural homes ($M_{age} = 6.28$, $SD = 4.62$) and 181 children were in out-of-home placements ($M_{age} = 6.75$, $SD = 4.78$). In regard to reason for admission, 45% of in-home children and 57% of out-of-home children were admitted to services as a result of abuse. Forty-seven percent of in-home children and 61% of

Table 1.2

Descriptive and Inferential Statistics for the Variables of Interest

Variable	Whole Sample			In-Home			Out-of-Home			df	t-score/ χ^2	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	%	M (SD)	n	%	M (SD)	n	%	M (SD)					
Sample Characteristics														
Age (0- to 15-year-olds)	362		6.52 (4.70)	181		6.28 (4.62)	181		6.75 (4.78)	360	-.95	.343	14 (.032)	.00
Gender (0- to 15-year-olds)	358			177			181			1	.000	1.00	22 (.05)	.00
Male	186	52.0%		92	52.0%		94	51.9%						
Female	172	48.0%		85	48.0%		87	48.1%						
Reason for admission: Abuse (0- to 15-year-olds)	362			181			181			1	4.42	.035	6 (.014)	.01
No	177	48.9%		99[a]	54.7%		78[b]	43.1%						
Yes	185	51.1%		82[a]	45.3%		103[b]	56.9%						
Reason for admission: Neglect (0- to 15-year-olds)	362			181			181			1	6.40	.011*	5 (.011)	.02
No	167	46.1%		96[a]	53.0%		71[b]	39.2%						
Yes	195	53.9%		85[a]	47.0%		110[b]	60.8%						
# of changes in caregiver (0- to 15-year-olds)	307		2.33 (2.48)	139		1.67 (2.21)	168		2.88 (2.56)	305	-4.37	.000***	1 (.002)	.06
General health (0- to 15-year-	362		4.21 (.80)	181		4.17 (.79)	181		4.26 (.82)	360	-1.11	.266	11 (.025)	.00

Variable	Whole Sample			In-Home			Out-of-Home			df	t-score/ χ^2	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	%	M (SD)	n	%	M (SD)	n	%	M (SD)					
olds)														
Educational Factors														
# of absences from daycare/school (3- to 15-year-olds)	286		3.26 (1.55)	139		3.37 (1.50)	147		3.14 (1.58)	284	1.27	.206	9 (.02)	.01
Academic Performance Scale	130		1.42 (1.66)	68		1.35 (1.67)	62		1.48 (1.66)	128	-.45	.655	17 (.039)	.00
Developmental Assets Profiles														
External Assets Profile (0- to 4-year-olds)	155		16.43 (3.76)	77		14.27 (4.05)	78		18.55 (1.70)	126.94	-9.18	.000***	2 (.005)	.40
Internal Assets Profile (0- to 4-year-olds)	155		16.92 (4.70)	77		14.32 (5.52)	78		19.47 (.83)	142.84	-8.03	.000***	3 (.007)	.31
External Assets Profile (5- to 9-year-olds)	113		16.01 (3.72)	60		14.63 (4.25)	53		17.57 (2.16)	101.25	-4.41	.000***	21 (.048)	.16
Internal Assets Profile (5- to 9-year-olds)	113		16.26 (4.49)	60		14.98 (5.06)	53		17.70 (3.22)	110.71	-3.27	.001**	19 (.043)	.09
External Assets Profile (10- to 15-	94		12.77 (3.94)	44		11.30 (4.26)	50		14.06 (3.15)	78.37	-3.61	.001**	4 (.009)	.14

Variable	Whole Sample			In-Home			Out-of-Home			df	t-score/ χ^2	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	%	M (SD)	n	%	M (SD)	n	%	M (SD)					
year-olds)														
Internal Assets Profile (10- to 15-year-olds)	94		12.23 (5.83)	44		11.64 (6.07)	50		12.76 (5.62)	92	-.93	.354	15 (.034)	.01
Mental Health Factors														
Mental health service use (0- to 15-year-olds)	300			131			169			1	.34	.558	16 (.036)	.00
No	181	60.3%		82	62.6%		99	58.6%						
Yes	119	39.7%		49	37.4%		70	41.4%						
Infant Temperament Scale (0-year-olds)	24		13.33 (3.61)	19		13.47 (3.76)	5		12.80 (3.27)	22	.36	.719	18 (.041)	.01
Child Temperament Scale (1- to 2-year-olds)	69		13.87 (3.40)	37		13.76 (3.53)	32		14.00 (3.28)	67	-.30	.769	20 (.045)	.00
Emotional Distress Scale (2-year-olds)	34		1.41 (1.71)	20		1.85 (1.98)	14		.79 (.97)					
Emotional Distress Scale (3- to 4-year-olds)	61		2.36 (2.39)	21		3.19 (2.71)	40		1.93 (2.12)					
Physical Aggression Scale (2-year-	40		4.83 (2.96)	23		5.39 (2.97)	17		4.06 (2.86)					

Variable	Whole Sample			In-Home			Out-of-Home			df	t-score/ χ^2	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	%	M (SD)	n	%	M (SD)	n	%	M (SD)					
olds) Physical Aggression Scale (3- to 4-year-olds)	62		5.35 (3.34)	21		6.33 (3.57)	41		4.85 (3.14)					
Prosocial Behaviour Scale (2-year-olds)	34		6.29 (2.47)	21		6.67 (2.61)	13		5.69 (2.18)	32	1.12	.270	12 (.027)	.04
Prosocial Behaviour Scale (3- to 4-year-olds)	62		7.39 (3.90)	21		8.29 (4.47)	41		6.93 (3.55)	60	1.30	.199	8 (.018)	.03
SDQ Prosocial Behaviour (5- to 15-year-olds)	207		8.00 (1.95)	104		8.20 (1.74)	103		7.79 (2.13)					
SDQ Total Score (5- to 15-year-olds)	207		13.93 (8.44)	104		13.74 (8.09)	103		14.13 (8.81)					

Note. * $p < .05$ or calculated BH *p*-value, ** $p < .01$, *** $p < .001$; Superscript letters denote instances where the group proportions are significantly different from one another at the .05 level; The BH criterion ranks for the three MANOVA analyses not included in this table are: 7 (.016) for the MANOVA for 3- to 4-year-olds, 10 (.023) for the MANOVA for 2-year-olds, and 13 (.03) for the MANOVA for 5- to 15-year-olds. None of these MANOVAs were statistically significant (please see *Mental health factors* in the *Results* section for more information).

out-of-home children were admitted as a result of neglect. Children who remain in their natural

home environments had just over 1.5 caregiver changes, on average, and children in care had

about three caregiver changes, on average. The general health scores were similar for both

samples. The in-home children had an average general health score of 4.17 (*SD* = .79) and out-

of-home children had an average general health score of 4.26 (*SD* = .82). A score of four

translates to "very good" health.

Educational factors. Both the in-home and out-of-home children had an average of about

three absences from school/daycare and close to an average score of 1.5 on the Academic

Performance Scale, which indicates low academic performance.

Developmental assets. Children, aged 0 to 4 years, who remained in their natural

environments had moderate levels of external and internal developmental assets and same-aged

children in out-of-home care had high levels of external and internal developmental assets.

Within each sample, the external and internal assets scores were comparable (14/20 for the

external and internal assets scores for in-home sample and 19/20, respectively, for the out-of-

home sample). For 5- to 9-year-old children, both children who remained in their natural

environments and children in out-of-home care had relatively high levels of external and internal

developmental assets (i.e., 15/20 for the external and internal assets scores for in-home sample

and 18/20, respectively, for the out-of-home sample). Ten- to 15-year-old children who remained

in their natural environments and those in out-of-home care had moderate levels of

developmental assets. However, as with the other age groups, the out-of-home sample

consistently had a higher number on the external and internal Developmental Asset Profiles (i.e.,

11/20 and 12/20 for the external and internal assets scores for in-home sample and 14/20 and

13/20 for the external and internal assets score for the out-of-home sample).

Mental health factors. In regard to mental health, across the two samples, the 0- to 4-year-old children had relatively low behavioural and emotional problems and high levels of prosocial behaviour. In regard to psychosocial functioning, across the two samples, the 5- to 9-year-old children had moderate behavioural and emotional problems and high levels of prosocial behaviour. In regard to psychosocial functioning, across the two samples, the 10- to 15-year-old children had moderate behavioural and emotional problems and high levels of prosocial behaviour.

Agency comparisons. A one-way ANOVA was conducted to examine the association of agency with child age. No significant difference in age was found for the agencies, $F(7, 354) = 1.88$, $p = .072$. Two chi-square analyses examined whether there were differences in gender or reason for admission among the eight agencies. A chi-square test (with Yates Continuity Correction) indicated no significant association between gender and the particular agency, $\chi^2(7, N = 362) = 4.02$, $p = .778$, *phi* = .11. The chi-square test examining the association between reason for admission and agency was also not significant, $\chi^2(27, N = 362) = 34.97$, $p = .711$, *phi* = .31. Thus, no significant differences were found between the eight agencies for age, gender, or reason for admission. Based on these findings, it was assumed that the agency samples were comparable to one another and agency was not included as a control variable in the multivariate analyses.

Bivariate analyses.

Demographic characteristics. Table 1.2 displays the *t*-test and chi-square test results. There was no significant difference in age, general health, or gender for the two samples. However, a *t*-test identified a significant difference between the in-home sample and the out-of-home sample for the number of changes in caregivers variable. Zero to 15-year-old children who

remained in their natural home had a significantly lower number of caregiver changes than children in out-of-home care. In addition, a chi-square test indicated a significant association between placement and neglect as the reason for admission to the child welfare system. In-home children were significantly less likely to be involved with the child welfare system as a result of neglect than children in out-of-home care. There was no significant difference between the two samples in regard to having abuse as the reason for admission to the child welfare system.

Educational factors. For the number of absences from daycare/school, no significant difference was found between the two groups. In addition, there was no significant difference between the two groups in regard to the Academic Performance Scale.

Developmental Assets Profile. For 0- to 4-year-old children, there was a significant difference between the two groups for the Internal and External Assets Profile scores. Children who remained in their natural home had significantly lower scores on the square root transformation of the External Assets Profile scale than children in care. Children who remained in natural home environments also had significantly lower scores on the inverse transformation of the Internal Assets Profile scale than children in out-of-home care. Thus, 0- to 4-year-old children in their natural environments consistently had lower levels of developmental assets than children in out-of-home care.

The findings were similar for 5- to 9-year-old children. Children who remained in the home had significantly lower scores on the square root transformation of the External Assets Profile scale than children in care. Children who remained in natural home environments also had significantly lower scores on the log transformation of the Internal Assets Profile scale than children in out-of-home care. Thus, 5- to 9-year-old children in their natural environments also consistently had lower levels of developmental assets than children in out-of-home care.

In contrast, there was no significant difference between the two 10- to 15-year-old samples for the Internal Assets Profile scale. However, there was a significant difference between the two 10- to 15-year-old samples for the External Assets Profile scale. Children who remained in their natural home had significantly lower scores on the External Assets Profile scale than children in out-of-home care.

Mental health factors. A chi-square test (with Yates Continuity Correction) indicated no significant association between placement and mental health service use. There were also no significant differences between the two 0- to 4-year-old samples for the temperament and prosocial subscale scores. The MANOVA analyses for the 0- to 4-year-old age group, for which all assumptions were met, examined the linear combination of the Physical Aggression and Emotional Distress subscales for 2-year-olds [F (2, 29) = 1.62, p = .215, Wilks' Lambda = .90, partial eta squared = .10] and 3- to 4-year-olds [F (2, 58) = 2.73, p = .074, Wilks' Lambda = .91, partial eta squared = .09]. No significant association was found for either age group. Thus, the univariate analyses for the individual subscales were not examined.

A MANOVA analysis was also conducted to examine the association between placement and the SDQ Total and Prosocial scale scores for 5- to 15-year-old children. The MANOVA analysis, for which all assumptions were met, found no significant association between the linear combination of the SDQ Prosocial subscale and the SDQ Total scale scores and the two groups, F (2, 204) = 1.27, p = .282, Wilks' Lambda = .99, partial eta squared = .01. Thus, the univariate analyses for the individual subscales were not examined.

Multivariate analysis of variance (MANOVA). To ensure that as many variables could be included in the analysis as possible, a MANOVA was performed to investigate the association between the variables that had a p-value less than .05 at the bivariate level for each of the three

age groups: 0- to 4-year-olds, 5- to 9-year-olds, and 10- to 15-year-olds. Given that there was

significant data missing for the number of changes in caregiver variable, this variable was

excluded from the multivariate analysis for all age groups.

0- to 4-year-old sample. Four variables were included in the MANOVA as dependent

variables: External Assets Profile, Internal Assets Profile, abuse as the reason for admission, and

neglect as the reason for admission. Preliminary assumption testing was conducted to check for

sample size per cell, normality, linearity, multicollinearity, and univariate and multivariate

outliers and all assumptions were met. Box's M Test of Equality of Covariance Matrices and

Levene's Test of Equality of Error Variances were used as a measure of homogeneity of

variance-covariance matrices. Box's M Test was significant at $p = .006$, which indicates that this

assumption was violated. To address the heterogeneity of variance-covariance matrices, Pillai's

criterion, rather than Wilks' lambda, was used as a measure of multivariate significance because

it is more robust (Tabachnick and Fidell, 2007). Levene's Test of Equality of Error Variances

was significant for three of the dependent variables: External Assets Profile [$F(1, 153) = 19.81$,

$p < .001$], Internal Assets Profile [$F(1, 153) = 3.77, p = .054$], and neglect as the reason for

admission [$F(1, 153) = 10.84, p = .001$]. To account for this violation, Tabachnick and Fidell

(2007) recommend a more conservative alpha of .025 or .01 for determining significance at the

univariate level. However, this was not applicable for the current analysis because univariate

analyses were not examined. For the multivariate test, there was a statistically significant

difference between the two groups on the combined dependent variables, $F(4, 150) = 24.81, p <$

.001; Pillai's Trace $= .40$, partial eta squared $= .40$. Thus, the linear combination of the External

and Internal Assets Profiles, abuse as the reason for admission, and neglect as the reason for

admission variables significantly differentiated the 0- to 4-year-old in-home and out-of-home samples, with a large effect size.

     5- to 9-year-old sample. Four variables were included in the MANOVA as dependent variables: External Assets Profile, Internal Assets Profile, abuse as the reason for admission to child welfare services, and neglect as the reason for admission to child welfare services. Preliminary assumption testing was conducted to check for sample size per cell, normality, linearity, multicollinearity, and univariate and multivariate outliers and all assumptions were met. Box's M Test of Equality of Covariance Matrices and Levene's Test of Equality of Error Variances were used as a measure of homogeneity of variance-covariance matrices. Box's M Test was significant at $p = .028$, which indicates that this assumption was violated. To address the heterogeneity of variance-covariance matrices, Pillai's criterion, rather than Wilks' lambda, was used as a measure of multivariate significance because it is more robust (Tabachnick and Fidell, 2007). Levene's Test of Equality of Error Variances was significant for two of the dependent variables: External Assets Profile [$F (1, 111) = 15.63, p < .001$], Internal Assets Profile [$F (1, 111) = 4.21, p = .043$]. To account for this violation, Tabachnick and Fidell (2007) recommend a more conservative alpha of .025 or .01 for determining significance at the univariate level. However, this was not applicable for the current analysis because univariate analyses were not examined. For the multivariate test, there was a statistically significant difference between the two groups on the combined dependent variables, $F (4, 108) = 5.35, p = .001$; Pillai's Trace $= .17$, partial eta squared $= .17$. Thus, the linear combination of the External and Internal Assets Profiles, abuse as the reason for admission, and neglect as the reason for admission variables significantly differentiated the 5- to 9-year-old in-home and out-of-home samples, with a moderate effect size.

10- to -15-year-old sample. Three variables were included in the MANOVA as dependent variables: External Assets Profile, abuse as the reason for admission, and neglect as the reason for admission. Preliminary assumption testing was conducted to check for sample size per cell, normality, linearity, multicollinearity, and univariate and multivariate outliers and all assumptions were met. Box's M Test of Equality of Covariance Matrices and Levene's Test of Equality of Error Variances were used as a measure of homogeneity of variance-covariance matrices. Box's M Test was not significant at $p = .119$. Levene's Test of Equality of Error Variances was significant for two dependent variables: External Asset Profile [$F (1, 92) = 5.08$, $p = .027$] and neglect as the reason for admission [$F (1, 92) = 9.33$, $p = .003$]. To account for this violation, Tabachnick and Fidell (2007) recommend a more conservative alpha for determining significance at the univariate level. However, this was not applicable for the current analysis because univariate analyses were not examined. For the multivariate test, there was a statistically significant difference between the two groups on the combined dependent variables, $F (3, 90) = 9.08$, $p < .001$; Wilks' lambda $= .77$, partial eta squared $= .23$. Thus, the linear combination of the External Assets Profile, abuse as the reason for admission, and neglect as the reason for admission variables significantly differentiated the 10- to 15-year-old in-home and out-of-home samples, with a moderate effect size.

6-Month Follow-Up Comparisons: In-Home Sample Only

For the follow-up comparisons, the AAR-C2-2010 data were merged with the follow-up data for each age group: 0- to 4-year-olds, 5- to 9-year-olds, and 10- to 15-year-olds. All three age groups, containing both the AAR-C2-2010 and follow-up data, were also combined into one dataset to allow for the completion of analyses for data that were collected for all three age

groups. A 5- to 15-year-old dataset was created as well for analyses pertaining only to these two age groups.

Preliminary analyses. Prior to running the analyses, univariate, bivariate, and multivariate screening and cleaning were completed to ensure there were no violations of assumptions, including normality, linearity, multicollinearity, and heterogeneity of variance. All univariate outliers were winsorized in accordance with a p-value of .001. Various continuous variables were skewed. The number of changes in caregiver variable was skewed and transformed by calculating the square root. For 0- to 4-year-old children, the Internal Asset Profile was skewed and addressed using an inverse transformation. For 5- to 9-year-olds, the External Asset Profile was skewed and addressed using a square root transformation and the Internal Asset Profile was skewed and addressed using an inverse transformation. The SDQ Prosocial subscale for 5- to 15-year-olds was also skewed and transformed using a square root transformation.

Bivariate analyses. Table 1.3 displays the t-test results and Table 1.4 displays the chi-square test results. No significant differences in case status were found (according to the BH correction) for the demographic, educational, developmental assets, and mental health variables that were examined. Thus, there were no significant differences found between the children whose cases remained open and those whose cases were closed at the 6-month follow-up for the variables examined.

Logistic regression analyses. The proposed analyses indicated that a logistic regression would be performed for each age group to determine which variables that were significant at the bivariate level best predicted case status. However, no significant differences were found at the

Table 1.3

Independent Samples t-Test Examining Case Status at 6-Month Follow-Up

Variable	Case Remained Open		Case Closed		df	t-score	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	M (SD)	n	M (SD)					
Descriptive Characteristics									
Age (0- to 15-year-olds)	115	6.75 (4.58)	63	5.46 (4.61)	176	1.79	.075	2 (.004)	.02
# of changes in caregivers (0- to 15-year-olds)	88	.93 (.92)	49	.84 (.94)	135	.50	.617	15 (.028)	.00
General health (0- to 15-year-olds)	115	4.17 (.78)	63	4.16 (.83)	176	.12	.903	25 (.046)	.00
Educational Factors									
# of absences from daycare/school (3- to 15-year-olds)	91	3.30 (1.51)	47	3.49 (1.49)	136	-.71	.476	11 (.02)	.00
Academic Performance Scale (5- to 15-year-olds)	48	1.38 (1.71)	20	1.30 (1.63)	66	.17	.868	24 (.044)	.00
Developmental Assets Profiles									
External Asset Profile (0- to 4-year-olds)	42	13.76 (4.47)	33	15.03 (3.30)	72.76	-1.41	.177	5 (.009)	.03
Internal Asset Profile (0- to 4-year-olds)	42	14.10 (5.67)	33	14.67 (5.31)	73	.73	.468	18 (.033)	.01
External Asset Profile (5- to 9-year-olds)	43	14.40 (4.24)	17	15.24 (4.35)	58	-.76	.448	12 (.022)	.01
Internal Asset Profile (5- to 9-year-olds)	43	14.60 (5.21)	17	15.94 (4.70)	58	-.63	.535	9 (.017)	.01
External Asset Profile (10- to 15-year-olds)	30	11.27 (4.45)	13	11.77 (3.81)	41	-.35	.725	21 (.039)	.00
Internal Asset Profile (10- to 15-year-olds)	30	12.10 (6.10)	13	11.31 (5.82)	41	.40	.694	19 (.035)	.00
Mental Health Factors									

Variable	Case Remained Open		Case Closed		df	t-score	p-value	Benjamini-Hochberg (BH) criterion rank	R^2
	n	M (SD)	n	M (SD)					
Infant Temperament Scale (0- to 1-year-olds)	11	13.82 (3.49)	8	13.00 (4.31)	17	.46	.653	17 (.031)	.01
Child Temperament Scale (1- to 2-year-olds)	19	14.21 (3.55)	16	13.88 (3.16)	33	.29	.772	22 (.041)	.00
Emotional Distress Scale (2-year-olds)	11	1.36 (1.91)	7	1.86 (1.21)	16	-.61	.553	14 (.026)	.02
Emotional Distress Scale (3- to 4-year-olds)	12	3.58 (2.94)	9	2.67 (2.45)	19	.76	.458	10 (.019)	.03
Physical Aggression Scale (2-year-olds)	14	3.93 (2.30)	7	7.43 (2.76)	19	-3.08	.006	1 (.002)	.33
Physical Aggression Scale (3- to 4-year-olds)	12	7.33 (4.14)	9	5.00 (2.18)	19	1.53	.142	3 (.006)	.11
Prosocial Behaviour Scale (2-year-olds)	12	6.42 (2.35)	7	7.86 (1.77)	17	-1.40	.180	6 (.011)	.10
Prosocial Behaviour Scale (3 to 4 years)	12	8.83 (4.55)	9	7.56 (4.53)	19	.64	.531	13 (.024)	.02
SDQ Total Score (5- to 15-year-olds)	73	13.68 (7.89)	30	13.67 (8.65)	101	.07	.947	26 (.048)	.00
SDQ Prosocial Scale (5- to 15-year-olds)	73	1.60 (.48)	30	1.59 (.57)	101	.15	.885	23 (.043)	.00

Note. * p < calculated BH p-value

Table 1.4

Chi-Square Tests Examining Case Closure at 6-Month Follow-up for the Combined Age Groups

Variable	Case Remained Open		Case Closed		df	χ^2	p-value	Benjamini-Hochberg (BH) criterion rank (p-value required for significance)	R^2
	n	*%*	*n*	*%*					
Demographic Characteristics									
Gender (0- to 15-year-olds)	113		62		1	.000	1.00	27 (.05)	.00
Male	58	51.3%	32	51.6%					
Female	55	48.7%	30	48.4%					
Reason for admission – Abuse (0- to 15-year-olds)	115		63		1	.14	.709	20 (.037)	.00
No	65	56.5%	33	52.4%					
Yes	50	43.5%	30	47.6%					
Reason for admission – Neglect (0- to 15-year-olds)	115		63		1	.23	.632	16 (.030)	.00
No	60	52.2%	36	57.1%					
Yes	55	47.8%	27	42.9%					
Two-parent family (0- to 15-year-olds)	111		61		1	2.14	.144	4 (.007)	.02
No	92	82.9%	44	72.1%					
Yes	19	17.1%	17	27.9%					
Mental Health Factors									
Mental health services use (0- to 15-year-olds)	83		47		1	1.17	.280	8 (.013)	.01
No	49	59.0%	33	70.2%					
Yes	34	41.0%	14	29.8%					

Note. * p < calculated BH p-value; Subscript letters denote instances where the group proportions are significantly different from one another at the .05 level.

bivariate level between cases that were closed and those that remained open at the 6-month follow-up. Thus, no logistic regression analyses were conducted.

Discussion

Children involved with the child welfare system are one of society's most vulnerable populations. Research examining the functioning of children within the child welfare system is extremely important to ensure appropriate and effective care. The current study (1) provided an in-depth examination of in-home children, (2) compared these children to children in out-of-home care, and (3) examined predictors of continued child welfare involvement 6-months following the initial assessment for children who remain in their natural home environments. For both children who remained in their natural family environments and children who were in out-of-home care, mean scores on measures of health, prosocial behaviour, and developmental assets indicated adequate functioning or areas of strength. Educational and mental health functioning were identified as areas of need for both samples. Overall, relatively few significant differences were found between children who remained in their natural homes and children in out-of-home care.

Differences that were found related to the number of changes in caregivers, the reason for admission to child welfare services, and the number of developmental assets. The most consistent differences across all age groups were that children in their natural home environments had fewer caregiver changes, were less likely to be admitted to child welfare services as a result of neglect, and had fewer developmental assets than children in out-of-home care. No significant differences were found between children whose cases remained open and children whose cases were closed after a 6-month follow-up period on measures assessing demographic factors, health, daycare/education, behavioural and emotional development,

developmental assets, and family situation. It is worth noting that greater than 5% of the

conducted analyses produced significant results, which indicates that the results were not

significant purely by chance or a result of a Type I error.

Overall, given that children who are not removed from their homes, as well as children

placed in out-of-home care, are functioning at an adequate level in terms of health, prosocial

behaviour, and developmental assets, the child welfare system appears to be providing a level of

care that supports functioning in these areas. However, there are some areas in which the

functioning of children in the child welfare system can be improved, most notably mental health

and educational functioning.

Cross-Sectional Comparisons

The first component of the study compared children involved with the child welfare

system (i.e., in-home and out-of-home samples). As expected, across all three age groups,

children in their natural home environments had fewer changes in caregivers than children in

out-of-home care. This finding is not surprising given that removal from one's home into out-of-

home care results in an extra change in caregiver for all children in the out-of-home sample.

For the current sample, neglect was identified as a less common reason for admission for

children who remain in their natural environments than for children in out-of-home care. This is

convergent with the initial hypothesis and extant literature. Neglect has consistently been found

as one of the most common reasons that children become involved with the child welfare system

(e.g., Courtney et al., 2001; National Clearinghouse on Family Violence, 2008). In addition, the

existing literature has identified long-term and negative implications of severe neglect on brain

development (e.g., Grayson, Childress, Ernst, & Webb, 2006; Perry, 2002). Furthermore, studies

have found that family preservation initiatives are not as effective for children who have

experienced neglect (e.g., Bath & Happala, 1993; Berry, 1992). Given this existing evidence that supports neglect as a high-risk type of maltreatment, it is not surprising that instances of neglect are more likely to lead to out-of-home placements in the Ontario child welfare system.

No significant difference was found between the two samples in regard to abuse as the reason for admission to child welfare services, although it did approach significance. This is consistent with the family preservation research, which has found that this type of intervention is more successful for families who are involved with the child welfare system as a result of abuse than neglect. (e.g., Bath & Haapala, 1993). It is possible that neglect is more resistant to change and that the resources/services child welfare workers are able to provide do not reliably improve the family situation. Family situations involving abuse may be more susceptible to change with the resources/services available through the child welfare system. More research is needed to determine whether this difference between admissions for neglect and abuse is a robust finding in the child welfare system or whether it is a result of limited power. In addition, it is important to note that the severity of the abuse was not examined. It is probable that children with more severe abuse histories would have a higher likelihood of being placed in out-of-home care.

Age. Age was not associated with placement status. This is somewhat divergent from previous research, which has found that older children are more likely to be placed in out-of-home care than younger children (Farmer et al., 2008). In the child welfare system, children are only removed from their homes if there is a high risk of harm to a child. One clear indication of high risk of harm is the presence of multiple and serious reported or witnessed incidents. Accumulating and documenting incidents takes time and would likely lead to children being older (especially when considering infants) when they are removed from their homes. Therefore, it is possible that an age difference may have been found in the current study if the three age

groups had been examined separately, particularly for the youngest age group (i.e., 0- to 4-year-old children). This hypothesis is supported by the fact that there were three times as many infants under the age of 1 in the in-home sample ($n = 18$, 23.4% of in-home sample) than in the out-of-home sample ($n = 6$, 7.7% of out-of-home sample).

Health. Although the analyses for the cross-sectional component were primarily explorative, it was hypothesized that children who remain in their natural environments would have less health difficulties, including physical health, special needs, and developmental disabilities than children in out-of-home care. Contrary to expectations and previous research (Ringeisen et al., 2008), there was no significant difference in the general health for children in their natural homes and children in out-of-home care. All the children, regardless of placement, were described as having *very good* health on average. It is important to note that a child's caregiver, rather than a health professional (e.g., a physician) provided information on the child's health. Having a health professional provide this information may have resulted in more variable ratings that would have been based more objectively on a child's past health care information.

Psychosocial functioning. Across both samples, 0- to 4-year-old children had relatively low behavioural and emotional problems and high prosocial behaviour. Similarly, 5- to 15-year-old children had high levels of prosocial behaviour but moderate levels of emotional and behavioural problems. The moderate levels of mental health problems for children older than 4 years of age is consistent with previous literature that has found that older children in the child welfare system have higher mental health problems than children in the general population (Burge, 2007; CMHA, 2010; Leslie, Gordon, Meneken et al., 2005; Marquis & Flynn, 2008; Milburn et al., 2008). Thus, mental health problems are an important area of concern for school-age children and adolescents in the child welfare system. Consistent with the current findings,

previous research has also identified that the prosocial behaviour of children in out-of-home care is comparable to children in the general population (Flynn et al., 2004). Given that this study found that in-home children have comparable prosocial behaviour to out-of-home children, it seems probable that in-home children also have prosocial behaviour that is similar to children in the general population. Thus, in-home and out-of-home children and adolescents in the child welfare system struggle with prevalent mental health concerns, but they display an area of relative strength in regard to socially appropriate behaviour.

Contrary to expectations, there were no significant differences between the two samples in regard to mental health problems for any of the age groups. Thus, children involved with the child welfare system, whether they remain in their natural home environment or in out-of-home care, have comparable levels of behavioural and emotional difficulties. Although this finding diverges from some previous research (e.g., Berger et al., 2009; Farmer et al., 2008), other studies have found that children in the child welfare system have comparable mental health needs, regardless of placement (Berger et al., 2009; Farmer et al., 2001; Leslie, Gordon, Meneken, et al., 2005; Mennen et al., 2010). In fact, it has been identified that it is not the placement of a child within the child welfare system that is associated with mental health problems. Instead, whether a child is involved with the system and whether the child has experienced maltreatment have been suggested as key factors associated with mental health problems (Farmer et al., 2001; Mennen et al., 2010). Given that only children involved with the child welfare system were examined in this study, the sample could not be compared to children in the general population and this explanation could not be verified for the current sample.

Although Farmer et al. (2008) found that children in out-of-home care have increased behavioural and emotional problems when compared to children who remain in their natural

homes, mental health functioning only significantly predicted placement when assessed in combination with other factors, including age, gender, and strengths. The authors explained that there might be a cumulative effect of multiple risk factors rather than an independent effect for mental health. Taken together with the current findings, this suggests that child mental health functioning in isolation may not be associated with placement type in the child welfare system.

Alternatively, the lack of a significant difference in mental health functioning may be due to the fact that the out-of-home sample had been in care for at least one year, which allows time for placement stability. It is unknown how the two current samples would compare to children who recently came into care on measures of mental health. Research has found that placement instability is associated with poor mental health functioning (Newton, Litrownik, & Landsverk, 2000; Sullivan & van Zyl, 2007). Thus, it is possible that children who have been placed in out-of-home care recently may have increased difficulty with the transition and may experience higher levels of mental health problems. It was beyond the scope of the current study to examine children recently placed in out-of-home care. However, it would be important for future research to examine the mental health needs of all children within the child welfare system and compare these needs to children who have not been maltreated and/or are not involved with the child welfare system to better understand the emotional and behavioural needs of these vulnerable children.

Mental health service use. Given that the mental health functioning was similar for all age groups, regardless of placement, it is encouraging that children in their natural homes and in out-of-home placements also had similar levels of mental health service use. This suggests that, for the current sample, accessibility to mental health services is consistent with the specific mental health needs of children rather than placement. This contrasts with previous research

conducted with American child welfare samples, which has found that children who remain in their natural environments are less likely to receive mental health services than children in out-of-home care (Burns et al., 2004; Raghaven et al., 2010). It has been suggested that out-of-home care may facilitate access to mental health care by eliminating the financial barrier (Farmer et al., 2001). Although the current study did not examine whether the mental health services received by the children are adequate and effective, it does suggest that the provision of mental health services is driven by a child's mental health needs and not their placement. Thus, for the Ontario child welfare system, children, who remain in their natural environments, do not appear to be limited by a financial barrier and receive similar access to mental health services as children in out-of-home care. This may be facilitated by the fact that there are free and affordable community mental health services available to children and adolescents in Ontario. However, these services can be challenging for families to navigate. Child welfare workers may be particularly helpful in initiating access to appropriate community services and helping families navigate the complex health care system (Farmer et al., 2001), regardless of a child's of family's level of involvement with the system. It would be worthwhile to further examine whether the method of identifying needs and providing accessibility to mental health services in Ontario, and Canada more broadly, is addressing the children's mental health needs effectively and preventing additional mental health problems in a timely manner.

Education. No significant differences were found in regard to academic performance or truancy from daycare/school for the two samples, but children aged 5 to 15 years had low academic performance, regardless of placement. This is consistent with previous literature, which has found that children in out-of-home care have lower levels of educational attainment than the general population in Canada, the United States, and Europe (Berridge, 2007; Flynn et

al., 2004). This study adds to this existing research by identifying that this lower level of educational attainment extends to in-home children. There are many factors that have been associated with lower academic achievement for children in the child welfare system, including low socioeconomic status, maltreatment, and a lack of parental involvement with education, which provide explanations for this finding. Many children in the child welfare system come from families who live in poverty, placing them at a social disadvantage. They also often live in communities that have poor educational systems, higher high school drop out rates, and higher rates of crime. Middle and upper class families have the resources to use economic, cultural, and social strategies to improve their children's environment by moving to more affluent communities with better education. In regard to maltreatment, children who have experienced maltreatment are more likely to exhibit behavioural and emotional difficulties, which then impact their ability to engage in learning (Berridge, 2007). Children who have experienced maltreatment are also more likely to have low parental involvement in school (this is especially true for children who experience neglect), which is also a known correlate of poor educational attainment. In addition to these factors, maltreatment affects the structure of the brain, which has a long-lasting impact on learning and behaviour (e.g., De Bellis, 2001; Berridge, 2007; Perry, 2001).

These potential explanations highlight that the low educational attainment of children involved with the child welfare system is broader than the system itself and relates to the social inequalities that occur at a societal level. Thus, change at the level of the child welfare system would not be sufficient to fully address this area of concern. Policy changes at the government level are also necessary to improve quality of education in low socioeconomic areas and provide better educational planning for children in the child welfare system (Berridge, 2007), including a

trauma-informed approach that considers the impact of maltreatment on learning. Researchers have already begun to examine how educational supports can impact children in out-of-home care with success (e.g., Flynn, Marquis, Paquet, Peeke, & Aubry, 2012); however, the current results indicate that these supports would also be of benefit to children involved with the child welfare system who are not in care.

Developmental assets. In regard to developmental assets, 0- to 9-year-old children in their natural home environments had fewer internal assets (i.e., commitment to learning, positive values, social competencies, and positive identity) and external assets (i.e., support, empowerment, boundaries and expectations, and constructive use of time) than same-age children in out-of-home settings. Similarly, 10- to 15-year-old children in their natural home environments had fewer external assets than same-age children in out-of-home care. There was no significant difference in internal assets for this age group. Some reasons why children in natural home settings may have fewer assets than same-age children in out-of-home settings are (1) families may have difficulty navigating the available resources within the community and (2) families who are involved with the child welfare system often have financial constraints (Farmer et al., 2001). In out-of-home care situations, the child welfare system can provide the knowledge, financial resources, and supports necessary for children to benefit from community resources and, in turn, increase their developmental assets. Thus, accessing external assets of interest may be easier for children in care than children who remain in their family homes. This again highlights the importance of accessible and affordable community supports for families in need.

In vulnerable home environments, parents may struggle to meet basic needs and provide appropriate care; thus, providing external assets, such as extracurricular activities, would be challenging and potentially not a priority. In out-of-home care, caregivers, such as foster parents,

are typically in more stable situations where basic needs are consistently met and structure and routine are more prominent. Thus, they are able to focus on higher order needs, such as the extracurricular activities of foster children (Maslow, 1968). It is also possible that the community in which a child lives has an impact on developmental assets, as well as academic achievement (Berridge, 2007). When a child is placed in out-of-home care, they may be moved to a more affluent community that has increased supports and community activities, which may assist caregivers in providing additional opportunities to enhance a child's developmental assets. This suggests that having an organized and structured caregiver and community supports are important when considering a child's developmental assets. Providing supports within the home and community to foster an environment where a child's basic needs are consistently met and his/her higher order needs can be prioritized would be beneficial (i.e., having enough financial resources for food and shelter, assistance with establishing a routine and structure in the home, and supports to aid caregivers with providing and fostering external assets).

It is also probable that foster parent selection factors, including (1) the unique characteristics that drive individuals to become foster parents and (2) the assessment and selection process required for an individual to become a foster parent [i.e., interviews and home assessments to determine the appropriateness of individuals and the safety of their home, such as the Structured Analysis, Family Evaluation (SAFE) Home Study that is used in Ontario (OACAS, 2015)] are associated with a foster parent's ability to provide an environment rich in developmental assets. In addition, foster parent training effects (i.e., the fact that all foster parents receive mandatory pre-service training; e.g., Nash & Flynn, 2016; Rodger, Cummings, & Leschied, 2006) likely also play a positive role in enhancing foster children's developmental assets.

