

Resilience and Risk Among Maltreated Children in Out-of-Home Care

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### **Abstract**

Resilience is defined as positive adaptation and functioning following exposure to significant risk or adversity (e.g., maltreatment). It is an important topic of investigation in child welfare due to the number of children with such adverse life experiences. While the definition of positive adaptation varies in the literature, maltreatment researchers often define it in terms of the low frequency of behavioural problems, with the consideration that resilience in a child may be fluid across domains of functioning and/or across time. The current dissertation examined resilience among maltreated school-age children living in out-of-home care through three interrelated studies. The first examined multilevel correlates of behavioural resilience among a sample of 5 to 9 year old children living in out-of-home care. The second used developmental trajectory modeling to examine behavioural functioning across time among a sample of school-age children living in out-of-home care (with a particular focus on trajectories of resilience), and the third used semi-structured interviews to gain the often-neglected perspectives on resilience of child welfare workers. Findings across all three studies revealed several factors within various levels of the ecological model that contribute to resilience, including child internal developmental assets and relationships and social support. Furthermore, findings teased apart the distal impact of child welfare workers and agencies. The current dissertation contributes to the existing literature by informing researchers and professionals working within the child welfare sector about the factors that are important for promoting resilience among vulnerable children in out-of-home care with the aim of improving the well-being of this population.

### Résumé

La résilience se définit comme étant une adaptation et un fonctionnement positifs suivant une exposition à la présence de risque ou d'adversité (p.ex., maltraitance). Dû au nombre élevé d'enfants ayant vécu de telles expériences d'adversité, la résilience représente un sujet important d'investigation en protection de l'enfance. Bien que la définition d'adaptation positive varie dans la littérature scientifique, les chercheurs dans le domaine de la maltraitance définissent fréquemment ce concept par la présence d'une faible fréquence de problèmes comportementaux, et ils considèrent que la résilience chez un enfant peut varier selon les domaines de fonctionnement et/ou à travers le temps. La présente dissertation a examiné, au sein de trois études interreliées, la résilience auprès d'enfants d'âge scolaire ayant vécu de la maltraitance et vivant en famille d'accueil. La première étude a examiné les corrélats multi-niveaux de la résilience comportementale auprès d'un échantillon d'enfants de 5 à 9 ans vivant en famille d'accueil. La deuxième a utilisé la modélisation de trajectoires développementales afin d'examiner à travers le temps le fonctionnement comportemental d'un échantillon d'enfants d'âge scolaire vivant en famille d'accueil (avec un focus particulier sur les trajectoires de résilience), et la troisième a employé des entrevues semi-structurées pour recueillir les perspectives souvent négligées des travailleurs en protection de l'enfance en ce qui a trait à la résilience. Les résultats obtenus à travers les trois études ont révélé la présence de facteurs provenant des différents niveaux du modèle écologique et contribuant à la résilience, tels que les ressources développementales et internes de l'enfant, les relations de l'enfant et le réseau social. Également, les résultats ont fait ressortir l'influence distale des travailleurs et des agences en protection de l'enfance. La présente dissertation contribue à la littérature existante en informant les chercheurs et les professionnels travaillant dans le secteur de la protection de l'enfance quant aux facteurs qui

s'avèrent importants pour la promotion de la résilience auprès d'enfants en famille d'accueil et ce, pour améliorer le bien-être de cette population vulnérable.

## General Introduction

### Definition of Resilience

Across decades of research, the term resilience has been used to refer to positive adaptation and functioning following exposure to significant risk or adversity (Masten, 2006; Rutter, 2006). Individuals considered to be resilient generally have average or above average psychological functioning despite the fact that they have experienced situations in which negative outcomes would be expected (Luthar & Zelazo, 2003). This definition is different from that which refers to individuals who are considered competent or successful but who have not experienced challenging life circumstances (Masten, 2006). While the literature has consistently endorsed this broad definition, there are many different ways in which positive adaptation and functioning have been operationally defined in empirical investigations. This variability in definitions of resilience has made it challenging to compare findings across studies and to draw conclusions about resilience more generally (Haskett, Nears, Ward, & McPherson, 2006; Heller, Larrieu, D'Imperio, & Boris, 1999; Walsh, Dawson, & Mattingly, 2010). Also, it is important to note that judgments concerning positive adaptation depend on the severity of the adversity experienced and on what can be expected given such experiences, which further contributes to the difficulty in reaching an agreed-upon definition (Luster, Bates, & Johnson, 2006; Luthar, Cicchetti, & Becker, 2000; Masten & Powell, 2003).

Within the area of child maltreatment, which undoubtedly represents an experience in which there is exposure to risk or adversity, researchers often define positive adaptation as limited psychopathology or as competence in age-salient developmental tasks (Bifulco, 2009; Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009; Masten & Powell, 2003;

Walsh et al., 2010). Numerous studies have examined the low frequency of internalizing (e.g., depression) and externalizing (e.g., conduct problems) behaviours among maltreated children as markers of resilience because such outcomes are commonly reported in this population (Bifulco, 2009; Fergusson & Horwood, 2003; Jaffee, Caspi, Moffitt, Polo-Thomas, & Taylor, 2007; Keil & Price, 2006; Losel & Bliesener, 1994). Another reason for the emphasis on behavioural outcomes is that they are related to multiple domains of functioning, including social relationships, academic achievement, and physical health (Calkins, Blandon, Williford, & Keane, 2007, Dumont, Widom, & Czaja, 2007; Jaffee et al., 2007). Generally, resilience does not mean that children excel in their behavioural functioning but rather that they function in the average range, typically operationally defined as scoring at or close to the normative mean on behavioural measures (Jaffee & Gallop, 2007; Kaufman, Cook, Arny, Jones, & Pittinsky, 1994; Luthar et al., 2000). Furthermore, such definitions of resilience recognize that children may not exhibit resilience across time and that, while children may show resilience in one domain of functioning, they may not necessarily be resilient in other domains of functioning (Luthar & Zelazo, 2003; Luthar et al., 2000; Walsh et al., 2010).

Masten and colleagues (1999, 2004) provide two complementary perspectives from which the operational definition and analysis of resilience can be approached. The first is a variable-focused or dimensional perspective whereby resilience is investigated with regard to variables and their covariance patterns, and the focus is on functioning within a specific domain (Barnsley, 2011; Masten et al., 1999, 2004). This approach is often tested with the use of regression and latent variable models (Masten et al., 1999). An example might be testing which child-specific factors (e.g., sex) predict academic performance. This approach

benefits from greater statistical power and the use of statistical controls to determine covariance, a focus on more specific dimensions of functioning, and in most cases, a more sensitive strategy for detecting specific and differential associations between predictor and outcome variables (Masten et al., 1999). However, this approach does not fully capture the complex nature of resilience. Addressing this limitation is the second perspective, namely the categorical or person-oriented perspective. This approach focuses on the whole person by recognizing that exposure to adversity has an impact on domains of functioning across various contexts (Masten et al., 1999, 2004). Individuals are grouped together and are compared to other groups of people on a defining feature. This approach is often tested using cluster analysis, analysis of variance, and discriminant function analysis. While this approach provides a more comprehensive picture of functioning, it is limited in that the generalizability of findings to other populations is low (Masten, 2001; Masten & Coatsworth, 1998). Masten and Powell (2003) note that in some cases, both perspectives are used to elicit a greater understanding of resilience.

### **Prevalence Estimates of Resilience**

While a number of studies have examined resilience with regard to behavioural outcomes, surprisingly few have provided actual prevalence estimates of resilience. Walsh et al. (2010) conducted a literature review and found that most studies focus on factors that enhance functioning rather than provide estimates of competence on single indicators or on overall rates of resilience. Studies that do provide such information show much variability. For example, Dumont et al. (2007) found that, among a sample of maltreated adolescents, 48% were resilient, as defined by normative levels of functioning on multiple domains. In contrast, Flores, Cicchetti, and Rogosch (2005) reported that only 9.2% of their maltreated

child sample was resilient, which was defined in terms of both social competence and behavioural symptoms. Walsh et al. (2010) conducted an investigation of resilient functioning among maltreated school-age children (8-10 years) and adolescents (11-15 years). Resilience was defined through average scores or scores in the non-clinical range across three domains, specifically behavioural, emotional, and educational functioning. Results revealed that 27% of school-age children and 16% of adolescents were considered resilient across all three domains.

This variability in prevalence estimates is likely the result of a wide range of definitions and methodologies that have been used to assess resilience and positive adaptation. Past studies have collected data from different informants (e.g., child, teachers, caregivers) over different time periods (e.g., childhood, adolescence, adulthood). Diverse research methodologies (e.g., prospective, retrospective, longitudinal) have also been used. For example, Dumont et al. (2007) used information from official records, census data, psychiatric assessments, and self-reports to determine functioning in a number of domains. In contrast, Flores et al. (2005) used camp counselors, child self-reports, and peers to evaluate children's behaviour, peer relations, intelligence, and relationship quality.

### **Resilience Across Time and Domain of Functioning**

Resilient functioning is not necessarily stable over time, nor does it necessarily refer to all aspects of an individual's current functioning. Maltreatment researchers have examined the influence of adversity on multiple domains of functioning and on functioning across multiple points in time (Bifulco, 2009; Dumont et al., 2007; Masten et al., 2004; Walsh, et al., 2010). In a longitudinal study by Masten et al. (2004), resilience following adversity (i.e., cumulative negative life experiences including child abuse, exposure to community

violence, and parental divorce) was measured in three domains of functioning, specifically academic achievement, social competence with peers, and conduct behaviour. These were measured at three points in time (i.e., childhood, adolescence, and adulthood) among a sample of 173 participants. To be considered resilient, individuals were required to obtain scores on self- and parent-reported measures comparable to the normative mean, namely matched controls with low levels of adversity and average to above-average functioning. Results revealed that approximately one sixth of the sample (16.2%) was resilient across time, meaning that scores remained close to the normative mean on all three domains of functioning from childhood to adulthood. Additional analyses revealed that individuals who scored in the maladaptive range during adolescence but were considered resilient in young adulthood had better adolescent adaptive resources (e.g., adult support, autonomy, coping) than their maladaptive peers who remained maladaptive across time, despite the fact that they still had fewer resources in comparison to the control group of consistently resilient individuals (Masten et al., 2004).

In another study (Jaffee et al., 2007), resilience among a sample of 1,116 children and their families was examined longitudinally when the children were 5 and then 7 years old. Resilient participants were those who had experienced physical maltreatment before the age of 5 years but whose teacher-reported antisocial behaviour fell within the normative range for same-age, same-sex children at both time points. Results revealed that 64% of children who had been maltreated and whose antisocial behaviour scores at age 5 did not exceed the normative range remained at or below the normative range at age 7 (Jaffee et al., 2007). The researchers also tested whether resilient children were performing successfully in other domains of functioning, including mental health, social relationships, and academic

achievement. In comparison to non-resilient children at age 7, resilient children had fewer emotional problems, engaged in more prosocial behaviour, and were more likely to have average or above-average reading ability (Jaffee et al., 2007). Other studies have also investigated resilience over the lifespan and across multiple domains of functioning. General conclusions are that (1) children who are considered resilient in one domain may not necessarily be functioning well in other domains, and (2) resilience may not remain stable over time (Bolger & Patterson, 2003; Fergusson & Horwood, 2003; Losel & Bliesner, 1994; Zucker, Wong, Puttler, & Fitzgerald, 2003).

### **Summary**

While there are challenges in synthesizing the maltreatment resilience literature, there does appear to be agreement on a number of points. The first point is that resilience exists and that a number of individuals with adverse life experiences are able to function in ways that are similar to others who have not experienced adversity, if not even better (Rutter, 2007). The second point is that resilience is fluid in that it is not an inherent and stable personality characteristic (Rutter, 2007; Waller, 2001). While an individual might be considered resilient in one domain of functioning, he or she may not necessarily be functioning adequately in other domains (Luthar & Zelazo, 2003; Luthar et al., 2000; Walsh et al., 2010). Additionally, an individual may be resilient at one point in time, but he or she may not exhibit resilience consistently throughout his or her lifetime (Luthar et al., 2000; Rutter, 2006).

### **Canadian Child Welfare System**

The study of resilience among maltreated children is highly applicable to the child welfare system, given that most children who come into contact with child welfare have

experienced adverse circumstances such as maltreatment. In Canada, the child welfare system is based on provincial legislation, which requires that legally mandated agencies responsible for child protection (e.g., Children's Aid Societies) respond accordingly in cases of suspected child abuse and neglect. Data on the incidence of reported child maltreatment and the characteristics of children and families investigated by child welfare have been collected at three time points (1998, 2003, 2008) through the Canadian Incidence Study of Reported Child Abuse and Neglect (CIS). The various reports from these three data collections provide key information on both investigated and substantiated maltreatment within Canada. Similar reports have been produced at the provincial level in Ontario, namely through the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS). Most recently, provincial data were gathered during the fall of 2008 from a representative sample of 23 child welfare agencies. Provincial estimates indicated that a total of 128,748 investigations were conducted (54.05 per 1,000 children aged 0-15 years), 68% of which were because of reported maltreatment and 32% of which were due to concerns of risk for future maltreatment (Fallon et al., 2010). Of those investigations that were substantiated (an estimated 38,572 investigations or 16.19 per 1,000 children), the most common forms of maltreatment were exposure to intimate partner violence (39%), neglect (31%), physical abuse (21%), emotional maltreatment (7%), and sexual abuse (2%). In approximately 12% of cases, there were multiple forms of maltreatment, and the highest co-occurrence was for exposure to intimate partner violence and neglect (3%).