Although children in their natural home environments had significantly fewer assets, especially external supports and opportunities, than similar aged children in care, it is important to note that the developmental assets were not low for either sample. Children in out-of-home care had a high number of developmental assets while children in their natural home environments generally had a more moderate number of developmental assets. Thus, both samples have both internal and external assets. Additional research examining the particular types of developmental assets (e.g., supports, caregiver boundaries, involvement in creative activities, motivation to learn, honesty, sense of purpose) that are present and absent for children in various placement settings within the child welfare system would help in identifying the specific needs and strengths of children and their surrounding environments and areas for improvement, particularly for children who remain in their natural environment.

6-Month Follow-Up Comparisons

Children who continued to be involved with the child welfare system at the 6-month follow-up point were compared to children whose cases were closed on measures of health, daycare/education, behavioural and emotional development, developmental assets, reason for child welfare involvement, and family status. None of the child and family variables examined were significantly associated with continued involvement with the child welfare system for children who remained in their natural home environments. Previous research has not examined case closure specifically and has focused more on out-of-home placement as the outcome variable. Thus, there is limited knowledge about the factors associated with case closure for children who remain at home. It is possible that family or community level factors that were not examined, such as a caregiver's parenting capacity or the child welfare agency's funding situation for low-risk cases, are associated with case status. Previous research has identified that

within the child welfare population, particularly for children in out-of-home care, family

variables account for a large portion of the variance in child welfare outcomes. This suggests that

it may be particularly valuable to closely examine family factors, such as parenting capacity and

family relationships, to further understand predictors of case closure for children who remain in

their natural environments. One method to further examine this would be to have in-home

samples complete that Family and Social Relationships dimension of the most recent version of

the AAR, which has various measures assessing parenting and caregiver-child relationships

(Flynn et al., 2010).

Agency factors have been found to be less important in accounting for the variance in

case outcomes (Bell, 2014). However, research examining the impact of out-of-home care has

found that a case worker's relative tendency to place a child in out-of-home care is important

(e.g., Doyle, 2013; Warburton et al., 2014). Thus, it may be beneficial to examine a case

worker's tendency to close a case as a variable in future analyses. It is also possible that case

closure is associated with a combination of individual and systemic factors, which is consistent

with Bronfenbrenner's (1979) ecological systems theory. Thus, future research examining child,

family, and agency level factors would be important to better understand predictors of case

closure decisions made within the child welfare system for children who remain in their family

homes.

Study Limitations

The current study conducted a thorough examination of the similarities and differences

between children who remained in their natural homes and children in out-of-home care.

However, the out-of-home sample had been in care for at least 1 year. Thus, children who had

been in care for less than 1 year were not represented. It is possible that there are key needs and

strengths for this population that may differ from the two samples included in this study. It would be a worthwhile endeavour to compare and contrast all three groups of children involved with the child welfare system to obtain a more comprehensive understanding of the needs and strengths of children involved with the system.

The in-home sample was representative of child welfare in-home samples, with children who had just become involved with the child welfare system, children who had been involved for a while but had never been removed from their natural homes, and children who had previously been in out-of-home care. Although the representativeness of the sample is considered a strength, the heterogeneity within the in-home sample may have confounded the analyses, particularly those that examined predictors of case closure. For example, it is possible that the children who remained in the home at the time of data collection, but had previously experienced out-of-home care, were less likely to have their cases closed than children with no previous out-of-home placements. Due to sample size restrictions and missing data, it was not feasible to examine how these different experiences with the child welfare system impacted the results. It would be a worthwhile endeavour for future research to examine these different in-home samples to determine whether there are unique needs and strengths associated with particular child welfare trajectories for children who reside in their family homes and how this may impact outcomes, such as case closure.

In addition, despite the relatively large overall sample size, the sample sizes for each of the age groups were smaller and affected the power of the study. Many of the differences identified converged with previous research, which demonstrates the validity of the findings. However, the fact that relatively few significant differences were found between the two samples and that none of the examined factors were significantly associated with case closure could be

due to low power. Thus, it would be beneficial to have additional research in this area to verify

the current findings. Longitudinal research would be particularly helpful to examine factors

associated with case closure for children in their natural environments, as there are no known

studies with which to corroborate the current findings.

Furthermore, it is possible that the procedure for completing the AAR-C2-2010 may have

led to under- or over-reporting by natural caregivers. The AAR-C2-2010 is an interview

conducted by the family case worker with the natural caregiver and the youth if they are over the

age of 9 years. It is possible that the natural caregiver may have been concerned about the impact

of the interview and assessment on the placement status of their child and the services they

would receive. For example, if the caregiver was worried that being truthful when completing the

assessment would lead to out-of-home care for their child, they may have under-reported their

difficulties. Alternatively, if the caregiver was feeling overwhelmed and wanted to receive

assistance, they may have over-reported their difficulties to increase the likelihood that they

would receive services. The current study did not control for this bias so it is unknown how

much under- or over-reporting was present within the in-home sample. The fact that the in-home

caregiver reports were consistent with the out-of-home sample on many measures and that

comparable functioning between these two samples is consistent with some previous literature

(e.g., Farmer et al., 2001; Mennen et al., 2010) suggests that the in-home caregivers did not

engage in extensive under- or over-reporting. However, it would be beneficial for future research

to examine the reliability of in-home caregivers reports on the AAR-C2-2010 when it is

completed with family case workers. It would be also be helpful to determine if introducing the

AAR-C2-2010 as a measure that assesses functioning of the family to ensure the provision of

optimal services, rather than as a measure that influences the decision to place a child out of care, is helpful in producing more accurate caregiver reports.

Lastly, the cross-sectional and longitudinal studies were correlational and no causal associations can be inferred. In addition, because two stratified random samples were obtained for the cross-sectional study, the findings do not provide information about the impact of placement type on child and family outcomes. For this, matching techniques, such as propensity score matching (e.g., Austin, 2008; Caliendo & Kopeinig, 2008; Peikes, Moreno, & Orzol, 2008) and approximate string (fuzzy) matching (e.g., Navarro, 2001), would be required. More specifically, to examine the impact of placement type on outcomes, a longitudinal study that uses propensity score matching is recommended (Berger et al., 2009).

The in-home and out-of-home samples were not matched in the current study because the purpose was to compare and contrast children involved with the child welfare system who remained with their natural families to those in out-of-home care. For this, a representative sample of in-home and out-of-home children is optimal. Matching these two samples on demographic and service-related factors, such as age, gender, and reason for involvement with the child welfare system, would limit the examination of characteristics between these two groups (i.e., it would control for potentially meaningful variance or differences between the two groups). In addition, as the complex research examining the impact of out-of-home care demonstrates, the specific variables that account for the error variance between in-home and out-of-home samples are difficult to identify (e.g., Berger et al., 2009; Doyle, 2013). Thus, it is unknown whether matching on age, gender, and reason for admission would actually account for the error variance between the two groups, which is the overarching purpose of matching. Furthermore, matching the samples would have resulted in a smaller sample size because some

of the agencies examined had limited numbers of children in out-of-home care. This also would have made matching the two samples difficult. For these reasons, stratified random samples were identified as more appropriate for the current study than matched samples.

Implications for Practice and Recommendations for Future Research

Across age groups, there were relatively few significant differences between children who remained in their natural home environments and children in out-of-home care. This suggests that the needs and strengths of these two groups of children; in regard to general health, mental health, and school factors; were comparable. Therefore, these two groups of children may benefit from similar levels of service involvement from the community to address these areas of functioning. These similarities emphasize the importance of examining the child welfare system from a systemic perspective that includes children in various types of placements, rather than focusing solely on children in out-of-home care, which is a predominant approach to child welfare research in the existing literature (e.g., Burns et al., 2004; Commission to Promote Sustainable Child Welfare, 2010).

It is important to note that factors and systems in the child welfare system that were not examined in this study are potentially influential in predicting child functioning and outcomes. One potential factor is the impact of the relative propensity of child welfare workers making placement decisions based on level of risk. Warburton et al. (2014) and Doyle (2013) highlighted the importance of differential propensity of child welfare worker decisions using an instrumental-variables approach. Future longitudinal research that encompasses a continuity of services approach and examines multiple levels of the child welfare system, including child welfare workers, would be beneficial in further enhancing our understanding of how children are impacted by the child welfare system.

Another consistent finding was that in-home children have significantly lower levels of developmental assets, particularly in regard to external assets. Despite having similar levels of functioning, children in their natural environments were exhibiting and accessing fewer internal and external resources. This finding highlights a potential avenue for improving services provided to children who remain in their natural homes: increasing accessibility to community supports. This could address the discrepancy and enhance the developmental assets for children in their natural home environments. This is particularly pertinent given that previous literature has found that, for children in out-of-home care, increased developmental assets are associated with educational success, prosocial behaviour, self-esteem, and behavioural functioning (Filbert & Flynn, 2010; Flynn & Tessier, 2011; Flynn, Tessier, & Coulombe, 2013). This suggests that focusing child welfare involvement on enhancing a child's developmental asset profile, particularly a child's external assets, could result in improved outcomes in various areas of functioning.

In addition to improving access to community resources to enhance developmental assets, it is also important to consider collaboration in protection and community services. The relationship between these services can impact children/families and developmental assets. If the community services are complementary to protection services and they liaise with one another, than the developmental assets of a child and family will be positively impacted. However, if they are not consistent with or contradict one another, they may not benefit the child or their family. Future research comparing the developmental asset profiles of children in their natural homes and children in out-of-home care and identifying particular assets related to positive outcomes would be helpful in specifying key areas that would benefit from child welfare and community intervention and collaboration.

In addition, by nature of their involvement with the child welfare system, it is likely that children who live in their natural family environments are living in sub-optimal family situations, where basic needs, such as food, shelter, and a safe, structured environment, may not be consistently met. Harlow's hierarchy of needs indicates that higher order needs, such as community involvement, are much less likely to be attained when a child/family is focused on meeting basic needs and caregivers are working long hours to attain this (Harper, Harper, & Stills, 2003). The out-of-home sample may have better community involvement because they live in foster care environments, where basic needs can be more reliably met due to the fact that foster parents receive pre-service training and the resources to provide adequate care (e.g., Nash & Flynn, 2016; Rodger, Cummings, & Leschied, 2006). The child welfare system could assist children who remain in their family homes by initially focusing on meeting basic child and family needs, including a safe home environment and helping caregivers develop structured and organized environments. Once these underlying needs are consistently being met, a child and family would be better able to shift their focus to higher order needs (Harper et al., 2003).

The importance of addressing the basic needs of a child and his/her family prior to targeting higher order needs is supported by differential response, a relatively recent, but increasingly popular, approach to providing services to families in the child welfare system (Semanchin Jones, 2015). *Differential response* is a multi-pathway response to children and families who are identified as low- or moderate-risk following an initial assessment (i.e., children who remain in their natural home environments). It allows for a more individualized response that focuses on meeting the specific needs of a family, with an initial emphasis on meeting any unmet basic needs (e.g., providing financial resources to meet basic needs). Research has found that the outcomes of families who received differential response improved when the supports

provided to families were culturally sensitive and focused on meeting basic needs (Semanchin Jones, 2015). Additional and more rigorous research that examines the effectiveness of providing services focused on addressing a family's basic needs, such as differential response, is needed to determine whether this approach to services is effective for a wide range of child welfare populations (e.g., children who are admitted to the child welfare system for various reasons) and to determine its long-term outcomes and cost-effectiveness.

Identifying specific basic needs and developmental assets that can be targeted by child welfare intervention would assist in providing more streamlined services. The child welfare system's financial and staffing resources are limited. Thus, it may not be possible for the child welfare system to provide in-home and out-of-home children with similar levels of support in fostering internal and external resources. However, there are various subsidized or cost-free resources for children and adolescents (such as financial aid for extracurricular activities, free or subsidized mental health services, youth groups, etc.) offered in communities throughout Ontario. Focusing on increasing awareness and knowledge about these accessible community resources as soon as a child/family becomes involved with the child welfare system may be a more realistic and budget-friendly approach. This would be even more effective if the responsibility lies at a community level and not just with the child welfare system. Thus, having various industries that interact with children and families, including schools, health care centres, mental health care centres, and community centres, educate families and assist them with navigating and accessing affordable community resources may help improve a child's developmental assets, as well as a family's ability to meet a child's basic needs. This would place less of an onus on the child welfare system and also potentially provide vulnerable families with earlier access to resources.

The importance of increased community involvement is supported by one of OACAS's current priorities for the child welfare system, which is to enhance and further develop relationships with community partners to better serve the Ontario child welfare population (OACAS, 2014). It is also consistent with a review of the literature on child development, which found that healthy child development following adverse childhood experiences is dependent not only on child and family factors, but the broader community and society, and, thus, requires intervention and change at a broader societal level (Boivin & Hertzman, 2012). It would be beneficial for future research to examine whether community, and potentially societal level interventions focused on improving access to resources for vulnerable families prevents future involvement with the child welfare system or reduces the intensity of child welfare involvement with families.

Alternatively, it is also possible that the increased access to developmental assets that children in out-of-home care received throughout their 1 or more years in out-of-home care improved their functioning to a level that is similar to children who remain in their natural homes. In this case, children in out-of-home care would benefit from continuing to receive increased resources from the child welfare system. Examining the causal relationship between developmental assets and functioning for the out-of-home sample requires longitudinal research, which was beyond the scope of the current study. A longitudinal study that includes all children entering the child welfare system and follows them throughout their care trajectory would be an optimal method for assessing access to and the impact of child welfare and community resources on functioning in various placement settings.

Conclusion

In summary, this exploratory study found that both children in their natural environment and children in out-of-home care are functioning adequately in regard to health, prosocial behaviour, and developmental assets. However, the mental health and academic functioning for both samples were identified as areas of need. Children who reside in in-home and out-of-home care could benefit from additional interventions that target these specific areas of difficulty. It may be especially beneficial to employ interventions that take advantage of areas of strength, particularly prosocial behaviour and developmental assets, while enhancing them at the same time.

Relatively few significant differences were found between children who remained in their natural environment and children in out-of-home care, which supports a systemic approach to researching and providing care to children involved with the child welfare system. Typically, child welfare research focuses on children in out-of-home care, which is understandable given the risk associated with these children and the fact that these children are provided the most costly services (e.g., Burns et al., 2004; Commission to Promote Sustainable Child Welfare, 2010). However, the current findings suggest that examining children in various types of placements within the child welfare system is more advantageous, particularly for obtaining a comprehensive understanding of its children and providing effective care.

Some key areas of need were identified for children who remain in their natural home environments, which have implications for service provision. Despite having comparable mental health functioning, children in natural home environments had lower developmental assets than children in out-of-home care. This indicates that children who remain in their family homes may benefit from additional support and resources from the child welfare system and broader

community to enhance their developmental assets, which may, in turn, promote better long-term outcomes for the child and family. That said, it is also possible that the more intensive resources received by children in out-of-home care help foster a level of functioning that is similar to children who remain in their natural environments. In this case, children in out-of-home care would continue to benefit from increased access to resources. More research is needed to replicate and better understand these findings so that the child welfare system can best meet the needs of all involved children.

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Chapter 3

The Impact of Foster Child Characteristics on Foster Parents' Perceptions about Fostering

Abstract

Foster children are a challenging group of children to parent; there are a far greater number of children with special needs (e.g., physical, emotional, and behavioural) in the child welfare system than in the typical child population. However, relatively little research has examined the impact of fostering children with special needs and maltreatment histories on perceptions of fostering. Across Canada, 937 foster parents completed the *Canadian Foster Parent Survey* (CFPS; Leschied & Rodger, 2012). Bivariate and multivariate analyses were performed to determine the impact of foster child factors on four areas of foster parents' experience of fostering, after accounting for foster parent and agency-level factors: perceptions about (1) the agency, (2) the fostering system, (3) training, and (4) foster children and their placements. Foster child needs and maltreatment histories, as reported by foster parents, were not significantly associated with foster parent perceptions. Increased practical and emotional supports were the most influential factors associated with positive perceptions of both agency-related components and foster children and their placements. Child welfare agencies can improve foster parents' experiences of fostering and potentially reduce attrition rates by providing foster parents with sufficient practical and emotional support. Additional research assessing specific qualities of emotional and practical support (e.g., intensity and quality) that lead to optimal foster parent perceptions, as well as a regular monitoring system for foster parents to provide feedback about fostering, would be beneficial to continuously evaluate their perceptions, assess the impact of support interventions, and address any areas of concern that may lead to attrition.

Keywords: foster parenting, foster children, maltreatment, special needs

The Impact of Foster Child Characteristics on Foster Parents' Perceptions about Fostering

Foster care is a temporary care setting that provides a child with a safe and nurturing family-like environment. Despite its stated goal of being short-term, there are circumstances where foster care can become a long-term placement and even a place for children to grow up. It is both the most common and least restrictive form of out-of-home care for children in the child welfare system (Rosenwald & Bronstein, 2008). It has been reported that up to three quarters of children in care are in foster homes (Urquhart, 1989). However, there is currently a deficient number of foster care placements available to adequately serve the number and complexity of children requiring placement (Matheson, 2010; Rodger, Cummings, & Leschied, 2006; Urquhart, 1989). Increased knowledge about factors related to foster parent recruitment and retention can aid decision makers within the child welfare system in maintaining an adequate supply of foster parents (Denby, Rindfleisch, & Bean, 1999).

There are many factors that contribute to a foster parent's decision to start, continue, and stop fostering (Denby et al., 1999). Therefore, when examining the fostering experience, it is important to take a systemic perceptive and assess various aspects of fostering including foster child, family, and agency factors. The extant literature has largely focused on agency-related factors, and has mostly neglected examining how foster child and foster parent factors might relate to the fostering experience. The current study addresses this gap in the literature by examining how child, foster parent, and agency factors are associated with the fostering experience. Identifying the foster child, foster parent, and agency factors that affect specific aspects of the fostering experience can help identify areas that child welfare agencies can address to create a more positive environment for foster parents. Improving the experiences of foster parents and addressing their needs can increase their satisfaction with fostering, potentially

reduce attrition rates, and maintain and, potentially increase, the number of current foster parents (Fees et al., 1998).

<center>**Foster Parent Recruitment**</center>

Given the current shortage of foster parents (e.g., Matheson, 2010; Rodger et al., 2006; Urquhart, 1989), effective recruitment is an important consideration for the child welfare system. In order to effectively recruit foster parents, child welfare agencies require an understanding of how foster parents find out about fostering, the characteristics of foster parents, and their motives for fostering.

Method of Recruitment

Rodger et al. (2006) surveyed 652 foster parents in southwestern Ontario and found that close to 60% of foster parents found out about fostering by connecting with other foster parents or foster children and only about 20% found out about fostering through the media. Similarly, Leschied, Rodger, Brown, den Dunnen, and Pickel (2014), who surveyed foster parents across Canada, found that the majority of foster parents reported becoming foster parents based on personal connections to other foster parents, a foster child, parents who foster, or being in care themselves. A minority identified the media as influencing their decision to pursue fostering. This suggests that "word-of-mouth" or personal connection is a more effective recruitment method than media efforts.

Characteristics of Foster Parents

Studies examining foster parent characteristics have found that most foster parents are married and Caucasian. They have a mean age of about 50 years and have fostered for 10+ years. The majority have at least a high school education and work outside the home in addition to fostering. However, there is significant variation within each of these factors and additional

variations between different geographic locations (Leschied et al., 2014; Orme & Buehler, 2001; Rodger et al., 2006).

Foster parents also vary in regard to preferred foster child characteristics. Cox, Orme, and Rhodes (2003) found that the majority of foster parents are willing to foster children with a variety of difficulties, but children who set fires and display destructive or sexualized behaviour are the least desired. That said, foster families with more resources tend to be more comfortable working with children with behavioural difficulties. Rosenwald and Bronstein (2008) held three focus groups for 13 foster parents in the state of New York to examine preferred foster child characteristics. Some expressed concern about taking foster children with severe problems while others became foster parents to work with children who are most in need. In addition, foster parents differed as to whether they considered children of a particular gender, age, and history of destructive behaviour as more or less desirable. However, there was consensus that the race of a child was not an area of concern. Thus, foster parents appear to have inclinations toward certain foster child characteristics but the specific preferred characteristics differ for each foster parent.

Motivation for Fostering

Understanding the motivations of foster parents is essential to developing effective methods of foster parent recruitment and retention. In fact, foster parents whose motives for fostering match with their actual experience of being a foster parent are more likely to experience a sense of satisfaction and continue fostering (Rodger et al., 2006). Motives for fostering is an area that has received a significant amount of research attention.

Motivations are commonly described as intrinsic or extrinsic in nature (Ambrose & Kulik, 1999; Rodger et al., 2006). Intrinsic motivation refers to internal forces characteristic of and within an individual, such as values. Extrinsic motivation relates to external forces, such as

environmental expectations and rewards. Research has consistently found that intrinsic rewards, such as respect and work that is consistent with personal values, are associated with job satisfaction and continuation. This phenomenon is referred to as motivation theory (Ambrose & Kulik, 1999).

Not surprisingly, research that examines motives for fostering is consistent with motivation theory and has found greater support for intrinsic motivations. The most common reasons for fostering are altruistic or familial in nature. The most prevalent altruisic motivator is the desire to help children (e.g., Barth, 2001; Buehler, Cox, & Cuddeback, 2003; Redding, Fried, Britner, 2000; Leschied et al., 2014). In addition, some foster parents are motivated to foster because they were foster children themselves or experienced events similar to those of foster children and identify with them on a personal level (Baum, Crase, & Crase, 2001; Redding et al., 2000). Other altruistic motivators include wanting to provide children with a stable environment and fostering out of a love of children (Barth, 2001; Buehler et al., 2003; Rodger et al., 2006). Giving back to the community and a desire stemming from religious affiliation have also been identified as intrinsic motives for fostering (Denby et al., 1999; Gillis-Arnold, Crase, Stockdale, & Shelley, 1998; Testa & Rolock, 1999). The most frequent familial intrinsic motivators identified by foster parents are a desire to help a child relative, provide a sibling for an only child, stay home and care for children, adopt or have their own children when they are unable to themselves, or fill an "empty nest" (Andersson, 2001; Baum et al., 2001; Denby & Rindfleish, 1996; Isomaki, 2002; Leschied et al., 2014; Redding et al., 2000).

Although less common, extrinsic motivators have also been identified by foster parents. The most commonly mentioned extrinsic motivator is compensation. Some foster parents identify a wish to supplement their family income as a reason for fostering (Isomaki, 2002;

Redding et al., 2000). Studies have found though that income supplementation is not generally the principal reason for fostering (Kirton, 2001; Leschied et al., 2014). For example, Kirton (2001) interviewed 20 female foster parents in England about their views on payment. These foster parents identified that compensation was not the most important influence on their decision to become and continue being foster parents. However, most foster parents did feel that compensation was important when they began fostering and realized the costs and challenges associated with the task. Similarly, Pasztor and Wynne (1995, as cited in Rodger et al., 2006) concluded from their review of the literature that reimbursing foster parents for the full cost of fostering positively influences foster parent retention.

MacGregor, Rodger, Cummings, and Leschied (2006) examined foster parent motivations related to foster parent intent to continue fostering. The authors conducted nine focus groups for a total of 54 foster parents. Similar to previously identified findings and congruent with motivation theory, intrinsic motivators were much more prevalent than extrinsic motivators. The most frequently identified intrinsic, altruistic motivations for fostering were wanting to make a difference in children's lives and the desire to have children in the home. The authors concluded that the importance of intrinsic motivators suggests that it would be more effective for child welfare agencies to emphasize internal satisfaction that comes from making a small change in a child's life when recruiting foster parents than external motivators.

Foster Parent Retention

Numerous studies have examined factors associated with continuation or discontinuation of fostering. The most prominent factors associated with foster parent attrition are related to both personal and practical support. The most common correlate is insufficient support from child welfare agencies and case workers for both the foster parents themselves and their foster children

(MacGregor et al., 2006). In fact, it has been found that lack of support and responsiveness from and poor communication with child welfare agencies are associated with leaving fostering within the first year of becoming a foster parent (Annie E. Casey Foundation, 2002; Rhodes, Orme, & Buelher, 2001). Similarly, in a paper discussing strategies to improve foster parent recruitment and retention, Rodwell and Biggerstaff (1993) emphasized the importance of the foster parent relationship with the case worker, as well as the importance of the role of the foster family in the agency, on foster parent retention. A lack of decision making input and recognition as valued members of the foster child's team have consistently been associated with foster parent attrition (Farris-Manning & Zandstra, 2003; Hudson & Levasseur, 2002; Rhodes et al., 2001). One study examining reasons for foster home closure in Alaska highlighted the importance of agency support in the retention of foster parents. Baring-Gould, Essick, Kleinkauf, and Miller (1983) found that foster homes closed due to two main reasons: (1) stressful life events that occur within the foster family and (2) a lack of agency supports, including infrequent contact with the case worker and insufficient training.

A study by Denby et al. (1999) also highlighted the importance of personal support on attrition. These researchers collected data from a random sample 539 active, licensed foster homes through mailed surveys. The authors developed a new instrument that assessed various aspects of foster parenting that research has found to be related to foster parent retention. Overall satisfaction, readiness to phone an agency worker, fewer foster children in the home, not being treated like one needed help, and private agency affiliation were factors that influenced a foster parent's intent to continue fostering.

The relationship between practical supports and foster parent attrition has also been identified in several studies (Hudson & Levasseur, 2002; Rhodes et al., 2001; Triseliotis,

Borland, & Hill, 1998). For example, Triseliotis and colleagues (1998) found that insufficient respite care was associated with foster parent attrition. In addition, Rhodes et al. (2001) found that foster parents' intent to continue fostering was related to their perceptions about the effectiveness of training. These authors also identified challenges with children's behaviour as a factor associated with foster parent attrition. Foster parents may feel more prepared to care for difficult children and, thus, less likely to consider quitting if they have received adequate training. The importance of training on foster parent retention is further indicated by a study that examined training, placement risk, and personal characteristics of foster parents (i.e., assertiveness, community activism) on license retention (Boyd & Remy, 1979). This study found that personal qualities were associated with retention but training had the biggest association with license retention.

Compensation has also been associated with foster parent retention. Studies have found that intentions to quit fostering are associated with low perceptions of compensation rates and dissatisfaction with the level of compensation (Barth, 2001; Kirton, 2001). Chamberlain, Moreland, and Reid (1992) conducted a 2-year study, which examined whether increased foster parent support, compensation, and training impacted a foster parent's desire to continue fostering. During the 2-year project, 12 of the 72 participating families (17%) stopped providing foster care, which was significantly lower than the state-wide dropout rate of 40% during the study period. Providing enhanced services resulted in a dropout rate almost two-thirds less than that of the control group. This demonstrates the positive impact that providing foster parents with additional practical and emotional supports has on foster parents' motivation to continue fostering.

MacGregor et al. (2006) examined the role of both personal and practical support more specifically by asking 54 foster parents about the strengths and deficits of the support they receive from child welfare agencies in focus groups. The deficits identified included lacking good communication with workers, respect for foster parents' abilities and opinions, recognition for foster parents, and consideration as part of the foster child's care team, as well as lacking additional supports, such as support from other foster parents through agency arranged foster parent support groups. The foster parents identified a lack of practical supports, such as limited access to respite care and unrealistic and unspecialized training opportunities, as being related to attrition as well. They also felt that providing accurate information about the foster child and introducing foster parents to the role gradually would improve retention rates.

The type of foster care provided has also been associated with foster parents' considering withdrawal from fostering. A recent study by Smith et al. (2015) examined Canadian foster parents and found that foster parents who provided *treatment foster care*, which refers to caring for children who present with needs that require services beyond usual care (e.g., children with physical, medical, and mental health issues who require specialized care) were more likely to consider withdrawing than foster parents who provided regular foster care. This suggests that fostering more challenging children and providing more specialized foster care can increase the likelihood that foster parents will consider withdrawing from fostering.

These studies highlight that adequate support, both personal and practical, is paramount to foster parent retention (Denby et al., 1999). Foster parents who feel supported, valued, and respected by the agency and case worker and perceive their training, respite services, and compensation as adequate are more likely to continue fostering. In contrast, foster parents who

are not recognized as part of the professional team or respected as an expert and advocate for the child are more likely to consider withdrawing from fostering (Rodger et al., 2006).

Foster Parent Satisfaction

In addition to foster parent attrition and consideration of withdrawing from fostering, there has also been research that examines foster parent satisfaction and broader perceptions of fostering. These studies have generally found that foster parents have moderate to high levels of satisfaction with their fostering role (Fees et al., 1998; Soliday, McCluskey-Fawcett, & Meck, 1994). Foster parents do experience some distress, depressive symptoms, and anxious symptoms related to stressors associated with fostering but overall levels of depression are low (Cole & Eamon, 2007; Farmer, Lipscombe, & Moyers, 2005; Wilson, Sinclair, & Gibbs, 2000). However, strong dissatisfaction in just one area can be enough to cause a foster parent to stop fostering (Fees et al., 1998). Feelings of strain, even at low levels, have been found to negatively impact foster parents' ability to care for children effectively and lead to higher levels of placement disruption (Cole & Eamon, 2007; Farmer et al., 2005). Research has examined many factors related to foster parent satisfaction. The stressors and challenges of foster parenting that affect the fostering experience can be organized into three categories: foster child, foster parent, and agency/system-level factors.

Foster child factors. In regard to foster child factors, the age and number of children cared for, particularly fostering several children under the age of 6, has been associated with reduced foster parent wellbeing (Buehler et al., 2003). One challenge of foster parenting is caring for the complex mental health and developmental needs of foster children. Children in the child welfare system have much higher levels of mental health problems than children who have never been involved with child protective services (e.g., Kerker & Morrison Dore, 2006; Milan &

Pinderhughes, 2000; Rodger et al., 2006; Stein, Evans, Mazumdar, & Rae-Grant, 1996).

Although foster parents receive pre-service training, this training may not include training on

how to identify mental health problems and manage difficult behaviour.

Due to the current low supply of foster parents, many foster parents are asked to care for

foster children beyond the scope of their training and own perceived capabilities, further adding

to their levels of stress. Foster parents are also given limited information about the history of

children placed in their care due to privacy and confidentiality guidelines. Thus, they may be

unaware of the underlying issues related to the child's behavioural and emotional problems

(Whenan, Oxlad, & Lushington, 2009). In addition, foster parents may not understand or be

aware of the connection between previous maltreatment experiences and current behaviour (Ko

et al., 2008). As a result, foster parents may focus solely on the behavioural problems and be at a

loss for how to manage these difficult behaviours, which can lead to the termination of a foster

placement. This is supported by previous research, which has found that severe behaviour

problems are associated with increased placement instability for children in the child welfare

system (Barber, Delfabbro, & Cooper, 2001; Chamberlain et al., 2006; Minty, 1999).

Foster child behavioural and emotional problems have also been associated with foster

parents' intent to continue fostering and wellbeing (Denby et al., 1999; Rhodes et al., 2001;

Whenan et al., 2009). Whenan et al. (2009) assessed the effect of child behavioural and

emotional problems, according to the Strengths and Difficulties Questionnaire (SDQ), foster

parent self-efficacy for managing challenging behaviour, and the foster parent-child relationship

on 58 foster parents' wellbeing, satisfaction, and intent to continue fostering. It found that fewer

foster child behavioural and emotional problems, pre-service and in-service training, increased

self-efficacy, and a healthy relationship with a foster child were associated with foster parent

wellbeing. Foster parent self-efficacy and a positive relationship with the foster child were associated with foster parent satisfaction. In addition, studies have found that foster parents who have lower self-efficacy for coping with challenging behaviour from foster children (Whenan et al., 2009) and have foster children with severe behavioural problems (Rhodes et al., 2001) are more likely to discontinue fostering.

However, not all studies have found a link between foster child behavioural and emotional problems and foster parent functioning. For example, Farmer and colleagues (2005) examined factors associated with foster parent strain. Their sample consisted of 68 adolescent foster children and their foster parents. The authors found that foster parent strain was not associated with foster children's level of emotional and behavioural problems, as reported on the SDQ, but it was linked to whether the foster parents thought the foster child had behavioural problems. The authors suggested that the foster parent rating of behavioural problems might be more of an indication of how well foster parents believe they can cope with foster children's difficulties. Thus, despite the inconsistent findings about the association between foster child behavioural and emotional problems and foster parent functioning, the extant research suggests that foster parent perceptions on how well they believe they can cope with child behavioural and emotional problems are associated with their wellbeing.

Foster parent factors. In addition to the complex problems of foster children, foster parents are often asked to cope with many additional stressful issues, including difficult relationships between themselves and biological parents, personal and family tensions, placement disruptions, allegations against them, and disagreements with social services (Wilson et al., 2000). Wilson et al. (2000) found that two-thirds of foster parents had experienced one or more of these events and, although most of the sample stated they were satisfied with their

fostering experience, experiencing one or more of these stressors was associated with less positive attitudes about continuing with fostering. Similarly, Farmer and colleagues (2005) found that foster parents who had experienced a higher number of stressful life situations 6-months prior to a foster child being placed in their home (e.g., moving to a new home, relationship difficulties with partners, death of a family member or friend, serious illness of a family member, changes at work, financial concerns, etc.) were more likely to express dissatisfaction with a placement and experience placement disruption 1-year later than foster parents who had experienced fewer stressful events prior to the placement of a foster child.

The examination of specific foster parent factors related to perceptions of fostering has not received much research attention. One foster parent factor related to stress, that has been identified mostly through small sample, qualitative study designs, is the foster parent's own unrealistic or unmet expectations of what fostering entails (Buehler et al., 2003; Coakley, Cuddeback, Buelher, & Cox, 2006). However, one study with a more representative sample also found similar results. Self-reported satisfaction of foster parents was associated with feeling competent to handle difficult children, wanting to take in children who needed loving parents, having no regret of time invested in foster children. In addition, being an older foster mother, receiving information when needed, and approval from the agency worker were associated with foster parent satisfaction (Denby et al., 1999). Lastly, Whenan et al. (2009), as described previously, found that increased foster parent self-efficacy is associated with foster parent satisfaction. Together, these findings for foster parent factors highlight the importance of agency-level aspects, such as training and the provision of realistic portrayals of fostering during the orientation period, in supporting positive foster parent experiences.

Agency-level factors.

Foster parent training. Training is an essential component to successful foster care placement (Annie E. Casey Foundation, 2002). It provides caregivers with opportunities to improve their parenting skills. This in turn, helps retain skilled and competent foster parents and improves quality of care for foster children. Continuing education also provides caregivers with ongoing support, which can buffer against stressors foster parents experience that may otherwise lead to home closures (Annie E. Casey Foundation, 2002). Recently, there has been increased interest in whether parent training programs that target child behavioural problems are also effective for foster parents.

One program that has received considerable research attention is Keeping Foster Parents Trained and Supported (KEEP) program. This program focuses on increasing the use of positive reinforcement, avoiding power struggles, managing relationships, and improving success at school. In addition, the importance of close monitoring and peer associations are highlighted (Price, Chamberlain, Landsverk, & Reid, 2009). This foster parent training program was developed as part of multidimensional treatment foster care, which is a form of treatment foster care for children with behavioural problems. This type of treatment has been found to be effective for use with the youth justice population and in reducing behavioural problems in child welfare samples (Westermark, Hansson, & Olsson, 2011). Research on the KEEP program, including randomized control trials, has demonstrated that the intervention reduces foster child behaviour problems and improves parenting behaviour. In addition, the program increases rates of placement permanency and reunification with biological parents (Chamberlain, Price, Reid, & Landsverk, 2008; Chamberlain, Price, Leve et al., 2008; Price et al., 2008, 2009).

A similar parenting program called the Incredible Years has also been adapted for use with foster parents. When compared to a control group, foster parents who received the training program reported significantly greater reductions in their foster child(ren)'s emotional and behavioural problems (Bywater et al., 2010; McDaniel, Braiden, Onyekwelu, Murphy, & Regan, 2011). Improvements in parental stress and parenting practices were also found (Letarte, Normandeau, & Allard, 2010; Linares, Montalto, Li, & Oza, 2006; Nilsen, 2007; Webster-Stratton & Shoecraft, 2009).

Although these training programs have promising findings, there continue to be some limitations associated with foster parent training. One issue is that these programs, though effective, have not been implemented broadly so that they are accessible to all foster parents. More typically, training programs developed specifically for foster parents, such as Foster Parent Resources for Information, Development, and Education (PRIDE; Child Welfare League of America, 1993; Nash & Flynn, 2016), are provided to foster parents as pre-service training. However, despite the widespread use of these foster parent specific pre-service training programs, they have little empirical support. For example, Nash and Flynn (2016) reported that there have only been four published studies (including their own) and two unpublished reports about the effectiveness of PRIDE. Overall, the results of this research have been positive; foster parents report satisfaction with the training and increased knowledge as a result of the training. However, foster parents typically provide this feedback prior to having children placed in their home. Little is known about foster parents' perceptions and the effectiveness of the training once children are placed in their care (Nash & Flynn, 2016). In addition, the training programs that are available to foster parents typically do not address how maltreatment experiences affect child behaviour, which is an important component to understanding and managing problem behaviour

exhibited by children in the child welfare system. Therefore, additional research is needed to examine the effectiveness of widespread training programs like PRIDE over time. This will provide a better understanding of the benefits of these programs, including whether these programs are effective at improving foster parent experiences, enhancing trauma-informed care, increasing placement permanency, and reducing child behavioural and emotional problems (Dorsey et al., 2008).

Inclusion in care team. Another agency factor related to positive perceptions of fostering is being included as a valued member of the foster child's care team. Sanchirico, Lau, Jablonka, & Russell (1998), through survey format with 1160 foster parents, found that foster parents who were involved in the care planning of foster children had higher levels of satisfaction in their fostering role. This suggests that agency recognition of the difficult work of foster parents and the value foster parents bring to the care team may increase foster parent retention (MacGregor et al., 2006).

Support. Additional agency-level factors that are associated with foster parents' experiences of fostering relate to the support received from child welfare agencies, which is similar to research on foster parent attrition (Soliday et al., 1994). Factors associated with decreased satisfaction include a lack of information about a foster child's history, a lack of access to respite care (Buehler et al., 2003; Coakley et al., 2006), perceived agency or worker incompetency, and unresponsiveness to foster parent requests for physical and mental health services for the children (Buehler et al., 2003). Visits with the biological family have also been associated with stress, possibly due to the child's behavioural and emotional difficulties following such visits and/or the fact that the biological family may be unhappy with the current placement situation (Buehler et al., 2003).

Rosenwald and Bronstein (2008) examined system-related challenges of being a foster parent through focus groups. The participants identified several challenges, including the fact that they often did not feel valued or trusted, the child's best interests were not always taken into consideration by agency workers, and there was a lack of coordinated care that was further complicated by inflexible rules. Foster parents indicated that they would like more information on a foster child's history, a larger role in the decision-making process of a foster child's future, and more support when, what foster parents perceive as false allegations of child maltreatment, occur against them. The foster parents also benefited from the supportive nature of the focus groups and expressed an interest in foster parent support groups. The authors recommended that the child welfare system provide foster parents with a more detailed account of the foster child's history initially and throughout care, include foster parents as a valuable member of the child care team, provide additional support to foster parents who fear abuse allegations, and offer support groups for foster parents (Rosenwald & Bronstein, 2008). Thus, similar to research on foster parent attrition, appropriate levels of child welfare agency support are key factors related to the fostering experience.

Foster parent retention is an important area to consider when examining the current state of the foster care system. Unfortunately, foster parent attrition is not uncommon in the child welfare system. Positive perceptions of fostering have been associated with retention and thus can provide important information on how to improve foster parent retention. Foster child, foster parent, and agency-level factors have all been found to be associated with foster parents' perceptions of fostering. In particular, realistic expectations of fostering, foster parent self-efficacy, and adequate personal and practical support from child welfare agencies are important correlates. These identified correlates of foster parent satisfaction and perceptions of fostering

are consistent with Edwin Locke's "Range of Affect Theory" of job satisfaction (Locke, 1969).

This theory posits that satisfaction is determined by consistency between what one expects in a

job and what one experiences in a job. Thus, foster parents, who have more realistic perceptions

of fostering (i.e., one that matches closely to their actual experience of fostering), would

experience increased satisfaction and a more positive perception of fostering, which is supported

by the research. However, as highlighted earlier, a foster parent can be satisfied in one area and

not others (Fees et al., 1998). Thus, it is important to obtain a comprehensive understanding of

foster parents' perceptions of fostering.

Current Study

Currently, we do not have a broad view of foster parents' experience of fostering children

in Canada and little is known about how foster child and foster parent factors impact the

fostering experience. In particular, there have been inconsistent findings regarding the impact of

foster child behavioural and emotional problems on the fostering experience. There are also no

known studies that examine how foster children's histories of maltreatment impact foster

parents' perceptions of fostering. There are a number of methodological limitations of the

existing literature, as well. Most notably, many of these studies use small sample sizes and

qualitative designs. Thus, the magnitude of each factor on foster parent perceptions has received

relatively little attention and remains largely unknown.

The current study addresses these gaps in the literature by examining the associations

between various child, foster parent, and agency factors and foster parent perceptions about

agency workers, the fostering system, training, and foster children and their placements. It draws

on cross-Canada data collected for the purpose of providing a more in-depth understanding of

how fostering children with special needs (e.g., medical, physical, behavioural, and emotional)

and maltreatment histories relate to the fostering experience. The following research question is examined: Is fostering challenging children, as reported by foster parents, significantly associated with foster parents' experience of fostering, after accounting for the influence of foster parent and child welfare agency factors? Identifying how fostering challenging children affects foster parent perceptions may help child welfare agencies improve their management of foster child factors. In addition, this study can provide child welfare agencies with specific recommendations on how to address foster child, foster parent, and agency-level components of the system to improve foster parent experiences and, in turn, potentially reduce foster parent attrition.

Hypotheses

The following hypotheses are based on the limited and mostly qualitative research:

- Although there is inconsistency in the extant literature, most findings suggest that challenging foster child behaviours are associated with lower foster parent perceptions (Denby et al., 1999; Kerker & Morrison Dore, 2006; Rhodes et al., 2001; Whenan et al., 2009). Therefore, it was predicted that fostering children, who according to foster parents, have special needs (physical, medical, behavioural, and emotional) would be associated with less positive perceptions about fostering.

- Similarly, it was hypothesized that fostering children who, according to foster parents, have maltreatment histories (physical, emotional, and sexual abuse; neglect; and multiple types of maltreatment) would be associated with less positive perceptions of fostering.

- Consistent with previous literature examining foster parent factors, it was predicted that foster parents who are older would have more positive perceptions of fostering. The remaining foster parent variables were included for exploratory purposes.

- In regard to agency factors, it was hypothesized that higher levels of agency support and support from other foster parents would be associated with more positive perceptions of fostering.

Method

Participants

This study drew on an existing dataset generated by the Child Welfare League of Canada (CWLC) and Leschied and colleagues (2014). All foster parents in Canada, including those providing kinship and respite care, were eligible for participation. The final sample consisted of 937 foster parents. It is important to note that foster parents who discontinued fostering were not assessed; only surviving foster parents participated in the study. Thus, perceptions of foster parents with potentially more negative views of fostering, given that they stopped fostering, were not represented by the current sample. The number of foster parents associated with each child welfare agency was unknown at the provincial and territorial level. Therefore, the potential response rate could not be calculated and compared to the actual response rate.

The largest portion of the sample was from Ontario (30%), followed by 19% from Alberta, 12% from Quebec, and 11% from British Columbia. Table 2.1 summarizes the number of participants from each province/territory. The sample was predominately female (90% female, 10% male) with a mean age of 50.19 ($SD = 10.37$). The majority of the sample was Caucasian (80%), was married (71%), and had college/university level education (62%). Notably, about 10% of the sample was Aboriginal (Métis, First Nations, or Inuit). The foster parents in this study provided foster care for an average of 11.00 years, ranging from 0 to 58 years. The most common type of foster care provided was regular foster care (66%), followed by respite/emergency foster care (51%) and treatment foster care (41%). Please see Table 2.2 for

Table 2.1

The Number of Foster Parents from Each Province/Territory (N = 937)

Province/Territory	*n*	%
Alberta	174	18.6%
British Columbia	100	10.7%
Manitoba	23	2.5%
New Brunswick	45	4.8%
Newfoundland and Labrador	41	4.4%
Northwest Territories	14	1.5%
Nova Scotia	26	2.8%
Nunavut	39	4.2%
Ontario	292	31.2%
Prince Edward Island	12	1.3%
Quebec	111	11.8%
Saskatchewan	30	3.2%
Yukon	24	2.6%
Unknown	6	0.6%

Table 2.2

Characteristics of Foster Parents (N = 937 unless otherwise noted)

Characteristic	*n*	%/Mean (*SD*)
Sex	926	98.8%
Male	95	10.3%
Female	831	89.7%
Age	920	50.19 (10.37)
Ethnicity	913	97.4%
Métis	25	2.7%
First Nations	18	2.0%
Inuit	33	3.6%
Euro-Canadian (Caucasian)	725	79.4%
African-Canadian	7	0.8%
Latina/o-Canadian	9	1.0%
Caribbean-Canadian	8	0.9%
Middle Eastern-Canadian	15	1.6%
Asian-Canadian	12	1.3%
Other	61	6.7%
Marital Status	927	98.9%
Single	74	8.0%

Characteristic	*n*	%/Mean (*SD*)
Married	658	71.0%
Separated	20	2.2%
Divorced	59	6.4%
Widowed	33	3.6%
Common Law	82	8.8%
Other	1	0.1%
Education	921	98.3%
Elementary School	20	2.2%
High School	274	29.8%
College/University	571	62.0%
Graduate Study	56	6.1%
Gross household income	874	93.3%
Under $20,000	92	10.5%
$20,000-$29,000	74	8.5%
$30,000-$49,000	199	22.8%
$50,000-$69,000	190	21.7%
$70,000-$84,000	111	12.7%
$85,000 and above	208	23.8%
Number of years providing foster care	924	11.00 (9.38)
Type of care provided	N/A	N/A

Characteristic	*n*	%/Mean (*SD*)
Regular Foster Care	613	65.4%
Treatment/Special Foster Care	381	40.7%
Emergency/Relief Foster Care	474	50.6%
Kinship Care	59	6.3%
Foster with View to Adopt	141	15.0%
Other	45	4.8%

more detailed information on the sample characteristics.

Procedure

Ethics approval for this project was obtained from the Office of Research Ethics and

Integrity at the University of Ottawa (see Appendix F). The sample was recruited through

various actions undertaken by the staff at the CWLC. The staff attended national conferences

throughout the data collection period to present the study to attendees and recruit participants.

The CWLC also created a webpage on their *Every Child Matters* website that contained the

details of the study and links to the survey. The CWLC is closely associated with the directors in

charge of foster parenting in each province and territory across Canada and worked with them

directly through face-to-face meetings, telephone calls, and email communication to spread

awareness about the study. The directors announced the research project to child welfare

agencies within their province or territory. The staff in direct or indirect contact with foster

parents at the individual agencies then informed foster parents through personal communication,

advertisements within the agency, advertisements on agency websites, advertisements in agency

newsletters, etc. Foster parents completed the survey between May 2012 and October 2013.

The initial page of the survey was a letter of information, which indicated that the

completion of the survey was considered consent for participation in the study (see Appendix G).

Foster parents had the option of completing an electronic or paper copy of the survey in either

English or French. There were two electronic versions of the survey, one created through Adobe

Acrobat, Livecycle Designer and the other created through Survey Monkey. The Survey Monkey

version was created for foster parents whose web browser did not support the Adobe Acrobat

program. Completed electronic versions of the survey were automatically sent to the research

team through an online data collection system. Paper/printable versions of the survey were

available from the CWLC, child welfare agencies, or the *Every Child Matters* website. Completed paper versions of the survey were either (1) mailed or faxed directly to the CWLC by the foster parent or (2) collected by child welfare agencies and then mailed or faxed to the CWLC.

Measures

     Canadian Foster Parent Survey (CFPS). The CFPS (Leschied & Rodger, 2012) consists of 91 questions related to the foster parents' fostering situation, demographic information about the foster parents and their family, and perceptions about fostering (see Appendix G). The first section of the survey, which assesses the current fostering situation, contains 24 questions and asks foster parents about the number of years their home has provided care, the total number of children fostered in the home, the number of biological children in their family, agency support, the types of foster children for whom they have provided care, the type of foster care provided, and refusals of care over the past year. The second section consists of ten questions related to the demographic information (i.e., sex, age, race, marital status, highest level of education) of the foster parent and his/her partner, if applicable.

     The third portion of the survey, consisting of 11 questions, asks questions specific to the foster family, such as the number of biological and foster children in the home when the last foster child was placed, employment, household income, reason for considering fostering, and considerations of withdrawal from fostering. Respondents were also asked to rate the possible reasons for becoming a foster parent and potential factors that impacted their consideration of withdrawal on a four-point scale: 0 (*not at all*), 1 (*a little*), 2 (*pretty much*), and 3 (*a great deal*).

     Many of the questions on the survey were adapted from Denby and colleagues' Foster Parent Satisfaction Scale (FPSS; 1999), such as the questions related to motives for becoming a

foster parent and willingness to remain a foster parent. The FPSS is a 65-question survey derived

from a review of the literature and in-depth interviews with foster parents. These 65 questions

were divided into five sections based on face validity: (1) Motivation to Become a Foster Parent

(8 items) and Willingness to Remain a Foster Parent (12 items); (2) Stress, Role Ambiguity, and

Conflict (7 items), which assesses the foster parent's role and relationship with agency workers;

(3) Foster Parenting Experiences (24 items), which refers to opinions about fostering and about

oneself as a foster parent; (4) Training Effect (7 items), the effect of training on confidence and

ability; and (5) Role Clarity, Workload, and Social Support (7 items), which assesses social

supports provided by other foster parents and agency workers (Denby et al., 1999).

The final section of the survey consists of 45 questions that make up the Your Experience

of Fostering scale, which assesses foster parents' perceptions about their fostering experience.

The questions are rated on a seven-point scale ranging from 1 (*completely disagree*) to 7

(*completely agree*). Higher scores indicate more positive perceptions of fostering. These 45

questions were adapted from Denby and colleagues' FPSS (1999). Rodger et al. (2006) further

examined the Your Experience of Fostering scale (Denby et al., 1999) with a sample of 652

foster parents. Through factor analysis, they identified a consistent and conceptually sound five-

factor solution that accounted for 34.7% of the variance. The five factors were (1) Perceptions

about Agency and Child Workers (14 items), (2) Challenging Aspects of Fostering (13 items),

(3) Perceptions about Foster Home Support Workers (4 items), (4) Confidence and Satisfaction

(4 items), and (5) Training (4 items).

The five factors had acceptable internal consistency, with reported Cronbach's alphas

ranging from .72 (Training) to .95 (Challenging Aspects of Fostering). The Perceptions about

Agency and Child Workers subscale accounted for the most variance (16.7%) and had a

reliability of .89. The Challenging Aspects of Fostering subscale followed, accounting for an additional 7.7% of the variance. This factor also had a very good reliability of .88. The Perceptions about Foster Home Support Workers subscale accounted for another 4.3% of the variance and had a reliability of .88. The fourth factor, Confidence and Satisfaction, accounted for 3.1% of the variance and had a reliability of .73. The final factor, Training, accounted for 3% of the variance and had a reliability of .72. In addition, the Challenging Aspects of Fostering subscale correctly classified 75% of parents who had or had not considered withdrawing from fostering. Rodger et al. (2006) recommended the use of this factor structure for future analyses because of its empirical basis and the fact that it is based on a large sample (Rodger et al., 2006). The psychometric properties (i.e., reliability and validity) of the Your Experience of Fostering scale has not been further examined by previous research (Denby et al., 1999; Rodger et al., 2006). The scale was chosen for the current study because of its comprehensive examination of foster parent perceptions of fostering and its theoretical and empirical development.

The internal consistency for the various subscales of the Your Experience of Fostering scale was computed for the current sample. The reliability for the total scale was excellent (.93). The Perceptions about Agency Workers, Training, and Foster Home Support Workers subscales ranged from good (.77 for Perceptions about Foster Home Support Workers) to excellent (.92 for Perceptions about Agency Workers). The Training subscale had a reliability score of .87, which is very good. However, the reliability scores for the Challenging Aspects of Fostering subscale and Confidence and Satisfaction subscale were .65 (acceptable) and .59 (poor) respectively. Due to these lower internal consistency scores and the fact that this scale has limited research on its reliability and validity, further analysis of the reliability and validity of the scale was conducted with the current sample. Please see Appendix H for a detailed report of the reliability and

validity analyses, which included reliability, factor, and Rasch modeling analyses. These analyses resulted in a reliable and valid scale with four subscales: (1) Perceptions about Agency Workers (12 items), (2) Perceptions about the Fostering System (9 items), (3) Perceptions about Training (5 items), and (4) Perceptions about Foster Children and Their Placements (10 items). Please see Table 2.3 for a breakdown of the various factors and their associated items.

Design

Survey data for this descriptive field study were collected at one time point from foster parents across Canada. The independent variables included 14 foster parent, child, and agency variables that have either been associated with perceptions of fostering in the extant literature or were hypothesized to be associated with perceptions of fostering.

Seven foster parent variables were examined: age, gender (*male*, *female*), geographic location (i.e., *eastern regions* or *western regions* of Canada), marital status (*married/common law*, *other*), education (*high school or less*, *post secondary*), the number of years the foster parent has fostered, and the type of foster care (*regular*, *treatment*, or *respite*). The geographic location variable was recoded into a dichotomous variable because many provinces had sample sizes that were less than 10% of the total sample. The variable was divided into eastern (Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador) and western (British Columbia, Alberta, Saskatchewan, Manitoba, Nunavut, Northwest Territories, and Yukon) provinces and territories. On the survey, the "type of foster care" question allowed foster parents to select multiple types of care. Therefore, the following procedures were undertaken to create the type of foster care variable. All foster parents who indicated they provided treatment or special foster care were coded as providing treatment foster care. All foster parents who indicated that they (1) did not provide treatment or special foster care and (2) did

Table 2.3

The Four Subscales of the Your Experience of Fostering Questionnaire (based on the current sample)

Subscale	Items
Perceptions about Agency Workers (12 items)	2. When I need to talk over my concerns about a child, I do not hesitate to phone our agency's worker. 3. My agency's worker treats me as if I am a team member. 4. I have clear communication with the worker regarding who should be responsible for transportation, doctor visits, school conferences and the like. 5. I am secure about the soundness of the decisions my supervising worker makes. 6. My supervising worker is available to assist me in handling special problems/needs of children in my care. 9. Supervising agency workers respect my opinions regarding the foster child(ren) that are placed with my family. 10. It was clear what supervising workers expect of me as a foster parent. 11. Supervising workers are warm and friendly when I have distress/concerns as a foster parent. 12. I get positive reinforcement from my worker on my foster parenting approach. 13. Supervising workers help me solve problems with my foster child when they arise. 14. Agency workers provide information about my foster child when I need it. 27. When I felt I needed to talk over my concerns about a child, I did not hesitate to phone my worker.
Perceptions about the Fostering System (9 items)	37. I feel foster parents in my community have influence in the way our child welfare systems respond to the needs of children and families. 38. I feel like our child welfare systems respect the cultural values of the children, community, and my family. 39. Foster children have adequate access to programs and resources to develop and maintain fluency in their first (or heritage) language. 42. I am satisfied that the child welfare system in my community assesses risk to children accurately and with cultural sensitivity. 43. I am satisfied that the resources and support for foster children in my community are equivalent to those available in other communities. 44. Foster children have adequate access to programs and resources to develop and maintain their cultural

Subscale	Items
	identity.
	41. I am satisfied that the child welfare system in my community assesses risk to children in a way that does not penalize biological parents/families for poverty, lack of access to adequate housing, or other circumstances that may be beyond their control.
	40. Child welfare systems respond appropriately to the needs of children throughout their lifespan.
	45. I am confident that the birth family, extended family and child (if appropriate) are involved in placement planning for children in my community.
Perceptions about Training (6 items)	19. My training requirements as a foster family were met.
	32. The knowledge and skills I learned in foster care training were later reinforced by agency workers.
	33. The foster care training I received was based on my training needs that I felt were relevant.
	34. Looking back, I was helped through orientation/pre-service training to anticipate many of the difficulties I later experienced as a foster parent.
	35. Overall, I consider the training I have received about fostering as appropriate.
	36. Positive programs, events, and activities are happening in this community to help children and families in a healthy way.
Perceptions about Foster Children and Their Placements (10 items)	20. Agency red tape often interfered with my ability to care for my foster children.
	21. The fear of being named in an allegation of abuse/neglect by a foster child affected my ability to care.
	22. Losing children who I was fond of is a common concern I have. (reverse scored)
	23. Seeing children sent back to a bad situation is a common concern I have. (reverse scored)
	24. Dealing with the foster child's primary family is a common concern I have. (reverse scored)
	25. Dealing with the foster child's difficult behaviour is a common concern I have. (reverse scored)
	26. I was challenged in my fostering by my own child(ren)'s resentment of and conflict with foster child(ren). (reverse scored)
	28. I am satisfied with the type of children the agency places with me.
	29. I feel competent to handle the type(s) of children placed in my home.
	30. I have never had regrets about my decision to become a foster parent.

provide regular foster care were coded as providing regular foster care. The remaining foster

parents (i.e., those who did not indicate they provide treatment, special, or regular foster care)

indicated that they provided respite, emergency, or provisional foster care and were recoded as

providing respite foster care.

There were four child-related variables. The first two were the highest number of children

fostered at one time and the most common age group of children cared for by the foster parents

(0-3 years, 4-12 years, 13 years and above, or all ages). The third item was a scale score that

indicated whether the foster parents had fostered children who, according to the foster parent,

had special needs. The scale was made up of four items: whether foster parents had fostered

children who, according to the foster parents, had (1) physical needs, (2) medical needs, (3)

behavioural needs, or (4) emotional needs. The total score was the sum of the four items [0 (*no*),

1 (*yes*)], ranging from 0 to 4, with higher scores indicating that foster parents had fostered

children with more types of special needs. For the current sample, the internal consistency score

for this scale was .71, which is good.

The fourth child-related variable was a scale score that assessed whether the foster

parents had fostered children who, according to the foster parent, had experienced various types

of abuse. The scale consisted of five items: whether foster parents had fostered children who,

according to foster parents, had experienced (1) physical abuse, (2) sexual abuse, (3) emotional

abuse, (4) neglect, or (5) multiple types of abuse. The total score was the sum of the five items [0

(*no*), 1 (*yes*)], ranging from 0 to 5, with higher scores indicating that foster parents had fostered

children with various types of abuse histories. For the current sample, the internal consistency

score for this scale was .80, which is very good.

The final three variables examined agency and support factors. The first two related to personal support: (1) the number of face-to-face contacts with supervising workers per month and (2) whether the foster parent met regularly with other foster parents (*no*, *yes*). The final variable was a scale score consisting of two items that asked about practical support: (1) whether foster care boarding rates were sufficient (seven-point scale with higher scores indicating more agreement) and (2) whether reimbursements for clothing, spending, etc. were sufficient (seven-point scale with higher scores indicating more agreement). The total score was the average of the two items, with higher scores indicating increased satisfaction. For the current sample, the Pearson correlation for these items is .74, which is good.

The subscales of the Your Experience of Fostering measure were the four continuous dependent variables: (1) Perceptions about Agency Workers, (2) Perceptions about the Fostering System, (3) Perceptions about Training, and (4) Perceptions about Foster Children and Their Placements.

Analysis

Statistical analyses were conducted in three steps. First, descriptive analyses were calculated (i.e., frequencies and mean scores) for all the independent and dependent variables. Second, preliminary bivariate analyses examining the association between the four subscales and the 14 independent variables (i.e., foster parent, foster child, and agency factors) were conducted. Pearson correlations and analysis of variance (ANOVA) were conducted depending on whether the variables were continuous or categorical. The purpose of the bivariate analyses was to examine the relationship between the independent and dependent variables to determine whether inclusion in the multivariate analysis was appropriate.

Lastly, a multivariate general linear model (GLM) examined the association between the independent variables and a linear combination of the four subscales. A multivariate GLM was chosen as the preferred method of analysis because the subscales represented a common theme of perceptions of fostering and both qualitative and quantitative independent variables were examined (Pallant, 2010; Tabachnick & Fidell, 2007). A multivariate GLM was more optimal than univariate GLM analyses because running multiple analyses would increase the risk of Type I error (i.e., the more analyses completed, the greater the likelihood of finding significant results, even when no significant differences are present). An advantage of a multivariate GLM is that it adjusts for this increased risk of Type I error (Tabachnick & Fidell, 2007).

Results

Preliminary Analyses

Prior to running the analyses, univariate and bivariate screening and cleaning were completed to ensure no violation of assumptions, including normality, linearity, multicollinearity, and homoscedasticity. All univariate outliers were winsorized in accordance with a p-value of .001. One support variable, the number of in person contacts with the worker, was positively skewed and transformed by calculating the square root of the variable. The remaining independent and dependent variables had acceptable skew and kurtosis.

Given the large sample size, all cases with greater than 10% missing data for the Your Experience of Fostering scale (i.e., more than four missing items) were excluded from further analyses. A total of 60 cases were deleted from the database leaving a sample of 875 foster parents. From this remaining sample, all variables were missing less than 5.5% of the data, with most variables were missing less than 1.0% of the data. Due to the relatively small amount of

missing data, expectation maximization algorithm was used to address missing data rather than mean substitution or multiple imputation (Tabachnick & Fidell, 2007).

Descriptive Statistics

Independent variables. Table 2.4 displays the descriptive information for all the independent and dependent variables included in the multivariate analysis for the 875 foster parents. In regard to foster children, most foster parents had fostered children of all ages. On average, they had fostered up to three foster children at a time. In addition, on average, respondents reported fostering children with two types of special needs and children with close to three types of maltreatment histories. Foster parents were somewhat dissatisfied with the practical support received (i.e., financial support) with a mean score between three (which is consistent with *slightly disagree* on the seven-point Likert scale) and four (with is consistent with *neutral*). On average, foster parents were meeting with agency workers close to two times a month ($1.36^2 = 1.85$). Just over half of the sample was meeting regularly with other foster parents for support.

Dependent variables. The Perceptions about Agency Workers and Perceptions about Training subscales had the highest mean scores of about five (*slightly agree*), indicating slightly positive perceptions about these areas of fostering. The Total Perceptions score also had a mean score of about five, indicating a *slightly positive* overall perception of the child welfare system. The mean scores for the Perceptions about the Fostering System subscale and Perceptions about Foster Children and their Placements subscale were slightly lower and demonstrated more neutral perceptions.

Table 2.4

Descriptive Statistics for the Variables included in the Analyses (N = 875 unless otherwise noted)

Variable	Frequency (%)	M (SD)
Foster Parent Variables		
Age		50.07 (10.21)
Gender (N = 872)		
0 = Male	91 (10.4%)	
1 = Female	781 (89.3%)	
Geographic location		
0 = Eastern provinces	493 (56.3%)	
1 = Western provinces	382 (43.7%)	
Education level		
0 = High school and less	268 (30.6%)	
1 = Post-secondary	607 (69.4%)	
Marital Status		
0 = Single	170 (19.4%)	
1 = Married/Common-law	705 (80.6%)	
# of years providing foster care		10.80 (8.99)
Type of foster care		
0 = Regular	412 (47.1%)	
1 = Treatment	361 (41.3%)	
2 = Other	102 (11.7%)	
Foster Child Variables		
Age group most commonly fostered		
0 = All ages	283 (32.3%)	
1 = 0 to 3 years	191 (21.8%)	
2 = 4 to 12 years	237 (27.1%)	
3 = 13+ years	164 (18.7%)	
Highest # of children fostered at one time		3.42 (1.73)
# of different types of special needs children fostered (range: 0 to 4)		2.08 (1.36)
# of different types of maltreatment backgrounds of children fostered (range: 0 to 5)		2.55 (1.76)

Variable	Frequency (%)	M (SD)
Support Variables		
Practical support (range: 1 to 7, with higher scores indicating increased satisfaction)		3.63 (1.97)
# of in-person meetings/month (square root)		1.36 (.95)
Meet regularly with foster parents		
0 = No	419 (47.9%)	
1 = Yes	456 (52.1%)	
Dependent Variables (range: 1 to 7, with higher scores indicating more positive perceptions)		
Total Perception		5.26 (1.09)
Perception about Agency Workers		5.50 (1.46)
Perception about the Fostering System		4.64 (1.36)
Perceptions about Training		5.20 (1.46)
Perceptions about Foster Children and their Placements		4.71 (.88)

Note. The missing values for the gender variable were not replaced due to the potential for inaccurate grouping.

Bivariate Analyses

The bivariate analyses examined the relationship between the 14 independent variables and four dependent variables. The purpose of these analyses was to determine whether all 14 variables had at least a marginal relationship with the dependent variables. If there was little to no relationship with the dependent variables (e.g., $p > .05$), the variable was considered for exclusion from the multivariate analysis.

Continuous and dichotomous variables. A Pearson correlation table (Table 2.5) displays the correlations between each of the continuous and dichotomous independent variables and the dependent variables, as well as the correlations between each of the dependent variables. There was a significant correlation between most independent variables and at least one of the dependent variables. The correlations for gender and marital status were not significant. These two dichotomous variables also had large size discrepancies between the two groups (i.e., only 10% of the sample was male and less than 20% of the sample was single). Thus, these variables were excluded to increase the cell size and robustness of the multivariate analysis.

Categorical variables. The first ANOVA analysis examined the impact of the most common age group cared for by foster parents on each of the four subscales (see Table 2.6). Foster parents were divided into four groups based on the most common age group cared for: (1) 0 to 3 years, (2) 4 to 12 years, (3) 13 and above years, and (4) all ages. There was a statistically significant difference at the $p < .05$ level for the Perceptions about the Fostering System subscale, $F(3, 871) = 3.42$, $p = .017$. Post hoc tests for this subscale revealed that there was a significant difference between foster parents who cared for 4- to 12-year-old children and foster parents who cared for adolescents, with foster parents who cared for adolescents ($M = 4.89$, $SD = 1.45$) having higher scores on the Perceptions about the Fostering System subscale than foster

Table 2.5

Pearson Correlations Between the Continuous and Dichotomous Independent Variables and the Four Subscales

Variable	PW	PFS	PT	PFCP
Dependent Variables				
Perceptions about Workers (PW)	-	.56**	.52**	.34**
Perceptions about the Fostering System (PFS)		-	.60**	.23**
Perceptions about Training (PT)			-	.17**
Perceptions about Foster Children and Their Placements (PFCP)				-
Independent Variables				
Practical support	.09**	.09**	-.04	.23**
In-person support	.11**	.09**	.09**	-.01
Meetings with other foster parents	.04	.08*	.21**	-.02
Age	.10**	.15**	.24**	.12**
Gender	-.01	.01	.00	.01
Geographic location	-.16**	-.19**	-.08*	-.13**
Marital status	-.01	-.02	-.00	-.05
Education	-.16**	-.17**	-.15**	-.06
Number of years providing care	.03	.06	.15**	.07*
Foster child special needs	-.12**	-.10**	.02	-.05
Foster child abuse history	-.10**	-.08*	.01	-.12**
Highest number of foster children cared for at one time	-.08*	-.06	.09*	-.00

Note. PW = Perceptions about Workers subscale, PFS = Perceptions about the Fostering System subscale, PT = Perceptions about Training subscale. PFCP = Perceptions about Foster Children and Their Placements, $* p < .05$, $** p < .01$

Table 2.6

Means and Standard Deviations for the Preliminary ANOVAs

Variable	n	PW M (SD)	PFS M (SD)	PT M (SD)	PFCP M (SD)
Most common age group cared for by foster parent					
0 to 3 years	191	5.41 (1.40)	4.55 (1.35)	4.98 (1.55)	4.72 (.81)
4 to 12 years	237	5.52 (1.47)	4.47 (1.41)	5.19 (1.49)	4.66 (.93)
13 and above years	164	5.61 (1.45)	4.89 (1.45)	5.37 (1.43)	4.81 (.90)
All ages	283	5.47 (1.50)	4.69 (1.25)	5.27 (1.37)	4.70 (.87)
F-test results		$F(3, 871) = .56, p = .639$	$F(3, 871) = 3.42, p = .017*$	$F(3, 871) = 2.42, p = .065$	$F(3, 871) = 1.08, p = .359$
Type of foster care					
Regular	412	5.52 (1.46)	4.71 (1.29)	5.13 (1.51)	4.75 (.90)
Treatment	361	5.47 (1.50)	4.55 (1.44)	5.27 (1.37)	4.67 (.89)
Other	102	5.53 (1.32)	4.66 (1.32)	5.26 (1.54)	4.74 (.80)
F-test results		$F(2, 872) = .17, p = .847$	$F(2, 872) = 1.42, p = .243$	$F(2, 872) = 1.01, p = .363$	$F(2, 872) = .83, p = .435$

Note. PW = Perceptions about Workers subscale, PFS = Perceptions about the Fostering System subscale, PT = Perceptions about Training subscale. PFCP = Perceptions about Foster Children and Their Placements.

parents who cared for 4- to 12-year-old children ($M = 4.48$, $SD = 1.41$). Given that there was a significant relationship between this independent variable and one of the subscales, this variable was included in the multivariate analysis.

The second ANOVA analysis examined the impact of the type of foster care provided on the four subscale scores. Foster parents were divided into three groups based on the type of foster care provided: (1) Regular, (2) Treatment, and (3) Other. There was no statistically significant difference at the $p < .05$ level for any of the subscale scores for the three types of fostering (see Table 2.6). However, because previous research has identified that the type of foster care is an important factor to consider when examining foster parents' experiences, this variable was retained for the multivariate analyses despite the non-significant findings.

Multivariate Analysis

A multivariate GLM was performed to investigate the association between the foster parent, support, and foster child-related variables and foster parent perceptions of fostering. Four dependent variables (i.e., the four subscales) and 12 independent variables were included in the analysis: seven continuous variables (age, practical support, in-person support, number of years fostering, foster child special needs, foster child maltreatment histories, and the highest number of children fostered at one time) and five categorical variables (meeting with other foster parents, geographic location, education, type of foster care, and age group of children fostered). Preliminary assumption testing was conducted to check for normality, linearity, and univariate and multivariate outliers. There were four multivariate outliers. A filter was created to remove these cases from the multivariate analysis.

Multicollinearity was examined. Please see Table 2.5 for the correlations between each of the dependent variables. Three of the dependent variables were moderately correlated with one

another. Only the Perceptions about Foster Children and Their Placements subscale had lower

correlations with the other three subscales. The other three subscales have more of a focus on

agency and foster parent components of the child welfare system rather than foster children.

However, together, the four subscales cover the key areas that encompass a foster parent's

experience of the child welfare system. Thus, the Perceptions about Foster Children and Their

Placements subscale was included in the multivariate analysis and not run as a separate

regression analysis.

To check homogeneity of regression, the interaction variable for each qualitative

independent variable and quantitative independent variable was examined through a multivariate

GLM analysis. These GLM analyses included the main effects for each of the independent

variables and one interaction variable (each interaction variable was added one at a time to

separate analyses). Six interaction variables were significant so the homogeneity of regression

assumption was violated. This violation was addressed by including the significant interaction

terms in the multivariate GLM.

The minimum requirement for the number of cases within a cell is the number of

dependent variables. However, a sample size of 30 to 35 cases per cell is optimal, especially

when assumptions have been violated (Tabachnick & Fidell, 2007). The cell sizes were

examined when the multivariate GLM analysis was run with the 12 independent variables, six

interaction terms, and four dependent variables. This model had numerous cells with fewer than

four cases.

The categorical variables (type of foster care and the most common age group fostered)

had some categories with less than 20% of the sample. Therefore, the categorical variables were

reduced to dichotomous variables to determine if this would increase the cell sizes. The type of

foster care variable was reduced to two categories: *Regular/Other Foster Care* and *Treatment Foster Care*. The most common age group of children fostered was also reduced to two categories: *All Ages* and *Specific Age Group*. Homogeneity of regression was examined for these variables and some violations were identified. The interaction terms that were significant were included in the multivariate GLM analyses.

Even by reducing the categories for the categorical variables, some cell sizes remained low. Because previous research has identified that the type of foster care is an important variable when examining foster parent experiences, it was decided that this variable would be retained and the most common age group of children fostered was removed from analyses. Once the most common age group variable was removed, the lowest cell size increased to 11 cases, which is lower than the optimal cell size of 30 to 35 cases but higher than the minimum requirement of four (i.e., the number of dependent variables). Thus, the final model for the multivariate GLM consisted of:

1. 11 independent variables

    a. Three support variables: Meeting with foster parents, in-person support, practical support

    b. Five foster parent variables: Age, geographic location, education, number of years fostering, type of foster care

    c. Three foster child variables: Fostering children with special needs, fostering children with abuse histories, and the highest number of children fostered

2. Four interaction terms: Practical support x geographic location, type of foster care x age, type of foster care x total needs, and type of foster care x practical support.

Box's M Test of Equality of Covariance Matrices and Levene's Test of Equality of Error

Variances were used as a measure of homogeneity of variance-covariance matrices. Box's M

Test was significant at $p = .001$, which indicates that this assumption is violated. However, this

particular test does have a tendency to be overly strict for large sample sizes. To address the

heterogeneity of variance-covariance matrices, Tabachnick and Fidell (2007) recommend using

Pillai's criterion, rather than Wilks' lambda, as a measure of multivariate significance because it

is more robust. Given the high level of significance, it was decided that using Pillai's criterion

was most appropriate.

In addition, because of the high number of independent variables, a more conservative

alpha was used to determine significance at the multivariate level to reduce the chances of a

Type I error (i.e., finding a significant result when there is not one). The Bonferroni correction is

often criticized for being overly conservative so the Benjamini-Hochberg false-discovery

correction was used instead. This approach is more logical but it does require additional

calculations so it is not as user friendly as the Bonferroni correction. The Benjamini-Hochberg

approach results in a unique alpha criterion for each analysis. For the current analysis, there were

11 independent variables so there were 11 multivariate analyses. For the 11 analyses ($n = 11$), the

p-values were sequenced from smallest to largest and then ranked from 1 to 11 (i). The smallest

p-value was given a rank of 1, the second smallest was given a rank of 2, and so on. Finally, the

false discovery rate was set to .05 (d), which is the standard rate assigned. The p-value for each

analysis was only considered significant if it was below $d(i/n)$ (Glickman et al., 2014).

Levene's Test of Equality of Error Variances was significant for two of the dependent

variables: Perceptions about Workers [$F (15, 855) = 2.86, p < .001$] and Perceptions about

Training [$F (15, 855) = 2.47, p = .002$]. Thus, a more conservative alpha was used for

determining significance at the univariate level for these two subscales. Tabachnick and Fidell

(2007) recommended an alpha of .025 or .01. Because a more conservative alpha was used at the

multivariate level, an alpha of .025 was used to determine univariate significance for these two

subscales.

Multivariate tests. Using the Benjamini-Hochberg false-discovery correction (see Table

2.7), there was a statistically significant difference on the combined dependent variables for the

following eight variables, after controlling for all other independent variables: three support

variables (practical support, in-person meetings with child welfare worker, meetings with other

foster parents), four foster parent variables (age, education, geographic location, and type of

foster care), and one foster child-related variable (the highest number of children fostered at one

time). There was no significant difference at the multivariate level for the length of time

fostering, the types of foster child special needs, and foster child maltreatment histories, after

controlling for all other independent variables. Therefore, the results for these three variables

were not further examined at the univariate level.

Univariate tests. Table 2.8 displays the univariate test results for the multivariate GLM.

Only the eight independent variables that were significant at the multivariate level were

examined at the univariate level. Given that a more conservative alpha (i.e., the Benjamini-

Hochberg correction) was used at the multivariate level, an alpha of .05 was used for the

univariate tests for all subscales except for the Perceptions about Workers and Perceptions about

Training subscales. For these two subscales, independent variables were considered significant

only if $p < .025$ because the assumption of equal variances was violated.