Responses to a report of suspected child maltreatment range from non-restrictive actions (e.g., referrals to community services) to more intrusive actions, such as removing children from the home and placing them in out-of-home care (e.g., kinship foster care,

foster family homes, group homes). The OIS-2008 found that 6% of investigations resulted in a change of residence for the child (Fallon et al., 2010). The removal of a child from their family of origin depends on the level of safety risk, and child protection workers typically exhaust all other options prior to placing a child in out-of-home care. When children are removed from the home, child welfare agencies attempt as much as possible to offer supports and services to families with the long-term goal of reunification (Commission to Promote Sustainable Child Welfare, 2010). In 2006, the Ontario government implemented the Transformation Agenda into child welfare, which includes providing more up front, intensive, and preventive services to families where risks are identified as well as more time to identify, screen, and train extended family members as an alternative to foster care (OACAS, 2010). Despite these efforts, some children who come into contact with child welfare become Crown Wards so that their legal care, custody, and control are permanently transferred to the child welfare agency. In such cases, the agency attempts to secure a stable home for the child through a permanent kinship placement, adoption, or legal guardianship by foster parents (OACAS, 2010); however, it should be noted that a substantial proportion of Crown Wards do, in fact, return home to their families of origin after being in care. The OACAS reported that there were approximately 17,000 children in foster care during 2009-2010, with half of these children being permanent wards of the Crown (OACAS, 2011).

### **Resilience and the Canadian Child Welfare System**

A growing body of research on resilience among maltreated children exists. However, information on resilience among maltreated children in out-of-home placements is limited. Such information is important given that these children have experienced both adversity and family disruption, and there are high rates of behavioural difficulties

associated with these experiences. As such, children in out-of-home care represent an especially vulnerable population. The OIS-2008 (Fallon et al., 2010) reported that, in 43% of substantiated child maltreatment cases, the investigating worker identified at least one child functioning issue. The most prevalent problems identified were academic difficulties (20%), depression, anxiety, or withdrawal (18%), aggression (16%), attachment issues (13%), ADD/ADHD (11%), and intellectual/developmental disabilities (10%). Similar rates were reported in a U.S. based study (Sullivan & van Zyl, 2008), which included 2,996 0 to 21 year olds, the majority of whom were living in foster family placements. Specifically, 44% of the children sampled had an identified emotional need, and 32% had a diagnosed medical need. Findings revealed that older age of the child was associated with a greater likelihood of experiencing an emotional need while a longer length of stay in foster care was associated with a greater likelihood of a diagnosed medical need.

Maltreated children in out-of-home care also tend to have higher rates of behavioural problems in comparison to maltreated children who remain in their homes and children who have not experienced maltreatment (Berger, Bruch, James, Johnson, & Rubin, 2009; Doyle, 2007, 2013; Fernandez, 2006; Keil & Price, 2006; Lawrence, Carlson, & Egeland, 2006; Warburton, Warburton, Sweetman, & Hertzman, 2014). For instance, Lawrence et al.'s (2006) longitudinal study found that children placed into foster care during the early elementary years (Grades 1-3) had greater behavioural problems upon exiting care in comparison to children who were maltreated but remained in their homes, despite the fact that these two groups did not differ significantly on behavioural measures prior to placement.

The high rates of emotional and behavioural problems among maltreated children in out-of-home care highlight the importance of promoting resilience as well as identifying the prevalence of and factors associated with resilience in this at-risk population. In one study by Jaffee and Gallop (2007), a U.S. nationally representative sample of 2,065 maltreated children aged 8 to 16 years involved in child protection was examined across three time points (baseline, 18 and 36 months post-baseline). Three domains were examined, namely social, emotional, and academic functioning, and resilience was defined in terms of meeting or exceeding national norms on one or more domains. Results revealed that 11-14% of children were resilient across all three domains at any one point in time while 14-22% were consistently resilient within a given domain across all three points in time (Jaffee & Gallop, 2007).

In terms of factors that promote resilience, one of the most commonly identified variables among children in out-of-home care is having a caring, competent, and secure relationship with an adult (not necessarily a parent or caregiver), regardless of the age of the child. Additional protective factors include a high level of intellectual functioning or cognitive ability, a good sense of self-efficacy, and connections to the community (e.g., participation in community organizations; Dumont et al., 2007; Legault, Anawati, & Flynn, 2006; Losel & Bliesener, 1994). Legault et al. (2006) investigated predictors of psychosocial adjustment (i.e., anxiety and physical aggression) among 220 maltreated 14 to 17 year olds living in out-of-home care in Canada. Results indicated that perceptions of a higher-quality relationship with a female caregiver, greater number of perceived higher-quality friendships, and higher self-esteem were significantly associated with lower levels of anxiety. These same variables, as well as a smaller number of primary caregivers, greater use of approach

coping strategies, and less frequent use of avoidant coping strategies were significantly associated with less physical aggression.

While it is an important research endeavour to investigate the factors that promote resilience following adversity, examining these factors from within a developmental perspective is a critical component to understanding resilience. For instance, Masten (2006) names fundamental adaptive systems that, if present, provide children with the tools needed to recover from a wide range of adversities over the course of development, including attachment relationships that provide emotional security and protection, effective self-control systems that provide for the self-regulation of arousal, emotion, and behaviour, and community safety and emergency service systems. Furthermore, in a longitudinal study spanning over three decades, Werner (1993, 1995) followed a sample of 698 Hawaiian children born in 1955 and assessed the impact of a variety of biological and psychosocial risk factors, stressful life events, and protective factors from the prenatal period through birth to ages 1, 2, 10, 18 and 32 years. Of those children exposed to four or more risk factors (e.g., poverty, perinatal stress) by age 2, two thirds developed serious learning or behaviour problems by the age of 10 or had delinquency records, mental health problems, or pregnancies by age 18. However, the final third exposed to four or more risk factors developed into competent, confident, and caring adults (Werner, 1993, 1995). Findings from this study indicated that a number of factors were associated with positive outcomes, including child (e.g., communication and problem solving skills), family (e.g., close bond with at least one competent and emotionally stable person), and community (e.g., supportive teachers) variables. In addition, Werner (1993, 1995) noted that these individuals had certain continuity in their lifespan that was precipitated by their own individual dispositions. In

other words, these individuals were able to choose or create environments that reinforced and maintained their positive approach to life. These findings highlight the importance of adopting a developmental perspective when assessing an individual's current functioning, and this can certainly be applied to the investigation of maltreated children in out-of-home care. Specifically, it is important to consider the timing of adverse life experiences and the key developmental processes (e.g., attachment) that may be disrupted due to placement in out-of-home care, as well as how these variables might impact child outcomes.

In sum, there are several studies that have examined resilience specifically among children who have been placed in out-of-home settings. Those that exist have been based on U.K. or U.S. data, so there is limited information on Canadian children, despite differences in the child welfare systems that are a function of such variables as social welfare policy, federalism, principle activities, and the organization of services (Herrick & Stuart, 2005). Particularly, there are four major differences between Canadian and U.S. child welfare systems (Courtney, Flynn, & Beaupré, 2013). First, child welfare leadership is a separate entity for each province and territory in Canada while the U.S. has federal leadership in matters of child welfare policy. Second, over the past 15 years, Canadian, and in particular the province of Ontario, child welfare has greatly been influenced by England's Looking After Children approach while this has not been the case in the U.S. Third, Aboriginal children are overrepresented in Canadian out-of-home care, while African-American children are overrepresented in U.S. out-of-home care. Due to the lack of federal child welfare leadership in Canada, it is difficult to report accurate and up-to-date figures; however, it has been reported that Aboriginal children are 6 to 8 times more likely to be placed in out-of-home care in comparison to non-Aboriginal children. For instance, in 2010

in Ontario, Aboriginal children represented 2.5% of the total population but approximately 14% of the children in care (Commission to Promote Sustainable Child Welfare, 2010). With regard to the overrepresentation of African-American children within U.S. out-of-home care, recent statistics indicate that Black children are almost twice as likely as White children to be victims of substantiated child abuse and neglect (U.S. Department of Health and Human Services, 2007). Finally, use of rigorous outcome evaluation (i.e., experimental and quasi-experimental) designs play a much larger role in the U.S., compared to Canada (Courtney et al., 2013). Furthermore, past research on resilience among maltreated children in out-of-home care has been limited with regard to the age of the child, as the focus has tended to be on resilience during the adolescent period with relatively less attention devoted to school-age children. Finally, longitudinal research tracking children in out-of-home care in Canada is needed in order to investigate resilience and its correlates over time.

### **Thesis Objectives**

The current dissertation contributes to the research literature on resilient functioning among maltreated children in out-of-home care by way of three studies. The first study examined multilevel correlates (child-, family-, and worker-level) of behavioural outcomes among 5 to 9 year olds, with a particular focus on potential protective factors. This study provided an initial snapshot of resilient behavioural functioning among maltreated school-age children involved in the child welfare system. Expanding on the first study, the second tracked developmental pathways of behavioural functioning among maltreated children in out-of-home care. It also examined a number of time-stable and time-varying predictors of behavioural trajectories, with a particular focus on predictors of resilient behavioural trajectories. The third study involved semi-structured interviews with child welfare workers

(N= 11) in order to understand their perceptions and conceptualizations of resilience. The goals of this latter study were to (1) determine the extent to which results from the first two studies map onto what professionals who work with maltreated children on a daily basis generally perceive promotes resilient functioning and (2) to take child welfare worker perspectives into account. Interview questions focused on those factors that child welfare workers perceive to promote resilience, inquiring about variables at the level of the child, family (foster and biological), child welfare worker, and child welfare agency.

### **Study 1: Multilevel Correlates of Behavioural Resilience Among Children in Child Welfare<sup>1</sup>**

Research on the prevalence and correlates of resilience among maltreated children in out-of-home care is limited and has generally focused on the adolescent period. The current study aimed to address these gaps in the literature in several ways. The first was to present prevalence rates of behavioural resilience (i.e., conduct problems, emotional problems, and prosocial behaviour) among a sample of maltreated school-age children living in out-of-home care. Second, how behaviourally resilient children are functioning in additional domains, including academic performance and peer relationships, was investigated as it has been recognized that resilience in one domain does not necessarily indicate resilience in other domains of functioning. Third, working from an ecological perspective, this study used multilevel modeling to investigate the independent contribution of four levels, including child, family, child welfare worker, and Children's Aid Societies on child behaviours in order to capture a more comprehensive picture of the contexts that impact child functioning.

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<sup>1</sup> From "Multilevel correlates of behavioral resilience among children in child welfare," by T. Bell, E. Romano, and R.J. Flynn, 2013, *Child Abuse & Neglect*, 37, 1007-1020. Copyright 2013 Elsevier Ltd. Adapted with permission.

This study therefore builds on past studies, which have tended to focus on only child and agency effects on child outcomes.

### **Correlates of Resilience**

Given the vulnerability to internalizing and externalizing problems among maltreated children in out-of-home care, identifying the prevalence and correlates of resilience in this at-risk population is critical. Masten and colleagues (1990, 1998, 2006) have written much on the topic of resilience and have provided valuable information with regard to the developmental processes that contribute to resilience among maltreated children. Masten (2006) states that correlates of resilient outcomes for maltreated children can be grouped into three broad categories, including (1) relationships and parenting (e.g., strong connections with one or more effective parents), (2) individual differences (e.g., learning and problem solving skills), and (3) community influences (e.g., effective schools). She also names fundamental adaptive systems that, if present, provide children with the tools needed to recover from a wide range of adversities over the course of development, including attachment relationships that provide emotional security and protection, effective self-control systems that provide for the self-regulation of arousal, emotion, and behaviour, and community safety and emergency service systems.

Using an ecological model (Belsky, 1980, 1984; Bronfenbrenner, 1977, 1979; Lynch & Cicchetti, 1998), correlates of resilience can be organized into several levels that are nested within one another and that have varying degrees of proximity to the individual. These include immediate influences within one's *microsystem* (e.g., family environment) as well as influences related to one's *ontogenic development* (e.g., child-rearing experiences within one's own family of origin). *Exosystem* influences refer to settings that do not involve

the individual (e.g. caregiver's workplace), while *macrosystem* influences include broader cultural values and beliefs (Belsky, 1980, 1984; Lynch & Cicchetti, 1998; Luthar et al., 2000; Yates, Egeland, & Sroufe, 2003). Interactions between settings in which an individual is actively involved can also occur, which refer to *mesosystem* influences. Factors in the layers closest to the child (i.e., *microsystem*) are assumed to have more of a direct impact compared to distal influences. However, researchers have emphasized the importance of adopting a multi-level perspective in an effort to better understand the impact of multiple nested contexts on the outcomes of maltreated children living in out-of-home care (Cheung, Goodman, Leckie, & Jenkins, 2011). In the current study, child-, family-, and child welfare worker-level variables were examined in terms of their ability to explain differences in behavioural outcomes among maltreated children in out-of-home care.

#### Child-level characteristics

Child variables that have been associated with behavioural outcomes range from demographics to physical, emotional, cognitive, and social dimensions (Jones et al., 2011). Within the child welfare literature, the focus has tended to be on variables such as intelligence, self-regulation skills, and for older children, outlook on life (Masten, 2006). A broad body of research indicates that there are behavioural differences between boys and girls; however, this may be dependent on the developmental period. Specifically, girls tend to be more vulnerable to the development of internalizing behaviours, while boys tend to exhibit greater externalizing behaviours (Crick & Zahn-Waxler, 2003). However, the vulnerabilities and strengths of one sex over the other may shift with developmentally-related changes in cognition, emotion, and the social environment (Masten, Best, & Garmezy, 1990). Additionally, an emerging finding is the impact that a child's

developmental assets can have on outcomes (Filbert & Flynn, 2010; Scales, Benson, Leffert, & Blyth, 2000). Developmental assets represent internal (e.g., positive values) and external (e.g., boundaries and expectations) resources that contribute to a child's ability to thrive. Research has indicated that the greater the developmental assets a child possesses, the better his or her functioning in a number of domains (Scales et al., 2000). This finding has been documented in both foster care and community samples. Other findings have implicated additional factors related to the foster care experience that may protect against behavioural problems. Specifically, children with fewer placement changes and continued contact with biological parents have been found to have better outcomes (Fernandez, 2006; Knott & Barber, 2005). For example, Fernandez (2006) found there is a need for children to develop cohesive relationships with their foster caregivers while at the same time maintaining continued contact with their family of origin.