In regard to support variables, foster parents who had higher levels of practical support

from child welfare agencies had significantly higher scores on the Perceptions about Agency

Table 2.7

Multivariate Test Results (using Pillai's Trace) After Controlling for All Other Variables Included in the Model

Variable	F-score (df)	p-value	Benjamini-Hochberg (BH) criterion rank (p-value required for significance)	Partial Eta^2
Practical support	12.82 (4, 852)	.000*	1 (.005)	.06
Number of in-person meetings with worker	3.18 (4, 852)	.013*	7 (.032)	.02
Meetings with other foster parents	7.48 (4, 852)	.000*	2 (.009)	.03
Age	4.77 (4, 852)	.001*	5 (.023)	.02
Education	5.87 (4, 852)	.000*	3 (.014)	.03
Geographic location	5.62 (4, 852)	.000*	4 (.018)	.03
Number of years fostering	.53 (4, 852)	.713	11 (.050)	.00
Type of foster care	4.69 (4, 852)	.001*	6 (.027)	.02
Foster child - types of special needs	1.55 (4, 852)	.186	10 (.045)	.01
Foster child - types of maltreatment histories	1.59 (4, 852)	.175	9 (.041)	.01
Highest number of children fostered at one time	2.84 (4, 852)	.023*	8 (.036)	.01

Note. * p < calculated BH p-value.

Table 2.8

Univariate Test Results (using Pillai's Trace) After Controlling for All Other Variables Included in the Model

Variable	PW (df = 1)			PFS (df = 1)			PT (df = 1)			PFCP (df = 1)		
	B (SE)	F-score	p-value < .025	B (SE)	F-score	p-value< .05	B (SE)	F-score	p-value < .025	B (SE)	F-score	p-value < .05
Practical support	.11 (.05)	6.88	.009**	.21 (.04)	13.37	.000***	.11 (.05)	.26	.611	.07 (.03)	39.04	.000***
Number of in-person meetings with worker	.16 (.05)	9.83	.002**	.09 (.05)	4.03	.045*	.12 (.05)	5.67	.018*	-.01 (.03)	.19	.660
Meetings with other foster parents	-.20 (.10)	3.99	.046*	-.25 (.09)	7.31	.007**	-.51 (.10)	28.00	.000***	.02 (.06)	.15	.702
Age	.01 (.01)	2.48	.116	.02 (.01)	7.98	.005**	.01 (.01)	12.29	.000***	.01 (.01)	7.71	.006**
Education	.42 (.11)	15.80	.000***	.41 (.10)	18.07	.000***	.32 (.10)	9.42	.002**	-.02 (.06)	.07	.788
Geographic location	.52 (.21)	6.38	.012*	.86 (.19)	21.08	.000***	.73 (.20)	13.42	.000***	.14 (.12)	1.20	.274
Number of years fostering	.01 (.01)	1.30	.255	.01 (.01)	1.21	.271	.01 (.01)	.51	.689	.01 (.01)	1.02	.312
Type of foster care	.35 (.61)	.33	.568	1.53 (.56)	7.54	.006**	-.64 (.59)	1.18	.278	.13 (.37)	.12	.725
Types of special needs	-.06 (.07)	5.02	.025	.08 (.06)	.53	.465	.05 (.07)	.15	.698	.03 (.04)	.02	.888
Types of abuse histories encountered	.02 (.03)	.61	.437	.003 (.03)	.01	.913	.02 (.03)	.73	.393	-.04 (.02)	4.12	.043
Highest	-.08 (.03)	5.57	.018*	-.06 (.03)	3.89	.049*	-.01 (.03)	.10	.752	.01 (.02)	.48	.488

Variable	PW ($df = 1$)			PFS ($df = 1$)			PT ($df = 1$)			PFCP ($df = 1$)		
	B (SE)	*F-score*	*p*-value < .025	*B (SE)*	*F-score*	*p-value< .05*	*B (SE)*	*F-score*	*p*-value < .025	*B (SE)*	*F-score*	*p*-value < .05
number of children fostered at one time												
Model R²	.093			.130			.136			.097		

Note. The bolded variables were significant at the multivariate level and examined further at the univariate level. * $p < .05$, ** $p < .01$, *** $p < .001$. PW = Perceptions about Workers subscale, PFS = Perceptions about the Fostering System subscale, PT = Perceptions about Training subscale. PFCP = Perceptions about Foster Children and Their Placements. For the PW and PT subscales, the variable is only considered significant if $p < .025$ due to violation of assumption.

Workers, Perceptions about the Fostering System, and Perceptions about Foster Children and their Placement subscales than foster parents who had lower levels of practical support, after controlling for all other variables. In addition, foster parents with more frequent in-person meetings with their case worker had significantly higher perceptions about agency workers, the fostering system, and training than foster parents with fewer in-person meetings with their case worker. Finally, foster parents who regularly met with other foster parents had significantly higher perceptions about agency workers, the fostering system, and training than foster parents who did not meet with other foster parents.

In regard to foster parent factors, older foster parents had higher perceptions about the fostering system, training, and foster children and their placements, after controlling for all other variables. In addition, foster parents without post-secondary education had higher perceptions about agency workers, the fostering system, and training than foster parents with post-secondary education. Foster parents from eastern regions of Canada had significantly higher perceptions about agency workers, the fostering system, and training than foster parents from western regions of Canada. Lastly, foster parents who provided regular or other types of foster care had significantly higher perceptions about the fostering system than foster parents who provided treatment foster care.

Only one foster child factor was significant at the multivariate level: the highest number of children fostered at one time. Foster parents who had fostered a higher number of foster children at one time had significantly lower perceptions about agency workers and the fostering system than foster parents who had fostered fewer children at one time, after controlling for all other independent variables. Please see Table 2.9 for a summary of the variables significantly

Table 2.9

Summary of the Different Variables Significantly Associated with Each of the Subscales

Variable	PW	PFS	PT	PFCP
Practical support	*	*		*
Number of in-person meetings with worker	*	*	*	
Meetings with other foster parents	*	*	*	
Age		*	*	*
Education	*	*	*	
Geographic location	*	*	*	
Number of years fostering				
Type of foster care		*		
Types of special needs				
Types of abuse histories encountered				
Highest number of children fostered at one time	*	*		

Note. PW = Perceptions about Workers subscale, PFS = Perceptions about the Fostering System

subscale, PT = Perceptions about Training subscale. PFCP = Perceptions about Foster Children

and Their Placements, * *p* < .05.

associated with the various subscales and Appendix I for the estimated marginal means for the categorical variables.

Discussion

This study aimed to clarify the current mixed findings related to the impact of foster child factors on perceptions of fostering by examining a large sample of active Canadian foster parents. Most of the foster parent sample provided care to children of all ages. On average, they had fostered up to three children at one time. In addition, the majority of foster parents had fostered children who require specialized and complex care. Overall, foster parents who were actively fostering had slightly positive perceptions of fostering, which is consistent with the previous literature that has found that foster parents have moderate to high satisfaction with fostering (Fees et al., 1998; Soliday et al., 1994). In regard to the Your Experience of Fostering subscales, foster parents had slightly positive perceptions about agency workers and training and neutral perceptions about the fostering system and decisions related to foster children and their placements.

In contrast to expectations, foster child factors, especially whether foster children had special needs and maltreatment histories, were not significantly correlated with active foster parents' perceptions of fostering, both before and after accounting for foster parent and support factors. Foster parent and agency factors were identified as more consistent and strong predictors of positive foster parents' perceptions. The strongest correlates were: (1) having higher levels of practical support provided by the child welfare agency, (2) having meetings with other foster parents, (3) having no post secondary education, and (4) living in eastern regions of Canada. Being of older age, providing regular foster care, and having a higher number of in-person

meetings with one's worker were also associated with more positive fostering perceptions. The length of time respondents had fostered was not associated with foster parent perceptions.

Foster Child Factors

The finding that caring for foster children with various special needs and maltreatment histories was not associated with foster parent perceptions is inconsistent with initial hypotheses and the findings of Denby et al. (1999), Rhodes et al. (2001), and Whenan et al. (2009). However, it is consistent with Farmer and colleagues (2005), who did not find an association between foster child behavioural and emotional problems and foster parent strain. It is important to note, however, that the current and previous studies used different methodology for measuring behavioural and emotional problems and foster parent functioning. In addition, the current study is the only known study that examined a broad range of special needs and the impact of maltreatment histories. Thus, the various findings in this area of research are not directly comparable.

That said, these contrasting findings do indicate that foster child characteristics do not consistently impact foster parent functioning. As previous researchers have identified, these inconsistent findings may be due to a confounding factor: the foster parents' self-efficacy for coping with foster child needs (e.g., Farmer et al., 2005; Whenan et al., 2009). It is possible that the foster parents in this Canadian sample felt well equipped to cope with complex foster child needs and had high self-efficacy in this area, regardless of the complexity of the foster children placed in their care. This possible explanation fits with the sample's relatively positive perceptions about training. In addition, research has found that one of the most prevalent motivations for becoming a foster parent is to help children who are in need (e.g., Barth, 2001; Buehler et al., 2003; Leschied et al., 2014; Redding et al., 2000). Thus, caring for children who

have challenging presentations may be an expected component of fostering. According to Locke's "Range of Affect Theory" of job satisfaction (Locke, 1969), this expectation would reduce the likelihood that fostering children with challenging behaviours and backgrounds would negatively impact foster parent perceptions.

One foster child factor was associated with foster parent perceptions; foster parents who had fostered a higher number of foster children at one time had less positive perceptions of agency workers and the fostering system. This is consistent with previous research that has found that having several foster children in a home is associated with less optimal foster parent wellbeing (Buehler et al., 2003, Denby et al., 1999). It is likely that caring for multiple foster children at one time negatively impacts the quality of care a foster parent can provide to each child. This may increase a foster parent's stress and cause feelings of resentment towards the agency workers and fostering system for providing inadequate supports and services to foster children. However, the number of foster children cared for at one time was not significantly associated with perceptions about training or foster children and their placements. It is possible that the overall impact of the associated stress may be minimal because foster parents are achieving a personal goal to help children (e.g., Barth, 2001; Buehler et al., 2003; Leschied et al., 2014; Redding et al., 2000). Although potentially stressful, having a higher number of foster children in the home does not appear to affect the perceptions of active foster parents as much as foster parent and agency factors. This suggests that foster child factors are not key correlates of and they play a minor role in foster parent perceptions.

Foster Parent Factors

Consistent with expectations and previous research (e.g., Denby et al., 1999), older age was associated with having higher perceptions of the fostering system, training, and foster

children and their placements. One potential explanation for this finding is that older individuals are more likely to be retired or slowing down in their employment and less likely to be raising young children of their own. The absence of these additional stressors may account for older individuals' more positive perceptions of agency-related and foster child components.

It was also identified that having no post-secondary education was associated with more positive perceptions of agency related components (i.e., agency workers, the fostering system, and training). Research has found that individuals with post-secondary education have higher civic involvement. They are more likely to vote and be involved in activities related to improving the society, including volunteer work (Baum, Ma, Payea, & College Board Advocacy & Policy Center, 2010; Perna, 2005). Thus, individuals with higher education would likely have more awareness of current policies and regulations and have higher expectations for service environments. In relation to fostering, this may translate to individuals with post-secondary education having higher expectations for the child welfare system, which, in turn, would increase the likelihood of dissatisfaction with the system. The fact that both age and education were significantly associated with foster parent perceptions suggests that it would be wise for future research to include age and education as control variables when examining foster parents' experiences of fostering.

The current study also found that active foster parents who live in eastern regions of Canada have significantly higher perceptions of the fostering system than active foster parents who live in western regions of Canada. This finding is consistent with previous studies examining the general Canadian population, which has found that Canadians in eastern regions (generally east of Ontario) have increased life satisfaction (e.g., Barrington-Leigh, 2013; Lu, Schellenberg, & Hou, 2015; Sharpe & Capeluck, 2012). For example, one study found that

Canadian residents from eastern provinces, such as Nova Scotia, Quebec, and Newfoundland had

higher life satisfaction than residents in British Columbia, Ontario, and Nunavut (Sharpe &

Capeluck, 2012). Researchers have attempted to determine why these differences in life

satisfaction exist. They have identified that life satisfaction and happiness tend to be lower in

large urban centres, such as Vancouver and Toronto. Economic and social factors, such as one's

income in comparison to neighbours, levels of inequality, and quality of social connections, have

also been found to play a role in explaining community variations in life satisfaction (Lu et al.,

2015). Thus, the lower population density, economic factors, and social factors present in eastern

regions of Canada (aside from Ontario) may at least partially explain the higher ratings of life

satisfaction that have been found in the general literature. The fact that easterners have a higher

baseline level of life satisfaction may also explain why foster parents living in eastern regions of

Canada have higher perceptions of fostering than foster parents in western regions.

It is also important to mention that, since 2009, foster care in Quebec has been

transitioning to a self-employment status where the rights of foster parents are framed by a

collective agreement that greatly alters the organization of the work and the relationship between

child welfare agencies and foster families (Éditeur officiel du Québec, 2009). It is unknown

exactly how this change is impacting and will impact foster parent perceptions as previous

research examining the professionalization of foster care has found both positive and negative

effects. For example, a study that compared professional foster care to regular foster care in

Illinois found that the "professionalization" of foster care increased foster parent training and

specialization and it led to increased stability and less restrictive placements for children in care.

It also resulted in placements that were in greater proximity to a child's natural community than

regular foster care (but not kinship care). In contrast, professional foster parents were less likely

to adopt children as this would terminate their employment status and source of income (Testa &

Rolock, 2001). Thus, the professionalization of foster care has some positive aspects that may

positively impact foster parents perceptions of training and foster children and their placements.

It is also possible that having employee status may reduce the prevalent intrinsic motivations of

foster parents (e.g., fostering due to a desire to care for children) and increase the prevalence of

extrinsic motivators (i.e., financial aid), which could negatively impact the family-based care

provided to foster children. It is also unknown how this change impacts foster parent perceptions

about their agency workers and the fostering system. For example, it is unclear how the

professionalization of foster care, especially self-employment status, would impact the

relationship between foster parents and agency workers. It could potentially increase the

tendency for foster parents to be viewed as part of the care team, which would lead to improved

perceptions, according to the previous literature (e.g., MacGregor et al., 2006). However, self-

employment status could also further separate foster parents from the care team and lead to lower

perceptions of fostering. Additional research is needed to fully understand the impact of the

professionalization of foster care on the perceptions of foster are. The findings of the current

study place Quebec foster parents in the eastern group of foster parents who have higher

perceptions of fostering than western regions of Canada. However, Quebec foster parents were

not examined separately so their specific experiences may not be visible when the other eastern

regions are included in the group.

Providing regular or other types of foster care, rather than treatment foster care, was the

final foster parent factor that was associated with more positive perceptions of the fostering

system. This is consistent with previous research that has found that treatment foster parents

consider withdrawing from fostering at a higher rate than regular foster parents. This suggests

that treatment foster parents are less satisfied with fostering than other foster parents. In addition, similar to the current findings, Smith et al. (2015) found that treatment foster parents have more negative perceptions of the community and agency's role in adequately caring for children. It is possible that the additional training treatment foster parents receive and the fact that they care for the most challenging foster children result in increased awareness and knowledge of the specialized needs of foster children. This would make treatment foster parents more likely to notice that a foster child is receiving inadequate supports and services than regular foster parents, which could then lead to decreased satisfaction with the fostering system. In addition, given the specialized care these foster parents provide, they may feel less satisfied with the supports and services provided to foster parents. This is supported by Smith et al. (2015), who found that treatment foster parents were more likely to express dissatisfaction with the child welfare system's response to a child's needs and the supports and resources provided to foster parents than regular foster parents.

It is also worth mentioning the finding that treatment foster parents and regular/other foster parents did not differ in their perceptions of foster children and their placements is consistent with the finding that foster parents' expectations impact their fostering experience (e.g., Buehler et al., 2003; Coakley et al., 2006). Similarly, many studies have found that foster parents who have self-efficacy in regard to their ability to care for challenging children are more likely to have positive perceptions of fostering (e.g., Rhodes et al., 2001Whenan et al., 2009). Therefore, despite having to care for some of the system's most challenging children, treatment foster parents (who have specialized training in caring for high-need children) did not have less positive perceptions of foster children and their placements than regular because they expect and are prepared to care for challenging children.

Agency Factors

Consistent with expectations, all the agency-related support factors were associated with foster parent perceptions about fostering. In fact, two of the three factors had the highest associations with perceptions of fostering. Foster parents who had (1) higher satisfaction with the financial and practical support they received from the child welfare agency, (2) regular meetings with other foster parents, and (3) more in-person meetings with their child welfare workers had more positive perceptions about agency workers and the fostering system. The latter two support variables were also associated with higher foster parent perceptions about the training received. These findings emphasize that the level of financial/practical, professional, and emotional support foster parents receive is highly related to whether a foster parent has positive opinions about agency-related components of the child welfare system. This is convergent with previous research, which has identified that insufficient support factors, such as not having access to respite care, a lack of inclusiveness in the care team, and unresponsive child welfare workers, are associated with foster parent dissatisfaction and attrition (e.g., Buehler et al., 2003; Coakley et al., 2006; Sanchirico et al., 1998; Soliday et al., 1994). These specific support factors were not examined in the current study, but they highlight the importance of adequate support in a wide range of areas. Although not previously demonstrated in a quantitative study, foster parents have also identified the value of foster parent support groups (Rosenwald & Bronstein, 2008). Thus, there is a clear and consistent relationship between the presence of both instrumental and emotional support and more positive agency-related perceptions of fostering.

Although all support factors were highly associated with agency-related components of fostering, only practical support was related to perceptions about foster children and their placements. This is not surprising given that appropriate financial and practical support is

required to provide adequate care for children. However, given the challenges associated with caring for foster children and coping with changes in placement, it was expected that emotional support would also be an important correlate. In addition, this finding is somewhat inconsistent with previous literature, which has found that increased instrumental and emotional support has a positive impact on foster parent experiences of foster child/placement related aspects of fostering, including allegations of maltreatment, interactions with biological families, and seeing children placed in suboptimal placements (e.g., Buehler et al., 2003; Rosenwald & Bronstein, 2008). It is possible that for these aspects, especially events such as allegations of maltreatment or when a foster child is moved to another home, the quality of support may be more essential than the quantity of support. Foster parents may be meeting frequently with case workers or other foster parents, but if they are not respected, believed, or supported during these meetings, the higher level of support would not necessarily be associated with higher perceptions of fostering. Additional prospective research examining the potential importance of the quality of support when considering perceptions about foster children and their placements would be beneficial in better understanding the current findings.

Study Limitations

The current study is not without limitations. Firstly, it focused solely on the reports of foster parents. Information was not obtained from foster children or agency workers. Foster parents reported on the foster child factors retrospectively and these factors were not specific to one foster child. Rather, they were reflective of a foster parent's combined experiences with foster children. This type of methodology provides less detailed and potentially less accurate accounts of foster child characteristics than prospective studies that include foster child participants. A study that collects information from foster parents, children placed in their care,

and agency workers would provide an even more comprehensive understanding of how these systems impact one another and influence foster parents' perceptions of fostering.

Another weakness is that the study is correlational by nature and foster parents reported retrospectively at one time point. Thus, it is not possible to determine whether there is a causal relationship between the child, foster parent, and agency variables and foster parent perceptions. A longitudinal study examining foster parents over time would be helpful in better understanding how and when foster child, foster parent, and agency factors influence foster parents' perceptions and what interventions are most successful at improving foster parents' perceptions.

Lastly, only foster parents who were activity fostering were included in this study. It is likely that the perceptions of active foster parents differ from individuals who are no longer fostering. The current findings are not representative of individuals who withdrew from fostering. Additional research that systemically examines the perceptions of both active and previous foster parents would be beneficial in obtaining a more comprehensive understanding of all foster parent experiences.

Practical Implications and Recommendations for Future Research

One of the key contributions of this study is that it identified the most influential foster child, foster parent, and agency factors associated with foster parent perceptions of fostering. Child welfare agencies can use this information to improve the general and specific experiences of foster parents and increase their overall satisfaction. This, in turn, can potentially increase the rates of foster parent retention and help maintain a more stable supply of foster parents. In regard to foster child factors, the current findings highlight that foster child factors, as reported by foster parents, have a minimal impact on foster parent perceptions of fostering. However, having a higher number of foster children in the home is associated with decreased perceptions of the

fostering system. Thus, one way child welfare agencies can promote more positive foster parent perceptions is by refraining from placing too many children in one foster home at a time.

There is evidence to suggest that there are not enough foster homes for the number of children in care, which can lead to overcrowding (e.g., Matheson, 2010; OACAS, 2013; Rodger et al., 2006; Urquhart, 1989). The current findings suggest that it is counterintuitive to overcrowd foster homes because it reduces foster parent perceptions of the fostering system, which may potentially lead to increased rates of attrition and further deteriorate the discrepancy between the number of foster children and available foster placements. Additional research examining the association between overcrowding in foster homes and foster parent retention would be helpful in obtaining a better understanding of the optimal number of foster children within a foster home, when relevant contextual factors, such as whether a foster parent has an additional job or biological children living at home, are also considered.

In addition to the finding that placing a high number of foster children in one home leads to more negative perceptions of the fostering system, foster parents who provide treatment foster care also had less positive perceptions of agency workers and the fostering system, when compared to regular and other types of foster parents. Both the number of foster children in a foster home and treatment foster care increase the stress placed on a foster parent and likely impact a foster parent's ability to provide adequate care (e.g., these situations may cause overcrowding, insufficient time to address a child's needs, insufficient resources to meet a child's specialized needs, etc.). This, in turn, appears to have a negative impact on a foster parent's perceptions. Foster parents who provide treatment foster care or provide care to numerous foster children at one time are more likely to be exposed to situations where a child may receive inadequate care, which would likely reduce their perceptions of agency workers and

the fostering system. The child welfare system could improve the experiences of foster parents in these high stress situations by identifying key problem areas that are impeding a foster parent's ability to meet the specialized needs of foster children in their care and problem solving ways that the child welfare system can provide the appropriate resources to address these areas of concern. Additional research focusing on foster parents who provide treatment foster care or care to multiple foster children at a time is recommended to obtain more detailed information about their specific needs and perceptions.

The current findings also indicate that both higher levels of practical and emotional support are associated with higher perceptions about agency-related components of the child welfare system, and practical support is associated with higher perceptions about foster children and their placements. Thus, a child welfare agency's provision of adequate financial resources, foster parent support groups, and regular in-person meetings from agency workers is a key area to target to promote higher foster parent perceptions. In addition, given that older and regular foster parents have better perceptions of fostering, it would be worth contemplating how younger foster parents, who may have additional jobs and children to care for, and treatment foster parents, who have more demanding caretaker roles, can be better supported in their role as foster parents to prevent reduced perceptions of fostering. For example, increased opportunities for respite may be particularly important for foster parents who are employed outside the home and have young families.

According to the current results and the extant literature, focusing efforts on improving the amount of practical and emotional support provided to foster parents is one of the most influential ways a child welfare agency can improve foster parents perceptions of all areas of fostering and promote foster parent retention (e.g., Buehler et al., 2003; Coakley et al., 2006;

Sanchirico et al., 1998; Soliday et al., 1994). However, the current study also suggests that the quality of support may be an important factor to consider, especially in regard to a foster parent's perceptions about foster children and their placements. Additional research that examines the Perceptions about Agency Workers subscale at an item level would provide more information about the quality of support that foster parents receive and how it related to the quantity of support and foster parent experiences. In addition, prospective research that assesses how variations in the quantity and quality of support offered by child welfare agencies impacts the fostering experience would be optimal for obtaining increased information about how a child welfare agency and the surrounding community (e.g., mental health clinicians who work with the foster children could enhance the support they provide to foster parents) can best support foster parents.

Currently, Canada does not have a provincial or federal level evaluation strategy for foster parents. A regular monitoring system would allow for consistent evaluation of the fostering system and foster parent perceptions, early identification of concerns, and early intervention to support foster parents who have less positive perceptions of fostering. The Your Experience of Fostering scale (Leschied & Rodger, 2012) would be particularly useful in monitoring foster parents overtime because its four subscales allow for a comprehensive assessment of foster parent perceptions and more specific information about the areas where foster parents may express less positive perceptions. Future research is recommended that examines whether regular monitoring of foster parent perceptions and satisfaction would help improve the experiences of foster parents, as well as foster parent retention. It could also provide insight into whether regular monitoring would be a cost-effective approach to improving foster parent recruitment and retention.

Conclusion

This study was unique in its examination of various facets of foster parent perceptions, including perceptions related to agency workers, the fostering system, training, and foster children and their placements. In addition, it added to the existing literature by further examining the association between foster child factors and foster parent perceptions. Foster child needs and maltreatment histories, as reported by foster parents, were not associated with foster parent perceptions. Higher levels of practical and emotional support were the most influential variables associated with positive perceptions of both agency-related components and foster children and their placements. This suggests that positive foster parent perceptions are influenced by the support foster parents receive, not the foster children for which they provide care. Child welfare agencies can improve foster parents' perceptions of fostering, and potentially increase retention, by providing foster parents with practical and emotional support that meets their needs. The results also highlight the importance of identifying the needs of particular groups of foster parents, such as young foster parents and treatment foster parents, and providing resources and supports to address their specific areas of concern. In addition, obtaining regular feedback from foster parents about their perceptions and the support they receive would also be beneficial so that foster parents' satisfaction and areas of concern can be monitored consistently and addressed in a timely manner.

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Chapter 4

General Discussion

General Discussion

This dissertation provides a glimpse into the Canadian child welfare system by addressing gaps in the literature related to (1) the unique needs and strengths of children involved with the child welfare system who remain in their natural environments, (2) how these needs and strengths differ by placement type (i.e., in-home vs. out-of-home placement), (3) factors associated with in-home cases remaining open or closing, and (4) how foster child factors, as well as foster parent and agency factors, impact foster parents' perceptions. The current dissertation's focus is unique in that it systemically examines both the 90% of children who are in contact with the child welfare system but remain largely out of care and the remaining 10% of children who are in care. The child welfare system provides a continuum of service to some of the society's most vulnerable children. Thus, having a solid understanding of all of its children and their caregivers is imperative so that the child welfare system can provide services that address the individual needs and strengths of its children, as well as promote healthy child development and positive long-term outcomes.

The Role of Child Factors within the System

The main purpose of this dissertation was to examine the role of children involved with the child welfare system by (1) examining the characteristics of in-home children, (2) comparing and contrasting children who remain in their natural homes and children in out-of-home care, and (3) clarifying the association between foster child factors on foster parents' perceptions about fostering. It was found that, regardless of placement, children in the child welfare system had good general health, high prosocial behaviour, moderate mental health problems, and low academic achievement. Not surprisingly, children who remained in their natural environments had increased placement stability with fewer changes in caregivers than children in out-of-home

care. However, children who remained in their natural home environment had fewer

developmental assets, particularly external resources, than children in out-of-home care. These

findings indicate that children who remain in their natural homes may have less access to

community resources/services than children in out-of-home care. Thus, one potential beneficial

aspect of out-of-home care may be increased access to resources within the community and

collaboration with community services. Most children in out-of-home care reside in foster homes

(Rosenwald & Bronstein, 2008) and it is likely that foster parents, as well as more intensive

involvement from a child welfare worker, are at least partially responsible for providing

increased levels of support for these children (i.e., stability in the provision of basic needs, access

to services within the community, and collaboration with community agencies). More

specifically, foster parent selection effects, especially (1) the unique characteristics that drive

individuals to become foster parents and (2) the selection process [i.e., interviews and home

assessments to determine the appropriateness of individuals and the safety of their home, such as

the Structured Analysis, Family Evaluation (SAFE) instrument used in Ontario; OACAS, 2015],

as well as training effects (i.e., all foster parents receive mandatory pre-service training; e.g.,

Nash & Flynn, 2016; Rodger, Cummings, & Leschied, 2006) likely positively impact foster

children's developmental assets.

Although foster care appears to be associated with increased support and access to

resources for foster children, foster child characteristics (i.e., fostering children with special

needs and maltreatment histories) were not found to be highly associated with foster parents'

perceptions of fostering. Foster parent perceptions were more strongly associated with agency

support factors, a finding that is consistently supported by the literature (e.g., Buehler, Cox, &

Cuddeback, 2003; Coakley, Cuddeback, Buehler, & Cox, 2006; MacGregor, Rodger, Cummings,

& Leschied 2006). More specifically, active foster parents who were more satisfied with the

practical support they received, in-person meetings they had with agency workers, and peer

support they received from other foster parents had more positive perceptions about agency

workers, the fostering system, and training, as well as foster children and their placements.

Foster parent factors, such as being older, having no post-secondary education, living in eastern

Canada, and providing regular, rather than treatment, foster care were also associated with more

positive perceptions of fostering. These findings indicate that addressing foster child factors

would not be a particularly beneficial approach to improving foster parents' perceptions. Child

welfare agencies would have more success targeting the support provided to foster parents to

ensure that it meets the foster parents' individual and family-level needs. In fact, the findings

from both studies highlight that children within the child welfare system and foster parents

would benefit most from increased support and resources that target their specific needs and

strengths.

Identified Needs and Strengths of Children and Foster Parents

This dissertation identified various needs and strengths for both children in the child

welfare system and foster parents. In regard to children in the system, both those who remained

with their natural families and children who were in out-of-home placement exhibited a

moderate level of behavioural and emotional problems (if they were above the age of 4 years).

This is consistent with previous literature that has found that school-age children and adolescents

in the child welfare system have higher mental health problems than the general population [e.g.,

Burge, 2007; Canadian Mental Health Association (CMHA), 2010; Leslie et al., 2005; Milburn,

Lynch, & Jackson, 2008]. In addition, regardless of placement, children over the age of 4 years

had low academic performance. This highlights that children in the child welfare system have

significant needs in regard to their mental health and academic functioning, whether they remain in their natural environments or they are in out-of-home care.

It was also found that children in the child welfare system displayed resilience, particularly in regard to prosocial behaviour. This converges with previous literature, which has found that positive caregiver-adolescent and peer relationships are associated with resilience for children in out-of-home care and that children in out-of-home care have similar levels of prosocial behaviour as the general population (Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004; Legault, Anawati, & Flynn, 2006). There is also evidence that, for children, strong social supports are linked to better physical health, mental health, and school functioning (e.g., Griffin, Cheier, Botvin, Diaz, & Miller, 1999; Lynskey & Fergusson, 1997; Rosenfeld, Richman, & Bowen, 2000).

In addition, although in-home children had fewer developmental assets than children in out-of-home care, both samples had at least a moderate amount of assets, suggesting that some internal and external resources are in place to help promote positive functioning. It may be beneficial for child welfare agencies to use these identified strengths related to prosocial behaviour and developmental assets to help children build and maintain strong social support networks, as well as address their identified needs. This would likely help in reducing the identified mental health and educational needs and preventing more severe and long-term problems in these areas.

Consistent with the existing literature that has found that foster parents are at least moderately satisfied with fostering (Fees et al., 1998; Soliday, McCluskey-Fawcett, & Meck, 1994), the current sample of foster parents reported relatively positive perceptions of fostering, particularly in relation to agency workers and training. Their perceptions about the fostering

system and foster children and their placements were more neutral. Although these perceptions

do not indicate dissatisfaction with fostering, they also do not indicate complete satisfaction with

the role of fostering. Thus, foster parents also have needs that have the potential to be more

adequately addressed by the child welfare system.

These results highlight that for both children in the child welfare system and foster

parents some aspects of their functioning and involvement with the system are positive. The

children display high social functioning while foster parents display somewhat positive

perceptions about agency workers and the training they receive. However, children and foster

parents also display specific areas of need, including child mental health and educational

functioning and foster parent perceptions about the fostering system and foster

children/placements, which could be improved through targeted interventions by the child

welfare system. The children's and caregivers' needs and strengths provide support for applying

a systemic perspective to the child welfare system. In addition, the similarities identified between

children who remain in their natural environments and children in out-of-home care provide

support for examining the system as a continuum of services, rather than separate parts of a

whole (e.g., examining only children and caregivers involved in out-of-home care).

Practical Implications and Recommendations for Future Research

Clinical Implications

A common finding for both studies is the importance of support in promoting optimal

functioning for foster parents and children involved with the child welfare system. Child welfare

agencies can enhance foster parents' perceptions by focusing on providing them with appropriate

practical and emotional support. Previous research has identified that, in regard to emotional

support, foster parents benefit from (1) responsiveness from and good communication with child

welfare workers, (2) respect for their opinions and abilities, such as being considered part of the

foster child's care team, and (3) agency arranged foster parent support groups (e.g., Farris-

Manning & Zandstra, 2003; Hudson & Levasseur, 2002; MacGregor et al, 2006; Rhodes, Orme,

& Buehler, 2001). In regard to practical support, respite care, sufficient training, and sufficient

compensation have been associated with more positive foster parenting outcomes (Barth, 2001;

Boyd & Remy, 1979; Kirton, 2001; Triseliotis, Borland, & Hill, 1998). These findings indicate

that providing practical and emotional support is likely the best way the child welfare system can

improve foster parent experiences of fostering and retention (MacGregor et al., 2006).

The current findings and the extant literature also suggest that the quality of support is an

important factor to consider. The association between the quality of support and foster parents'

perceptions has not been specifically addressed in the previous literature. Furthermore, the

precise intensity of support required for optimal results is unknown. For example, one study by

Chamberlain, Moreland, and Reid (1992) randomly placed foster parents of 4- to 7-year-old

children in one of three groups: (1) enhanced training (i.e., weekly 2-hour training group in child

behaviour management), support (i.e., three calls from a worker per week), and compensation,

(2) enhanced compensation only, and (3) foster care as usual. They found that foster parent

attrition rates decreased significantly when foster parents were provided with extra training,

support, and compensation. Thus, a high level of support results in positive outcomes but the

exact intensity of support that is required to obtain these positive outcomes remains unknown.

Maintaining supportive services at a level of intensity that is similar to that described in

Chamberlain et al. (1992), even with the authors recommendation of reducing the frequency of

group support sessions, would be challenging because the child welfare system's resources are

generally stretched to the limit. In addition, agencies often struggle to dedicate enough financial

resources so that child welfare workers are able to provide foster parents with adequate support (e.g., MacGregor et al., 2006). Despite this challenge, there is no research that further examines the intensity or quality of support required to maximize foster parent experiences and minimize the strain on the child welfare system. To best meet the needs of foster parents and be considerate of the reality of a taxed child welfare system, more research examining the optimal intensity and quality of support using a similar research design to Chamberlain et al. (1992) would be beneficial.

Individualizing support to meet the needs of children involved with the child welfare system is also imperative. For children in the child welfare system, additional support that addresses mental health concerns, improves educational functioning, and improves access to community resources would be beneficial. To address the reduced external resources for children who remain in their natural environments, it may be advantageous to assess a family's ability to meet a child's basic needs (e.g., shelter, food, transportation, etc.), as well as provide structure and routine in the home, because these factors may be hindering a family's ability to address higher order needs, such as mental health problems, educational factors, and extracurricular activities (Maslow, 1968). If there is any indication that a family is struggling to provide basic needs, it may be particularly important to provide interventions that target these areas of need and help caregivers establish stability and structure in the home prior to the provision of interventions that address higher order needs.

Individualizing support and addressing the basic needs of a child and his/her family prior to targeting higher order needs is consistent with differential response (Semanchin Jones, 2015). *Differential response* is a multi-pathway response to children and families who are identified as low- or moderate-risk following an initial assessment (i.e., children who remain in their natural

home environments). It allows for a more individualized response that focuses on meeting the

specific needs of a family, with an initial emphasis on meeting any unmet basic needs. Although

differential response is a relatively new response, research that has examined this approach has

found promising results. However, more rigorous research is required before any conclusions can

be made about its effectiveness (Semanchin Jones, 2015).

Although the specific supports that are optimal for children and foster parents differ, one

of the key findings of this dissertation is that providing sufficient and targeted supports for

children in the child welfare system and foster parents is important to improve the overall

functioning of the system. One potential barrier to providing additional supports that target the

specific needs of children and foster parents is the already stretched financial resources available

to child welfare agencies. It would likely require a reorganization of finances, as well as

collaborations with community organizations that can also aid in providing the necessary

supports to both children and foster parents, such as school boards and mental health agencies.

This is consistent with one of the initiatives of the Ontario Association of Children's Aid

Societies (OACAS, 2014) to develop and enhance partnerships with community resources so that

more supports are available to meet the needs of its children and families.

Some initiatives to address these areas of need for children in care are already taking

place and serve as helpful examples, especially given the positive results that have been

documented (Berridge, 2007; Chamberlain et al., 1992; Flynn, Marquis, Paquet, Peeke, & Aubry,

2012). However, additional initiatives and research are needed that examine the impact of

supports for children involved with the child welfare system who are not in care and foster

parents as well. One suggestion to enhance supports received by foster parents is for child

welfare agencies to share the responsibility of supporting foster parents with mental health

clinicians who work with the foster children. According the first study of this dissertation, about 41% of children in out-of-home care have access to mental health services. For these children, arrangements could be made with the clinicians to provide support to foster parents as well. In addition, to collaborative work with mental health facilities, involvement of the school system, including teachers and clinicians within the school system, could also be an avenue that would help improve the supports received by foster parents. Longitudinal research examining specific aspects of support, including the intensity and quality of support, community involvement (e.g., how often foster parents are supported by mental health and school systems and the impact), and government level initiatives, would be helpful in beginning to understand and identify the most cost-effective supportive interventions required to promote optimal outcomes for children and foster parents involved with the system, while also ensuring sustainability in a resource-limited society.

Theoretical Implications

Consistent with Bronfenbrenner's Ecological Systems Theory (1979), the child welfare system is a complex continuum of services that involves multiple systems. These systems interact with and impact the functioning of each individual who is involved with the system. This dissertation examined various factors at child, caregiver, family, and agency levels to enhance our understanding of this complex system, particularly in regard to how children in the child welfare system are faring and how they are impacting foster parents' perceptions of fostering. When the needs and strengths of children were examined, there were minimal significant differences between children in natural family environments and children in out-of-home care. However, all children in the child welfare system exhibited difficulties in mental health and educational functioning, which are areas that are highly impacted by the family and community

level systems in which the child is imbedded. In addition, it was found that foster parent

perceptions were most highly impacted by agency-level factors, such as support.

These results highlight the systemic nature of the child welfare system and the

importance of providing targeted supports at various levels within the system, including the

child, (foster) family, and agency level. For example, providing additional compensation to

foster parents in isolation would not be sufficient in improving foster parents' perceptions, as this

would only partially address the need for adequate practical support. According to current and

previous findings, additional compensation that is accompanied by increased emotional support

from an agency worker, who respects foster parents' perspectives, and child-level supports to

address any individual concerns, such as mental health and educational problems, would result in

more optimal outcomes (Chamberlain et al., 1992). Additional community supports (e.g., mental

health clinicians) could also improve foster parents' perceptions. Thus, a comprehensive,

systems-informed approach, which addresses the needs of the agency, caregiver, and child and

also provides adequate support at each of these levels, is more likely to promote positive

outcomes for both children and caregivers.

In addition to the individual, family, and agency level systems, it is important to note that

a child welfare agency is highly impacted by broader systems that control financial resources,

such as government-level systems. This is particularly essential to consider given that the

findings of this dissertation highlight the importance of optimizing supports for children and

foster parents, which could potentially require an increase in funding, restructuring of finances,

or more reliance on community supports. Although not all systems necessarily have an equal

impact on the functioning of children and caregivers (e.g., foster child vs. agency-level supports

for foster parents), they do play a role in understanding the system because addressing one level

of the system impacts other levels in which it is imbedded. For example, in order to provide increased emotional and practical supports for foster parents, the child welfare system would need to approach high-level systems, such as the government, and same-level systems, such as community agencies, to identify how to receive adequate funding and resources to provide additional support. The outcome of this endeavour would then impact the direct services provided to foster parents and the types of supports they are offered, which would then impact the services received by foster children. Thus, increasing supports would impact higher-level systems, such as the government, same-level systems, such as other community services, and lower-level systems, such as the (foster) family and child. However, the intensity of involvement from each of these systems would likely differ. When examining the child welfare system, it is essential to consider more than one embedded system (e.g., foster children) when attempting to understand the system or implement changes.

Despite using a systems theory framework for both studies, it was not possible to fully capture the complexity of the system. Questions remain about the associations between systems (e.g., whether helping a family meet basic needs positively impacts a child's external developmental assets). In addition, it was not possible to examine all potential factors that may be associated with the functioning of children and caregivers in the child welfare system, both because of the limitations of the current data collection procedures (e.g., there was no measure assessing the caregiver-child relationship) and the fact that it is not possible to capture the full complexity of the system in one study. One aspect of the system that this dissertation did not capture was the perspective of caregivers of children who remain in their natural environment. This would be an interesting area for future research to consider, as it would provide an even broader systemic perspective and insight into the specific needs and strengths of natural

caregivers. Given the similarities in supports required for children who remained in their homes and children in out-of-home care, it is possible that there may also be similarities in the supports required by natural and foster caregivers. Additional research that examines the child welfare system from a systemic perspective is also important to continue to identify the most effective ways to address the needs and strengths of its children and caregivers. Longitudinal studies and randomized control trials would be particularly helpful to determine changes that occur throughout an individual's involvement in the system and as a result of implementing supportive interventions designed to address areas of need and strength.

Policy Implications

From a policy standpoint, it would be worthwhile for the child welfare system to invest in resources to better understand how supports impact child and foster parent functioning. For example, it would be beneficial to determine what specific aspects of support promote positive outcomes (e.g., the optimal intensity and quality of support), while also considering the impact of contextual factors, such as the family situation (e.g., number of children), caregiver employment, and child/caregiver age. In order to accomplish this, it would be ideal to have a monitoring system in place for all children and caregivers in the child welfare system. This would not only allow for an examination of how changes in the supports offered within the system impact foster parents' perceptions, but it would also provide child welfare agencies with a better understanding of the child and foster parent population and their needs and strengths on a regular basis. In Canada, there is no provincial or federal assessment approach in place for foster parents or children who remain in their natural environments. Introducing a monitoring system for both levels of the child welfare system would allow for a more comprehensive understanding of the system, easier identification of the needs and strengths of both children and foster parents, earlier

intervention to address needs, and continued monitoring to assess outcomes for any attempted

interventions.

Given the complexity of the child welfare system and the fact that it is consists of many

intertwined systems, changes in one area of the system can significantly impact other areas.

Thus, the needs and strengths of children and foster parents may change overtime. With a

monitoring system in place, these changes can be identified and addressed in a more timely and

effective manner. This would aid in developing a more efficient system that could potentially

reduce costs and reduce or prevent children from penetrating further into the child welfare

system, increased child functioning problems, placement breakdown, and foster parent attrition.

In order to encompass the complexity of the child welfare system, comprehensive assessment

tools are recommended, such as the *Assessment and Action Record* (AAR; Flynn, Miller,

Desjardins, Ghazal, & Legault, 2010), with revisions for children who are not in out-of-home

care, and the *Canadian Foster Parent Survey* (CFPS; Leschied & Rodger, 2012), with some

adjustments to make it more optimal for use as a monitoring tool. In particular, it would be

beneficial to consider the following revisions: (1) include additional questions that ask about the

supports foster parents receive from child mental health services (e.g., clinicians) and the

education system (e.g., teachers); (2) assess family stressors that have occurred within the last 6-

months to 1-year for the foster parents' biological families (e.g., Farmer et al., 2005); (3)

distinguish between regular, kinship, and adoptive foster parents for the "type of foster care"

question; and (4) improve the scale properties of the Your Experiences of Fostering Scale as per

the results of the Rasch modeling analyses (please see Appendix H), including reducing the 7-

point scale to a 5-point scale and revising the reverse scored items so that they are no longer

reverse scored. This revised Your Experience of Fostering scale would be particularly beneficial

for monitoring foster parents' perceptions of various aspects of the child welfare system and how changes in supports impact these perceptions.

Conclusion

The results of this dissertation highlight the importance of providing supports to children and foster parents in the child welfare system in order to enhance the functioning of all its children and foster parents' perceptions of fostering. Children in the child welfare system would benefit most from supports that address their mental health and educational needs, increase their external resources, and enhance their prosocial behaviour. For foster parents, providing adequate emotional and practical support is most likely to improve their perceptions about agency-related factors and foster children and their placements. Addressing the specific needs and strengths of children and foster parents involved with the system requires a systemic approach that recognizes that the child welfare system is a continuum of services. This approach should not only incorporate the child welfare system and its resources; it should also incorporate and enhance collaboration with community and government level resources. This would allow for the development of a supportive structure that, first and foremost, meets the needs of the child welfare system's children and caregivers, and is affordable and sustainable long-term.

Additional research is needed that examines specific aspects of support (e.g., intensity and quality); the impact of supports on child, family, and foster parent functioning (e.g., mental health, academic achievement, foster parent retention); and the resources required by the child welfare agency to provide adequate supports to children, families, and foster parents. In addition, in order to maintain a solid understanding of the needs and strengths of those served by the child welfare system and how these aspects are impacted by supports provided by the child welfare system, a comprehensive monitoring system for its children, families, and foster parents would

be particularly beneficial. This would also allow for earlier identification of concerns, earlier

implementation of interventions, and the ability to evaluate the success of interventions.

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Appendix A

Follow-Up Questionnaire for Outcomes Project

<u>Follow-Up For Outcomes Project</u>

A. Family/Kinship Care Placement Information Form

How long was the placement at the time of the AAR?
___ days

[Answer #1 or #2, whichever fits for the child's circumstances when you completed the AAR]

1. Birth Family Placement at the time the AAR was completed

a. Type of Family
___ One Parent – mother led family
___ One Parent – father led family
___ Two Parent Family – both birth parents
___ Two Parent Family – step family arrangement

b. Siblings
___ Number of siblings (birth and step) in the home (0-99)

2. Kinship Care Placement at the time the AAR was completed

___ Grandparents (Maternal)
___ Grandparents (Paternal)
___ Aunt and/or Uncle (Maternal)
___ Aunt and/or Uncle (Paternal)
___ Sibling
___ Cousin
___ Religious Leader
___ Family Friend
___ Godparent
___ Other (Please specify)
_____
_____

B. Reason For Case Opening

   1. *At the Time of Case Opening, What was the family ESC Open For (in relation to their code and identify the topical theme of the concerns that we are open to address through protection intervention)*
   Yes ___

No ___

2. **If the answer to 1. is "yes", then using the eligibility spectrum as a guide indicate what the nature of risk included:**

Physical ____
Sexual ____
Neglect (including basic, medical and response to a child's mental, emotional development) ____
Emotional ____
Exposure to adult conflict or partner violence ____
Abandonment ____
Parent-child conflict ____
Caregiver capacity (to include mental health, addictions, inability to protect, care giving skills) _____

C. Case Plan Follow-up Since the Completion of the Tool to Date

1. ***Child safety***
   a. Evidence of verified concerns of maltreatment during the six-month follow-up period since the AAR was completed?
      Yes ____
      No ____

   b. If yes, the nature of maltreatment was
      Physical abuse ___
      Neglect ___
      Sexual abuse ___
      Domestic Violence ____
      Multiple forms of abuse ___
      There was a report but no substantiation of abuse or neglect ___

   c. Was there a presence of concern related to:
      Addiction [alcohol] ____
      Addiction [Street Drugs] ____
      Addiction [prescription] ____
      Mental Health ____

2. ***Child well-being – School Related problems since the AAR was completed***

   a. Evidence to suggest the child currently experiences school-related problems (0 = no evidence, 1= mild, 2 = moderate, 3 = severe).   _____

   b. Evidence to suggest the child currently experiences truancy   _____
      (0 = no evidence, 1 = mild, 2 = moderate, 3 = severe).

3. ***Permanence***

a. Has child remained in same placement since the AAR was completed?
    (1 = yes; 2 = no) _____

b. If child has been moved to another placement since AAR was completed, how
    many changes have occurred? _____

c. If child has been moved to another placement since AAR was completed, what is
    their current placement type:
    Foster home _____
    Group Home _____
    Residential Treatment Centre _____
    Youth Justice Centre _____
    Kinship Care _____
    Other [Please specify] _____

4. Family and Community Support

a. Has family moved during the six-month follow-up period? _____ (1 =
    yes; 2 = no)

b. If yes to above, how many moves? _____ (00-
    99)

c. Has child moved schools during the six-month follow-up period? _____
    (1 = yes; 2 = no)

d. If yes to above, how many school moves? _____ (00-
    99)

5. Agency Response

a. Did the child/youth come into care? ___
    (1 = yes; 2 = no)

b. Was the case closed since the AAR was completed? ___
    (1 = yes; 2 = no)

c. Was there a new report of abuse or neglect? ___
    (1 = yes; 2 = no)

d. Did the child/youth's worker change during the six-month follow up period (1 =
    yes; 2 = no) ___

e. If yes to [d], how many times? (00-99) ___

D. Level and Nature of Child Welfare Supervision to Support Birth/Kinship Placement

1. What was the frequency of visits to provide child focused support and counselling since the AAR was completed _____

   (Average number of weekly visits; 0-99)

2. Supervision to provide family focused support and counselling since the AAR was completed   (1 = yes; 2 = no) _____

3. Frequency of visits to provide family focused support and counselling since the AAR was completed (Average number of weekly visits; 0-99) _____

4. Team conferences held in regard to the placement _____

(Number of team meetings held since last follow up reporting; 0-99)

E. Level and Nature of Community Based Children's Services/Educational Involvement to Child Welfare Involvement, Family Service Support Program

Which of the following services were used by the family since the AAR was completed?

(1 = No; 2 = Yes, community facilitated; 3 = Yes, CAS facilitated; 4 = Yes CAS and Community jointly facilitated)

1. Community based counselling focused on the child / youth _____

(Other than those provided through CAS)

2. Community based counselling focused on the family _____

3. School based counselling resources _____

4. Educational resources, non –counselling in nature (i.e. tutors) _____

5. Youth probation _____

6. Medical care since the AAR was completed _____

7. Psychiatry _____

8. Public Health ___

9. Has family used any of the following services (check as many as applicable) since completing the tool?
    a. Ontario Works ___

    b. Ontario Disability Support Program ___

    c. Public Housing ___

    d. Domestic Counselling (Parent) ___

    e. Domestic Counselling (Child) ___

    f. Addictions Counselling ___

    g. Victim Services ___

    h. Adult Probation ___

    i. Emergency Housing ___

    j. Parenting Groups ___

    k. Adult Protective Services ___

    l. Faith Group Support ___

    m. Support for Physical Wellness [i.e., physiotherapy] ___

    n. Cultural-Based Support ___

    o. Language Services ___

10. Child/youth placed in a Residential Treatment Centre ___

11. Aboriginal/Band Support since completing the tool? ___

Appendix B

Ethics Approval for Study 1, Sample 1

Western Education

WESTERN UNIVERSITY
FACULTY OF EDUCATION
USE OF HUMAN SUBJECTS - ETHICS APPROVAL NOTICE

Review Number: 1307-16
Principal Investigator: Alan Leschied
Student Name:
Title: *Do We Have the Right Outcome Measures for the 90% of Children We Serve?*
Expiry Date: February 28, 2014
Type: Faculty
Ethics Approval Date: August 7, 2013.
Revision #:
Documents Reviewed &
Approved: Western Protocol, Letter of Information & Consent

This is to notify you that the Faculty of Education Sub-Research Ethics Board (REB), which operates under the authority of the Western University Research Ethics Board for Non-Medical Research Involving Human Subjects, according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario has granted approval to the above named research study on the date noted above. The approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the REB's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the study or information/consent documents may be initiated without prior written approval from the REB, except for minor administrative aspects. Participants must receive a copy of the signed information/consent documentation. Investigators must promptly report to the Chair of the Faculty Sub-REB any adverse or unexpected experiences or events that are both serious and unexpected, and any new information which may adversely affect the safety of the subjects or the conduct of the study. In the event that any changes require a change in the information/consent documentation and/or recruitment advertisement, newly revised documents must be submitted to the Sub-REB for approval.

Dr. Alan Edmunds (Chair)

2012-2013 Faculty of Education Sub-Research Ethics Board

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The Faculty of Education   Faculty of Education Building
1137 Western Rd.   edu-ethics@uwo.ca
London, ON N6G 1G7   519-661-2111, ext.88561 FAX 519-661-3095

Copy: Office of Research Ethics

Appendix C

Study 1 Letter of Information

LETTER OF INFORMATION

Do We Have the Right Outcome Measures for the 90% of Children We Serve?

Introduction

My name is Dr. Alan Leschied and I am a Professor at the Faculty of Education at Western University. I am currently conducting research into service outcomes in child welfare service and would like to invite you and your child to participate in this study.

Purpose of the study

The aims of this study are to assist child welfare in understanding the impact of their services to children and youth who remain in the care of their families.

If you agree to participate

If you agree to participate in this study you will be asked to complete an interview with your case worker. It will consist of questions that you would be normally asked on a routine basis by them. This will take place within your own home, at your convenience. The completion of this interview may take place over two or three meetings each lasting approximately 1 hour for a total of 3 hours. You will also be contacted by your case worker approximately 6 months later when they will ask you additional questions about your child that should take no longer than 1 hour.

Confidentiality

The information collected will be used for research purposes as well as assisting your case worker in understanding your family's and child's needs. For the research portion of the data collection, neither your name, your child's name nor information might identify you will be given to the researchers. For example, your name or anything that could identify you will not be used in any publication or presentation of the study results. All information collected for the study will be kept confidential and housed as an electronic file within the University of Ottawa. All data will be destroyed 5 years following the completion of the study

Risks & Benefits

There are no risks to participating in this study.

Voluntary Participation

Participation in this study is voluntary. You and/or your child may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on the services that you would normally receive form the CAS.

Questions

If you have any questions about the conduct of this study or your rights as a research participant you may contact the Office of Research Ethics, Western University at 519-661-3036 or ethics@uwo.ca. If you have any questions about this study, please contact Dr. Alan Leschied at 519-661-2111, ext 88628.

This letter is yours to keep for future reference.

_____

Signed

Western Education

Appendix D

Study 1 Consent Form

Do We Have the Right Outcome Measures for the 90% of Children We Serve?

Dr. Alan Leschied
The University of Western Ontario

I have read the Letter of Information, and have had the nature of the study explained to me. I agree that my child and my family may participate in the study. All questions have been answered to my satisfaction.

Name of child (please print): _____

Signature of Child: _____

Name of Parent/Guardian (please print): _____

Signature: _____ Date: _____

_____ _____

Name of Person Obtaining Informed Consent: _____

Signature of Person Obtaining Informed Consent:

_____

Date: _____

Western University Building, Rm. 222 1111 Street Name St. London, ON, Canada A1A 2B2
t. 519.111.1111 ext. 22222   f. 519.111.3333 www.westernu.ca

Appendix E

Ethics Approval for Study 1

File Number: H05-15-15   Date (mm/dd/yyyy): 01/05/2016

Université d'Ottawa   University of Ottawa

Bureau d'éthique et d'intégrité de la recherche   Office of Research Ethics and Integrity

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
John	Lyons	Social Sciences / Psychology	Supervisor
Wendy	den Dunnen	Social Sciences / Psychology	Student Researcher

File Number: H05-15-15

Type of Project: PhD Thesis

Title: The Functioning of Children in the Child Welfare System: A comparison of Children Out-of-Home Care and Children who remain in the family home

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
01/05/2016	01/04/2017	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
N/A

1

550, rue Cumberland, pièce 154   550 Cumberland Street, room 154
Ottawa (Ontario) K1N 6N5 Canada   Ottawa, Ontario K1N 6N5 Canada
(613) 562-5387 • Téléc./Fax (613) 562-5338
www.recherche.uottawa.ca/deontologie/ www.research.uottawa.ca/ethics/

Appendix F

Ethics Approval for Study 2

Université d'Ottawa   **University of Ottawa**
Bureau d'éthique et d'intégrité de la recherche   Office of Research Ethics and Integrity

Ethics Approval Notice

Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
John	Lyons	Social Sciences / Psychology	Supervisor
Wendy	den Dunnen	Social Sciences / Psychology	Student Researcher

File Number: H05-15-14

Type of Project: PhD Thesis

Title: The Impact of Caring for Challenging Foster Children on the Fostering Experience

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
07/27/2015	07/26/2016	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
N/A

1

550, rue Cumberland, pièce 154   550 Cumberland Street, room 154
Ottawa (Ontario) K1N 6N5 Canada   Ottawa, Ontario K1N 6N5 Canada
(613) 562-5387 • Téléc./Fax (613) 562-5338
www.recherche.uottawa.ca/deontologie/ www.research.uottawa.ca/ethics/

Appendix G

Canadian Foster Parent Survey

Canadian Foster Parent Survey [2012]

Dr. Alan Leschied   Dr. Susan Rodger
Western University; London, Ontario, Canada

Dear Foster Parent,

Foster care systems across Canada are under stress. There are more children needing homes than there are homes available, yet all children deserve to grow up in a family.

There are many reasons that cause children to come into care, including a family situation that could put a child at risk, or where a child has been abused, neglected or abandoned, but sometimes it is about a parent who is ill or who cannot make other arrangements for their child during a difficult life period. Foster parents care for a child who cannot live safely with their parents or caregivers and are not yet old enough to live on their own.

In order to address this issue of a diminishing resource within our communities it is essential to appreciate the challenges associated with the recruitment and retention of foster parents for children and youth in need.

In conjunction with the Child Welfare League of Canada (CWLC) and in partnership with the Canadian Foster Families Association (CFFA), we have put together this inventory of questions and concerns that can help examine relevant issues related to the recruitment and retention of foster parents in Canada. There are no known risks to participating in this study.

Participation is voluntary. You may refuse to participate, refuse to answer any questions, or withdraw from the study at any time with no effect on your status as a foster parent. By the virtue of your experience and knowledge we truly hope that you will assist us in completing this series of questions. We estimate that it will take approximately 25 to 30 minutes. By completing this form, you are consenting to participate in this research initiative. **Your responses are confidential**. No individual's specific response or set of responses will be distinguishable in the final report. If you have any questions about the conduct of this study or your rights as a research participant you may contact the Office of research Ethics, Western University at 519-661-3036 or ethics@uwo.ca.

We want to thank you in advance for your assistance. If you have any questions related to the full project please do not hesitate to contact either of the principal investigators, Dr. Alan Leschied or Dr. Susan Rodger, or Ms. Kelly Stone, Director Program Development of the Child Welfare league of Canada.

Dr. Alan Leschied   Dr. Susan Rodger   Ms. Kelly Stone
Western University   Western University   Child Welfare League of Canada
leschied@uwo.ca   srodger2@uwo.ca   Kelly@cwlc.ca
(519)-661-2111, ext 8862   (519)-661-2111, ext 88605   (613)-235-4412, ext 32

Concerns regarding specific questions within this protocol can be directed to our Research Assistant:

Ms. Wendy den Dunnen

Instructions for Submitting Your Responses:

To submit your responses, simply click on the submit button on the top right-hand corner of the screen. This will send the completed form directly to our Research Assistant Wendy den Dunnen.

When you click on the submit button, you will be asked for your name and email address. If you feel uncomfortable providing your name and email address and prefer to remain anonymous, you may use an alternate name and email address. This information will only be used to distinguish between completed surveys and will be converted to an anonymous ID number once received.

Canadian Foster Parent Survey [2012]

Dr. Alan Leschied   Dr. Susan Rodger
Western University; London, Ontario, Canada

Current Date (dd/mm/yy):

Please note that throughout this survey, the term "worker" refers to any one of the following: Social worker, support worker, or resource worker.

YOUR HOME AND FAMILY

Please answer the following questions about you and your family by selecting the response that fits the best, or by filling in the blanks:

1. For how many years has your home provided foster care?

2. The total number of children I have fostered in my home:

3. The number of children in my own biological family:

4. The highest number of children I have fostered at any one time:

5. The number (on average) of face-to-face contacts I have with a supervising worker(s) per month:

6. Do you meet regularly with other foster families through your own network?

7. Have you fostered children from other cultures?

8. Primarily, I care for children who are (select the most common age group):

9. My home has fostered children with special needs: ☐ No ☐ Yes ☐ NA

Special needs relates to children with unique physical, medical, behavioural or emotional needs that require special efforts on the part of the foster parents to attend such things as frequent appointments or alterations to the family home to meet the needs of the child(ren).

10. If you answered 'yes' to the question above, please tell us what types of needs the children had (check the one you consider to be the most important special need, if a child had more than one need for which they needed special support).

	No	Yes	NA		No	Yes	NA
Physical	☐	☐	☐	Behavioural	☐	☐	☐
Medical	☐	☐	☐	Emotional	☐	☐	☐

11. In the past 12 months have you fostered a child who has experienced:

	No	Yes	NA		No	Yes	NA
Physical abuse	☐	☐	☐	Neglect	☐	☐	☐
Sexual abuse	☐	☐	☐	Multiple forms of abuse	☐	☐	☐
Emotional abuse	☐	☐	☐				

12. As of January 1, 2012, in what province did you reside?

in what county or district did you reside?

in what town or city did you reside?

13. What year was your home first approved for foster care? (yyyy)

14. For what age range of children was your home approved? ☐ to ☐

Page 2 of 8

Canadian Foster Parent Survey [2012]

15. For what sex(es) of children was your home approved? [▼]

16. In the yes/no boxes below, indicate the type(s) of care provided in your foster home during the last 12 months. In the spaces to the right of the yes/no boxes, enter the total number of children you had during the last 12 months for each type of care. Be sure to report all types of care that you provided.

	No	Yes	NA	Number of children placed in your home		No	Yes	NA	Number of children placed in your home
Regular foster care	☐	☐	☐		Provisional foster care	☐	☐	☐	
Special foster care	☐	☐	☐		Foster with a view to adopt	☐	☐	☐	
Treatment foster care	☐	☐	☐		Kinship care	☐	☐	☐	
Emergency foster care	☐	☐	☐		Other	☐	☐	☐	
Relief foster care	☐	☐	☐						

17. In the yes/no boxes below, check ages and specific needs or situations of the children placed in your foster home during the last 12 months. In the spaces to the right of the yes/no boxes, enter the total number of children you had during the last 12 months for each age or specific need/situation.

	No	Yes	NA	Number of children placed in your home		No	Yes	NA	Number of children placed in your home
Infants (0-1 years old)	☐	☐	☐		Young adults (18 years old + who remain under the care of child welfare services)	☐	☐	☐	
Toddlers (2-4 years old)	☐	☐	☐		Medically fragile children	☐	☐	☐	
Young children (5-6 years old)	☐	☐	☐		A relative	☐	☐	☐	
Latency age children (7-12 years old)	☐	☐	☐		Other	☐	☐	☐	
Adolescents (13-17 years old inclusive)	☐	☐	☐						

18. In the yes/no boxes below, indicate the type(s) of care provided in your foster home during your last 12 months as an approved home. In the spaces to the right of the yes/no boxes, enter the total number of months of service you gave for each type of care during the last 12 months as an approved home. (For example, if you had one infant for 3 months and a second infant for 4 months, the total months of infant foster care would be 7.)

	No	Yes	NA	Total number of months of care		No	Yes	NA	Total number of months of care
Regular foster care	☐	☐	☐		Relief foster care	☐	☐	☐	
Special foster care	☐	☐	☐		Provisional foster care	☐	☐	☐	
Treatment foster care	☐	☐	☐		Other	☐	☐	☐	
Emergency foster care	☐	☐	☐						

Canadian Foster Parent Survey [2012]

19. How many foster children left your home during the last year? This includes all children including those placed on emergency, respite and/or relief placement.

20. How many times during the last year did you decline to accept a child who was offered for placement?

21. If you refused care of a child as in question 20, was it due to: (please select all that apply)

	No	Yes	NA		No	Yes	NA
Age of child	☐	☐	☐	Not considered an appropriate fit within the current family	☐	☐	☐
Gender of child	☐	☐	☐	Concerns related to other children in the home	☐	☐	☐
Behavioural profile of child	☐	☐	☐	Not the right time for a child to be placed in the home	☐	☐	☐
Dynamics related to the child's family	☐	☐	☐	Other	☐	☐	☐

22. Did you ever feel that if you refused a placement that you might not get offered another placement? ☐ No ☐ Yes ☐ NA

23. What was the longest length of stay for a child placed in your home? (number of months)

24. How long did you expect children to remain in your home when you first became a foster family?

YOU AS A FOSTER PARENT

25. What is your sex? ☐ Male ☐ Female ☐ Other

26. What is your age?

27. What is your race?

28. What is your marital status?

29. What is the highest level of education you have received?

These questions pertain to parent #2 (if a two-parent household) in the home:

30. What is your sex? ☐ Male ☐ Female ☐ Other

31. What is your age?

32. What is your race?

33. What is your marital status?

Canadian Foster Parent Survey [2012]

34. What is the highest level of education you have received? [▼]

YOUR FAMILY

35. How many of your biological or adopted children were living at home when the last foster child was placed in your home?

[ ] Number of males   [ ] Number of females

36. What was the age range of your own child(ren) living at home when the last foster child was placed in your home?

[ ] Age of youngest   [ ] Age of oldest

37. How many foster children were living at home when the last foster child was placed in your home?

[ ] Number of males   [ ] Number of females

38. What was the age range of the foster child(ren) living at home when the last foster child was placed in your home?

[ ] Age of youngest   [ ] Age of oldest

39. Please select which parent(s) was working outside the home when your home was approved. [▼]

40. What was the source of household income as of January 1, 2012? (Check all that apply)

	No	Yes	NA		No	Yes	NA
Employment	☐	☐	☐	Self-employment	☐	☐	☐
Social Assistance	☐	☐	☐	Retirement income	☐	☐	☐
Fostering is our/my sole source of income	☐	☐	☐	Other income	☐	☐	☐

41. How much was the total gross _parental_ household income (excluding rates related to fostering) for the calendar year 2011? Select the income group that applies to your household. [▼]

42. About how many contacts on average did you have with agency workers per month during your last 12 months? Enter the number in the blanks below.

Average number of contacts a month with the foster home worker: In person [ ]   By telephone [ ]   By email [ ]

43. What prompted you to originally call your child welfare agency to inquire about being a foster parent?

	No	Yes	NA		No	Yes	NA
Television advertisement	☐	☐	☐	Parents fostered	☐	☐	☐
Radio advertisement	☐	☐	☐	Know other foster families	☐	☐	☐
Newspaper advertisement or article	☐	☐	☐	Know foster children	☐	☐	☐
Billboard advertisement	☐	☐	☐	Was in care myself	☐	☐	☐
Information on the Internet	☐	☐	☐	Other	☐	☐	☐

Canadian Foster Parent Survey [2012]

44. To what extent was each of the following conditions a reason you became a foster parent? (check all that apply)

	Not at all	A little	Pretty much	A great deal	NA
a) Own family was grown, but still wanted to care for children	☐	☐	☐	☐	☐
b) Wanted to save children from further harm	☐	☐	☐	☐	☐
c) Wanted to increase household income	☐	☐	☐	☐	☐
d) Wanted to provide a brother/sister for own child	☐	☐	☐	☐	☐
e) Wanted to take in children who needed loving parents	☐	☐	☐	☐	☐
f) Wanted to adopt, but were unable to do so	☐	☐	☐	☐	☐
g) Wanted to give care as a religious obligation	☐	☐	☐	☐	☐

h) Other [   ]

45. At any one time have you considered withdrawing from fostering? ☐ No ☐ Yes ☐ NA

46. If you responded _yes_ to the previous question, to what extent did the following impact your consideration of withdrawal?
*In the following items, the term _worker_ refers to a social worker, support worker, or resource worker.

	Not at all	A little	Pretty much	A great deal	NA
a) Conflict with the foster home support worker	☐	☐	☐	☐	☐
b) Conflict with the child's worker	☐	☐	☐	☐	☐
c) Foster care boarding rates insufficient	☐	☐	☐	☐	☐
d) Reinbursements for clothing, spending, etc. insufficient	☐	☐	☐	☐	☐
e) Significant personal loss of a family member(s)	☐	☐	☐	☐	☐
f) Training requirements	☐	☐	☐	☐	☐
g) Agency red tape	☐	☐	☐	☐	☐
h) Named in an allegation of abuse/neglect	☐	☐	☐	☐	☐
i) Losing children I (we) was (were) fond of	☐	☐	☐	☐	☐
j) Seeing children sent back to a bad situation	☐	☐	☐	☐	☐
k) Dealing with the foster child's primary family	☐	☐	☐	☐	☐
l) Dealing with the foster child's difficult behaviour	☐	☐	☐	☐	☐
m) Own child(ren)'s resentment of and conflict with foster child(ren)	☐	☐	☐	☐	☐
n) Lack of support services such as respite care	☐	☐	☐	☐	☐
o) Other (please specify) [ ]	☐	☐	☐	☐	☐

p) What made you decide not to quit? [   ]

YOUR EXPERIENCE OF FOSTERING

	1 Completely disagree	2 Moderately disagree	3 Slightly disagree	4 Neither disagree nor agree	5 Slightly agree	6 Moderately agree	7 Completely agree	NA
1. Agency workers share fully about the background and problems of children whom they ask my family to accept.	☐	☐	☐	☐	☐	☐	☐	☐
2. When I need to talk over my concerns about a child, I do not hesitate to phone our agency's worker.	☐	☐	☐	☐	☐	☐	☐	☐
3. My agency's worker treats me as if I am a team member.	☐	☐	☐	☐	☐	☐	☐	☐

Canadian Foster Parent Survey [2012]

	1 Completely disagree	2 Moderately disagree	3 Slightly disagree	4 Neither disagree nor agree	5 Slightly agree	6 Moderately agree	7 Completely agree	NA
4. I have clear communication with the worker regarding who should be responsible for transportation, doctor visits, school conferences and the like.	☐	☐	☐	☐	☐	☐	☐	☐
5. I am secure about the soundness of the decisions my supervising worker makes.	☐	☐	☐	☐	☐	☐	☐	☐
6. My supervising worker is available to assist me in handling special problems/needs of children in my care.	☐	☐	☐	☐	☐	☐	☐	☐
7. I receive as much service from my supervising worker as other foster parents.	☐	☐	☐	☐	☐	☐	☐	☐
8. The less I have to do with my supervising worker, the better off my home is.	☐	☐	☐	☐	☐	☐	☐	☐
9. Supervising agency workers respect my opinions regarding the foster child(ren) that are placed with my family.	☐	☐	☐	☐	☐	☐	☐	☐
10. It was clear what supervising workers expect of me as a foster parent.	☐	☐	☐	☐	☐	☐	☐	☐
11. Supervising workers are warm and friendly when I have distress/concerns as a foster parent.	☐	☐	☐	☐	☐	☐	☐	☐
12. I get positive reinforcement from my worker on my foster parenting approach.	☐	☐	☐	☐	☐	☐	☐	☐
13. Supervising workers help me solve problems with my foster child when they arise.	☐	☐	☐	☐	☐	☐	☐	☐
14. Agency workers provide information about my foster child when I need it.	☐	☐	☐	☐	☐	☐	☐	☐
15. Conflict with the supervising worker occurs on a frequent basis.	☐	☐	☐	☐	☐	☐	☐	☐
16. Foster care boarding rates are insufficient.	☐	☐	☐	☐	☐	☐	☐	☐
17. Reimbursements for clothing, spending, etc. are insufficient.	☐	☐	☐	☐	☐	☐	☐	☐
18. There was respect for my family when we experienced a significant personal loss of a family member(s).	☐	☐	☐	☐	☐	☐	☐	☐
19. My training requirements as a foster family were met.	☐	☐	☐	☐	☐	☐	☐	☐
20. Agency red tape often interfered with my ability to care for my foster child(ren).	☐	☐	☐	☐	☐	☐	☐	☐
21. The fear of being named in an allegation of abuse/ neglect by a foster child affected my ability to care.	☐	☐	☐	☐	☐	☐	☐	☐
22. Losing children who I was fond of is a common concern I have.	☐	☐	☐	☐	☐	☐	☐	☐
23. Seeing children sent back to a bad situation is a common concern I have.	☐	☐	☐	☐	☐	☐	☐	☐
24. Dealing with the foster child's primary family is a common concern I have.	☐	☐	☐	☐	☐	☐	☐	☐
25. Dealing with the foster child's difficult behavior is a common concern I have.	☐	☐	☐	☐	☐	☐	☐	☐
26. I was challenged in my fostering by my own child(ren)'s resentment of and conflict with foster child(ren).	☐	☐	☐	☐	☐	☐	☐	☐
27. When I felt I needed to talk over my concerns about a child, I did not hesitate to phone my worker.	☐	☐	☐	☐	☐	☐	☐	☐

Canadian Foster Parent Survey [2012]

	1 Completely disagree	2 Moderately disagree	3 Slightly disagree	4 Neither disagree nor agree	5 Slightly agree	6 Moderately agree	7 Completely agree	NA
28. I am satisfied with the type of children the agency places with me.	☐	☐	☐	☐	☐	☐	☐	☐
29. I feel competent to handle the type(s) of children placed in my home.	☐	☐	☐	☐	☐	☐	☐	☐
30. I have never had regrets about my decision to become a foster parent.	☐	☐	☐	☐	☐	☐	☐	☐
31. I saw positive changes in the children who were placed in my home.	☐	☐	☐	☐	☐	☐	☐	☐
32. The knowledge and skills I learned in foster care training were later reinforced by agency workers.	☐	☐	☐	☐	☐	☐	☐	☐
33. The foster care training I received was based on my training needs that I felt were relevant.	☐	☐	☐	☐	☐	☐	☐	☐
34. Looking back, I was helped through orientation/pre-service training to anticipate many of the difficulties I later experienced as a foster parent.	☐	☐	☐	☐	☐	☐	☐	☐
35. Overall, I consider the training I have received about fostering as appropriate.	☐	☐	☐	☐	☐	☐	☐	☐
36. Positive programs, events, and activities are happening in this community to help children and families in a healthy way.	☐	☐	☐	☐	☐	☐	☐	☐
37. I feel foster parents in my community have influence in the way our child welfare systems respond to the needs of children and families.	☐	☐	☐	☐	☐	☐	☐	☐
38. I feel like our child welfare systems respect the cultural values of the children, community, and my family.	☐	☐	☐	☐	☐	☐	☐	☐
39. Foster children have adequate access to programs and resources to develop and maintain fluency in their first (or heritage) language.	☐	☐	☐	☐	☐	☐	☐	☐
40. Child welfare systems respond appropriately to the needs of children throughout their lifespan.	☐	☐	☐	☐	☐	☐	☐	☐
41. I am satisfied that the child welfare system in my community assesses risk to children in a way that does not penalize biological parents/families for poverty, lack of access to adequate housing, or other circumstances that may be beyond their control.	☐	☐	☐	☐	☐	☐	☐	☐
42. I am satisfied that the child welfare system in my community assesses risk to children accurately and with cultural sensitivity.	☐	☐	☐	☐	☐	☐	☐	☐
43. I am satisfied that the resources and support for foster children in my community are equivalent to those available in other communities.	☐	☐	☐	☐	☐	☐	☐	☐
44. Foster children have adequate access to access to programs and resources to develop and maintain their cultural identity.	☐	☐	☐	☐	☐	☐	☐	☐
45. I am confident that the birth family, extended family, and child (if appropriate) are involved in placement planning for children in my *community*.	☐	☐	☐	☐	☐	☐	☐	☐

THANK YOU VERY MUCH FOR COMPLETING THE *Canadian Foster Parent Survey*! Page 8 of 8

Appendix H

Psychometric Properties of the Your Experience of Fostering (YEF) Scale

List of Tables

List of Figures

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This appendix examines the psychometric properties of the Your Experience of Fostering (YEF) scale, which is part of the Canadian Foster Parent Survey (CFPS; Leschied & Rodger, 2012; see Appendix G). The CFPS was completed by 937 Canadian foster parents. The measure and participants were described in detail in the *Method* section of Chapter 3.