#### Family-level characteristics

Existing research on foster family variables that promote better behavioural functioning among children in out-of-home care has indicated that a positive and supportive caregiver-child relationship is important (Cheung et al., 2011; Legault, Anawati, & Flynn, 2006). This relationship, which may be enhanced by parenting practices that involve praise, communication, and consistency, is important because it may work to attenuate the effect of the adversity and stressors experienced by the child. Masten and Shaffer (2006) discussed the role of the family as a protective factor, in that having a supportive and high-quality family environment after the experience of maltreatment or adversity may buffer its negative effects on child development. In their study, Legault et al. (2006) investigated predictors of psychosocial adjustment among 220 maltreated 14-17 year olds living in out-of-home care in

Canada. Results indicated that perceptions of a higher-quality relationship with a female caregiver and a smaller number of primary caregivers were among the predictors of lower levels of anxiety and physical aggression.

#### Worker-level characteristics

Few studies have examined the influence of child welfare worker characteristics on the outcomes of maltreated children in out-of-home care; however, this is important because children in out-of-home care are involved in the child welfare system and, as per the ecological model, might be influenced by characteristics of this system, be it at a more global level (e.g., agency characteristics) and/or worker level. For example, Cheung et al. (2011) found that, among a sample of workers for 1,063 maltreated 10-17 year olds living in out-of-home care, those with less formal education were more likely to work with children with greater externalizing behaviour problems. It is unclear, however, whether less formal education impacts outcomes or whether children with greater difficulties are more often assigned to workers with less education. This latter explanation may indicate that agencies that work with difficult children have a harder time employing workers with more formal education, or perhaps workers with more formal education are better at advocating for cases that involve less difficult children (Cheung et al., 2011). The influence of education was also evident in a study (Ryan, Garnier, Zyphur, & Zhai, 2006) which found that workers with a Master's of Social Work degree were more likely to work with children who spend less time in out-of-home care in comparison to workers who did not complete graduate-level training. Time worked in child welfare and caseload may also influence outcomes; workers with greater years of experience may be more knowledgeable and better able to navigate the child welfare system (Cheung et al., 2011), and we can speculate that smaller caseloads provide

workers with more time to consider optimal ways to serve the child's needs thereby increasing the likelihood of resilience.

#### Agency-level characteristics

Characteristics of an agency, such as its location (i.e., rural versus urban) and the number of within-agency resources, may also play a role in the promotion of resilience among maltreated children in out-of-home care (Attar-Schwartz, 2008; Rosenthal & Curiel, 2006). In one Israeli study (Attar-Schwartz, 2008), 4,420 maltreated 6-18 year olds living in residential care were assessed by social workers using the Child Behavior Checklist for aggression, depression/anxiety, and social problems. Multilevel modeling was used to investigate correlates of these outcomes at levels of the child and the child welfare system. In addition to child variables (i.e., sex, age, quality of visitation with biological family members), the residential care setting characteristics (i.e., physical conditions, institutional functioning/climate), including involvement in after-school activities, low peer violence, and access to good food had statistically significant associations with more positive child psychosocial outcomes (Attar-Schwartz, 2008).

#### **Summary and Study Objectives**

While several studies have examined the prevalence and correlates of resilience among maltreated children in out-of-home care, the use of multilevel modeling in these studies has been limited despite the recognition that child outcomes are affected by multiple contexts that are nested within one another. In this way, multilevel modeling is beneficial because it determines how variance in an outcome is partitioned across multiple contexts, and it avoids the common error of applying group-level results to the individual level. Also, multilevel modeling is different from classical statistical techniques in that it accounts for

dependence between observations (Raudenbush & Bryk, 2002). Of the few studies using child welfare samples that have employed this methodology, the role of the foster family has been largely ignored as a level of influence (with the exception of Cheung et al., 2011), despite findings that the family plays a significant role in child development and outcomes (e.g., Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005). To our knowledge, no study has examined the simultaneous influence of child, family, worker, and agency levels on outcomes for children in out-of-home care. As such, the current study adds to the literature by using the ecological framework to examine how multilevel correlates work together to influence child outcomes, including variables that have not previously been examined (i.e., worker caseload). Also, past research has tended to focus on the adolescent period, with relatively less attention devoted to school-age children. However, early maltreatment by a primary caregiver is a well-recognized risk factor for a wide variety of later adaptational problems (e.g., attachment relationships, psychosocial outcomes; Masten et al., 1990). Therefore, a focus on school-age children is important for understanding issues related to resilient functioning at an earlier developmental period and for informing intervention efforts.

Given these considerations, the first goal was to identify the prevalence of behavioural resilience in an Ontario (Canada) wide sample of maltreated school-age children living in out-of-home care. In keeping with past research (e.g., Jaffee et al., 2007), behavioural resilience was defined as normative functioning in the areas of conduct, emotional, or prosocial behaviours. How behaviourally resilient children were functioning in other domains (i.e., peer relationships, academic performance) was also of interest, recognizing that resilience in one domain does not necessarily indicate resilience in another

domain. Resilience on these additional domains was also defined in terms of functioning at a normative level. The second goal was to identify the independent contribution of four levels of analysis (child, foster family, worker, and child welfare agency) on variation in the frequency of the three behavioural outcomes, namely conduct problems, emotional problems, and prosocial behaviour. The third goal was to identify the contribution of each independent variable within each level of the analysis. Based on the ecological model, it was anticipated that the child level would account for the majority of variance in behaviours, followed by the foster family, worker, and agency levels, respectively. For child-level correlates, it was anticipated that fewer number of placements, contact with biological parents, fewer experiences of maltreatment, and a higher number of developmental assets would predict a lower frequency of conduct and emotional problems and a greater frequency of prosocial behaviour. For family-level variables, it was anticipated that a positive caregiver-child relationship (measured by way of less ineffective parenting and more positive parenting) would contribute to better child outcomes. For worker-level variables, it was anticipated that greater education, greater time worked in child welfare, and smaller caseloads would contribute to better child outcomes. There were no correlates (i.e., independent variables) included at the agency level because none of the variables in the administrative data were deemed of relevance for the current study (e.g., operating costs of each agency). However, the agency level was maintained to statistically account for the nesting of workers within agencies.

## **Method**

### **Sample and Procedure**

In 2000, Robert Flynn and colleagues initiated the Ontario Looking After Children (OnLAC) project to improve the quality of substitute parenting provided by child welfare

organizations for children in out-of-home care and to monitor their progress on an annual basis (Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004). The Ontario Ministry of Children and Youth Services made data collection for the OnLAC project mandatory in all 53 Ontario child welfare agencies in 2006 (Flynn, Vincent, & Legault, 2009); however, it did not take complete effect until roughly halfway through December 2007 (year 7), making year 8 (2008-2009) of data collection the first year of full implementation. The primary way in which children are monitored is through the second Canadian adaptation of the Assessment and Action Record (AAR-C2). This instrument is completed on an annual basis by the child welfare worker with the child in care (if over the age of 10) and the foster parent (or other adult caregiver). It covers seven domains of functioning (i.e., health, education, identity, family and social relationships, social presentation, emotional and behavioural development, self-care skills; Flynn et al., 2004).

The present study used OnLAC data in year 6 (June 2006-May 2007), which included 531 5-9 year old children. This year was chosen because it represented the first year in which Ontario child welfare agencies were mandated to use the AAR-C2 as a way to contribute to the OnLAC data set. The average age of children in the current sample was 7.4 years ( $SD = 1.4$ ), and there was a fairly even distribution of boys (52.7%) and girls (47.3%). Most children were of European-Canadian background (65.2%), followed by First Nations (20.0%), African-Canadian (2.1%), and other (e.g., Asian, Latin American, 7.7%). In the current 5-9 year old cohort, the mean age when first placed in out-of-home care was 3 years ( $SD = 2.3$ ). The majority of children were in foster care (82.1%) in comparison to other placement types (i.e., 12.8% kinship care, 5.1% group homes). The number of placement changes ranged from 0-15, with an average of 4.7 ( $SD = 2.7$ ). Reasons for admission to care

were indicated by child welfare workers based on their knowledge of the child's case history, and they were primarily maltreatment related, including neglect (75.9%), emotional harm (44.3%), physical harm (37.5%), domestic behaviour (27.5%), and sexual harm (11.1%). There were 473 foster families in our sample. The overwhelming majority of data for the AAR-C2 was provided by female foster caregivers (93%), and the majority of foster families (88%) were caring for one foster child. However, the average household size (including adults and children) was 5.9 (SD= 2.0). The majority of children had been living with the same foster family for at least one year (80.6%), with the average number of years in the current placement at 3.2 (SD= 1.9; range 0-9). Approximately 6 in 10 children (59.5%) maintained regular contact with one or both of their biological parents. There were 338 workers in the sample, 116 (34%) of whom worked with multiple families. Finally, there were 37 out of 53 Ontario Children's Aid Societies in the sample (69.8%).

Given that the current study did not include all agencies, a comparison between the current sample of 5-9 year olds (year 6) to same-aged children in later OnLAC years (i.e., years 8, 9, 10, and 11) when all agencies were represented, was conducted. Comparisons were made on a number of child variables, including age, sex, age at first placement, number of placements, type of placement, and maltreatment exposure. T-tests and chi-square analyses revealed no statistically significant differences between the current sample and that for later data collection years on age, sex, and type of placement. Significant differences were found on age at first placement (i.e., the current sample was significantly younger at first placement compared to later 5-9 year old cohorts), number of placements (i.e., the current sample had significantly more placements), and maltreatment exposure (i.e., the current sample had significantly higher levels of maltreatment).

## Measures

**Outcome variables.** As part of the 2006 AAR-C2, the foster caregiver responded to the Strengths and Difficulties Questionnaire (SDQ; Goodman, Ford, Simmons, Gatward, & Meltzer, 2000), which includes five items on conduct problems (e.g., often fights with other children or bullies them), five items on emotional problems (e.g., often unhappy, depressed, or tearful), and five items on prosocial behaviour (e.g., considerate of other people's feelings) over the past six months. Responses were on a 3-point Likert scale ranging from 0 (*not true*) to 2 (*true*). Scores were summed and ranged from 0-10, with a higher score indicating greater frequency of the behaviour. Each scale demonstrated acceptable to good internal consistency for the current sample, with Cronbach's  $\alpha = .78$  (conduct problems),  $.71$  (emotional problems), and  $.81$  (prosocial behaviour). Achenbach et al. (2008) provide further data on the reliability and validity of the SDQ.

Caregivers also responded to five SDQ items on the child's peer relationships over the past six months (e.g., would rather be alone than with other children) along a 3-point Likert scale, from 0 (*not true*) to 2 (*true*). Scores could range from 0-10, with higher scores indicating a greater frequency of peer problems (Cronbach's  $\alpha$  for our sample =  $.67$ ). Four caregiver-reported items measured academic performance over the past year (e.g., reading, mathematics). Responses were on a 3-point Likert scale ranging from 0 (*poorly or very poorly*) to 2 (*well or very well*). Scores could range from 0-8, with higher scores indicating better academic performance. Items were adopted from the National Longitudinal Survey of Children and Youth (NLSCY; Statistics Canada & Human Resources Development Canada, 1999) and demonstrated excellent reliability for the current sample (Cronbach's  $\alpha = .91$ ).

**Child-level correlates.** Foster caregivers and child welfare workers provided information on the child's demographics, maltreatment exposure, contact with biological parents, and developmental assets. For demographics, information was gathered from the worker on the child's sex, current age, age at first placement, and number of placements. Maltreatment exposure concerned the reasons for admission to child welfare (i.e., physical harm, sexual harm, neglect, emotional harm, and exposure to harmful domestic behaviour), with the worker indicating the number of maltreatment types (possible range from 0-5). Caregivers reported whether the child had regular contact with one or both biological parents (yes, no).

As part of the AAR-C2-2006, each worker completed the Developmental Assets Scale (Scales, 1999), which includes a 20-item internalizing subscale (e.g., *sense of purpose*: child reports that "my life has a purpose"; Cronbach's  $\alpha = .88$  for our sample) and a 16-item externalizing subscale (e.g., *safety*: child is safe in current placement, at school, and in neighborhood; Cronbach's  $\alpha = .57$  for our sample). Workers rated each item as either Yes (present), Uncertain, or No (absent), after which the number of yes responses was summed to create a score ranging from 0-20 for internal assets and 0-16 for external assets. These scales have also been used in a number of research studies that have established their validity and reliability (Scales, 1999). For instance, community samples have linked developmental assets with positive developmental trajectories among gang members (Taylor et al. 2002), with non-use of drugs and alcohol (Oman et al., 2004), and with thriving behaviours (Scales et al., 2000). It should be noted, however, that the use of developmental assets with child welfare samples and school-aged children has been limited. However, one recent study (Filbert & Flynn, 2010) found that, among a sample of 470 Aboriginal 10-16 year olds in

out-of-home care, greater total developmental assets was associated with higher levels of prosocial behaviour, self-esteem, and educational performance, and with fewer total difficulties on the SDQ.

**Family-level correlates.** Foster caregivers responded to parenting items adopted from the Parenting Practices Scale (Strayhorn & Weidman, 1988), as used in the NLSCY (Statistics Canada & Human Resources Development Canada, 1999). There were seven items on ineffective parenting (e.g. how often do you get angry when you punish the child?) which were rated from 0 (*never*) to 4 (*all the time*). Scores could range from 0-28, with higher scores indicating a greater frequency of ineffective parenting. Positive parenting included five items (e.g., how often do you and the child laugh together?) rated from 0 (*never*) to 4 (*many times each day*). Scores could range from 0-20, with higher scores indicating a greater frequency of positive interactions. These scales demonstrated acceptable reliability for the current sample, with Cronbach's  $\alpha = .73$  (ineffective parenting) and .71 (positive parenting) and in their use within the NLSCY (Statistics Canada & Human Resources Development Canada, 1999).

**Worker-level correlates.** Child welfare workers provided information on their education, time worked in child welfare, and caseload. Worker education was assessed with a single item, with responses ranging from 0 (*non-university certificate/college*) to 4 (*Master's degree*). A single item was used to assess time worked in child welfare, with responses ranging from 0 (*less than 1 year*) to 3 (*10 years and over*). Caseload was calculated from administrative data as the ratio between the number of staff at each agency and the average number of children in care at each agency.

### Statistical Analyses

Descriptive statistics on the prevalence of resilience for each of the behavioural outcomes were calculated (i.e., conduct and emotional problems, prosocial behaviour). Resilience was defined as scores within the normative range (i.e., range in which the average participant scores), which was determined using the reported U.K. general population norms (in the absence of Canadian norms; Flynn et al., 2009). This strategy has been used in previous research using the OnLAC data (e.g., Marquis & Flynn, 2009) and is based on the fact that U.K. norms fit better with our age cohort and with the demographics of our sample, in contrast to U.S. norms where there is a large number of African-American children in care (R.J. Flynn, personal communication, March 4, 2013). In fact, 65.2% of children in the current sample were of European-Canadian background, followed by First Nations (20.0%), African-Canadian (2.1%), and other (e.g., Asian, Latin American, 7.7%). Cut-off scores were slightly different for boys and girls. For emotional problems, the normative range was from 0-3 for boys and 0-4 for girls. For conduct problems, the range was from 0-3 for boys and 0-2 for girls, and for prosocial behaviour, the normative range was from 7-10 for boys and 8-10 for girls. The possible range of scores for all behaviours was 0-10.

Descriptive statistics also determined how behaviourally resilient children were functioning in other domains (i.e., peer relationships, academic performance). Resilience on peer relationships was defined as scores within the normative range, using the reported U.K. general population norms (Flynn et al., 2009). This was a score ranging from 0-3 for boys and girls (possible range 0-10). In the absence of norms for academic performance, a procedure by Flynn et al. (2004) was applied in which a nationally representative sample of Canadian children from the NLSCY served as the normative group for purposes of defining resilience. Note that the same academic performance items are used in both the NLSCY and

OnLAC. For the NLSCY normative group, the sample from Cycle 7 (2006), which consisted of 10,885 Canadian children aged 5-9 years (49.9% boys, 48.4% girls) was used. The NLSCY sample was divided into thirds based on the total academic performance scale score. Using these cut-off points, the scores for the current out-of-home care OnLAC sample were divided. A child was defined as resilient if his or her total score was in the same range as that of the children in the upper two thirds of the NLSCY sample. This was a score of 7 or 8 for boys and a score of 8 for girls (possible range 0-8).

To address the second and third goals, hierarchical linear modeling was used to statistically account for the nesting of children within families, workers, and Children's Aid Societies and to model the relationship between child, family, and worker variables and the outcomes (Raudenbush & Bryk, 2002). As a first step, parallel scales were created for each outcome as a means to increase the number of observations at the level of the child. Creating such scales was a strategy first proposed by Barnett, Marshall, Raudenbush, and Brennan (1993), and it allows each of the items that constitute a scale to be used as an indication of the particular construct of interest. In the current study, each behavioural outcome consisted of five items, so five parallel scales were created for each.

Next, four-level hierarchical models were tested for each outcome. There were 8 child-level correlates (sex, age, age at first placement, number of placements, biological parent contact, maltreatment exposure, internal developmental assets, external developmental assets). There were 2 family-level correlates (ineffective and positive parenting), and 3 worker-level correlates (education, time worked in child welfare, caseload). Table 1 provides descriptive information on all study variables. Correlates were chosen and placed at the various levels of the analyses based on past research findings and

also based on our theoretical understanding of the ecological framework. As such, the variables were not completely independent of one another. We did, however, test for multicollinearity and found no significant problems. Missing predictor data was low (below 10%). Expectation Maximization (EM) in SPSS 18.0 was used to impute missing data for predictor variables. All subsequent statistical analyses were conducted using HLM 7 (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004).

## **Results**

### **Profiles of Resilience**

Approximately 7 in 10 children (65.9% of boys, 70.9% of girls) were resilient on emotional problems, as defined by the percentage who scored within the normative range on this measure. Using this same definition, approximately 5 in 10 children (54.6% of boys, 45% of girls) were resilient on conduct problems, and approximately 6 in 10 (54.6% of boys, 60.6% of girls) exhibited resilience in terms of prosocial behaviours. Results also indicated that about 3 in 10 children (27.5% of boys, 33.1% of girls) were considered resilient on two behavioural outcomes, and the same proportion (30.7% of boys, 28.7% of girls) exhibited resilience on all three behavioural outcomes. No statistically significant differences between boys and girls on behavioural resilience were found, with the exception of conduct problems ( $\chi^2 = 5.10, p < .05$ ) where boys demonstrated greater resilience than girls.

When peer relationships and academic performance were examined, results indicated that approximately 1 in 10 children (9.6% of girls, 8.6% of boys) were resilient on emotional problems, peer relationships, and academic performance, as defined by scores within the normative range for all three measures. With this same definition, about 1 in 10 children (8.4% of girls, 8.6% of boys) were resilient on prosocial behaviour, peer relationships, and

academic performance, and about 1 in 10 children (8.8% of girls, 8.2% of boys) exhibited resilience on conduct problems, peer relationships, and academic performance. Finally, 7.6% of girls and 6.1% of boys were resilient on all five outcomes. There were no statistically significant differences between boys and girls on resilience across these additional domains.

### **Multilevel Correlates of Behavioural Outcomes**

Prior to conducting the multilevel analysis, simple bivariate correlations among all predictor and outcome variables were calculated (Table 2). There were a number of statistically significant associations among the family-level variables, among the child-level variables, and between the family- and child- level variables. The majority of correlations were in the expected direction and statistically significant with weak to moderate strength. Most variables were correlated with internal and external developmental assets as well as with ineffective and positive parenting practices. The majority of correlations among the outcome variables were statistically significant but also with weak to moderate strength.

Table 3 presents the multilevel base model of random effects variances which partitions the variance in children's behaviours into CAS, worker, family, and child levels for conduct problems. For emotional problems and prosocial behaviour, levels 3 (worker) and 4 (CAS) were removed due to statistical insignificance. For conduct problems, the total variation explained by the four-level model was 0.51 or 51.0% ( $0.01 + 0.02 + 0.15 + 0.33$ ). The child-level variance partitioning coefficient (VPC, Goldstein, Browne, & Rasbash, 2002) was 0.647 ( $0.33/0.51$ ), suggesting that 64.7% of the total explained variance can be attributed to children's unique characteristics and experiences. The family-level VPC was 0.294 ( $0.15/0.51$ ), suggesting that 29.4% of the variation in scores is attributable to between-family differences. The worker-level VPC ( $0.039 = 0.02/0.51$ ) suggests that 3.9% of the

variation in scores is attributable to between-worker differences, and the CAS-level VPC ( $0.02 = 0.01/0.51$ ) suggests that 2.0% of the total explained variance is attributable to differences between agencies. For emotional problems, the total variation explained by the two-level model was 48.0%. The child-level VPC was 0.75, suggesting that 75.0% of the total explained variance can be attributed to children's unique characteristics and experiences. The family-level VPC was 0.25, suggesting that 25.0% of the variation accounted for in scores is attributable to between-family differences. For prosocial behaviour, the total variation explained by the two-level model was 42.0%. The child-level VPC was 0.571, suggesting that 57.1% of the total explained variance can be attributed to children's unique characteristics and experiences. The family-level VPC was 0.429, suggesting that 42.9% of the variation accounted for in scores is attributable to between-family differences.

The percentage of additional variance accounted for by the inclusion of independent variables was determined by subtracting the random effects variance (i.e., residual variance) found in the model including the independent variables from the variance accounted for by the base model. For conduct problems, 1.3% of additional variance was explained at the child-level, 4.2% was explained at the family-level, and < 1% was explained at the worker-level. For emotional problems, 1.3% of additional variance was explained at the child-level, and 1.4% was explained at the family-level. For prosocial behaviour, 1.1% of additional variance was explained at the child-level, and 1.7% was explained at the family-level.

Table 4 presents the four-level model of fixed and random effects for conduct problems and the two-level models for emotional problems and prosocial behaviour. The fixed effects involve fixing the value of each parameter to a constant over all groups, while

random effects allow the values to be different for each group (i.e., different across children, families, and workers; Raudenbush & Bryk, 2002). For conduct problems, findings for fixed child-level variables revealed that a greater number of internal developmental assets predicted a lower frequency of conduct problems. For family-level variables, more ineffective parenting predicted a higher frequency of conduct problems. For emotional problems, findings for child-level variables indicated that greater age and greater exposure to maltreatment predicted a higher frequency of emotional problems. For family-level variables, more ineffective parenting and positive parenting predicted a higher frequency of emotional problems. For prosocial behaviour, findings for child-level variables demonstrated that boys were less prosocial than girls. Greater exposure to maltreatment predicted a higher frequency of prosocial behaviour, and children with regular contact with one or both biological parents were more prosocial in comparison to children without regular contact. For family-level variables, greater ineffective parenting predicted a lower frequency of prosocial behaviour.

### **Discussion**

The current study examined the prevalence of behavioural resilience, and using the ecological framework, investigated the contribution of agency, worker, family, and child levels on behavioural outcomes, and identified correlates of children's conduct, emotional, and prosocial outcomes among 531 5-9 year olds in out-of-home care. Findings indicated that 50-70% of children exhibited resilience on one of the behavioural outcomes, while approximately 30% were resilient on at least two outcomes. These rates were surprising given past research indicating that children in out-of-home care have many behavioural problems (Doyle, 2007; Lawrence et al., 2006; Sullivan & van Zyl, 2008). Given that most

of the children in the current sample had been living in the same placement for an average of 3 years ( $SD= 1.98$ ), it is possible that this stable environment helped reduce behavioural problems that may have been present upon admission to care (when children undoubtedly were in a state of transition and crisis; Perkins-Mangulabnan & Flynn, 2006). Along the same lines, it is also possible that those children who were faring poorly initially were placed with foster caregivers who had more expertise and training in dealing with problematic child behaviours; therefore, upon assessment, these behaviours would be considerably improved (Orme & Buehler, 2001; Oosterman, Schuengel, Slot, & Doreleijers, 2007). Finally, caregiver reports on the behaviours of children in their care may have been biased toward underreporting the extent of behavioural difficulties.

In terms of sex differences, there were no statistically significant differences in terms of emotional difficulties and prosocial behaviour; however, a greater number of boys than girls were resilient on conduct behaviour. Previous research, while limited, has presented mixed findings with regard to sex based differences. Some have indicated no differences with regard to resilience (Jaffee & Gallop, 2007; Jaffee et al., 2007) while others have found that being female is associated with higher levels of resilience (Dumont et al., 2007; Flores et al., 2005). In the current sample, age and developmental period might account for the higher rate of resilience on conduct problems for boys such that these types of behaviours tend to become more salient during adolescence, rather than in the school-age period (Tremblay, 2000). Furthermore, with the exception of one item (i.e., often fights with other children or bullies them), the measurement of conduct problems appears to rely on relationally aggressive behaviours more typical of girls (e.g., lying or cheating, losing one's temper; Crick & Zahn-Waxler, 2003), which could partially account for this finding.

In terms of resilient functioning in other domains, the results indicated that 8.2-9.6% of children who exhibited resilience on one behavioural outcome also were resilient on peer relationships and academic performance, while 6.1-7.6% were resilient on all five outcomes. These findings indicate a considerable drop in resilience when one considers multiple domains of functioning, and they highlight previous research conclusions that resilience in one domain of functioning does not imply resilience in other domains (Luthar et al., 2000; Walsh et al., 2010). The current rates are comparable (albeit somewhat lower) to those reported by Jaffee and Gallop (2007), who found that 11-14% of maltreated 8-16 year olds involved with U.S. child protective services demonstrated resilience at one point in time on social, emotional, and academic domains. In contrast, the current rates are considerably lower compared to those of Jaffee et al. (2007) and Dumont et al. (2007) who reported that 64% and 48% of their samples, respectively, were resilient across multiple domains of functioning. Variability in sample recruitment and domains assessed most probably accounts for these differing rates of resilience. For example, the current study examined children in out-of-home care, while both Jaffee et al. (2007) and Dumont et al. (2007) sampled maltreated children who remained with their family of origin. Also, these studies examined resilience in domains of functioning that were different than those in the present study (e.g., reading ability, substance abuse, arrests) in various age groups (5-7 year olds in Jaffee et al., 2007; adolescents in Dumont et al., 2007).

Turning to the contribution of various levels of the ecological framework (i.e., child, family, worker, and agency) on variation in the frequency of behavioural outcomes, the hypothesis that there would be significant effects was partially supported. For emotional functioning and prosocial behaviour, agency and worker levels did not significantly

contribute to explained variance, meaning there were no significant differences between workers and agencies on these child outcomes. However, for conduct problems, all four levels were statistically significant. Across all three behavioural outcomes, the child level accounted for the highest proportion of explained variance, which is in line with our expectations based on the ecological model and past findings (Attar-Schwartz, 2008; Cheung et al., 2011). Interestingly, the family level contributed to a considerable proportion of the explained variance in child behaviours, especially with regard to prosocial behaviour (42.8% for prosocial behaviour, 29.7% for conduct problems, and 24.6% for emotional functioning). These rates are considerably higher than those found by Cheung et al. (2011; 18.5%), and the age of the sample may be partly responsible. Specifically, Cheung et al. (2011) investigated externalizing behaviour among a maltreated adolescent sample (10-17 years) while the current study focused on school-age children. Families tend to have a greater impact on younger children who spend more time in the home, compared to adolescents who spend increasingly more time outside the home interacting with non-family members. Overall, the current study findings suggest that both child and family levels are important influences on child behavioural functioning. These findings are key because the role of the family in child welfare samples has largely been ignored in past studies using multilevel modeling. The findings suggest that caregivers (even if not biologically related to the child as was the case for our out-of-home care sample) have an important impact on children's behavioural outcomes.