Analysis

First, a principal components analysis (PCA) on the 45 items of the YEF scale was conducted, using IBM SPSS Statistics, version 22. The purpose of this analysis was to determine whether the factor structure previously identified by Rodger, Cummings, and Leschied (2006) fit the current data, considering the low internal consistency scores for two of the five subscales: the Challenging Aspects of Fostering subscale and Confidence and Satisfaction subscale. It was predicted that the factor structure would be altered for the items within the two subscales that had low reliability. It was also predicted that the Perceptions about Agency Workers, Training, and Perceptions about Foster Home Support Workers subscales would remain stable. Lastly, it was hypothesized that there would continue to be five reliable factors.

Item response theory (IRT) was also completed to assess the scaling properties of the YEF scale. IRT is a mathematical technique for measuring a continuous variable. This theory assumes that persons and items are located on the same continuum and an item is only considered useful if it is able to differentiate among persons located at different points on the continuum. Because the YEF scale has seven ordered response options in a Likert scale format, Rasch modeling, which assesses ordered polytomous data, was the chosen IRT approach (de Ayala, 2009). Rasch modeling is a one-parameter logistic model where the amount of a given latent trait in a person and the amount of that latent trait in various items can be estimated

independently and also compared to one another. It is the simplest of the IRT models because it has one parameter for the person and one parameter for the item (Linacre, 2002). It is a strategy for understanding scale properties when determining how to combine items into subscales (Lyons, 2009). This approach yields more comprehensive information on the construct being assessed and the respondents than classical test theory, which pays less attention to the particular items on a scale and the individuals answering them (Andrich & Luo, 2003). The Rasch model assumes that item difficulty is the main characteristic influencing responses. Item difficulty is measured as the frequency at which an item is endorsed. Thus, items that are infrequently endorsed are viewed as being (1) more difficult than items that are frequently endorsed or (2) more representative of characteristics that are rare for a particular sample (Linacre, 1999).

The overall scale and each of the subscales were examined separately to determine scale and item sensitivity and reliability. Winsteps version 3.81.0 (Linacre, 2012, 2014) was used to compute the analyses. Infit and outfit statistics and variable maps provided the basis for determining how well the items measured each subscale. It was predicted that the overall scale and the three subscales that had excellent internal consistency would have acceptable item and person sensitivity. In addition, it was hypothesized that the scores associated with very negative perceptions of fostering (response items 1-2) would be infrequently endorsed and scores associated with very positive perceptions of fostering (response items 6-7) would be highly endorsed because foster parents' perceptions of fostering tend to be fairly positive (Fees et al., 1998; Soliday, McCluskey-Fawcett, & Meck, 1994).

Results

Principal Components Analysis (PCA)

Initial PCA. Prior to performing a PCA, the suitability of data was assessed. According to Tabachnick and Fidell (2007), a sample of at least 300 cases is optimal but the ratio of participants to items is also important. Tabachnick and Fidell (2007) recommend at least five cases for each item being analysed whereas Nunnally (1978) recommends at least 10 cases for each item (as cited in Pallant, 2010). For this analysis, there were 45 items. Therefore, if the most stringent requirement of 10 cases for each item was followed, a sample of at least 450 foster parents would be required. Given that the current study had a sample of 937 foster parents, this requirement was met.

The second consideration for PCA is the strength of the intercorrelations among the items. Tabachnick and Fidell (2007) recommend that the correlation matrix be inspected for evidence of correlations greater than .30. If there are few correlations higher than .30, then factor analysis may not be an appropriate method of analysis. Inspection of the correlation matrix revealed the presence of many correlation coefficients of .30 and above (see Tables H.1 and H.2). Two statistical tests are also computed by IBM SPSS Statistics to measure the appropriateness of the data: Kaiser-Meyer-Olkin measure of sampling adequacy (Kaiser, 1970, 1974) and Bartlett's Test of sphericity (Bartlett, 1954). The Kaiser-Meyer-Olkin value was .94, exceeding the recommended value of .60 (Kaiser, 1970, 1974) and Bartlett's Test of sphericity reached statistical significance, supporting the factorability of the correlation matrix.

The 45 items of the YEF scale were subjected to PCA for the sample of 937 foster parents. PCA revealed the presence of seven components with eigenvalues exceeding one, explaining 30.71%, 7.75%, 5.34%, 4.32%, 3.60%, 3.32%, and 2.58% of the variance,

Table H.1

Correlation Matrix for the 45-Item YEF Scale

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	.35	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	.48	.61	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	.40	.48	.55	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	.47	.52	.72	.59	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	.45	.54	.71	.55	.77	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	.35	.41	.52	.43	.55	.64	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	.25	.32	.46	.29	.46	.43	.33	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	.41	.48	.73	.51	.70	.66	.49	.42	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	.44	.57	.67	.59	.69	.66	.52	.38	.70	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
11	.43	.55	.74	.55	.74	.71	.54	.44	.76	.75	1.0	-	-	-	-	-	-	-	-	-	-	-	-
12	.39	.53	.71	.50	.67	.69	.53	.42	.68	.67	.78	1.0	-	-	-	-	-	-	-	-	-	-	-
13	.43	.52	.67	.54	.69	.73	.54	.41	.68	.71	.77	.75	1.0	-	-	-	-	-	-	-	-	-	-
14	.56	.50	.63	.57	.62	.62	.50	.31	.61	.63	.64	.59	.66	1.0	-	-	-	-	-	-	-	-	-
15	.25	.32	.49	.31	.48	.46	.35	.42	.48	.44	.51	.44	.42	.38	1.0	-	-	-	-	-	-	-	-
16	.15	.02	.07	.09	.10	.10	.11	.01	.04	.06	.04	.03	.03	.11	.08	1.0	-	-	-	-	-	-	-
17	.16	.03	.07	.11	.08	.10	.13	-	.05	.11	.07	.05	.05	.12	.09	.74	1.0	-	-	-	-	-	-
18	.19	.23	.27	.23	.25	.29	.26	.15	.25	.26	.28	.28	.27	.26	.12	-	.01	1.0	-	-	-	-	-
19	.22	.24	.26	.23	.22	.27	.22	.15	.23	.32	.29	.29	.29	.26	.08	-	-	.30	1.0	-	-	-	-
20	.22	.07	.29	.18	.32	.30	.16	.28	.29	.26	.31	.24	.29	.29	.28	.15	.17	.11	.08	1.0	-	-	-
21	.16	.15	.18	.16	.19	.19	.12	.19	.18	.18	.22	.17	.14	.15	.21	.15	.18	.04	-	.35	1.0	-	-
22	.05	.07	.06	.10	.10	.10	.07	.09	.07	.11	.12	.09	.09	.08	.10	.10	.09	.03	.03	.07	.22	1.0	-
23	.08	.02	.03	.06	.10	.07	.08	.03	.07	.09	.04	.00	.04	.09	.06	.17	.13	.04	-	.16	.13	.40	1.0
24	.05	.06	-	.04	.07	.06	.09	.10	.05	.04	.01	-	-	.06	.04	.08	.07	.07	.06	.12	.17	.26	.30
25	.07	.07	.03	.09	.07	.10	.04	.02	.07	.03	.05	.05	.02	.06	.09	.14	.09	.02	-	.10	.17	.15	.10
26	.02	.00	.03	.03	.03	.07	.04	.04	.03	.01	.07	.03	.04	.04	.10	.05	.04	.07	.05	.05	.16	.10	.07
27	.33	.67	.59	.47	.54	.58	.43	.39	.52	.55	.59	.60	.61	.48	.35	.02	.03	.25	.29	.21	.16	.12	.03
28	.30	.30	.35	.30	.36	.39	.29	.18	.34	.35	.34	.35	.39	.37	.25	.08	.05	.21	.23	.13	.13	.05	.02
29	.13	.15	.10	.15	.11	.12	.10	-	.12	.15	.11	.14	.14	.14	.10	-	-	.06	.20	.02	.06	.06	.01
30	.23	.22	.21	.21	.21	.24	.17	.13	.20	.24	.21	.18	.21	.23	.15	.07	.01	.13	.19	.13	.09	.05	-
31	.05	.11	.04	.08	.03	.05	.02	-	.04	.04	.03	.05	.03	.06	.07	-	-	.07	.18	-	.02	-	-

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
32	.32	.38	.43	.39	.45	.43	.33	.25	.38	.50	.45	.44	.48	.42	.24	-	-	.28	.40	.20	.06	-	.03
33	.24	.32	.30	.27	.34	.32	.30	.21	.25	.36	.33	.34	.39	.33	.15	-	-	.24	.46	.14	.00	.01	-
34	.29	.26	.34	.35	.38	.34	.30	.23	.30	.40	.36	.31	.40	.38	.14	.01	.01	.22	.40	.19	.03	-	-
35	.27	.29	.31	.32	.34	.36	.27	.22	.29	.37	.35	.31	.35	.35	.16	-	-	.28	.56	.14	.02	.04	.02
36	.20	.23	.26	.25	.25	.26	.22	.12	.26	.29	.28	.28	.32	.29	.10	-	-	.22	.38	.11	.06	.00	-
37	.30	.30	.38	.32	.40	.35	.32	.20	.35	.39	.38	.33	.42	.40	.16	.05	.06	.22	.31	.20	.04	-	.02
38	.36	.36	.41	.35	.40	.40	.32	.24	.39	.41	.44	.39	.43	.45	.22	.01	.02	.26	.34	.22	.08	.05	-08
39	.25	.20	.25	.25	.23	.24	.22	.12	.23	.29	.25	.22	.27	.33	.12	.04	.08	.20	.31	.17	.05	.02	.04
40	.35	.29	.35	.33	.40	.34	.28	.21	.33	.37	.39	.35	.40	.45	.15	.10	.12	.23	.27	.27	.08	-	.06
41	.29	.23	.29	.31	.34	.31	.23	.23	.30	.32	.34	.28	.34	.35	.18	.03	.09	.23	.29	.14	.08	.06	.03
42	.34	.29	.37	.34	.39	.36	.31	.26	.38	.39	.42	.39	.44	.44	.23	.02	.06	.27	.33	.19	.09	.09	.08
43	.31	.27	.34	.33	.36	.36	.37	.18	.33	.40	.37	.34	.38	.39	.21	.10	.14	.22	.34	.18	.04	.03	.07
44	.27	.21	.25	.25	.25	.27	.25	.15	.24	.31	.27	.27	.31	.34	.13	.04	.05	.24	.33	.16	-	.05	.03
45	.30	.31	.33	.29	.35	.37	.30	.20	.32	.39	.36	.35	.37	.40	.20	.05	.06	.27	.31	.18	-	.04	.05

Table H.2

Correlation Matrix for the 45-Item YEF Scale Continued

	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
24	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	.35	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	.14	.22	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	.00	-	.02	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	.09	.15	.12	.33	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	.11	.18	.17	.18	.42	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	.06	.15	.17	.25	.31	.32	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	.03	.10	.10	.17	.29	.24	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	.06	-	-	.42	.22	.11	.20	.11	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
33	.01	.01	-	.34	.22	.12	.20	.09	.61	1.0	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	.29	.18	.07	.22	.06	.57	.63	1.0	-	-	-	-	-	-	-	-	-	-	-
35	.05	.03	.01	.33	.23	.11	.24	.10	.59	.72	.69	1.0	-	-	-	-	-	-	-	-	-	-
36	.03	-	.05	.21	.22	.13	.15	.15	.42	.37	.43	.45	1.0	-	-	-	-	-	-	-	-	-
37	-	.01	-	.34	.21	.08	.24	.08	.43	.40	.45	.42	.46	1.0	-	-	-	-	-	-	-	-
38	.04	.04	-	.30	.25	.12	.26	.08	.45	.42	.44	.49	.44	.58	1.0	-	-	-	-	-	-	-
39	-	.05	.03	.19	.17	.14	.18	.11	.28	.26	.31	.32	.37	.40	.53	1.0	-	-	-	-	-	-
40	-	.05	.03	.27	.22	.10	.17	.04	.36	.36	.44	.40	.33	.52	.55	.51	1.0	-	-	-	-	-
41	-	.02	.07	.25	.23	.11	.15	.15	.34	.29	.33	.34	.31	.37	.48	.41	.50	1.0	-	-	-	-
42	.00	.03	.05	.33	.26	.14	.16	.10	.38	.36	.40	.38	.35	.45	.60	.50	.59	.68	1.0	-	-	-
43	.00	.02	.03	.28	.24	.19	.20	.10	.39	.35	.39	.40	.37	.47	.53	.52	.51	.50	.59	1.0	-	-
44	.00	.06	-	.21	.19	.12	.17	.10	.31	.30	.31	.36	.38	.39	.53	.73	.45	.43	.56	.60	1.0	-
45	-	.04	.02	.34	.22	.08	.17	.08	.32	.33	.37	.38	.32	.45	.48	.45	.48	.43	.54	.49	.54	1.0

respectively. An inspection of the scree plot revealed that a stable plateau was reached after the seventh component (see Figure H.1). Using Cattell's (1966) scree test, it was decided to retain the seven components for further investigation.

The seven-component solution explained a total of 57.53% of the variance. To aid in the interpretation of these seven components, oblimin rotation was performed, which is an oblique rotation approach. Oblique rotation allows for the factors to be correlated, whereas orthogonal rotation requires a researcher to assume that the underlying constructs are not related, which is often not the case. The rotated solution revealed the presence of a simple structure for most of the variables (Tabachnick & Fidell, 2007). The first five components showed a number of strong loadings and most variables loaded substantially on only one component. However, the sixth and seventh factors were more problematic. The sixth factor only had two items loading on it, which both related to practical supports, and the seventh factor had four items loading on it, two of which also loaded on other factors.

With a cutoff of .32 for inclusion of a variable in interpretation of a factor, one item did not load on any of the seven factors: *18. There was respect for my family when we experienced a significant personal loss of a family member(s)*. Four of the variables in the solution were complex, with loadings on more than one factor: *8. The less I have to do with my supervising worker, the better off my home is*, *15. Conflict with the supervising worker occurs on a frequent basis*, *25. Dealing with the foster child's difficult behaviour is a common concern I have*, and *28. I am satisfied with the type of children the agency places with me*. The loadings of variables on factors, commonalities, and percent of variance and covariance information for each factor are displayed in Table H.3. Variables are ordered and grouped by size of loading to facilitate interpretation. Factor loadings under .32 (10% of the variance) ware left blank.
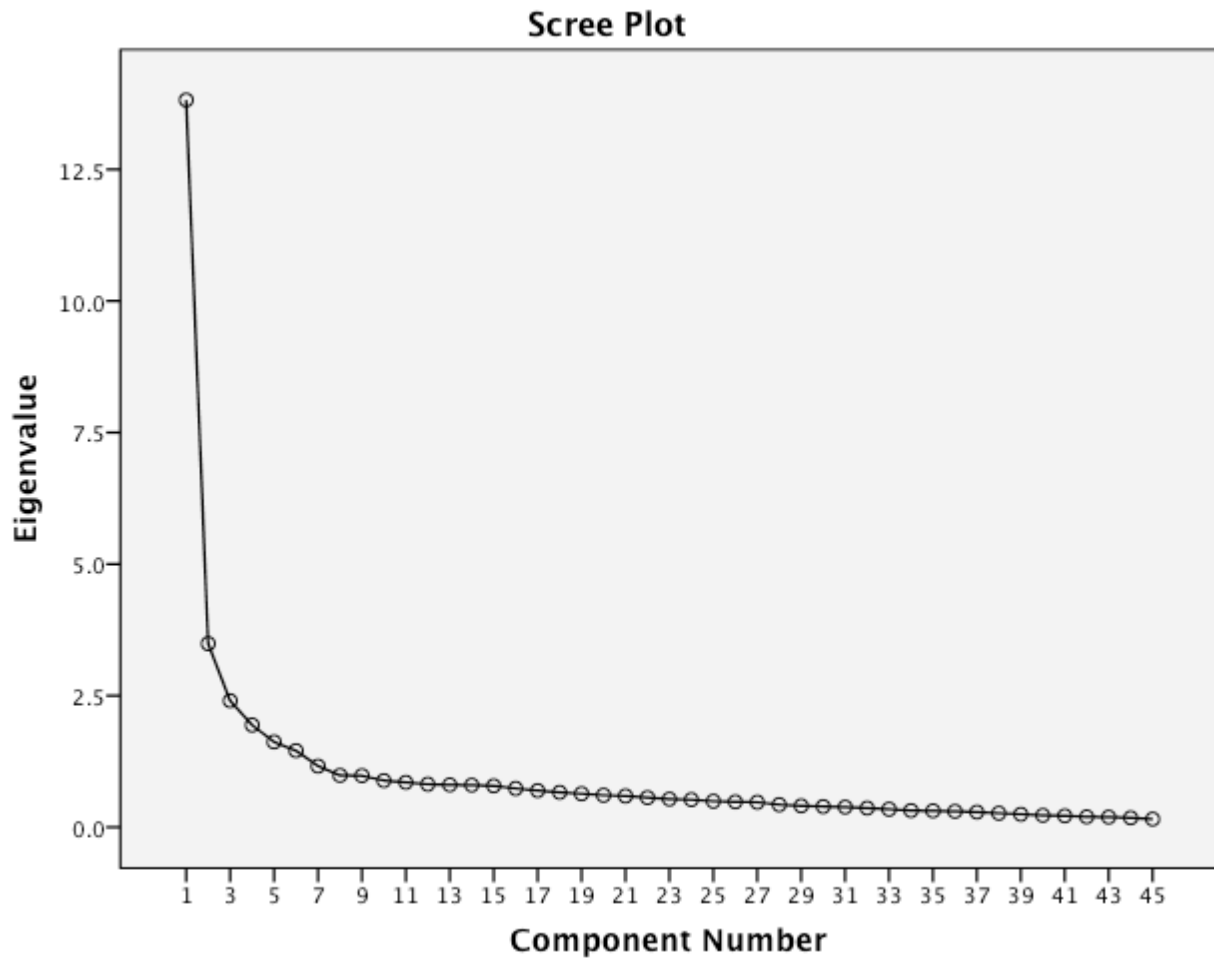
Figure H.1. Scree Plot for the Principal Components Analysis of the 45-Item YEF Scale

Table H.3

Pattern and Structure Matrix for PCA with Oblimin Rotation of the Seven-factor Solution for the 45-Item YEF Scale

Item	F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_1	F_2	F_3	F_4	F_5	F_6	F_7	Communalities
			Pattern Coefficients							Structure Coefficients					
3	.85							.86	.39			.36			.75
11	.84							.88	.43			.39			.78
12	.84							.84	.38			.37			.69
6	.83							.85	.39			.38			.70
9	.82							.85	.40			.36			.73
5	.80							.85	.41			.39			.73
13	.80							.85	.45			.44			.73
10	.77							.83	.44			.44			.69
27	.72							.73	.30			.39			.55
2	.69							.70	.30			.36			.49
7	.66							.67	.34			.33			.61
14	.66							.76	.50			.40			.62
4	.64							.68	.37			.36			.50
15	.54						.35	.56						.46	.46
1	.44							.55	.40						.38
8	.43						.42	.52						.49	.47
18								.33				.35			.21
44		.86							.81			.36			.67
39		.85							.79			.33			.63
42		.79						.44	.82			.41			.68
41		.70						.35	.71			.35			.51
43		.65						.40	.76			.44			.60
40		.64						.40	.73			.45			.58
45		.64						.41	.70			.40			.51
38		.61						.45	.75			.54			.61
37		.42						.42	.62	.67		.56			.50
22			.73							.72					.54

Item	Pattern Coefficients							Structure Coefficients							Communalities
	F_1	F_2	F_3	F_4	F_5	F_6	F_7	F_1	F_2	F_3	F_4	F_5	F_6	F_7	
23			.71							.70					.55
24			.68							.70					.53
25			.37	.36						.44	.40				.37
29				.73							.74				.58
31				.60							.58				.40
30				.56							.59				.42
28				.52			.45				.57				.48
26	.35			.42							.44		.32		.32
35	.37	.46			.88							.88			.78
33	.37	.38			.87							.84			.71
34	.39	.45			.79							.81			.69
32	.51	.42			.67							.76			.63
19		.40			.58							.65			.49
36		.50			.44							.58			.41
16						.90							.91		.83
17						.89							.90		.81
20							.68							.70	.57
21							.64							.68	.51

Note. Variables are ordered and grouped by size of loading to facilitate interpretation. For loadings under .32 (10% of the variance), cells are left blank.

It is generally recommended that at least three variables should load on a factor (Tabachnick & Fidell, 2007). Due to the fact that the practical support items (16 and 17) were the only two items loading on factor six and practical support has been identified by previous research as a variable associated with foster parent perceptions of fostering, these two items were removed from the YEF scale so that they could be examined as independent variables in the analyses. In addition, item 18 was removed from the Total Perception scale because of its low communality value of .21 (Tabachnick & Fidell, 2007). Therefore, a second PCA was computed for the 42 remaining items of the YEF scale. Five factors were designated for the analysis since the sixth and seventh factors were not supported by the results of the PCA.

Five-factor PCA. The second PCA, with a fixed five-factor structure, had a Kaiser-Meyer-Olkin value of .95 and statistically significant Bartlett's Test of Sphericity, supporting the factorability of the correlation matrix. The factors explained 32.51%, 8.22%, 5.14%, 4.34%, and 3.85% of the variance, respectively. An inspection of the scree plot revealed that a stable plateau was reached after the fifth component, supporting the extraction of five factors (see Figure H.2).

The five-component solution explained a total of 54.06% of the variance. To aid in the interpretation of these five components, oblimin rotation was performed. The rotated solution revealed the presence of a simple structure for most of the variables (Tabachnick & Fidell, 2007). The five components showed a number of strong loadings and most variables loaded substantially on only one component. With a cutoff of .32 for inclusion of a variable in interpretation of a factor, two of the variables in the solution loaded on more than one factor: *25. Dealing with the foster child's difficult behaviour is a common concern I have* and *28. I am satisfied with the type of children the agency places with me*. The five-factor structure was similar to the seven-factor structure in the previous PCA. However, taking all of the model
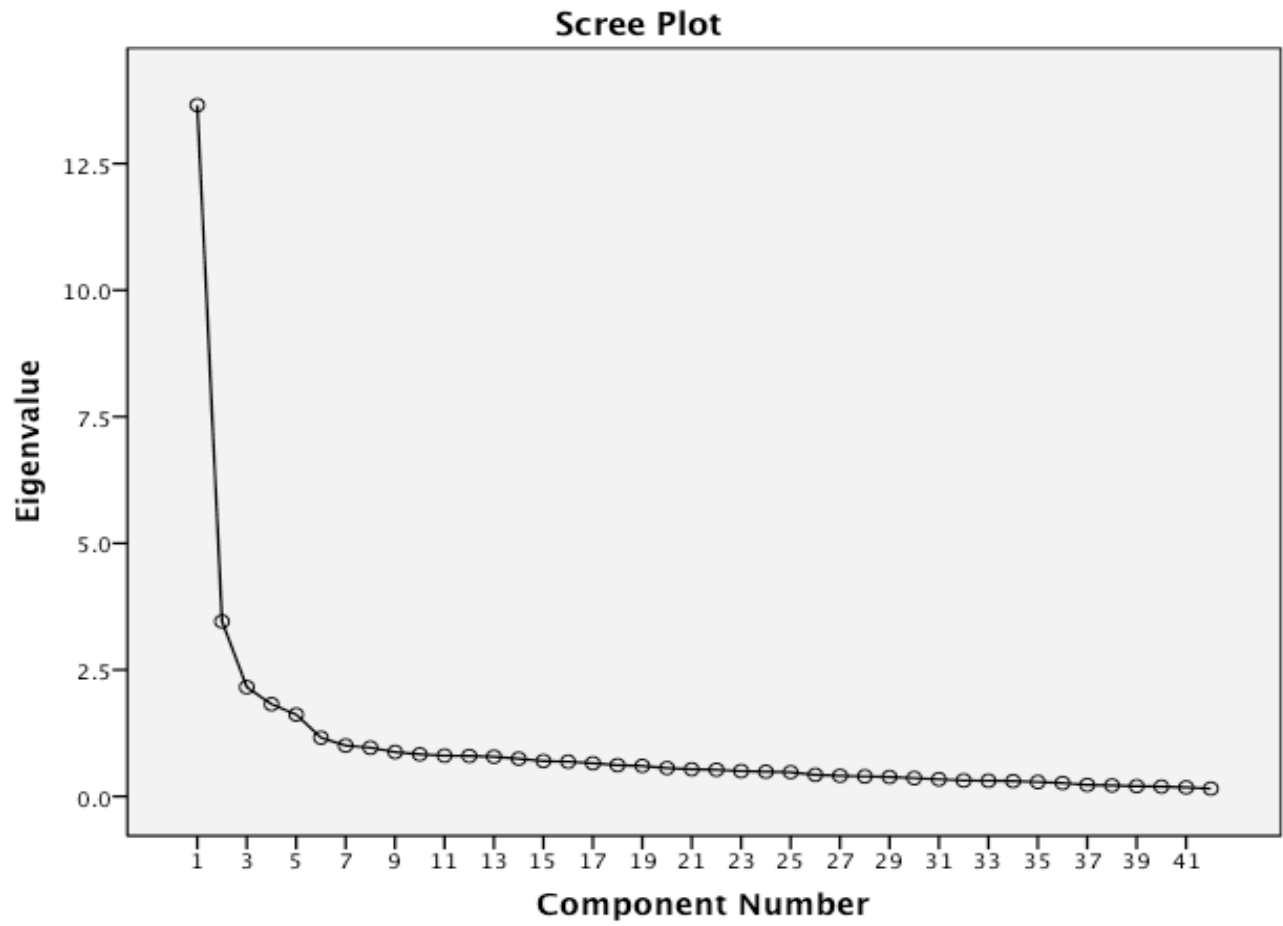
Figure H.2. Scree Plot for the Principal Components Analysis of the 42-Item YEF Scale

components into consideration, the five-factor PCA was a better fit for the data than the previous seven-factor model. The amount of variance accounted for was similar, the factors were stronger, and there were fewer complex variables in the five-factor model. The loadings of variables on factors, commonalities, and percent of variance and covariance information for the factors are displayed in Table H.4. Variables are ordered and grouped by size of loading to facilitate interpretation. Loadings under .32 (10% of the variance) are left blank.

The correlations between components ranged from -.02 (component 3 and 5) to .50 (component 2 and 5). In addition, component 1 was moderately correlated with component 2 and 5, with correlations of .44 and .43 respectively. These moderately high correlations supported the use of oblique versus orthogonal rotation (Tabachnick & Fidell, 2007). See Table H.5 for the correlation matrix for the five components.

The interpretation of the five components is not completely consistent with Rodger et al.'s (2006) factor analysis of the YEF scale. The first and fifth components are fairly similar to two of the previously identified components, Perceptions about Agency Workers and Training respectively, indicating that these two subscales are reliable across samples. However, the remaining three subscales varied from the components identified in the factor analysis completed by Rodger et al. (2006). Table H.6 compares the factors identified in Rodger et al. (2006) and those identified in the current sample. The five factors for the current sample of foster parents were Perceptions about Agency Workers, Perceptions about the Fostering System, Concern about Foster Children, Perceptions about Foster Child Placements, and Perceptions about Training.

Table H.4

Pattern and Structure Matrix for PCA with Oblimin Rotation of the Five Factor Solution for the

42-Item YEF Scale

Item	Pattern Coefficients					Structure Coefficients					Communalities
	F_1	F_2	F_3	F_4	F_5	F_1	F_2	F_3	F_4	F_5	
3	.87					.86	.39			.34	.75
11	.87					.88	.43			.37	.78
9	.84					.83	.39				.69
12	.84					.83	.38			.36	.70
6	.83					.85	.40			.36	.73
5	.82					.85	.41			.36	.73
13	.80					.84	.45			.42	.73
10	.76					.82	.44			.43	.69
27	.70					.72				.39	.55
2	.66					.68				.35	.49
14	.65					.75	.51			.37	.61
15	.64					.59					.39
7	.62					.66	.35				.44
4	.61					.67	.38			.34	.47
8	.55					.55					.34
1	.44					.55	.42				.34
44		.86					.80			.35	.66
39		.85					.78			.32	.63
42		.77				.44	.81			.40	.67
43		.71				.40	.77			.42	.59
41		.68				.35	.70			.34	.50
40		.68				.41	.74			.42	.57
45		.64				.40	.70			.38	.51
38		.61				.45	.75	.		.53	.61
37		.45				.42	.63			.54	.49
24			.69					.67			.50
23			.67					.65			.47
22			.65					.64			.42
25			.47	.35				.50	.38		.37
21			.46					.51			.30
20			.35					.39			.27
29				.74					.75		.57
31				.60					.59		.39
30				.54					.58		.39
28	.35			.52		.44			.58		.47
26				.40				.32	.42		.26
35					.86	.36	.46			.88	.78
33					.85	.36	.38			.85	.72

Item	Pattern Coefficients					Structure Coefficients					Communalities
	F_1	F_2	F_3	F_4	F_5	F_1	F_2	F_3	F_4	F_5	
34					.75	.39	.46			.81	.67
32					.67	.50	.42			.76	.63
19					.61		.39			.66	.48
36					.44		.50			.58	.41

Note. Variables are ordered and grouped by size of loading to facilitate interpretation. For loadings under .32 (10% of the variance), cells are left blank.

Table H.5

Component Correlation Matrix

Component	1	2	3	4	5
1	1.00	-	-	-	-
2	.45	1.00	-	-	-
3	.17	.06	1.00	-	-
4	.13	.14	.09	1.00	-
5	.39	.47	-.05	.11	1.00

Table H.6

Order (by size of loadings) in which Variables Contribute to the Five Factors of the Current Factor Analysis and that of Rodger et al.

(2006)

Current Sample		Rodger et al. (2006)	
Factor	Variables	Factor	Variables
1. Perceptions about Agency Workers (17 items)	3. My agency's worker treats me as if I am a team member. 11. Supervising workers are warm and friendly when I have distress/concerns as a foster parent. 9. Supervising agency workers respect my opinions regarding the foster child(ren) that are placed with my family. 12. I get positive reinforcement from my worker on my foster parenting approach. 6. My supervising worker is available to assist me in handling special problems/needs of children in my care. 5. I am secure about the soundness of the decisions my supervising worker makes. 13. Supervising workers help me solve problems with my foster child when they arise. 10. It was clear what supervising workers expect of me as a foster parent. 27. When I felt I needed to talk over my concerns about a child, I did not hesitate to phone my worker. 2. When I need to talk over my concerns	1. Perceptions about Agency and Child Workers (14 items)	1. Agency workers share fully about the background and problems of children whom they ask my family to accept. 2. When I need to talk over my concerns about a child, I do not hesitate to phone our agency's worker. 3. My agency's worker treats me as if I am a team member. 4. I have clear communication with the worker regarding who should be responsible for transportation, doctor visits, school conferences and the like. 5. I am secure about the soundness of the decisions my supervising worker makes. 6. My supervising worker is available to assist me in handling special problems/needs of children in my care. 7. I receive as much service from my supervising worker as other foster parents. 8. The less I have to do with my supervising worker, the better off my home is. (reverse scored) 9. Supervising agency workers respect my opinions regarding the foster child(ren) that are placed with my family.

	Current Sample		Rodger et al. (2006)	
Factor	Variables	Factor	Variables	

	about a child, I do not hesitate to phone our agency's worker. 14. Agency workers provide information about my foster child when I need it. 15. Conflict with the supervising worker occurs on a frequent basis. (reverse scored) 7. I receive as much service from my supervising worker as other foster parents. 4. I have clear communication with the worker regarding who should be responsible for transportation, doctor visits, school conferences and the like. 8. The less I have to do with my supervising worker, the better off my home is. (reverse scored) 1. Agency workers share fully about the background and problems of children whom they ask my family to accept. 28. We are satisfied with the type of children the agency placed with us.		10. It was clear what supervising workers expect of me as a foster parent. 11. Supervising workers are warm and friendly when I have distress/concerns as a foster parent. 12. I get positive reinforcement from my worker on my foster parenting approach. 13. Supervising workers help me solve problems with my foster child when they arise. 14. Agency workers provide information about my foster child when I need it.
2. Perceptions about the Fostering System (9 items)	44. Foster children have adequate access to programs and resources to develop and maintain their cultural identity. 39. Foster children have adequate access to programs and resources to develop and maintain fluency in their first (or heritage) language. 42. I am satisfied that the child welfare system in my community assesses risk to children accurately and with cultural	2. Challenging Aspects of Fostering (13 items)	15. Conflict with the supervising worker occurs on a frequent basis. (reverse scored; this item was originally split into two items: conflict with the foster home support worker and conflict with the child's worker). 16. Foster care boarding rates are insufficient. (reverse scored) 17. Reimbursements for clothing, spending, etc. are insufficient. (reverse scored) 18. There was respect for my family when we

	Current Sample		Rodger et al. (2006)	
Factor	Variables	Factor		Variables
	sensitivity.		experienced a significant personal loss of a family member(s).	
	43. I am satisfied that the resources and support for foster children in my community are equivalent to those available in other communities.		19. My training requirements as a foster family were met.	
	41. I am satisfied that the child welfare system in my community assesses risk to children in a way that does not penalize biological parents/families for poverty, lack of access to adequate housing, or other circumstances that may be beyond their control.		20. Agency red tape often interfered with my ability to care for my foster child(ren). (reverse scored)	
			21. The fear of being named in an allegation of abuse/neglect by a foster child affected my ability to care. (reverse scored)	
	40. Child welfare systems respond appropriately to the needs of children throughout their lifespan.		22. Losing children who I was fond of is a common concern I have. (reverse scored)	
			23. Seeing children sent back to a bad situation is a common concern I have. (reverse scored)	
	45. I am confident that the birth family, extended family and child (if appropriate) are involved in placement planning for children in my community.		24. Dealing with the foster child's primary family is a common concern I have. (reverse scored)	
	38. I feel like our child welfare systems respect the cultural values of the children, community, and my family.		25. Dealing with the foster child's difficult behaviour is a common concern I have. (reverse scored)	
			26. I was challenged in my fostering by my own child(ren)'s resentment of and conflict with foster child(ren). (reverse scored)	
	37. I feel foster parents in my community have influence in the way our child welfare systems respond to the needs of children and families.			
3. Concern about Foster	24. Dealing with the foster child's primary family is a common concern I have. (reverse scored)	3. Perceptions about Foster Home Support Workers (4	27. When I felt I needed to talk over my concerns about a child, I did not hesitate to phone my worker.	
	23. Seeing children sent back to a bad		3. My agency's worker treats me as if I am a team	

	Current Sample		Rodger et al. (2006)	
Factor	Variables	Factor	Variables	
Children (6 items)	situation is a common concern I have. (reverse scored) 22. Losing children who I was fond of is a common concern I have. (reverse scored) 25. Dealing with the foster child's difficult behaviour is a common concern I have. (reverse scored) 21. The fear of being named in an allegation of abuse/neglect by a foster child affected my ability to care. 20. Agency red tape often interfered with my ability to care for my foster children.	items)	member. 5. I am secure about the soundness of the decisions my supervising worker makes. 6. My supervising worker is available to assist me in handling special problems/needs of the children in my care.	
4. Perceptions about Foster Child Placements (6 items	29. I feel competent to handle the type(s) of children placed in my home. 31. I saw positive changes in the children who were placed in my home. 30. I have never had regrets about my decision to become a foster parent. 28. I am satisfied with the type of children the agency places with me. 26. I was challenged in my fostering by my own child(ren)'s resentment of and conflict with foster child(ren). (reverse scored) 25. Dealing with the foster child's difficult behaviour is a common concern I have. (reverse scored)	4. Confidence and Satisfaction (4 items)	28. I am satisfied with the type of children the agency places with me. 29. I feel competent to handle the type(s) of children placed in my home. 30. I have never had regrets about my decision to become a foster parent. 31. I saw positive changes in the children who were placed in my home.	
5. Perceptions about Training	35. Overall, I consider the training I have received about fostering as appropriate. 33. The foster care training I received was based on my training needs that I felt were	5. Training (4 items)	32. The knowledge and skills I learned in foster care training were later reinforced by agency workers. 33. The foster care training I received was based	

	Current Sample		Rodger et al. (2006)
Factor	Variables	Factor	Variables
(6 items)	relevant. 34. Looking back, I was helped through orientation/pre-service training to anticipate many of the difficulties I later experienced as a foster parent. 32. The knowledge and skills I learned in foster care training were later reinforced by agency workers. 19. My training requirements as a foster family were met. 36. Positive programs, events, and activities are happening in this community to help children and families in a healthy way.		on my training needs that I felt were relevant. 34. Looking back, I was helped through orientation/pre-service training to anticipate many of the difficulties I later experienced as a foster parent. 35. Overall, I consider the training I have received about fostering as appropriate.

Internal Consistency

Following the results of the PCA, the internal consistency scores (Cronbach's alpha) for the total 42-item YEF scale and the subscales were examined. All cases that had more than 15% missing data were excluded for the Total scale reliability calculations and any cases with more than two items missing for the subscales were excluded from the analysis for that particular scale. The Total Perceptions score had excellent internal consistency, with a Cronbach's alpha coefficient of .94. The Perceptions about Agency Workers and Perceptions about the Fostering System also had excellent internal consistency, with Cronbach's alpha coefficients of .95 and .90, respectively. In addition, the Perceptions about Training subscale had a reliability score of .86, which is very good. However, both the foster child-related subscales, Concerns about Foster Children and Perceptions about Foster Child Placements, had low reliability scores of .60 and .55, respectively.