With regard to conduct problems, not only did the child and family level account for a significant proportion of the explained variance but so did the worker and agency levels (3.5% for worker and 2.2% for agency). Not surprisingly, the explained variance was

considerably lower than that of the child and family levels, which represent contexts that are more immediate to the child and therefore, are assumed to have a stronger influence on development over more distal contexts such as the child welfare agency (Bronfenbrenner, 1979). The current findings are similar to past studies which have found that the agency and/or worker level explains 9.7-11% of the variance in child behaviours (Attar-Schwartz, 2008; Cheung et al., 2011). However, what is quite novel about the current study is that it simultaneously examined agency, worker, family, and child effects. As noted by Cheung et al. (2011), using only the worker or agency level may result in the effects of one being interpreted as part of the other. Separating these levels permitted this relationship to be teased apart, with findings indicating that differences between both workers and agencies each made unique contributions (albeit small) to children's conduct behaviour. While determining the specific factors that might contribute to differences between agencies was outside the scope of the current study, past findings would suggest that geographic location (rural versus urban), size, and availability of resources may be of importance (Attar-Schwartz, 2008).

In terms of predictors of children's behavioural functioning, the current study found a number of statistically significant child- and family-level variables. For child-level variables, sex, age, contact with biological parents, maltreatment exposure, and internal developmental assets were significant across one or more of the behavioural domains. Girls were found to exhibit more prosocial behaviour than boys. There is little research investigating sex differences in prosocial behaviour among child welfare samples, although a recent study (Marquis & Flynn, 2009) found more prosocial behaviour among 11-15 year old girls living in out-of-home care compared to their male counterparts. Furthermore, sex differences have

been documented in the broader literature, with females tending to have higher rates of prosocial behaviour that involve interpersonal interactions, such as helping to care for others and offering emotional and relational support (Eagly, 2009). However, research also shows that males do exhibit prosocial behaviour, but this typically consists of such acts as helping strangers (e.g., rescuing, removing distress) and maintaining peer group cohesion (Eagly, 2009). Moreover, longitudinal studies generally do not indicate sex differences over time (Hastings, Utendale, & Sullivan, 2007). In the current study, it is possible that boys were not less prosocial than girls but that the measure of this behaviour focused on actions that are more typical of females, such as consideration of others' feelings and offering help to peers or family members.

In terms of age, older children had a significantly higher frequency of emotional difficulties. This finding indicates differences regarding the vulnerability to emotional problems across the school-age developmental period. As children (particularly girls) become older and approach adolescence, their risk of developing emotional problems increases (Masten et al., 1990). Furthermore, as children age, more time is spent outside of the family home, and this greater exposure to peers may carry an increased risk of psychosocial difficulties, especially among vulnerable children (Leve, Fisher, & DeGarmo, 2007). For example, previous research has demonstrated a link between children living in out-of-home care and peer victimization; however, the relationship may be bidirectional in that these children develop poor peer relationships due to pre-existing behavioural problems and lack of social skills or that bullying and victimization by peers leads to the behaviours (Leve et al., 2007).

Regarding maltreatment exposure, results indicate that greater maltreatment exposure predicted greater emotional problems but also greater prosocial behaviour. Previous research has linked multiple maltreatment experiences with a host of detrimental emotional and behavioural problems (Finkelhor, Ormrod, & Turner, 2007). For children in out-of-home care, this is further compounded by additional hardships including family disruption and poor parenting, for example. Such cumulative risks create an increased vulnerability to the development of problematic behaviours (Masten & O'Dougherty Wright, 1998). With regard to prosocial behaviour, results were not in the expected direction. Post hoc analyses revealed that the child's age at first placement acted as a suppressor variable. Suppressor variables are those that do not appear correlated with the dependent variable, but when added to the model, enhance the association between another predictor and the dependent variable (Thompson & Levine, 1997). For the post hoc analyses, age at first placement was categorized into infancy (0-1 years), pre-school age (2-4 years), and school-age (5-9 years), and it was determined that those entering care during infancy or school-age had the highest maltreatment exposure. Therefore, the impact of maltreatment exposure on prosocial behaviour for children entering care during the infancy and school-age periods was diminished with the inclusion of the age at first placement variable. In other words, upon adding age at first placement to the model, the relationship between maltreatment exposure and prosocial behaviour became specific to the remaining children with little maltreatment exposure (pre-school age), creating a significant positive association (which would be expected between fewer experiences of maltreatment and prosocial behaviour).

Turning to the hypothesis that contact with biological parents would be associated with better behavioural outcomes, it was partially supported. Specifically, biological parent

contact was predictive of a higher frequency of prosocial behaviour. Previous research has indicated the importance of maintaining contact with biological family members, particularly biological parents, for the well-being of children living in out-of-home care (Fernandez, 2006; Knott & Barber, 2005; Sanchirico & Jablonka, 2000). For example, Sanchirico and Jablonka (2000) noted that contact with biological parents while in care contributes to the child's well-being because it can reduce feelings of abandonment, grief, and depression that are often experienced by children when placed in out-of-home care. While the specific relationship with prosocial behaviour has not been tested before among school-age children in out-of-home care, we can speculate that maintaining contact with one's biological family improves a child's sense of well-being and connectedness, thus increasing the likelihood of prosocial behaviours such as considering others' feelings and offering help.

Finally, the hypothesis that greater internal and external developmental assets would be associated with more adaptive behavioural functioning was partially supported in that a higher number of internal assets predicted lower frequencies of conduct problems. There are limited past studies on developmental assets, but our findings are in line with past research conducted with both community and foster care samples (Scales et al., 2000). These results suggest that supporting a child's development in multiple domains is beneficial to their functioning across the lifespan. For children in the welfare system, it would seem important for child welfare workers and foster caregivers to pay attention to which assets a child does and does not possess, particularly within the internal sphere (e.g., commitment to learning), in order to create a plan of care that includes strengthening identified assets and putting resources in place to promote important assets that the child does not currently have.

Turning to family-level variables, the hypothesis that more positive parenting and less ineffective parenting would be related to better behavioural outcomes was partially supported. More ineffective parenting was associated with a lower frequency of prosocial behaviour and a higher frequency of emotional and conduct problems. These findings are consistent with past studies, which have indicated that a positive and supportive caregiver-child relationship is critical to the well-being of children in out-of-home care (Cheung et al., 2011; Legault et al., 2006). Masten and Shaffer (2006) discussed the protective role of the family in that having a supportive and high-quality family environment following maltreatment may buffer the negative effects on child development.

However, contrary to expectations, more positive parenting was significantly associated with a higher frequency of emotional problems. While this particular relationship has not been previously tested among children in out-of-home care, this result may be a function of the measure of positive parenting, which did not directly assess the quality of these caregiver-child interactions, but rather the frequency. In other words, while a caregiver might report frequent use of positive parenting behaviours, there was no way to substantiate the accuracy of these self-reports or to interpret the quality and meaning of these interactions. To address this possibility, it will be important for future studies to incorporate child reports (or other informants) regarding the quality of time spent with caregivers and to investigate interactions. The use of observational data collection also would likely be beneficial to gain further understanding of this relationship.

Surprisingly, worker-level characteristics did not significantly influence child conduct behaviours. It may be that other variables in the model mediated the impact of these worker-level variables. This explanation would be consistent with an ecological approach,

which posits that factors immediate to a child have a more significant impact (i.e., microsystem influences such as family relationships) than more distal influences (i.e., exosystem influences such as worker characteristics). Past research, which has explored the influence of worker-level characteristics on outcomes, has focused on the adolescent period (Cheung et al., 2011). It may be that the use of a younger cohort (5-9 year olds) might partially account for the lack of significant findings since younger children spend the majority of their time in the home with their caregivers, while adolescents spend more time outside the home interacting with others. As such, child welfare workers may have a greater influence on adolescent behavioural outcomes by virtue of their greater contact with one another. Alternatively, while it was beyond the scope of the current study, it is possible that other worker characteristics (e.g., attitude and beliefs) and the quality of the worker-child relationship might have more of an impact on behaviour (Ryan et al., 2006) than more static variables such as caseload or education.

### **Study Limitations**

The study has several limitations, one of which is the correlational design which precludes causal conclusions. Longitudinal investigations will be important to examine how child behaviour changes over time and what factors might become more or less salient in predicting such behavioural changes. Future research might also consider examining interactions between variables, particularly across levels (i.e., cross-level interactions) to see how agency, worker, family, and child correlates work together. Second, information on the socio-economic status of the foster families in the current sample was not available, which may limit the generalizability of the findings. Third, the current study relied on caregiver and worker reports for the variables, which may have introduced reporting biases such as social

desirability especially with regard to the family-level variables (i.e., parenting behaviours). It will be important for future research to incorporate additional informants (i.e., child, teachers, peers). Fourth, the externalizing assets and peer relationships measures demonstrated questionable internal consistency for the current sample. Therefore, findings regarding these variables should be regarded as tentative. Fifth, the SPSS method by which missing data were imputed is limited. Future research should consider using multiple imputation by way of SAS PROC MI (Graham, 2012). Sixth, due to the limited number of agency-level variables in the data set, correlates were not included at this level. Likewise, it is important to keep in mind that the current study did not test an exhaustive list of potential variables related to better behavioural functioning among children in out-of-home care due to limitations in the data set. This should be considered when interpreting the study findings. Future research should consider including additional variables based on previous research and the ecological model (e.g., child cognitive ability, overall family climate) in addition to testing interactions. Finally, the definition of resilience was narrower than has sometimes been used in previous research given that the primary focus was on behaviours. It is acknowledged that resilience in one domain does not necessarily indicate resilience in other domains, and functioning within additional domains (i.e., peer relationships and academic performance) was included in an attempt to address this.

### **Study Implications**

The findings indicate that examining child outcomes across multiple domains is important in order to obtain a comprehensive developmental picture of functioning. Consistent with previous literature (e.g., Jaffee & Gallop, 2007), the current study found rates of behavioural resilience that were relatively high when considering each behaviour

individually. However, when behaviours were considered together and additional domains of functioning were also taken into account (e.g., academic performance, peer relationships), rates of resilience dropped considerably. Therefore, one needs to adopt a comprehensive evaluation approach for children in child welfare that considers their well-being across multiple domains of functioning and that then puts into place at school and home a number of strategies to build on their strengths and address their weaknesses. Such strategies would require individuals involved in the child's life and from various levels of the ecological model, including the foster parent, biological parent, teacher, and child welfare worker. While these individuals each play a role in promoting better outcomes for children in out-of-home care, the findings indicate that foster parents are particularly important in helping promote adaptive functioning for children in their care. This is in line with the ecological model, which posits that proximal influences (i.e., microsystem) play a more direct role in an individual's life. Furthermore, given that the current sample consisted of school-age children, it follows that individuals within the household might play a greater role than those in the community. However, the inclusion of others involved in the child's life, such as teachers, remains important for intervention efforts given that these contexts are overlapping, such that a child's functioning in school will have an impact on their functioning at home and vice versa (Romano, Marquis, Babchishin, & Fréchette, 2013). Finally, while child welfare worker characteristics did not have a direct impact on child behavioural resilience, it is likely that their influence is more indirect for school-age children. For example, workers indirectly influence the well-being of children in their care through their interactions with foster parents and the organization of services for children and their families (both biological and non-biological).

## **Study 2: Profiles and Predictors of Behavioural Resilience Among Children Living in Out-of-Home Care**

Behavioural outcomes associated with maltreatment and with living in out-of-home care is an important topic of investigation due to the number of children with such experiences. However, a limited number of studies have reported the prevalence of behavioural resilience in addition to identifying factors associated with resilient outcomes, and an even smaller number have tracked behavioural resilience and its correlates over time. The current study aimed to address this gap by conducting a longitudinal investigation of behavioural outcomes in a sample of maltreated school-age children currently living in out-of-home care. Specifically, this study used group-based growth mixture modeling to track three behavioural outcomes (i.e., conduct problems, emotional problems, and prosocial behaviour) across a four-year period (2008-2011). Time-stable and time-varying correlates were included in order to see if and how they impact the various behavioural developmental pathways.

### **Resilience Across Time**

Although a number of studies have investigated the prevalence and predictors of resilience among maltreated children in out-of-home care, fewer have tracked emotional, behavioural, and academic outcomes longitudinally (Fernandez, 2008; Jaffee et al., 2007; Jaffee & Gallop, 2007; Proctor, Skriner, Roesch, & Litrownik, 2010). One study (Jaffee & Gallop, 2007) investigated social, emotional, and academic competence at three points in time (baseline, 18, and 36 months) in a nationally representative U.S. sample of 2,065 maltreated 8 to 16 year olds who had recent contact with child protective services. Children were considered resilient if they met or exceeded national norms on all domains assessed. Specifically, the emotional domain was assessed by way of caregiver and teacher reports on

a behavioural checklist and child reports on depression. To assess school achievement, the children completed the Mini Battery of Achievement, and to assess social competence, caregivers and teachers reported on the child's social skills. Results revealed that 14-22% of the children were considered resilient within a given domain across all time points while 11-14% were resilient across all domains at any point in time. While this study provides valuable information pertaining to the prevalence of resilience across time and across various domains of functioning, it did not examine any variables that might potentially influence such rates.

In a more recent U.S. study (Proctor et al., 2010), the behavioural adjustment of 279 maltreated children who had entered foster care before the age of 4 years and had spent at least five months in care was tracked over an 8-year period. At the baseline assessment (age 4), 44.8% were in out-of-home placement (including nonrelative care, kinship care, and group homes), 35.4% had been reunited with a biological parent, and 19.7% had been adopted. Behaviours were assessed using a caregiver-reported checklist every two years between the ages of 6 and 14. Growth mixture modeling was used to identify profiles of behavioural adjustment, with findings indicating three internalizing and four externalizing behaviour trajectories. For internalizing behaviours, 66.7% were identified as having stable adjustment over the 8-year period, while 25.4% had mixed/decreasing adjustment and 7.9% had increasing adjustment. For externalizing behaviours, 46.6% of children had stable adjustment over the 8-year period, 28.7% had mixed adjustment, 8.2% had increasing adjustment, and 16.5% had stable maladjustment. For correlates of these trajectories, results revealed that greater caregiver-reported social competence and higher child-reported cognitive ability (each assessed at age 6), as well as greater placement stability (assessed bi-

annually) and lower frequency of physical abuse (assessed at 6 to 14 years of age through review of CPS allegations), predicted belonging on the stable or increasing adjustment trajectory for both internalizing and externalizing behaviours (Proctor et al., 2010).

Additional longitudinal studies have investigated resilience over time among maltreated children, some of whom spent time in out-of-home care and some of whom did not, and have assessed a range of outcomes, including behavioural, social, and educational functioning (Dumont et al., 2007; Fergusson & Horwood, 2003; Lansford et al., 2006; McGloin & Widom, 2001). In general, findings indicate that a substantial proportion of maltreated children exhibit resilience across domains, and a number of child (e.g., sex, ethnicity) and family (e.g., parental attachment, stable household) variables are associated with resilience. While the following study did not include a sample of maltreated children in out-of-home care, it is reviewed due to a focus on resilience and its associated factors. Specifically, Fergusson and Horwood (2003) tracked factors associated with resilient outcomes in a sample of 991 participants who were followed from birth to 21 years of age. Participants were assessed on a number of aspects related to mental health and adjustment over the periods of 16-18 years and 18-21 years. They were also assessed on their extent of exposure to adversity in childhood (0-16 years), including experiences of child abuse, parental conflict (e.g., intimate partner violence), and socioeconomic disadvantage, as well as on factors associated with resilience, including family (e.g., parental attachment), child (e.g., self-esteem), peer (e.g., peer affiliations), and school (e.g., school retention) variables. The findings indicated that, while over half of the sample had experienced little or no childhood adversity, approximately 9% had experienced multiple adversities ( $\geq 6$  types). These latter individuals were significantly more likely to have externalizing (e.g., conduct

disorder, alcohol dependence) and internalizing (e.g., anxiety, depression) behaviour problems later in life. In terms of resilience, being female reduced the risk of developing externalizing behaviours while being male reduced the risk of developing internalizing behaviours. The results also indicated that avoidance of deviant peer affiliation mitigated the effects of exposure to family adversity in terms of externalizing behaviours, whereas for internalizing behaviours, having a strong parental attachment was a protective factor. Finally, personality factors including low novelty seeking and high self-esteem reduced the risk for externalizing behaviour problems, while low novelty seeking and neuroticism were protective factors for internalizing behaviour problems. The researchers identified two general ways in which personality factors may alter vulnerability to resilience. One is that such factors influence a threshold at which an individual reacts to environmental adversity (e.g., those with low neuroticism are less likely to react to environmental adversity by developing internalizing responses), and the second is that these factors may play a role in behaviour which can act to increase or decrease rates of outcomes (e.g., low novelty seeking may contribute to a reduced likelihood of high risk-taking behaviours that are often preludes to externalizing problems).

### **Study Objectives**

While studies have examined behavioural outcomes within the context of resilience, only a limited number have used longitudinal methodology (Fergusson & Horwood, 2003; Jaffee & Gallop, 2007; Proctor et al., 2010). In addition, no study to our knowledge has examined developmental pathways of behavioural resilience using a sample comprised entirely of maltreated children in out-of-home care during the whole process. Furthermore, all children included in the current study had been living in out-of-home care for

approximately one year at baseline assessment. This adds to the current literature in terms of furthering our understanding of the relationship between living in out-of-home care and behavioural outcomes as past findings (e.g., Proctor et al., 2010) have tended to use heterogeneous samples (i.e., a combination of children in foster care, adopted children, and children living with their biological families). Also, past studies examining developmental trajectories have tended to focus solely on externalizing and internalizing behaviours (Fergusson & Horwood, 2003; Proctor et al., 2010). The current study examines trajectories of prosocial behaviour in addition to internalizing and externalizing behaviours. Finally, while a number of studies have examined the impact of early predictors on later behaviour, the current study investigated both time-stable and time-varying predictors in order to capture dynamic effects on children's behavioural functioning.

Given these considerations, the first objective was to examine behavioural trajectories among maltreated school-age children in out-of-home care, with a particular focus on trajectories that represent resilient functioning. Three behavioural outcomes were examined, namely conduct problems, emotional problems, and prosocial behaviour. In keeping with past research (e.g., Jaffee et al., 2007), behavioural resilience was defined as functioning within the normative range. The second objective was to examine two types of predictors taken from various levels of the ecological model, namely time-stable and time-varying, with a particular focus on predictors of resilient trajectories. Time-stable predictors were variables measured at one point in time (i.e., baseline). These were demographics and variables in which little variation was anticipated over time. These variables included child sex, age at first placement, number of placements, placement type, adverse life experiences, child attachment to the caregiver, caregiver training, and caregiver years fostering. Time-

varying predictors were those measured across the subsequent 4-year period and in which variation over time was anticipated. These included changes in caregiver reporter, contact with biological parents, whether the child was receiving treatment, internal developmental assets, external developmental assets, positive parenting, and number of children in the home. The current study focused on the school-age period because the majority of studies on behavioural functioning among maltreated populations have examined the adolescent period. However, the school-age period is the time during which children may be particularly vulnerable to the development of behavioural problems, especially among those who have experienced early maltreatment by an attachment figure (Costello, Egger, & Angold, 2005; Masten, Best, & Garmezy, 1990; Skovgaard et al., 2007).

Based on past research (Bell et al., 2013; Dumont et al., 2007; Flores et al., 2005; Walsh et al., 2010), it was anticipated that girls would be more likely to exhibit resilient functioning on prosocial behaviour than boys and that children who were placed in kinship care, had fewer placement changes, maintained regular contact with biological parents, and had greater developmental assets (internal and external) would exhibit resilient functioning over time. It was also anticipated that positive caregiver-child relationships (measured by way of child attachment to the foster caregiver and positive parenting), caregiver training, and greater years of experience as a foster caregiver would contribute to resilient functioning across time.

## **Method**

### **Sample and Procedure**

In 2000, Robert Flynn and colleagues initiated the Ontario Looking After Children (OnLAC) project to improve the quality of substitute parenting provided by child welfare organizations for children in out-of-home care and to monitor their progress on an annual

basis (Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004). The Ontario Ministry of Children and Youth Services made data collection for the OnLAC project mandatory in all 53 Ontario child welfare agencies in 2006 (Flynn, Vincent, & Legault, 2009). The primary way in which children are monitored is through the second Canadian adaptation of the Assessment and Action Record (AAR-C2), of which there have been two versions (2006 and 2010). This instrument is completed on an annual basis by the child welfare worker with the child in care (if over the age of 10) and the foster parent (or other adult caregiver). It covers seven domains of functioning, specifically health, education, identity, family and social relationships, social presentation, emotional and behavioural development, and self-care skills (Flynn et al., 2004).

The present study used OnLAC data from years 7 (2007-2008) to 11 (2011-2012). To be included, children were required to be in a foster or kinship placement at year 7 (2007-2008) and to have data on the specific behavioural outcome for at least 3 out of 4 time points (years 8-11). These criteria resulted in a sample of 353 children for conduct problems and 354 children for emotional problems and prosocial behaviour. The sample was further reduced by 11% to 12% as some households had more than one foster child. To avoid dependence of observations, only one child per household was selected (i.e., the child with the most recent birthday), providing a final sample of 313 for conduct problems, 312 for emotional problems, and 311 for prosocial behaviour.

At year 7, the average age of children in the current sample was 7.5 years ( $SD = 1.3$ ), and there was a fairly even distribution of boys (55.6%) and girls (44.4%). Most children were of European-Canadian background (67.4%), followed by First Nations (17.3%), African-Canadian (4.8%), and other (e.g., Asian, Latin American, 8.3%). The mean age at

first out-of-home placement was 3 years ( $SD = 2.3$ ). The majority of children were in foster care (83.7%) in comparison to kinship care (16.3%). The number of placements ranged from 0 to 13, with an average of 4.2 ( $SD = 2.5$ ). The reasons for admission to care were indicated by child welfare workers based on their knowledge of the child's case history, and they were primarily maltreatment related, including neglect (77.0%), emotional harm (45.0%), physical harm (38.3%), domestic behaviour (33.9%), and sexual harm (8.6%).

### Measures

**Outcome variables.** At each assessment year (years 8-11), the foster caregiver responded to the Strengths and Difficulties Questionnaire (SDQ; Goodman, Ford, Simmons, Gatward, & Meltzer, 2000). This measure includes five items on conduct problems (e.g., often fights with other children or bullies them), five items on emotional problems (e.g., often unhappy, depressed, or tearful), and five items on prosocial behaviour (e.g., considerate of other people's feelings) over the past six months. Responses were on a 3-point Likert scale ranging from 0 (*not true*) to 2 (*true*). Scores were summed and ranged from 0-10, with a higher score indicating greater frequency of the behaviour. Each scale demonstrated acceptable to good internal consistency for our sample (average across the four years of assessment) with Cronbach's  $\alpha = .77$  (conduct problems),  $\alpha = .70$  (emotional problems), and  $\alpha = .79$  (prosocial behaviour). Achenbach et al. (2008) and Goodman and Goodman (2012) provide further data on the reliability and validity of the SDQ.

**Time-stable predictors.** Foster caregivers and child welfare workers responded to a number of items assessed in year 7 (2007-2008) regarding the child. These included the child's type of care (i.e., foster care or kinship care) and adverse life experiences, which refer to additional forms of hardship that the child may have experienced since birth (e.g.,

death of a birth parent, severe poverty). Child welfare workers indicated the types of adverse experiences for the child, with a possible range from 0-10. At year 7, child welfare workers also indicated the number of placement changes and age at first placement. Furthermore, time-stable foster family predictors included child welfare worker reports of caregiver training, which was dichotomized to indicate whether the caregiver participated in any of the following training programs: OnLAC; Parent Resources for Information, Development, and Education (PRIDE); agency-specific training; foster parenting techniques; or another program (yes/no). Child attachment to the foster caregiver was also a single worker-reported dichotomous variable, with responses coded 0 (*little or no attachment to caregiver*) or 1 (*definite attachment to caregiver*). Finally, foster caregiver years of experience was a single worker-reported categorical item with possible responses consisting of 0 (*up to 3 years of experience*), 1 (*4 to 9 years of experience*), and 2 (*10 or more years of experience*).

**Time-varying predictors.** At each assessment year (years 8-11), caregivers and child welfare workers responded to items concerning the child's contact with birth parents, whether the child was receiving treatment, and developmental assets. Contact with birth parents was a dichotomous variable reported by caregivers indicating 0 (*no contact*) or 1 (*regular contact*). Child receiving treatment was also a dichotomous variable, indicating whether or not the child received services from a psychologist or counselor, psychiatrist, and/or another mental health service provider in the previous year. It was coded 0 (*not in treatment*) or 1 (*in treatment*) at each year of assessment, as reported by the caregiver. Finally, as part of the annual AAR-C2, each worker completed the Developmental Assets Scale (Scales, 1999), which includes a 20-item internalizing subscale (e.g., *sense of purpose*: child welcomes new experiences and imagines what he or she might do or be in the future)

and a 20-item externalizing subscale (e.g., *safety*: caregivers and community adults ensure the child's safety while keeping in mind his/her increasing independence). Workers rated each item as either Yes (*present*), Uncertain, or No (*absent*), after which the number of yes responses was summed to create a score ranging from 0-20 for internal assets and 0-20 for external assets. Each scale demonstrated acceptable to good internal consistency for the current sample (average across the four years of assessment) with Cronbach's  $\alpha = .84$  (internal assets) and  $\alpha = .74$  (external assets).

Turning to foster family time-varying predictors, child welfare workers indicated the number of children in the home at each assessment year, and foster caregivers responded to items pertaining to their positive parenting. Positive parenting practice scales differed across years 8 to 11 based on the age of the child at assessment. As a way to capture positive parenting over time, a prorating procedure was used such that each scale was given a score ranging from 0-24. For instance, at assessment years 8 and 9, the positive parenting scale included 5 items (e.g., how often do you and the child laugh together?) for children 0 to 9 years of age. Responses were coded 0 (*never*) to 4 (*many times each day*) creating a score ranging from 0-20 while for children 10 to 17 years of age, the positive parenting scale had 8 items (e.g., I speak to the youth in a warm and friendly way) coded 0 (*rarely or never*) to 2 (*often or always*) for a total score ranging from 0-16. All of the scales used were divisible by 2, so a score ranging from 0-24 was used. Specifically, the positive parenting scale for 0-9 year olds (with a range from 0-20) was divided by 10 and multiplied by 12 to provide a score ranging from 0-24. Similarly, the scale for 10-17 year olds was divided by 2 and multiplied by 3 to provide a score ranging from 0-24. A similar procedure was used for the additional positive parenting scales at years 10 and 11. Upon completion of the prorating procedure, an

overall mean score on positive parenting was calculated. All items were adapted from the Parenting Practices Scale (Strayhorn & Weidman, 1988), as used in the NLSCY (Statistics Canada & Human Resources Development Canada, 1999).