Although the Cronbach's alpha provides a measure of internal consistency, this statistical measure is more accurate for scales that have 10 or more items and measure the same dimension of a concept. It is less accurate for scales that have less than 10 items and may underestimate their reliability (Tabachnick & Fidell, 2007). Because the two factors with the lowest reliability each had six items, it is possible that the internal consistency scores are not accurately representing the psychometric properties of the subscales. Therefore, Rasch modeling procedures were also completed to further assess the scaling properties of the five factors.

Rasch Modeling

Winsteps (Linacre, 2012, 2014), the Rasch modeling statistics program used in the current analysis, calculates various statistics related to the items included in a scale and the respondents, including person and item reliability, person and item separation, and goodness of

fit statistics for each item and person. These statistics indicate how well data fit the model assumptions, such as unidimensionality of the items (i.e., whether the items measure one latent concept) and equal item distribution. Person separation is used to classify the individuals in the sample. Low person separation (less than two) and person reliability (less than .80) indicates that the measure may not be sensitive enough to distinguish between high and low responders. Person reliability is consistent with the traditional reliability measure for scales. Item separation verifies the item hierarchy, with a low item separation score (less than three) and low item reliability (less than 0.90) indicating that the person sample is not large enough to confirm the item difficulty hierarchy (i.e., construct validity) of the measure. Item reliability has no equivalent statistical measure. Low values suggest a narrow range of item measures. It is also negatively impacted by a small sample. In Winsteps, the precision of the reliability estimates is highly affected by missing data. In the current sample, only cases with less than 15% missing data (six or fewer missing items) were included in the Rasch modeling analyses, for a sample size of 887 (Linacre, 2012).

For Rasch modeling, two fit statistics (infit and outfit) are calculated using the mean square and standardized statistics to assess unidimensionality. These statistics are expected to fall around one and range from zero to infinity. Mean-square infit or outfit scores that are greater than one indicate underfitting to the Rasch model (i.e., the data are less predictable than the model expects). Typically, item infit/outfit mean square values between .5 and 1.5 are considered indicative of unidimensionality. Values between 1.5 and two may indicate that more than one construct is being measured (i.e., the scale is not unidimensional). Mean-square infit and outfit scores that are less than one indicate overfitting to the Rasch model (i.e., the data are more predictable than the model expects). Infit statistics give more weight to persons and items in the

middle of the range. Thus, infit mean square values outside of the range indicate off-variable noise. Outfit mean square values outside of the ideal range indicate the presence of unexpected outliers or outside factor influence, which is more problematic. Infit and outfit values that are greater than +/- two are considered to be particularly problematic. Reasonable mean square ranges for infit and outfit statistics have been identified for various situations. For surveys and rating scales, which is what the current analysis examined, a range of 0.6 to 1.4 is considered optimal (Linacre, 2002; Wright, Linacre, Gustafson, & Martin-Lof, 1994).

The total scale and each of the five subscales were examined separately using Rasch modeling. For the total scale, 42 items were analyzed. For the Perceptions about Agency Workers subscale, 17 items were examined. Nine items were analyzed for the Perceptions about the Fostering System subscale. For the remaining three subscales, Concern about Foster Children, Perceptions about Foster Child Placements, and Perceptions about Training, six items were examined.

Total scale score.

Initial attempt. For the total scale score, the person separation score was 2.90 and person reliability was .89. These scores were above a separation score of two and a reliability score of .80, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 14.25 (a number over three is optimal) and item reliability was one (a number over .9 is ideal), which indicates that the scale measured a broad range of items. Table H.7 displays the fit statistics of the 42 items included in the YEF scale. Items 21 and 26 were problematic, with outfit statistics over two. These items were reverse scored which may account for this finding. This may have made the questions less clear for respondents, which would have affected their responses. Together, these results suggest that the

Table H.7

Initial Attempt: Fit Statistics for the Total YEF Scale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
26	1.87	9.90	2.17	9.90
21	1.65	9.90	2.12	9.90
22	1.65	9.90	1.96	9.90
24	1.63	9.90	1.96	9.90
25	1.61	9.90	1.94	9.90
23	1.61	9.90	1.90	9.90
30	1.49	6.70	1.43	5.00
15	1.33	5.60	1.63	8.10
20	1.32	7.20	1.57	9.90
8	1.29	5.90	1.44	7.10
19	1.20	3.50	1.14	2.00
2	1.17	2.60	.96	-.50
29	1.17	2.00	1.28	2.80
31	1.16	1.40	1.14	1.30
1	1.09	2.20	1.23	4.60
27	1.03	.60	.99	-.10
4	1.03	.50	.86	-2.10
28	1.00	.00	1.09	1.20
34	.98	-.60	.98	-.30
39	.97	-.60	1.01	.20
37	.95	-1.30	.93	-1.50
3	.94	-1.20	.82	-3.20
36	.92	-1.80	.99	-.20
33	.92	-1.80	.95	-.90
35	.88	-2.70	.88	-2.20
7	.87	-2.70	1.06	1.0
40	.84	-4.20	.88	-2.70
32	.81	-4.40	.82	-3.30
9	.81	-4.00	.74	-4.90
44	.80	-5.00	.82	-3.70
41	.80	-5.00	.81	-3.80
12	.79	-4.10	.65	-6.00
45	.78	-5.80	.94	-1.30
38	.74	-6.30	.69	-6.40
6	.75	-5.40	.65	-6.60
43	.77	-7.30	.75	-5.30
5	.69	-7.60	.62	-7.90
11	.68	-7.30	.60	-7.70
10	.67	-7.30	.58	-7.80
42	.64	-9.70	.63	-8.40

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
14	.64	-9.10	.67	-6.80
13	.63	-8.80	.57	-8.50
Mean	1.04	-.40	1.09	.00
SD	.33	6.0	.45	5.9

Note. MNSQ = Mean squared statistics, ZSTD = standardized statistic.

total scale is measuring more than one construct. This is supported by the results of the PCA, which identified five factors within the scale. Due to the problematic outfit statistics for two items, a second Rasch modeling analysis was completed with the two problematic items (21 and 26) removed to determine if this improved the scale properties.

Second attempt. The person separation score was 2.96 and person reliability was .90, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 14.79 and item reliability was one, which indicates that the scale measured a broad range of items. Table H.8 displays the fit statistics of the 40 items. Items 22, 23, 24, and 25 were problematic, with outfit statistics over two. These items were also reverse scored. Therefore, another Rasch modeling analysis was computed that removed these four problematic items.

Third attempt. The person separation score was 2.88 and person reliability was .89, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 13.41 and item reliability was .99, which indicates that the scale measured a broad range of items. Table H.9 displays the fit statistics of the 36 items. Items 20, 8, and 15 were problematic, with outfit statistics over two. Similar to the previous problematic items, these items were reverse scored. Another Rasch modeling analysis was computed that removed these three problematic items.

Fourth attempt. The person separation score was 2.99 and person reliability was .90, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 13.78 and item reliability was .99, which indicates that the scale measured a broad range of items and an adequate sample was examined. Table H.10 displays the fit statistics of the 33 items. No items had outfit statistics over two.

Table H.8

Second Attempt: Fit Statistics for the Total YEF Scale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
22	1.77	9.90	2.15	9.90
24	1.75	9.90	2.14	9.90
25	1.73	9.90	2.14	9.90
23	1.70	9.90	2.09	9.90
30	1.58	7.70	1.53	6.00
20	1.41	8.80	1.75	9.90
15	1.40	9.90	1.75	9.30
8	1.35	7.00	1.54	8.40
19	1.25	4.20	1.19	2.70
29	1.24	2.70	1.37	3.70
31	1.21	1.90	1.19	1.70
2	1.21	3.10	.99	-.10
1	1.13	3.10	1.26	5.00
27	1.07	1.00	1.15	2.00
4	1.07	1.10	.90	-1.50
28	1.06	1.00	1.15	.60
39	1.01	.30	1.06	1.20
34	1.00	.00	1.01	.20
36	.97	-.70	1.04	.60
37	.96	-1.00	.95	-1.10
3	.96	-.70	.84	-2.80
33	.95	-1.10	.98	-.30
7	.91	-1.90	1.10	1.70
35	.90	-2.00	.89	-1.80
40	.86	-3.60	.93	-1.50
41	.84	-3.90	.86	-2.70
9	.84	-3.40	.76	-4.30
32	.83	-3.80	.85	-2.70
44	.82	-4.20	.84	-3.10
12	.81	-3.60	.66	-5.60
45	.80	-4.90	.97	-.60
6	.77	-4.90	.66	-6.20
38	.76	-5.70	.70	-6.00
43	.74	-6.60	.77	-4.70
5	.70	-5.70	.63	-7.60
11	.70	-6.70	.62	-7.10
10	.68	-6.90	.59	-7.50
14	.66	-8.50	.68	-6.50
42	.66	-8.90	.64	-7.80
13	.64	-8.40	.58	-8.20

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
Mean	1.04	-.30	1.09	.10
SD	.32	5.60	.45	5.60

Table H.9

Third Attempt: Fit Statistics for the Total YEF Scale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
30	1.75	9.50	1.77	8.20
20	1.68	9.90	2.57	9.90
15	1.55	8.60	2.35	9.90
8	1.52	9.40	2.03	9.90
29	1.37	9.90	1.76	8.20
19	1.36	5.80	1.32	4.20
1	1.29	6.10	1.50	8.30
2	1.29	4.20	1.07	1.00
31	1.28	2.50	1.23	2.00
28	1.18	2.70	1.35	4.30
4	1.15	2.50	1.00	.10
27	1.14	2.20	1.12	1.70
39	1.13	2.80	1.23	3.90
36	1.08	1.60	1.21	3.30
34	1.07	1.60	1.09	1.60
37	1.05	1.00	1.08	1.60
33	1.04	.80	1.13	2.20
7	1.00	.10	1.32	4.60
35	.99	-.30	.98	-.20
3	.99	-.10	.88	-2.00
40	.95	-1.20	1.06	1.20
41	.94	-1.40	1.03	.50
44	.93	-1.60	.97	-.50
45	.90	-2.20	1.25	4.30
32	.89	-2.40	.96	-.60
9	.89	-2.30	.84	-2.70
12	.84	-3.00	.68	-5.20
43	.82	-4.20	.91	-1.70
38	.82	-4.00	.74	-4.90
6	.81	-3.90	.70	-5.20
5	.75	-5.80	.68	-6.10
42	.73	-6.50	.73	-5.40
11	.72	-6.10	.61	-6.10
10	.71	-6.10	.61	-6.80
14	.70	-7.00	.76	-4.50
13	.65	-7.80	.60	-7.60
Mean	1.05	.30	1.14	.80
SD	.28	4.80	.46	5.00

Table H.10

Fourth Attempt: Fit Statistics for the Total YEF Scale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
30	1.88	9.90	1.89	9.20
29	1.47	5.10	1.97	8.40
19	1.43	6.60	1.39	5.00
2	1.39	5.50	1.18	2.30
1	1.38	7.70	1.72	9.90
31	1.32	2.90	1.26	2.30
28	1.27	4.00	1.43	5.10
27	1.23	3.60	1.27	3.50
4	1.22	3.60	1.12	1.60
39	1.18	3.80	1.30	4.90
36	1.13	2.50	1.28	4.30
34	1.12	2.50	1.18	3.00
33	1.09	1.70	1.20	3.10
3	1.09	1.70	.98	-.30
7	1.08	1.50	1.45	6.20
37	1.08	1.90	1.18	3.10
35	1.02	.50	1.04	.70
40	1.00	.00	1.12	2.20
41	.99	-.20	1.10	1.60
44	.97	-.60	1.01	.10
9	.97	-.50	.98	-.2-
45	.95	-1.10	1.28	4.70
32	.93	-1.40	1.12	1.80
12	.91	-1.60	.75	-3.90
6	.89	-2.20	.77	-3.70
43	.85	-3.30	.94	-1.00
38	.85	-3.30	.76	-4.20
5	.82	-3.90	.76	-4.20
11	.79	-4.30	.75	-4.20
42	.77	-5.50	.76	-4.50
10	.76	-4.80	.68	-5.40
14	.75	-5.70	.84	-2.70
13	.71	-6.40	.65	-6.30
Mean	1.07	.60	1.12	1.30
SD	.25	4.00	.32	4.30

The item variability map (Figure H.3) visually lays out the hierarchical structure of the 33 items. Items at the top of the figure indicate items that are more difficult for the sample to endorse and those at the bottom are easier for the sample to endorse (Linacre, 2012). Therefore, as you move from the bottom to the top of the figure, items become more difficult for the sample to endorse. The easiest item to endorse was: *31. I saw positive changes in the children who were placed in my home;* the hardest items to endorse were: *37. I feel foster parents in my community have influence in the way our child welfare systems respond to the needs of children and families* and *40. Child welfare systems respond appropriately to the needs of children throughout their lifespan.* The average ability of the respondents, which is conceptualized as respondents' willingness or ability to endorse an item, was higher than the average difficulty of the statements, indicating that participants' ability to endorse the items was generally high and the items were quite easy to endorse for the sample, as noted by the mean, *M*, of items and persons.

The category probability curves are displayed in Figure H.4. This figure focuses on the rating scale configuration (i.e., seven-item Likert scale), specifically related to its use. Peaking response categories illustrate the usage of that particular response category. Based on the probability curves, respondents tended to overuse response options 1 and 7. Response options 2 and 6 were also used quite frequently. Response options 3, 4, and 5 were endorsed less often.

Perceptions about Agency Workers subscale.

Initial attempt. The person separation score was 2.13 and person reliability was .82. These scores suggest that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 8.60 and item reliability was .99, which indicates that the scale measured a broad range of items. Table H.11 displays the fit statistics of the 17 items included in the subscale. Items 1, 8 and 15 were problematic, with outfit statistics above two.

```
MEASURE      PERSON - MAP - ITEM
                  <more>|<rare>
     5          .   +
                    |
                    |
                    |
                    |
              .   |
     4          .   +
                    |
                    |
                    |
              .   |
                    |
     3          .   +
              .   |
                    |
                    |
              .#  |
              .#  |
              .   T|
     2          .   +
              .#  |
              .## |
              .## |
              .## S|
              .### |
              .#### |
     1      .####### +
            .####### |T
          .######### M|   YEF37   YEF40
        .##########   |   YEF1
        .#########   |S YEF45
            ########   |   YEF34   YEF39   YEF41   YEF42   YEF43   YEF44
        .#########   |   YEF14   YEF32   YEF33   YEF36   YEF38   YEF5
     0      .######## +M YEF11   YEF13   YEF3    YEF35   YEF6    YEF7    YEF9
             .### S|   YEF10   YEF12   YEF19
             .###   |   YEF27   YEF4
              .#  |S YEF2    YEF28   YEF30
              .#  |
              .   |
              .   T|T YEF29
    -1          .   +
                    |
              .   |
              .   |   YEF31
                    |
                    |
                    |
    -2          +
                  <less>|<frequent>
     EACH "#" IS 8: EACH "." IS 1 TO 7
```

Figure H.3. Fourth Attempt: Variable (person/item) Map for the Total YEF Scale

```
        CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P       -+-----------+-----------+-----------+-----------+-----------+-
R  1.0 +                                                             +
O      |                                                             |
B      |                                                       77777|
A      |11                                                    7777   |
B   .8 +   111                                              7777     +
I      |     11                                           77         |
L      |       11                                       777          |
I      |         11                                   77            |
T   .6 +          1                                 77               +
Y      |           11                             7                  |
    .5 +             1                           77                   +
O      |              1                         7                     |
F   .4 +               1                      77                      +
       |                11                  6*6666                    |
R      |                 1            66*7       66666                |
E      |          2222222   1       66 7             6666            |
S   .2 +       222222          22**44*****55              6666       +
P      |22222              333***3**** 7 4445555             66666   |
O      |          3333444    5** 7**333   444 55555           666666|
N      |    333333**444455***6777    *****33344444455555555555       |
S   .0 +****************7777        11******************************+
E       -+-----------+-----------+-----------+-----------+-----------+-
           -2          -1          0           1           2           3
        PERSON [MINUS] ITEM MEASURE
```

Figure H.4. Fourth Attempt: Category Probability Curve for the Total YEF Scale

Table H.11

Initial Attempt: Fit Statistics for the Perceptions about Agency Workers Subscale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
8	1.82	9.90	2.44	9.90
1	1.71	9.90	2.13	9.90
15	1.67	9.80	2.42	9.90
28	1.53	7.20	1.81	8.20
2	1.30	4.30	1.08	1.00
4	1.25	3.90	1.19	2.40
7	1.15	2.70	1.87	9.90
27	1.15	2.40	1.08	1.10
14	.81	-4.40	.91	-1.40
3	.79	-4.2	.70	-4.80
9	.77	-4.50	.75	-3.90
12	.70	-5.70	.57	-6.70
10	.67	-6.60	.69	-4.80
6	.66	-7.00	.60	-6.60
5	.64	-7.8	.65	-6.00
13	.61	-8.3	.62	-6.30
11	.55	-9.60	.55	-7.60
Mean	1.05	-.50	1.18	.20
SD	.42	6.8	.66	6.6

Two of the items are reverse coded (8 and 15), which could account for the high scores. This may have made the questions less clear for respondents and affected their responses. Due to the problematic outfit statistics for three items, a second Rasch modeling analysis was completed with the three problematic items (1, 8, and 15) removed to determine if this improved the scale properties.

Second attempt. The person separation score was 2.09 and person reliability was .81, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 6.96 and item reliability was .98, which indicates that the scale measured a broad range of items. Table H.12 displays the fit statistics for the 14 items. Items 7 and 28 were problematic, with outfit statistics over two. Another Rasch modeling analysis was computed that removed these two problematic items.

Third attempt. The person separation score was 2.13 and person reliability was .82, which suggests that the scale was sensitive enough to distinguish between high and low performers. The item separation score was 7.25 and item reliability was .98, which indicates that the scale measured a broad range of items. Table H.13 displays the fit statistics of the 12 items. No items had outfit statistics over two.

On the item variability map (see Figure H.5), the easiest item to endorse was: *2. When I need to talk over my concerns about a child, I do not hesitate to phone our agency's worker*. The hardest items to endorse were: *5. I am secure about the soundness of the decisions my supervising worker makes* and *14. Agency workers provide information about my foster child when I need it.* The average ability of the respondents was higher than the average difficulty of the statements, indicating that participants' willingness/ability to endorse the items was generally high and the items were quite easy for the sample to endorse, as noted by the mean, *M,* of items

Table H.12

Second Attempt: Fit Statistics for the Perceptions about Agency Workers Subscale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
28	1.85	9.90	2.28	9.90
2	1.50	6.50	1.32	3.80
4	1.45	6.50	1.44	5.40
7	1.38	6.10	2.23	9.90
27	1.31	4.60	1.32	4.00
14	.99	-.10	1.22	3.30
3	.93	-1.30	.90	-1.50
9	.90	-1.80	.94	-.80
12	.79	-3.80	.71	-4.50
5	.78	-4.30	.86	-2.20
10	.76	-4.50	.89	-1.60
6	.75	-4.70	.68	-5.40
13	.68	-6.30	.69	-5.20
11	.63	-7.50	.63	-6.30
Mean	1.05	-.10	1.15	.6
SD	.36	5.50	.52	5.3

Table H.13

Third Attempt: Fit Statistics for the Perceptions about Agency Workers Subscale

Item	Infit		Outfit	
	MNSQ	ZSTD	MNSQ	ZSTD
2	1.68	8.30	1.45	5.20
4	1.65	8.60	1.67	7.80
27	1.46	6.30	1.55	6.50
14	1.16	2.70	1.48	6.60
3	.98	-.30	.96	-.60
9	.97	-.50	1.00	.10
5	.88	-2.30	.96	-.60
6	.88	-2.10	.81	-2.90
12	.87	-2.20	.79	-3.20
10	.84	-2.90	.99	-.10
13	.77	-4.30	.84	-2.50
11	.66	-6.60	.69	-5.20
Mean	1.07	.40	1.10	.9
SD	.33	4.80	.33	4.3

```
MEASURE     PERSON - MAP - ITEM
                  <more>|<rare>
     4   .########### +
            .####    |
              .      |
                    T|
                     |
                     |
                     |
            .#####   |
     3       .    +
            .###   |
              .     |
            .### S|
              .     |
            .###   |
     2        .   +
            .###   |
            .##    |
            .##    |
              .     |
           .####   |
          .######  |
            .###   |
     1       .### M+
          .#####   |
            .###   |
            .###   |
            .###   |T
           .####   |   YEF14  YEF5
           .####   |S
             .##   |   YEF13  YEF3    YEF9
     0      .####  +M YEF10  YEF11   YEF6
             ##    |
           .####  S|S YEF12  YEF27  YEF4
             .##   |
             .##   |T YEF2
              .#   |
              .#   |
               .   |
    -1         .   +
              .#   |
               .   |
              .#   |
               . T|
               .   |
                   |
               .   |
    -2         .   +
                   |
               .   |
                   |
                   |
               .   |
                   |
                   |
    -3         .   +
                  <less>|<frequent>
     EACH "#" IS 8: EACH "." IS 1 TO 7
```
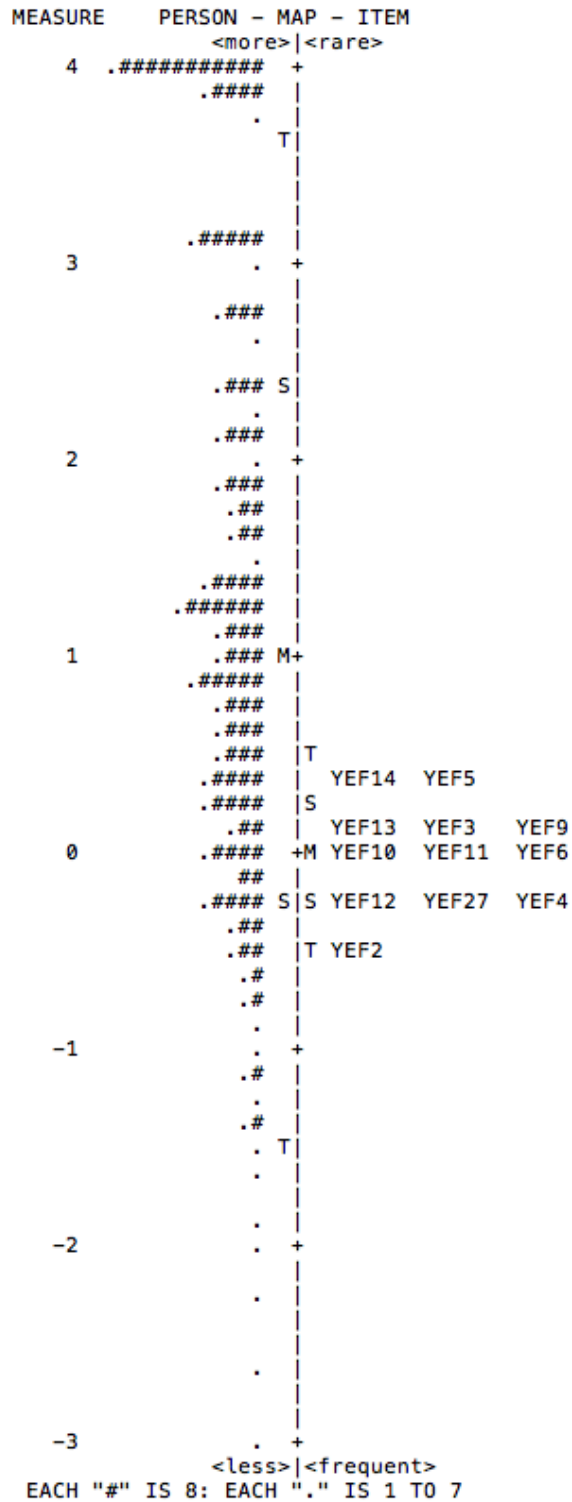
Figure H.5. Third Attempt: Variable (person/item) Map for the Perceptions about Agency

Workers Subscale

and persons. The category probability curves are displayed in Figure H.6. Based on the

probability curves, respondents most frequently endorsed response options 1 and 7, followed by

response options 2 and 6. Response options 3, 4, and 5 were endorsed less frequently.

Perceptions about the Fostering System subscale. For the Perceptions about the

Fostering System subscale, the person separation score was 2.29 and person reliability was .84.

These scores suggest that the scale was sensitive enough to distinguish between high and low

performers. The item separation score was 8.79 and item reliability was .99, which indicates that

the scale measures a broad range of items. Table H.14 displays the fit statistics of the nine items

included in the subscale. None of the items had fit statistics above two.

The item variability map (see Figure H.7) visually lays out the hierarchical structure of

the nine items. The easiest item to endorse was: *38. I feel foster parents in my community have*

influence in the way our child welfare systems respond to the needs of children and families. The

hardest items to endorse were: *37. I feel foster parents in my community have influence in the*

way our child welfare systems respond to the needs of children and families and *40. Child*

welfare systems respond appropriately to the needs of children throughout their lifespan. The

average ability of the respondents was slightly higher than the average difficulty of the

statements, indicating that participants' willingness/ability to endorse the items was somewhat

high and the items were quite easy for the sample to endorse, as noted by the mean, *M,* of items

and persons. The category probability curves are displayed in Figure H.8. Based on the

probability curves, respondents endorsed response options 1 and 7 very frequently. Response

options 2, 4, and 6 were endorsed frequently. Response options 3 and 5 were endorsed

infrequently.

```
         CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P       -+---------+---------+---------+---------+---------+---------+-
R  1.0 +                                                               +
O       |
B       |111
A       |   111
B   .8 +      111                                                  777+
I       |        11                                            777   |
L       |          11                                         77     |
I       |            11                                     77       |
T   .6 +              1                                   77         +
Y       |             1                                 7           |
    .5 +               11                             77             +
O       |                1                  666666*7               |
F   .4 +                  1            666      7 666               +
        |                  1         6       77      666            |
R       |           2222222*2       66      7          666          |
E       |        222          ***33  5*55555577            666      |
S   .2 +      2222             333   122***      77555          666 +
P       |    2222            333      4****4**477      555          6|
O       |2222            3333       44*56*1 227**444      5555        |
N       |      333333     4444**5*66  7****22*33**444     5555555     |
S   .0 +*********************77777        111************************+
E       -+---------+---------+---------+---------+---------+---------+-
        -3        -2        -1         0         1         2         3
         PERSON [MINUS] ITEM MEASURE
```
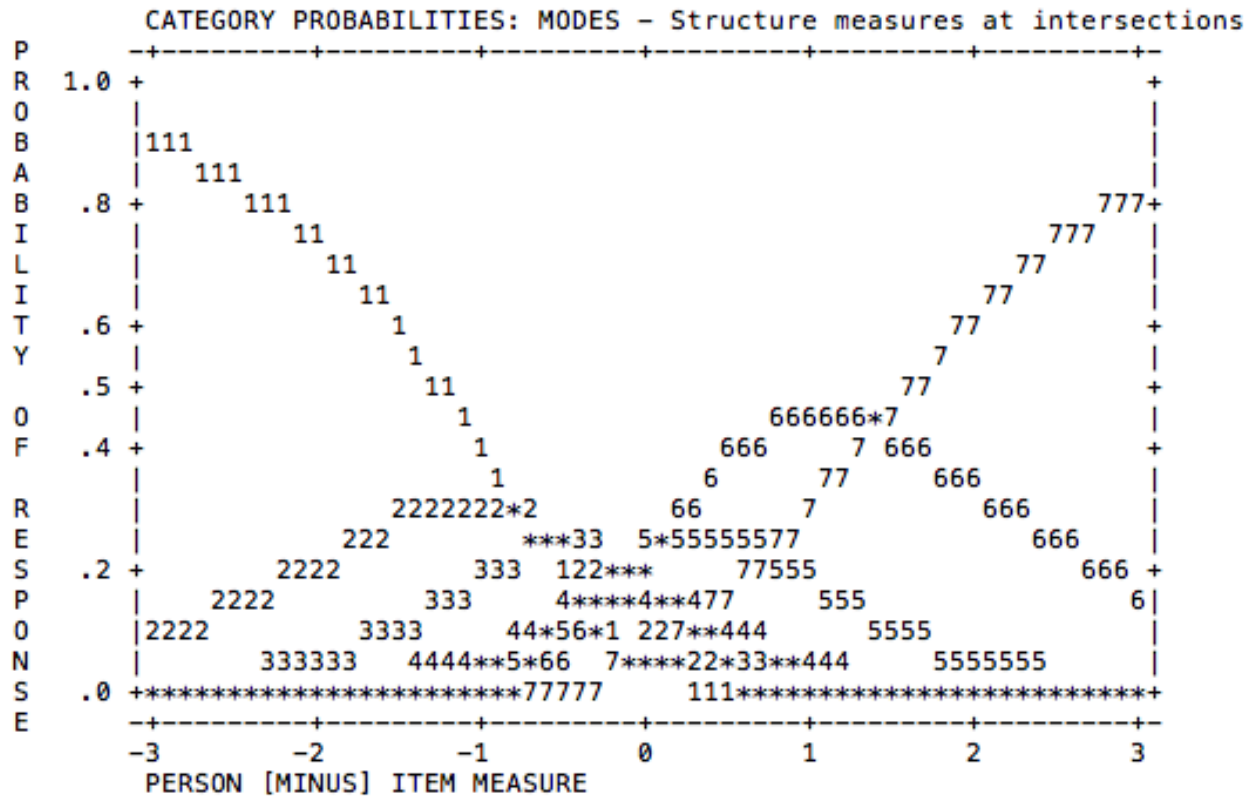
Figure H.6. Third Attempt: Category Probability Curve for the Perceptions about Agency

Workers Subscale

Table H.14

Fit Statistics for the Perceptions about the Fostering System Subscale

| Item | Infit | | Outfit | |
	MNSQ	ZSTD	MNSQ	ZSTD
37	1.39	7.50	1.46	7.70
39	1.09	1.80	1.10	1.90
45	1.08	1.60	1.19	3.50
41	1.07	1.40	1.12	2.10
40	1.05	1.10	1.08	1.60
38	.98	-.30	.89	-2.10
43	.89	-2.20	.94	-1.00
44	.86	-2.90	.84	-3.10
42	.72	-6.30	.70	-6.20
Mean	1.01	.20	1.04	.50
SD	.18	3.60	.21	3.90

```
MEASURE      PERSON - MAP - ITEM
                   <more>|<rare>
     4            ####   +
                         |
                         |
                 .#      |
                  .      |
                  .      |
                         |
     3            +
                 .#      |
                  .      |
                         |
                .##      |
                        T|
                         |
                 .#      |
     2            .      +
                ##       |
                .##      |
                  .      |
               .###      |
               .##     S|
               .##      |
               .##      |
     1          .##     +
                .###     |
             .######     |
           .########     |
                .##     |T YEF37   YEF40
            .###### M|
            .#######   |S
            .#######    |
     0       .#######   +M YEF39   YEF45
       .###########    |   YEF41   YEF42   YEF43
           ######     |S YEF44
           .######     |   YEF38
           .######     |T
               ###    S|
               .##      |
                .#      |
    -1           .#     +
                  .      |
                .#      |
                  .      |
                  .    T|
                  .      |
                         |
    -2            .      +
                         |
                         |
                  .      |
                         |
                         |
                  .      |
    -3            #     +
                  <less>|<frequent>
    EACH "#" IS 7: EACH "." IS 1 TO 6
```
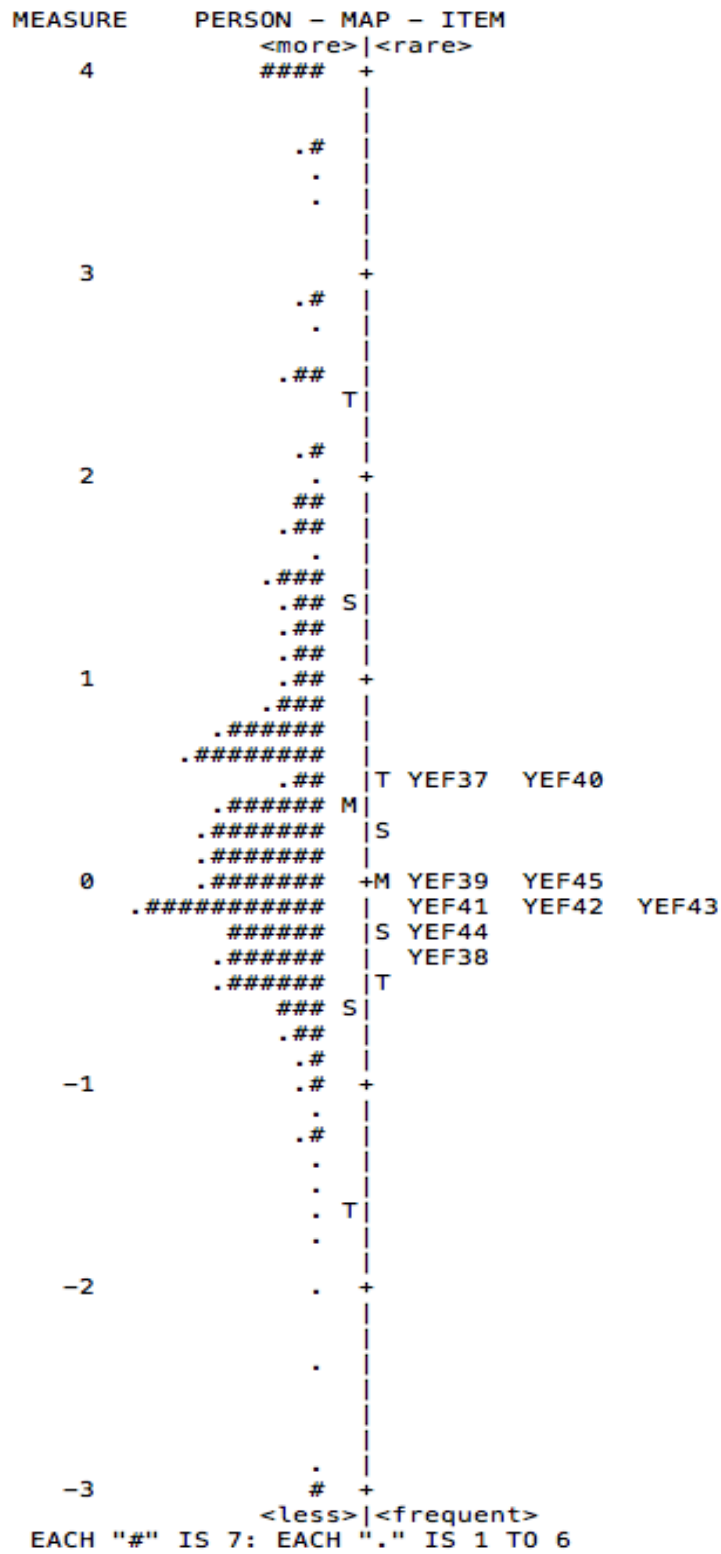
Figure H.7. Variable (person/item) Map for the Perceptions about the Fostering System Subscale

```
        CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P      -+---------+---------+---------+---------+---------+---------+-
R  1.0 +                                                                +
O      |                                                                |
B      |111                                                             |
A      |   1111                                                         |
B   .8 +       11                                                  777+
I      |         11                                            77    |
L      |           11                                        77      |
I      |             11                                    77        |
T   .6 +               1                                 77          +
Y      |               1                               77            |
    .5 +                1                             7              +
O      |                 1                    6666677                |
F   .4 +                   11              666      76666            +
       |                     1     444444    66      77      666      |
R      |                      1 44        446       7          66    |
E      |          2222222222*       6644    77            666        |
S   .2 +           2222        44 *2   5**5555***5              6666+
P      |         2222          **333 *****       77 445555          |
O      |22222          333**        55***2*3377      444 5555        |
N      |        3333**444    555*66    ******333       444445555555  |
S   .0 +*********************777777   111************************+
E      -+---------+---------+---------+---------+---------+---------+-
        -3        -2        -1         0         1         2         3
        PERSON [MINUS] ITEM MEASURE
```
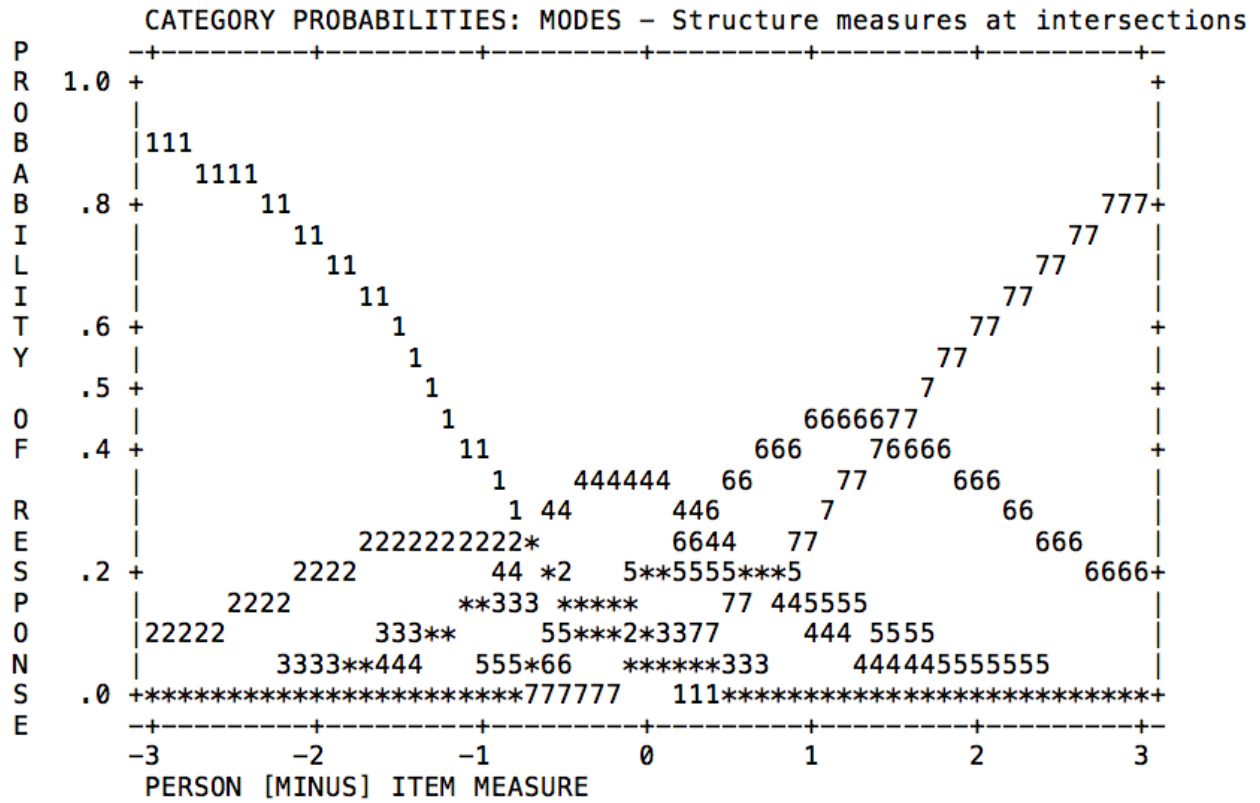
Figure H.8. Category Probability Curve for the Perceptions about the Fostering System Subscale

Concerns about Foster Children subscale. For the Concerns about Foster Children subscale, the person separation score was 1.14 and person reliability was .57. These scores suggest that the scale was not sensitive enough to distinguish between high and low performers. This is consistent with the internal consistency score for this scale, which was .60. The item separation score was 11.98 and item reliability was .99, which indicates that the scale measured a broad range of items. Table H.15 displays the fit statistics of the six items included in the subscale. For this subscale, all the items had fit statistics within the ideal range of .60 to 1.40, indicating unidimensionality.