### **Statistical Analyses**

As a first step, trajectories for each of the three behavioural outcomes (i.e., conduct problems, emotional problems, prosocial behaviour) were modeled across a 4-year period from 2008 (6-10 years of age) to 2011 (9-13 years of age). A SAS procedure called PROC TRAJ, which is a semi-parametric group-based mixture model approach that identifies developmental trajectories of variables of interest as a function of age, was used. Similar to growth curve modeling approaches (e.g., hierarchical or multilevel), this group-based approach uses a polynomial function (i.e. linear, quadratic, cubic) to model the link between age and a variable of interest, in this case behaviour. However, whereas the hierarchical and latent growth curve methodologies are based on continuous distribution functions and model individual-level differences (which assume that the parameters are continuously distributed throughout the population), the group-based PROC TRAJ method assumes that there may be clusters or groupings of distinctive developmental trajectories that themselves may reflect distinctive etiologies (Nagin, 1999, 2005).

In the current study, multiple models were tested for each outcome, beginning with a 1-group trajectory model and moving up to a 5-group model. The Bayesian Information Criterion (BIC) was used to establish the best fitting model (Shaw, Lacourse, & Nagin, 2005). Using the selected model, individuals are then assigned to a group based on their posterior probabilities of group membership. These probabilities collectively indicate a specific individual's likelihood of belonging to each of the trajectory groups. Individuals are

placed in the group for which they have the largest probability of membership (Nagin, 1999, 2005).

After determining the best number of trajectories for each behavioural outcome, multinomial logistic regression was used to investigate the impact of time-stable and time-varying predictors on trajectory group membership. Year 7 (2007) time-stable predictors included child sex, age at first placement, type of care, number of placements, adverse life experiences, caregiver training, caregiver years of experience, and child attachment to the foster caregiver. For continuous time-varying predictors, including internal and external developmental assets, number of children in the home, and positive parenting, a mean score across the four years of assessment (2008-2011) was calculated. To capture contact with birth parents over time, an ordinal variable was computed to indicate no contact with birth parents across the four years of assessment (0), contact for 1 of the 4 years (1), contact for 2 of the 4 years (2), contact for 3 of the 4 years (3), or contact across all 4 assessment years (4). In the same way, child receiving treatment was coded from 0 (*no treatment*) to 4 (*in treatment across all 4 years of assessment*). Finally, in order to capture caregiver stability, a variable was created to indicate whether there was a change in caregiver reporter across the assessment years. It was also a single ordinal variable coded 0 (*no change in reporter*) to 4 (*change in reporter at all 4 years*).

PROC TRAJ in SAS was used to determine trajectory group membership, after which point SPSS 19.0 was used to run the regression models. Missing data for the time-stable and time-varying predictors were relatively low (10-20%). SPSS Expectation Maximization (EM) was used to impute missing data for these variables. Assumptions of logistic regression were tested, and two variables (i.e., internal assets and number of children

in the home) were log transformed due to a violation of linearity in the logit. However, findings for regression models using the transformed and the untransformed variables were the same. Therefore, for ease of interpretation, the untransformed models are presented. Adequate statistical power ( $> .80$ ) was maintained with the inclusion of all variables, and a probability level of .05 was used to establish statistical significance.

## Results

### Trajectories of Conduct, Emotional, and Prosocial Behaviour

Based on the Bayesian information criterion (BIC) index, the best-fitting model for conduct problems was a 4-group model (Figure 1). Two of the four trajectory groups were considered to represent resilient functioning, defined as scores within the normative range on this measure, which was determined using the reported U.K. general population norms (in the absence of Canadian norms, Flynn et al., 2009). This strategy has been used in previous research using OnLAC data (e.g., Bell et al., 2013; Marquis & Flynn, 2009) and is based on the fact that U.K. norms fit better with the current study's age cohort (i.e., children 5-9 years of age) and with the demographics of our sample, in contrast to U.S. norms where there is a large number of African-American children in care (R.J. Flynn, personal communication, March 4, 2013). In fact, children in the current sample were of European-Canadian background (67.4%), followed by First Nations (17.3%), African-Canadian (4.8%), and other (e.g., Asian, Latin American, 8.3%). Scores within the normative range were 0 to 3 for boys and 0 to 2 for girls (possible range 0-10). The resilient groups were the *No conduct problems* group, which comprised about 1 in 6 children (14.4%;  $n = 45$ ) who were reported to exhibit no problems over a 4-year period and the *Low, stable conduct problems* group, which included half the sample (49.8%;  $n = 156$ ). These children were reported to have few

conduct problems over time. The two remaining trajectory groups included children who were reported to exhibit moderate to moderately high levels of conduct problems.

Specifically, the *Moderate, stable conduct problems* group consisted of about 1 in 4 children (26.8%;  $n = 84$ ) who exhibited a moderate level of conduct problems that remained stable over a 4-year period. The *Moderate-high, descending conduct problems* group included the least number of children (8.9%;  $n = 28$ ). These children were reported to exhibit a moderately high level of conduct problems initially, but there seemed to be a decreasing trend over time.

Turning to emotional problems, based on the BIC index, the best-fitting model was a 4-group model (Figure 2). Two of the four trajectory groups were considered to represent resilient functioning, defined as scores within the normative range on this measure. Specifically, this was a score of 0 to 3 for boys and 0 to 4 for girls (possible range 0-10). The resilient groups were the *No emotional problems* group, which comprised about 1 in 6 children (14.7%;  $n = 46$ ) who were reported to exhibit no emotional problems over a 4-year period, and the *Low, stable emotional problems* group, which consisted of 43.9% ( $n = 137$ ) of the sample. Children in this latter trajectory group were reported to exhibit few emotional problems over time. The two remaining trajectory groups included children who were reported to exhibit moderate to moderately high levels of emotional problems. There was the *Moderate, ascending emotional problems* group, which included about one third of children (33.7%;  $n = 105$ ) who had moderate initial levels of emotional problems that increased over a 4-year period, and the *Moderate-high, descending emotional problems* group. This latter group included the fewest number of children (7.7%;  $n = 24$ ) who were reported to have moderately high levels of emotional problems initially which declined over time.

For prosocial behaviour, the best-fitting model, based on the BIC index, was a 3-group model (Figure 3). Two groups were considered to represent resilient functioning defined as scoring within the normative range. Specifically, this was a score of 7 to 10 for boys and 8 to 10 for girls (possible range 0-10). These resilient groups were the *Moderate-high, stable prosocial behaviour* group, which comprised the majority of children (66.6%;  $n = 207$ ) who were reported to demonstrate relatively high levels of prosocial behaviour that remained stable over time, and the *High, stable prosocial behaviour* group where about 1 in 4 (23.2%;  $n = 72$ ) children demonstrated high levels of prosocial behaviour throughout the 4-year assessment period. The final trajectory was the *Low-moderate, increasing prosocial behaviour* group, which included 1 in 10 (10.3%;  $n = 32$ ) children who were reported to exhibit moderately low levels of prosocial behaviour initially but that increased over time.

### **Predictors of Behavioural Trajectories**

Prior to examining time-stable and time-varying predictors of behavioural trajectories, bivariate analyses were conducted to examine the frequency of each variable by trajectory group (Tables 5-7). For conduct problems, seven variables differed significantly among the trajectory groups, specifically child attachment to caregiver, number of placements, changes in caregiver reporter, child receiving treatment, external assets, internal assets, and number of children in the home. For emotional problems, five variables differed significantly among the profiles, specifically child attachment to caregiver, placement type, changes in caregiver reporter, child receiving treatment, and internal assets. Finally, for prosocial behaviour, eight variables differed significantly among the profiles, specifically child sex, placement type, child attachment to caregiver, changes in caregiver reporter, child receiving treatment, external assets, internal assets, and number of children in the home. To

summarize, children who experienced fewer changes in caregiver reporter, had a stronger attachment to the foster caregiver, and were not in treatment were significantly more likely to exhibit resilient functioning over time on all outcomes. Children with greater external assets and living in smaller households were more likely to exhibit resilient functioning on conduct and prosocial outcomes. Also, there were more children in kinship care than would be expected who were resilient on emotional and prosocial functioning over time. In terms of resilient functioning on one of the outcomes, children with a fewer number of placements and greater internal assets were significantly more likely to exhibit resilience on conduct outcomes over time, while girls were more likely than boys to exhibit resilience on prosocial behaviour.

**Conduct problem trajectories.** Tables 8-10 present findings from the multinomial logistic regression models in which time-stable and time-varying predictors of conduct, emotional, and prosocial trajectories were investigated. Given that the bivariate analyses revealed differences between the groups representing resilient functioning, it was decided to keep these as separate groups in the regression models. Using the *Moderate-high, descending conduct problems* trajectory as the reference group, findings revealed no significant time-stable predictors for any of the three trajectory groups. For time-varying predictors, the three following variables were significant predictors of resilient functioning (i.e., children in either the *No conduct problems* or *Low, stable conduct problems* trajectory groups): child receiving treatment; internal assets; and number of children in the foster home. Specifically, with every additional year that a child received treatment, the odds of belonging to one of the resilient trajectory groups (compared to the *Moderate-high, descending conduct problems* trajectory group) decreased significantly by 81% (OR= 0.19)

for the *No conduct problems* group and by 51% (OR= 0.49) for the *Low, stable conduct problems* group. Every additional child in the foster home resulted in a significant decrease in the probability of belonging to one of the resilient trajectory groups, compared to the *Moderate-high, descending conduct problems* group. This decrease was 36% (OR= 0.64) for the *No conduct problems* group and 30% (OR= 0.70) for the *Low, stable conduct problems* group. For worker-reported child internal assets, every one-unit increase on the internal assets scale significantly increased the odds of belonging to one of the two resilient trajectory groups (compared to the *Moderate-high, descending conduct problems* trajectory group) by 43% (OR= 1.43) for the *No conduct problems* group and by 32% (OR= 1.32) for the *Low, stable conduct problems* group. One additional time-varying variable emerged as statistically significant, namely positive parenting on the part of the foster caregiver. With every one-unit increase on the positive parenting scale, there was a 25% (OR= 1.25) increased probability of belonging in the *Low, stable conduct problems* resilient group, compared to the *Moderate-high, descending conduct problems* group.

**Emotional problem trajectories.** Turning to emotional problem trajectories, using the *Moderate-high, descending emotional problems* as the reference group, findings revealed two significant time-stable predictors for the *No emotional problems* resilient trajectory group, namely age at first placement and child attachment to the foster caregiver. Compared to children in the *Moderate-high, descending emotional problems* group, every one-year increase in age at first placement resulted in a 37% increase in the odds of belonging to the *No emotional problems* (OR= 1.37) group, and compared to children with little or no attachment to their caregiver, those with definite attachment were 12.5 times more likely to belong to the *No emotional problems* (OR= 12.5) group.

For time-varying predictors, two were significantly related to resilient functioning (i.e., children in the *No emotional problems* or *Low, stable emotional problems* trajectory groups): changes in caregiver reporter and child receiving treatment. Specifically, with every additional change in caregiver reporter, the odds of belonging to the *No emotional problems* group (compared to the *Moderate-high, descending emotional problems* trajectory group) decreased significantly by 64% (OR= 0.36). Also, with every additional year that a child received treatment, the odds of belonging to one of the resilient trajectory groups (compared to the *Moderate-high, descending emotional problems* trajectory group) decreased significantly by 70% (OR= 0.30) for the *No emotional problems* group and by 46% (OR= 0.54) for the *Low, stable emotional problems* group. Finally, for *Moderate, ascending emotional problems*, there was one significant time-varying predictor. Specifically, for every additional change in caregiver reporter, the odds of belonging to the *Moderate, ascending emotional problems* group (compared to the *Moderate-high, descending emotional problems* trajectory group) decreased significantly by 46% (OR= 0.54).

**Prosocial behaviour trajectories.** Using the *Low-moderate, ascending prosocial behaviour* group as the reference, significant time-stable predictors of the *High stable prosocial behaviour* trajectory were sex and number of placements. Specifically, in comparison to girls, boys had a 74% decrease in the odds of following this trajectory (OR= 0.26), and every additional placement resulted in a 27% increase in the odds of following this trajectory (OR= 1.27). For time-varying predictors, the following four variables were significant predictors of one or both trajectory groups representing resilient functioning (i.e., *Moderate-high, stable prosocial behaviour* or *High, stable prosocial behaviour* groups): child receiving treatment; internal assets; positive parenting; and number of children in the

home. Specifically, with every additional year that a child received treatment, the odds of belonging to the *High, stable prosocial behaviour* (compared to the *Low-moderate, ascending prosocial behaviour* trajectory group) decreased significantly by 39% (OR= 0.61). For worker-reported child internal assets, every one-unit increase on the internal assets scale significantly increased the odds of belonging to one of the two resilient trajectory groups (compared to the *Low-moderate, ascending prosocial behaviour* trajectory group) by 39% (OR= 1.39) for the *Moderate-high, stable prosocial behaviour* group and by 90% (OR= 1.90) for the *High, stable prosocial behaviour* group. Furthermore, with every one-unit increase on the positive parenting scale, there was a 23% (OR= 1.23) increased probability of belonging to the *Moderate-high, stable prosocial behaviour* group, and finally, every additional child in the foster home resulted in a decrease of 35% (OR= 0.65) in the probability of belonging to the *High, stable prosocial behaviour* group in comparison to the *Low-moderate, ascending prosocial behaviour* trajectory group.

### **Discussion**

The current study used longitudinal data to identify behavioural trajectories over a 4-year period in a province-wide sample of maltreated school-age children living in out-of-home care. In this way, the current study aimed to identify those trajectories which represented resilient functioning on conduct, emotional, and prosocial behaviour. The current study also investigated time-stable and time-varying predictors of these behavioural trajectories.