The item variability map (see Figure H.9) visually lays out the hierarchical structure of the six items. The easiest item to endorse was: *21. The fear of being named in an allegation of abuse/neglect by a foster child affected my ability to care;* the hardest item to endorse was: *23. Seeing children sent back to a bad situation is a common concern I have.* The average ability of the respondents was at par with the average difficulty of the statements, indicating that participants' willingness/ability to endorse the items was consistent with the spread of items and the items were at the ideal level of difficulty for the sample, as noted by the mean, *M*, of items and persons. The category probability curves are displayed in Figure H.10. Similarly to the previous scales, response options 1 and 7 were frequently used. Response option 2 was endorsed a moderate amount. Response options 3, 4, 5, and 6 were endorsed less frequently.

Perceptions about Foster Placements subscale. The person separation score was .92 and person reliability was .46 for the Perceptions of Foster Placements subscale. These scores suggest that the scale was not sensitive enough to distinguish between high and low performers. This is consistent with the subscale's low internal consistency score of .55. The item separation score was 18.03 and item reliability was 1.00, which indicates that the scale measured a broad

Table H.15

Fit Statistics for the Concern about Foster Children Subscale

| Item | Infit | | Outfit | |
	MNSQ	ZSTD	MNSQ	ZSTD
20	1.15	3.60	1.15	3.10
25	1.05	1.20	1.10	2.00
23	1.04	.70	.99	-.20
21	1.00	.10	1.00	.00
22	.96	-1.00	.95	-1.00
24	.86	-3.70	.87	-2.90
Mean	1.01	.10	1.01	.20
SD	.09	2.20	.09	2.00

```
MEASURE      PERSON - MAP - ITEM
                  <more>|<rare>
   2            .   +
                    |
                    |
                    |
                    |
              .     |
                    |
              .     |
   1          .#   +
             .## T|
             .#    |
             .#    |
             ##    |
             .##   |
             ### S|T  YEF23REV
           .#####  |
            .####  |
         .######### |S
         .########## |
            .###### |   YEF22REV
   0  .########### M+M  YEF25REV
          .####### |   YEF20REV
        .############ |   YEF24REV
           .####   |S
           .#####  |
           .### S|   YEF21REV
           .###   |T
            .##   |
            .##   |
            .#    |
                 T|
            .#    |
  -1            +
             .    |
                  |
             #    |
                  |
                  |
             .    |
                  |
                  |
  -2            +
                  |
                  |
             .    |
                  |
                  |
                  |
                  |
                  |
  -3         .   +
              <less>|<frequent>
 EACH "#" IS 8: EACH "." IS 1 TO 7
```
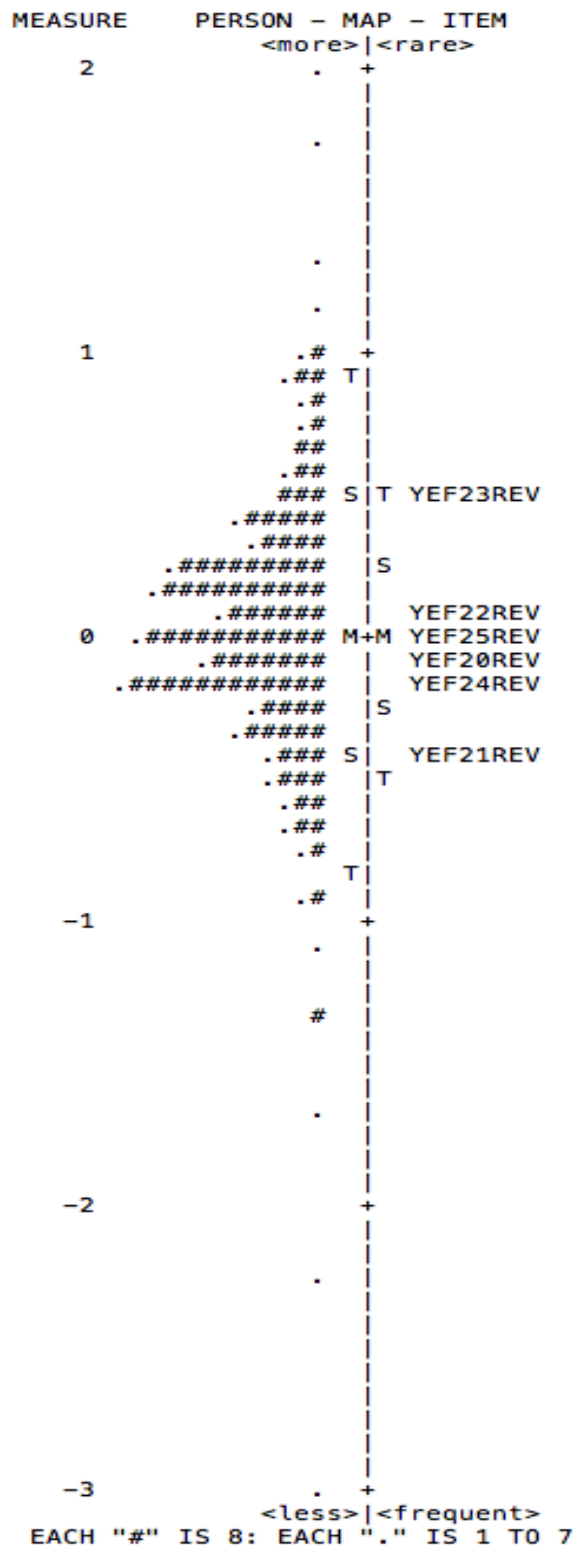
Figure H.9. Variable (person/item) Map for the Concern about Foster Children Subscale

```
      CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P     -+--------------+--------------+--------------+--------------+-
R  1.0 +                                                              +
O      |                                                              |
B      |                                              777777|
A      |                                           7777       |
B   .8 +111                                    777            +
I      |  1111                              77               |
L      |     11                           77                |
I      |      111                        7                 |
T   .6 +       11                       77                +
Y      |        11                     7                 |
    .5 +         11                   7                 +
O      |          11                 7                 |
F   .4 +           1                7                +
       |           11              7                |
R      |          22222222*1      7                |
E      |       2222222      ****333  77            |
S   .2 +    22222          33333   ******444       +
P      |222          3333    4444 11 *2 3*****6666666666      |
O      |          33333   4444      77******5****444    6666666666 |
N      |3333333333  4444444    5*******5 111*222**********55       6|
S   .0 +********************6           1111********************+
E     -+--------------+--------------+--------------+--------------+-
      -2            -1             0              1              2
      PERSON [MINUS] ITEM MEASURE
```
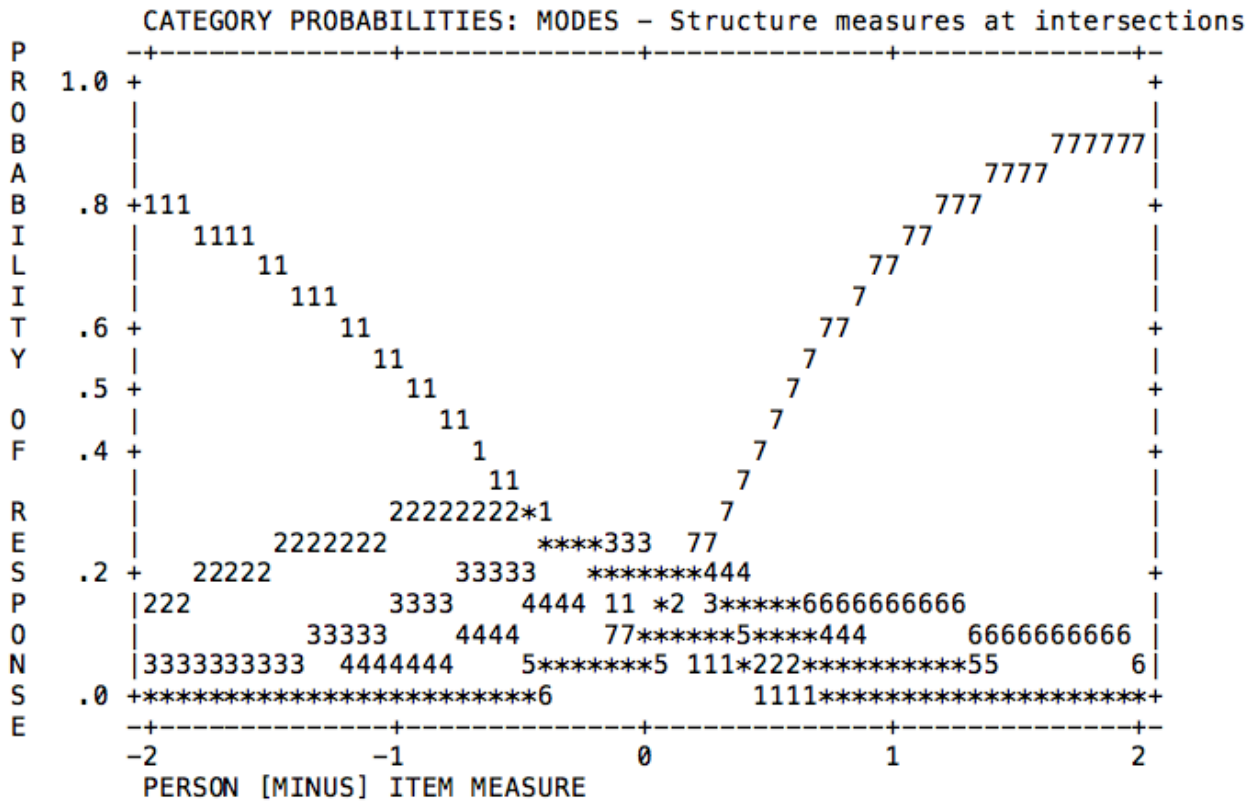
Figure H.10. Category Probability Curve for the Concern about Foster Children Subscale

range of items. Table H.16 displays the fit statistics of the six items included in the subscale. For this subscale, all the items had fit statistics within the ideal range of .60 to 1.40, indicating unidimensionality.

The item variability map (see Figure H.11) visually lays out the hierarchical structure of the six items. The easiest item to endorse was: *31. I saw positive changes in the children who were placed in my home*; the hardest item to endorse was: *25. Dealing with the foster children's difficult behaviour is a common concern I have.* The average ability of the respondents was much higher than the average difficulty of the statements, indicating that participants' willingness/ability to endorse the items was quite high and the items were easy for the sample to endorse, as noted by the mean, *M*, of items and persons. The category probability curves are displayed in Figure H.12. Consistent with the previous scales, respondents frequently used response options 1 and 7. Response options 2, 3, and 6 were endorsed less frequently and response options 4 and 5 were endorsed the least frequently.

Perceptions about Training subscale. The person separation score was 1.67 and person reliability was .74 for the Perceptions about Training subscale. These scores suggest that the scale was not sensitive enough to distinguish between high and low performers. This is inconsistent with the subscale's internal consistency score of .86. The item separation score was 7.40 and item reliability was .98, which indicates that the scale measured a broad range of items. Table H.17 displays the fit statistics of the six items included in the subscale. None of the items had fit statistics above two, indicating unidimensionality.

The item variability map (see Figure H.13) visually lays out the hierarchical structure of the six items. The easiest item to endorse was: *19. My training requirements as a foster family were met*; the hardest item to endorse was: *34. Looking back, I was helped through*

Table H.16

Fit Statistics for the Perceptions about Foster Child Placements Subscale

| Item | Infit | | Outfit | |
	MNSQ	ZSTD	MNSQ	ZSTD
25	1.01	.30	1.15	2.50
26	1.19	3.70	1.18	2.80
28	.89	-1.90	1.05	.70
30	1.09	1.40	1.07	.90
29	.75	-3.30	.69	-3.40
31	.91	-.80	1.04	.40
Mean	.97	-.10	1.03	.60
SD	.14	2.30	.16	2.00

```
MEASURE     PERSON - MAP - ITEM
                  <more>|<rare>
    3       #########  +
                       |
                       |
                       |
              .######  |
                       |
                       |
                     T|
                       |
    2                  +
                .####  |
                    .  |
              .###### S|
                    .  |
               ###### |
             .######### |T
                    .  |
            .########### |   YEF25REV
    1       ######### M+
               .######## |
               .######## |
               .######## |
               .####### |S
              ######### |
                  .### S|   YEF26REV
                  .###  |
                 .####  |
                   .#  |
    0               ##  +M YEF28
                   .#  |   YEF30
                   .  T|
                   .  |
                   .  |   YEF29
                   .  |S
                       |
                       |
                       |   YEF31
   -1             .  +
                       |
                       |
                       |T
                   .  |
                       |
                       |
                       |
                       |
                       |
   -2                  +
                 <less>|<frequent>
 EACH "#" IS 7: EACH "." IS 1 TO 6
```

Figure H.11. Variable (person/item) Map for the Perceptions about Foster Placements Subscale

```
     CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P     -+-----------+-----------+-----------+-----------+-----------+-
R  1.0 +                                                           +
O      |                                                           |
B      |11111                                                      |
A      |    1111                                                   |
B   .8 +       1111                                          777+
I      |           11                                      777   |
L      |             11                                  77      |
I      |               11                              77        |
T   .6 +                 11                          77          +
Y      |                   11                      7             |
    .5 +                    1                     7              +
O      |                     11                 77               |
F   .4 +                       1               7                 +
       |                        11            7                  |
R      |                22222222*         76666666               |
E      |              2222        33***33333  6*6      66666      |
S   .2 +           22222          333    12**44**7        6666   +
P      |         22222            3333      44*1 **7 **44      66|
O      |2222222             3333      4444   6*****55*****5        |
N      |          3333333     444444  5*****7 111*222333******5555|
S   .0 +*************************************77    111***************+
E      -+-----------+-----------+-----------+-----------+-----------+-
         -3          -2          -1          0           1           2
        PERSON [MINUS] ITEM MEASURE
```

Figure H.12. Category Probability Curve for the Perceptions about Foster Placements Subscale

Table H.17

Fit Statistics for the Perceptions about Training Subscale

| Item | Infit | | Outfit | |
	MNSQ	ZSTD	MNSQ	ZSTD
19	1.52	7.40	1.43	6.00
36	1.36	6.10	1.49	7.40
30	.99	-.10	1.02	.40
25	.90	-2.00	.91	-1.60
28	.81	-3.80	.83	-3.10
29	.66	-7.10	.63	-7.30
Mean	1.04	.10	1.05	.30
SD	.30	5.20	.31	5.10

```
MEASURE    PERSON - MAP - ITEM
                 <more>|<rare>
    4    ########## +
                      |
                      |
                      |
                      |
                      |
              ####    |
    3                 +
               .      |
                     T|
              .####   |
                      |
                      |
    2                 +
              .####   |
                .     |
              .#### S|
                 .    |
              .#####  |
                      |
              .###### |
    1     .######## +
                 .    |
              .###### |
              .#### M|
               ####  |T
          .########## |   YEF34
              .####  |S
               .###  |
    0         .##### +M YEF32  YEF33  YEF35  YEF36
               ##### |
              .#### |S
               .## S|
               .### |T YEF19
                .## |
                .## |
                 .   |
   -1            .  +
                 .   |
                 .   |
                .  T|
                 .   |
                      |
                 .   |
   -2                +
                      |
                      |
                 .   |
                      |
                      |
                      |
   -3            .#  +
                 <less>|<frequent>
    EACH "#" IS 7: EACH "." IS 1 TO 6
```

Figure H.13. Variable (person/item) Map for the Perceptions about Training Subscale

orientation/pre-service training to anticipate many of the difficulties I later experienced as a

foster parent. However, there was little spread in the variability of item difficulty. The average

ability of the respondents was higher than the average difficulty of the statements, indicating that

participants' willingness/ability to endorse the items was generally high and the items were

slightly too easy to endorse for this particular sample, as noted by the mean, *M*, of items and

persons. The category probability curves are displayed in Figure H.14. Respondents frequently

used response options 1 and 7. Response option 6 was endorsed a moderate amount. Response

options 2, 3, 4, and 5 were endorsed less frequently.

Summary. Various statistical measures were obtained using Rasch modeling for the total

scale and five subscales. For all the items of the YEF scale, the extreme response options (1 and

7) were frequently endorsed. The response options 2 and 6 tended to have moderate endorsement

and the middle response options (3, 4, and 5) were endorsed infrequently. This suggests that a

seven-point Likert scale may not be the optimal measurement tool for this scale. A five-point

Likert scale may be sufficient to capture the spread of foster parent perceptions for future

administrations of the survey.

Taken together, the results for the total scale, Perceptions about Agency Workers, and

Perceptions about the Fostering System were quite promising, after removing items with outfit

statistics of two and above. This is consistent with the internal consistency analyses for these

scales. Following the analyses, the total scale was reduced to 33 items and the Perceptions about

Agency Workers subscale was reduced to 12 items. The Perceptions about the Fostering System

remained the same.

In contrast, for the Perceptions of Training subscale, the reliability obtained through

Rasch modeling was lower than that obtained using Cronbach's alpha. Despite this, the item

```
    CATEGORY PROBABILITIES: MODES - Structure measures at intersections
P     -+-----------+-----------+-----------+-----------+-----------+-
R   1.0 +                                                               +
O       |                                                               |
B       |                                                               |
A       |                                                            7|
B    .8 +111                                                     777 +
I       |   11                                               777      |
L       |     11                                          777         |
I       |       1                                       77            |
T    .6 +          11                                 77              +
Y       |           1                               77               |
     .5 +             1                            77                 +
O       |              11                    6666 77                  |
F    .4 +                1                66666    7*6666             +
        |                 1             66       7        6666        |
R       |                1      4     66       77        666          |
E       |                   14444 ****555555577              666      |
S    .2 +       22222222222***1155566   444  77555              6666  +
P       |2222         3**333*****      7**4    5555                66|
O       |         333**4   555 66***33*77    444      55555          |
N       |3333***444 55556666   77******3333    4444444   55555555    |
S    .0 +***************777777        11********************************+
E       -+-----------+-----------+-----------+-----------+-----------+-
        -2          -1           0           1           2           3
        PERSON [MINUS] ITEM MEASURE
```
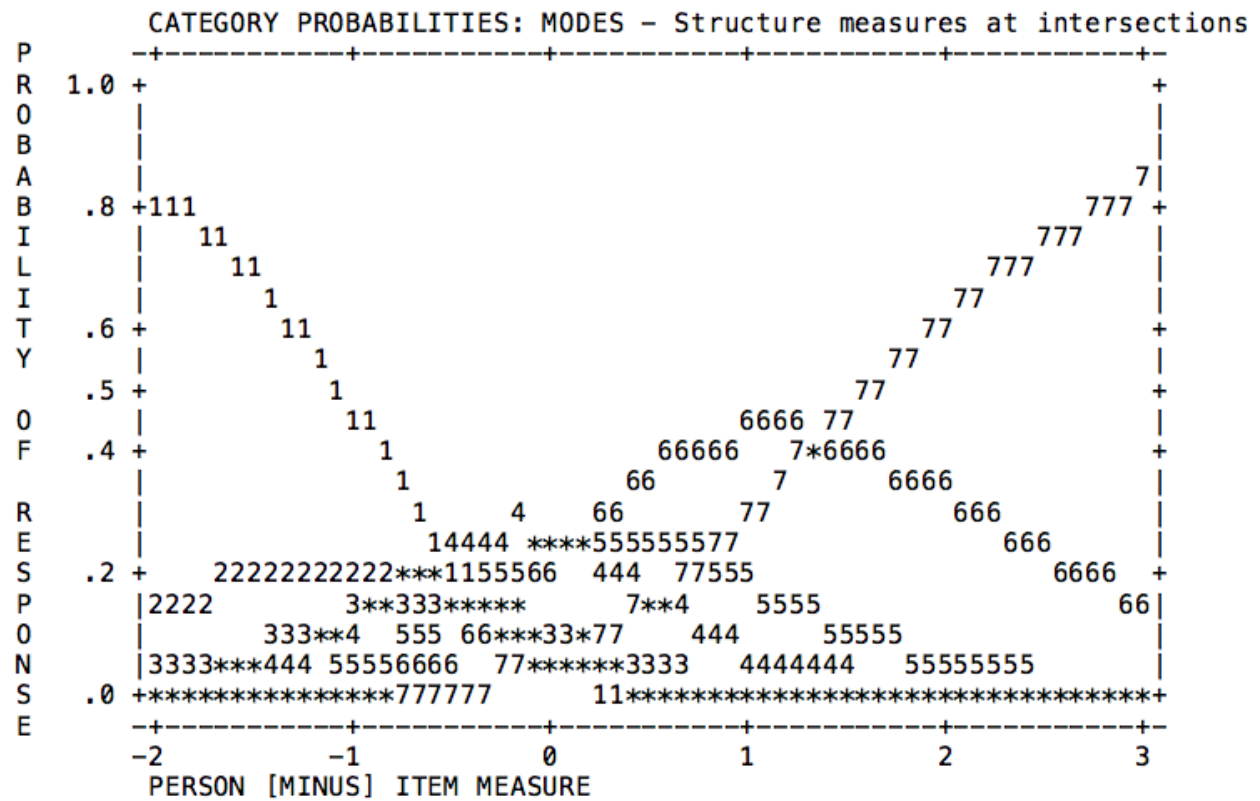
Figure H.14. Category probability curve for the Perceptions about Training subscale

separation score and item reliability were adequate and the infit and outfit statistics and person-item map were acceptable, although not ideal.

Although person reliability for the Concern about Foster Children scale was low, the item statistics were adequate, infit and outfit statistics were within the ideal range for all items, and the person-item map indicated that the respondents' willingness to endorse the items and the item difficulty were at par. Therefore, this scale demonstrated adequate properties in most areas examined, aside from having low person reliability.

The most problematic subscale was the Perceptions about Foster Placements subscale. Although the item and infit/outfit statistics were good, this subscale had the lowest person reliability. In addition, the participants' willingness to endorse the responses was much higher than the item difficulty. Removing this subscale was considered. In addition, due to the fact that internal consistency for the Concern for Foster Children subscale was low and that the subscale was made up entirely of reverse scored items, which were problematic for the total scale, dropping the reverse scored items from the subscales was considered as well. However, given that these subscales were both related to perceptions of foster child-related issues and measured similar concepts, the possibility of combining these subscales to create one subscale (Perceptions about Foster Children and Their Placements) was examined. The internal consistency score for the combined subscales was poor, with a Cronbach's alpha coefficient of .59 when all 11 items were included. However, when item *31. I saw positive changes in the children who were placed in my home* was removed, the Cronbach's alpha coefficient increased to .63, which is acceptable. Thus, the Perceptions about Foster Children and their Placements subscale was retained.

In summary, the psychometric analyses resulted in a total scale consisting of 33 items and four subscales (Perceptions about Agency Workers, Perceptions about the Fostering System, Perceptions about Training and Perceptions about Foster Children and Their Placements).

Follow-Up Principal Components Analysis (PCA)

Initial PCA. Due to the changes made to the YEF scale as a result of the Rasch modeling analyses, the remaining 33 items of the scale were subjected to a follow-up PCA to determine whether the factor structure had changed for the sample of 937 foster parents. The results of the PCA revealed that the Kaiser-Meyer-Olkin value was .96, exceeding the recommended value of .60 (Kaiser, 1970, 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix. PCA revealed the presence of four components with eigenvalues exceeding one, explaining 39.51%, 9.75%, 5.26% and 4.94% of the variance, respectively. An inspection of the scree plot revealed that a stable plateau was reached after the fourth component (see Figure H.15). Using Cattell's (1966) scree test, it was decided to retain four components for further investigation.

The four-component solution explained a total of 59.46% of the variance. Similar to the previous PCA, an oblimin rotation was performed to aid in the interpretation of these four components. The rotated solution revealed the presence of a simple structure for all of the variables (Tabachnick & Fidell, 2007). The four components showed a number of strong loadings and all variables loaded substantially on only one component. The loadings of variables on factors, commonalities, and percent of variance and covariance are displayed in Table H.18. Variables were ordered and grouped by size of loading to facilitate interpretation. Factor loadings under .32 (10% of the variance) were not included. The component correlation matrix is displayed in Table H.19.
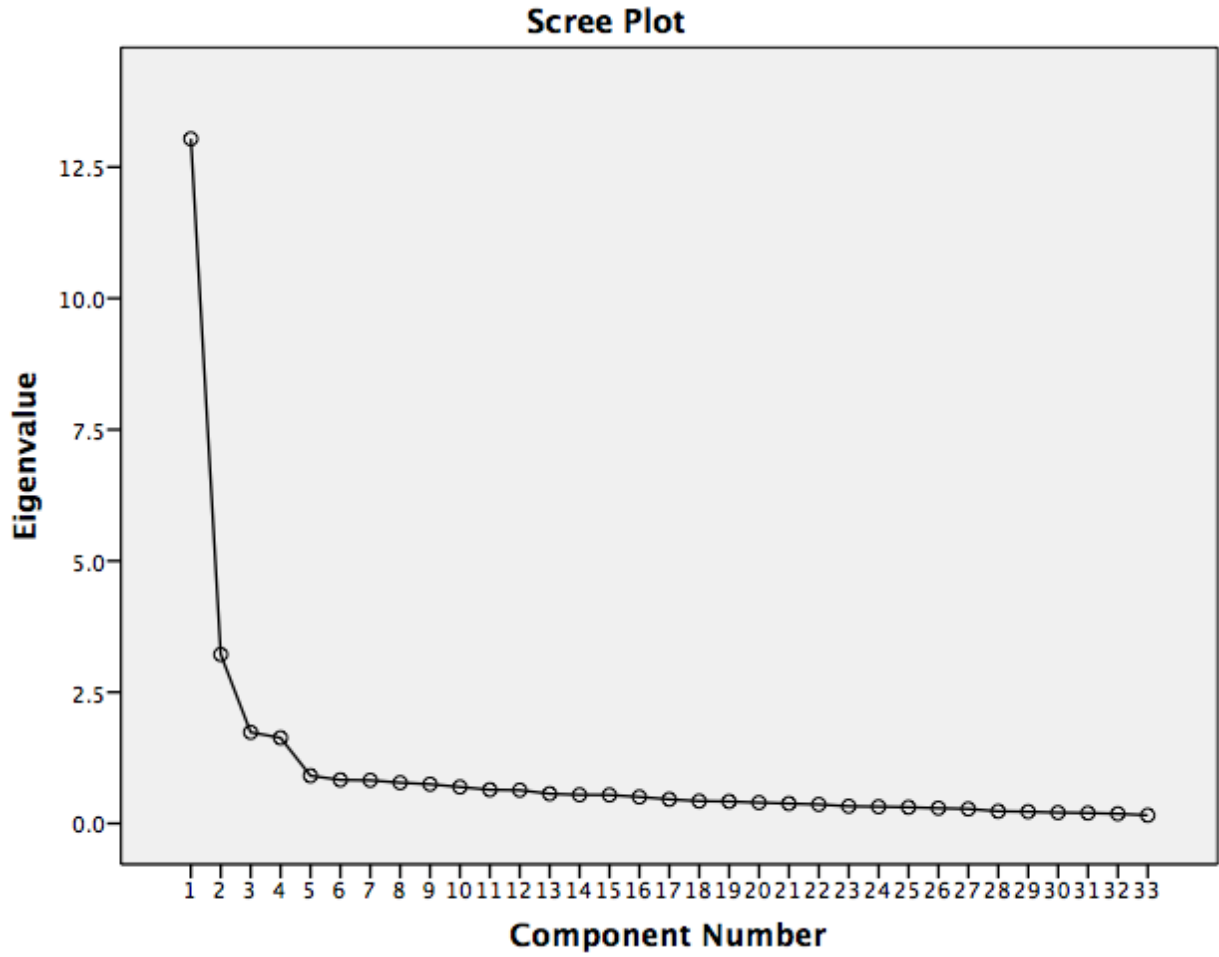
Figure H.15. Scree plot for the four-factor principal components analysis of the 33-Item YEF

scale

Table H.18

Pattern and Structure Matrix for PCA with Oblimin Rotation of the Four Factor Solution for the

33-Item YEF Scale

Item	Pattern Coefficients				Structure Coefficients				Communalities
	F_1	F_2	F_3	F_4	F_1	F_2	F_3	F_4	
11	.88				.88	.42	.40		.78
3	.88				.86				.74
6	.86				.86				.73
9	.86				.83				.69
5	.85				.85	.41			.73
12	.85				.84				.70
13	.81				.85	.44	.44		.73
10	.79				.83	.43	.45		.70
27	.69				.72				.55
14	.69				.77	.50			.62
2	.67				.69				.50
7	.65				.67				.45
4	.64				.69				.48
1	.48				.56	.41			.35
44		.86				.81			.66
39		.85			.55	.78			.63
42		.77				.80			.67
43		.70			.42	.77	.44		.60
41		.68				.71			.50
40		.67			.43	.74	.45		.57
45		.63			.42	.70	.41		.51
38		.60			.48	.75	.55		.61
37		.43			.44	.62	.56		.48
35			.88			.46	.88		.78
33			.88				.85		.73
34			.78		.41	.46	.82		.68
32			.68		.52	.41	.77		.63
19			.60				.66		.47
36			.46			.50	.59		.41
29				.79				.79	.62
31				.65				.63	.41
30				.58				.62	.41
28				.56	.45			.62	.50

Note. Variables are ordered and grouped by size of loading to facilitate interpretation. For

loadings under .32 (10% of the variance), cells are left blank

Table H.19

Component Correlation Matrix

Component	1	2	3	4
1	1.00	-	-	-
2	.46	1.00	-	-
3	.45	.50	1.00	-
4	.22	.21	.22	1.00

The four identified factors coincide with the Perceptions about Agency Workers, Perceptions about the Fostering System, Perceptions about Training, and Perceptions about Foster Placements subscales. However, as identified above, the Perceptions about Foster Placements subscale was combined with the Concern about Foster Children subscale, as this resulted in a scale with a stronger internal consistency coefficient. The six items of the Concern about Foster Children subscale items were removed from the YEF scale following the Rasch modeling analyses and are not included in the final 33-item total scale score. Table H.20 lists the items contained in each of the four factors and subscales: Perceptions about Agency Workers, Perceptions about the Fostering System, Perceptions about Training, and Perceptions about Foster Children and Their Placements.

Internal Consistency

Following the results of the PCA, the internal consistency (Cronbach's alpha) for the total 33-item perceptions score and the three factors (excluding the Perceptions about Foster Children and Their Placements) were examined. All cases that had more than 15% missing data were excluded for the Total Perceptions scale reliability calculations and any cases with more than two missing items for the subscales were excluded from the analysis for that particular scale. The Total Perceptions score and Perceptions about Agency Workers subscale both had excellent internal consistency, with Cronbach's alpha coefficients of .95. The remaining subscales (Perceptions about the Fostering System and Perceptions about Training) continued to have strong internal consistency as well, with reliability coefficients of .90 and .86, respectively.

Table H.20

The Four Final Subscales of the YEF Questionnaire

Subscale	Items
Perceptions about Agency Workers (12 items)	2. When I need to talk over my concerns about a child, I do not hesitate to phone our agency's worker. 3. My agency's worker treats me as if I am a team member. 4. I have clear communication with the worker regarding who should be responsible for transportation, doctor visits, school conferences and the like. 5. I am secure about the soundness of the decisions my supervising worker makes. 6. My supervising worker is available to assist me in handling special problems/needs of children in my care. 9. Supervising agency workers respect my opinions regarding the foster child(ren) that are placed with my family. 10. It was clear what supervising workers expect of me as a foster parent. 11. Supervising workers are warm and friendly when I have distress/concerns as a foster parent. 12. I get positive reinforcement from my worker on my foster parenting approach. 13. Supervising workers help me solve problems with my foster child when they arise. 14. Agency workers provide information about my foster child when I need it. 27. When I felt I needed to talk over my concerns about a child, I did not hesitate to phone my worker.
Perceptions about the Fostering System (9 items)	37. I feel foster parents in my community have influence in the way our child welfare systems respond to the needs of children and families. 38. I feel like our child welfare systems respect the cultural values of the children, community, and my family. 39. Foster children have adequate access to programs and resources to develop and maintain fluency in their first (or heritage) language. 40. Child welfare systems respond appropriately to the needs of children throughout their lifespan. 41. I am satisfied that the child welfare system in my community assesses risk to children in a way that does not penalize biological parents/families for poverty, lack of access to adequate housing, or other circumstances that may be beyond their control. 42. I am satisfied that the child welfare system in my community assesses risk to children accurately and with cultural sensitivity. 43. I am satisfied that the resources and support for foster children in my community are equivalent to those available in other communities. 44. Foster children have adequate access to access to programs and resources to develop and maintain their cultural identity.

Subscale	Items
	45. I am confident that the birth family, extended family, and child (if appropriate) are involved in placement planning for children in my community
Perceptions about Training (6 items)	19. My training requirements as a foster family were met.
	32. The knowledge and skills I learned in foster care training were later reinforced by agency workers.
	33. The foster care training I received was based on my training needs that I felt were relevant.
	34. Looking back, I was helped through orientation/pre-service training to anticipate many of the difficulties I later experienced as a foster parent.
	35. Overall, I consider the training I have received about fostering as appropriate.
	36. Positive programs, events, and activities are happening in this community to help children and families in a healthy
Perceptions about Foster Children and Their Placements (10 items)	20. Agency red tape often interfered with my ability to care for my foster child(ren).
	21. The fear of being named in an allegation of abuse/neglect by a foster child affected my ability to care.
	22. Losing children who I was fond of is a common concern I have.
	23. Seeing children sent back to a bad situation is a common concern that I have.
	24. Dealing with the foster child's primary family is a common concern I have.
	25. Dealing with the foster child's difficult behaviour is a common concern I have.
	26. I was challenged in my fostering by my own child(ren)'s resentment of and conflict with foster child(ren).
	28. I am satisfied with the type of children the agency places with me.
	29. I feel competent to handle the type(s) of children placed in my home.
	30. I have never had regrets about my decision to become a foster parent.

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Appendix I

The Estimated Marginal Mean and Standard Error for the Dichotomous Variables Included in the Multivariate GLM Analysis for

Study 2

Variable	PW		PFS		PT		PFCP	
Meet regularly with other foster parents	No (*n* = 417)	Yes (*n* = 454)	No (*n* = 417)	Yes (*n* = 454)	No (*n* = 417)	Yes (*n* = 454)	No (*n* = 417)	Yes (*n* = 454)
M (SE)	5.46 (.08)	5.65 (.07)	4.51 (.07)	4.75 (.07)	4.99 (.08)	5.50 (.07)	4.69 (.05)	4.67 (.05)
Education level	High school (*n* = 268)	Post-secondary (*n* = 603)	High school (*n* = 268)	Post-secondary (*n* = 603)	High school (*n* = 268)	Post-secondary (*n* = 603)	High school (*n* = 268)	Post-secondary (*n* = 603)
M (SE)	5.77 (.09)	5.34 (.06)	4.84 (.08)	4.43 (.06)	5.41 (.09)	5.09 (.06)	4.69 (.06)	4.67 (.04)
Geographic location	East (*n* = 491)	West (*n* = 380)	East (*n* = 491)	West (*n* = 380)	East (*n* = 491)	West (*n* = 380)	East (*n* = 491)	West (*n* = 380)
M (SE)	5.72 (.07)	5.40 (.08)	4.85 (.06)	4.41 (.08)	5.38 (.07)	5.12 (.08)	4.78 (.04)	4.58 (.05)
Type of foster care	RFC (*n* = 510)	TFC (*n* = 361)	RFC (*n* = 510)	TFC (*n* = 361)	RFC (*n* = 510)	TFC (*n* = 361)	RFC (*n* = 510)	TFC (*n* = 361)
M (SE)	5.52 (.07)	5.59 (.09)	4.71 (.06)	4.56 (.08)	5.26 (.07)	5.23 (.09)	4.72 (.04)	4.65 (.06)

Note. PW = Perceptions about Agency Workers scale, PFS = Perceptions about the Fostering System scale, PT = Perceptions about Training scale, PFCP = Perceptions about Foster Children and their Placements scale; RFC = Regular Foster Care, TFC = Treatment foster care; continuous variables appearing in the model were evaluated at the following values: (1) age = 50.11, (2) practical support = 3.63, (3) in-person meetings = 1.35, (4) number of years providing care = 10.83, (5) types of special needs = 2.08, (6) types of maltreatment histories = 2.55, and (7) the highest number of children fostered = 3.42