The findings indicated that there were distinct groups of children in foster care in terms of behavioural functioning across time. In general, children tended to exhibit moderately high, moderate, low, or absent levels of certain behaviours, and these rates

remained relatively stable over time. Specifically, about 6 in 10 were in either the *No problems* or *Low, stable* trajectory group for conduct (64.2%) and emotional (58.6%) problems. For prosocial behaviour, 9 in 10 (89.8%) were in either the *Moderate-high, stable* or *High, stable* trajectory groups, which represented resilient functioning. Therefore, a considerable proportion of the children in our sample were resilient in that they were functioning at levels within the normative range on the behavioural measures that were used.

These rates were surprising, given past research indicating that children in out-of-home care tend to exhibit many behavioural problems (Doyle, 2007; Lawrence et al., 2006; Sullivan & van Zyl, 2008). However, a recent study by Proctor et al. (2010) reported similar findings in that about 6 in 10 (66.7%) of the children in their sample had stable adjustment in terms of internalizing behaviours (similar to the emotional problems construct of the current study) while almost 5 in 10 (46.6%) had stable adjustment in terms of externalizing behaviours (similar to the conduct problems construct of the current study). The relatively high rates of resilient functioning for children in the current study may be a function of placement stability in that the average time they had been living with the same foster family was approximately 3 years at the baseline assessment ( $M = 2.9$ ,  $SD = 2.1$ ). Interestingly, the sample in Proctor et al. (2010) also had relatively stable placements (54.7% had the same caregiver at all five time points), with assessments of adjustment beginning 3 years after initial child welfare involvement. It is possible that this stable environment helped reduce behavioural problems that may have been present upon admission to care – a time often characterized by a number of transitions and crises (Perkins-Mangulabnan & Flynn, 2006). Along the same lines, it is also possible that those children who were faring poorly initially were placed with foster caregivers who had more expertise and training in dealing with

problematic child behaviours; therefore, upon assessment, these behaviours would be considerably improved (Orme & Buehler, 2001; Oosterman et al., 2007). Finally, caregiver reports on the behaviours of children in their care may have been biased toward underreporting the extent of behavioural difficulties.

Regarding the relative stability of behaviours over time, one possible explanation is that functioning was only tracked across a 4-year period. Additional years of data might reveal greater changes in behaviour as these children enter adolescence, as indicated by the preliminary trends that were visible (i.e., *Moderate-high, descending conduct problems*, *Moderate, ascending emotional problems*, *Moderate-high, descending emotional problems*, and *Low-moderate, ascending prosocial behaviour* trajectory groups). Furthermore, the measure of behavioural functioning used in the current study (i.e., Strengths and Difficulties Questionnaire) was limited in that behaviours were each assessed through caregiver reports on five items. It is possible that a longer scale, such as the commonly used Child Behavior Checklist (CBCL), might have revealed more variability. Finally, it is also possible that the age group used in the current study (i.e., 5-9 years at baseline) was too inclusive, such that differences sensitive to developmental period could not be detected. In order to test this possibility, post-hoc cross-sectional (i.e., 2008, 2009, 2010, 2011) one-way ANOVAs were used to examine the impact of child age and trajectory group membership on each outcome. The interaction between age and trajectory group membership was also tested. The results revealed non-significant findings for all but one interaction between age and trajectory group membership for emotional problems in 2008 ( $F(10, 244) = 2.46, p = .008$ ). Specifically, for those following non-resilient trajectories (i.e., *Moderate, ascending emotional problems*, *Moderate-high, descending emotional problems*), emotional problems were significantly

greater for older children. While for those following resilient trajectories (i.e., *No emotional problems*, *Low, stable emotional problems*), emotional problems did not differ as a function of the child's age. Overall, the findings indicate that differences in child age did not play a statistically significant role in the stability of behaviours over time.

Turning to predictors of trajectory group membership, a number of statistically significant child and foster family time-stable and time-varying predictors were found. For time-stable predictors, significant child variables were sex, age at first placement, and number of placements. In addition, there was one significant time-stable foster family variable, attachment to caregiver. These variables were significant across one or more behavioural trajectory groups. These findings were in line with the hypothesis in that girls were more likely to follow a *High stable prosocial behaviour* trajectory (i.e., resilient trajectory) in comparison to boys. Very few studies have investigated sex differences in prosocial behaviour among child welfare samples, although two recent Canadian studies using the Ontario Looking After Children (OnLAC) data (Bell et al., 2013; Marquis & Flynn, 2009) reported more prosocial behaviour among girls living in out-of-home care compared to their male counterparts. Furthermore, sex differences have been documented in the broader literature, with females tending to have higher rates of prosocial behaviour that involve interpersonal interactions, such as helping to care for others and offering emotional and relational support (Eagly, 2009). However, research also shows that males do exhibit prosocial behaviour, but this typically consists of such acts of such acts as helping strangers (e.g., rescuing, removing distress) and maintaining peer group cohesion (Eagly, 2009). Moreover, longitudinal studies generally do not indicate sex differences over time (Hastings, Utendale, & Sullivan, 2007).

In terms of age at first placement, children who were older when they were placed in foster care were more likely to exhibit resilient functioning in terms of their emotional well-being. Previous research investigating the impact of age at first placement has been mixed. For example, Holtan, Rønning, Handegård, and Sourander (2005) found that age at first placement did not significantly predict behavioural problems, while Kolko et al. (2010) found that children placed in out-of-home care at a younger age demonstrated heightened levels of posttraumatic stress (PTS) symptoms. These latter researchers stated that younger children might be more vulnerable to PTS symptoms as they have not yet developed coping mechanisms to help in dealing with such experiences. Placement at a younger age compromises key developmental tasks that are more likely to have already been attained in children of an older age, for example, attachment and emotional regulation (Arvidson et al., 2011; Romano et al., 2013). Younger children have also not yet had the opportunity to develop a supportive peer group, which might buffer the impact of out-of-home placement for older children and adolescents (Kolko et al., 2010). These compromised key developmental processes put younger children at higher risk for difficulties across a number of domains, including behaviour (Romano et al., 2013). Finally, this finding also might imply that placement at a younger age is a proxy for more severe adversity, given that child welfare workers exhaust all other options prior to removal of a child from their family home (OACAS, 2010).

Contrary to the study hypothesis, children with a greater number of placements were significantly more likely to exhibit resilient functioning in terms of their prosocial behaviours. Time spent in current placement might partially account for this finding. For example, Newton, Litronik, and Landsverk (2000) reported that multiple placement changes

contributed to both internalizing and externalizing behaviour problems for foster children and that initial externalizing problems proved to be the strongest predictor of placement changes. In the current study, children had been living in the same placement for an average of 3 years at the time of the baseline assessment. Therefore, it is possible that the impact on behaviour of previous placement changes was no longer as salient among the current sample of school-age children. Furthermore, living in a stable home environment for a period of 3 years might have led to a child's improved sense of well-being, thus increasing the likelihood of prosocial behaviours.

Turning to foster family variables, the hypothesis that attachment to the foster caregiver would be associated with greater resilience was partially supported. In particular, children who were reported to have a definite attachment to their foster caregiver were significantly more likely to exhibit resilient functioning in terms of their emotional well-being, in comparison to children who were reported to have little or no attachment. However, this relationship was not significant for conduct problems or prosocial behaviour. Previous research has indicated the importance of the caregiver-child relationship for child outcomes in out-of-home care (Cheung et al., 2011; Legault et al., 2006); however, the nature of these attachment relationships is complex. As previously mentioned, when children enter out-of-home care, they often come in at developmental points when they would otherwise have already fully developed attachments (Dozier et al., 2009). Due to maltreatment and separation from the primary caregiver, these children often have disorganized attachments in which they display a combination of seeking out and avoiding/resisting contact (Oosterman & Schuengel, 2008; Romano et al., 2013). However, if placed in a home with nurturing caregivers, research has indicated that the development of

secure attachment is more likely to occur. Subsequently, such an environment might act as a buffer to adverse life experiences, and children will be at decreased risk for developing problematic behaviours (Oosterman & Schuengel, 2008).

Foster caregiver training and years of experience did not significantly influence child behavioural trajectories. Previous research findings have been mixed with regard to the impact of foster caregiver training on child outcomes. A recent empirical review (Festinger & Baker, 2013) concluded that there is a lack of evidence regarding the effectiveness of current foster parent training programs. Additional research has indicated that while the typical training received (e.g., Parent Resources for Information, Development, and Education) may provide important information for foster parents, supplemental training for dealing with specific behavioural difficulties is likely needed (Chamberlain et al., 2008; Nash & Flynn, 2009). Such was the case in the current study in that foster parent training was not specific to changing child behaviours. Alternatively, it may be that other variables in the model mediated the impact of these foster caregiver variables. Specifically, previous research has indicated that foster caregiver characteristics are an important element to child functioning in out-of-home care (Sinclair & Wilson, 2003). Positive parenting and the ability to develop an attachment relationship with the child may transcend the knowledge that comes from training and years of experience. This might be especially applicable to foster family caregivers in comparison to kinship caregivers who may already have developed an attachment relationship with the child prior to his or her placement in out-of-home care. Sinclair and Wilson (2003) discuss this further in terms of the unpredictable ‘chemistry’ between caregiver and child that can make or break a placement. Years of experience might leave a caregiver well prepared in terms of dealing with problematic behaviours, but this

does not guarantee that they will be able to meet all of the child's other needs (e.g., nurturance; Sinclair & Wilson, 2003), which is important for promoting more adaptive functioning. This was partially evident upon examination of the bivariate correlations between foster caregiver training and years of experience with all other variables included in the models (Tables 11-13). Foster caregiver years of experience was significantly associated with positive parenting, child age at first placement, and placement type across all outcomes while caregiver training was significantly associated with placement type and number of children in the home across all outcomes.

Turning to time-varying predictors, significant variables were child receiving treatment, internal assets, number of children in the home, positive parenting, and number of changes in caregiver reporter. These variables were significant across one or more behavioural trajectory groups. Number of years the child was receiving treatment was a consistent predictor of less adaptive functioning on all outcomes. While this relationship has not been investigated before, we can speculate that the children who remain in treatment for longer periods of time are likely the ones struggling the most with such behavioural difficulties as conduct or emotional problems. Therefore, the likelihood of membership in a low stable or absent behavioural trajectory group would be significantly reduced. Furthermore, correlations between predictor and outcome variables (Tables 7-9) reveal that children receiving treatment tend to have more tumultuous experiences in care, including greater number of placements, greater adverse life experiences, and a greater number of changes in reporter, which might partially account for this finding.

Regarding developmental assets, the hypothesis was partially confirmed in that greater internal assets increased the likelihood of resilient functioning for both conduct

problems and prosocial behaviour. There are a limited number of past studies on developmental assets, but the current study findings are in line with research conducted with both community and foster care samples (Scales et al., 2000). These results suggest that supporting a child's development in multiple domains is beneficial to their functioning across the school-age period. For children in out-of-home placements, it would seem important for child welfare workers and foster caregivers to pay attention to which assets a child does and does not possess, particularly within the internal sphere (e.g., commitment to learning), in order to create a plan of care that includes strengthening identified assets and putting resources in place to promote important assets that the child does not currently have. Surprisingly, external assets did not significantly predict trajectory group membership. There are a number of possible explanations for this finding. The first may be the significant correlation between the external asset scale and several other variables, namely child sex, number of placements, attachment to caregiver, changes in reporter, child in treatment, and internal assets as well as each of the outcome variables (Tables 7-9). It is possible that the inclusion of these variables mediated the significant relationship between external assets and the behavioural trajectories. Another possibility might be the relevance of the external asset items to the current sample of school-age children, which refer to influences outside of the home (e.g., caring neighbourhood, participation in sports, clubs, or organizations within the school or community). It may be that the impact of such variables is not as salient for younger children as the majority of their time is spent within the home interacting with family members.

Turning to foster family time-varying variables, a greater number of children in the home decreased the odds of resilient functioning for both conduct problems and prosocial

behaviour. Studies investigating the impact of household size on foster child outcomes are scarce, but we can speculate that a greater number of children in the home leaves caregivers less time to devote to each child individually. Therefore, the child may not have as much of an opportunity to develop a meaningful relationship with their caregiver, which might result in negative behavioural outcomes or the exacerbation of pre-existing problems. Furthermore, caring for additional children puts a strain on the psychosocial, health, and financial resources of the foster caregiver (Barth et al., 2008), which in turn might lead to reductions in the quality of parenting.

Turning to positive parenting, the hypothesis was partially confirmed in that greater positive parenting increased the odds of resilient functioning on both conduct and prosocial outcomes. Such findings are in line with previous research, which has indicated that a positive and supportive caregiver-child relationship is critical to the well-being of children in out-of-home care (Cheung et al., 2011; Legault et al., 2006). For maltreated children, living in a supportive and high-quality family environment can work to buffer the negative effects such experiences can have on child development (Masten & Shaffer, 2006). Such an environment might also improve a child's sense of well-being and connectedness, thus increasing the likelihood of prosocial behaviours. Surprisingly, positive parenting was not significantly associated with emotional problems. The measure of positive parenting used in the current study did not directly assess the quality of these caregiver-child interactions, but rather their frequency, which might partially account for this lack of statistical significance. In other words, it is likely that the attachment relationship between the caregiver and child holds more weight in terms of having an impact on the child's emotional well-being in comparison to the frequency of positive interactions.

Finally, a greater number of changes in caregiver reporter across the 4-year period significantly reduced the likelihood of a child following either a *No emotional problems* (i.e., resilient trajectory) or a *Moderate, ascending emotional problems* trajectory. This finding speaks to the detrimental impact on the child of disruptions in caregivers. Previous research has indicated that children who lack a consistent caregiver have been found to experience a host of negative outcomes (e.g., internalizing and externalizing behaviours, attachment disorder), and multiple changes in caregiver tend to be common among children living in out-of-home care (Jones et al., 2011; Oosterman et al., 2007; Proctor et al., 2010). However, Proctor et al. (2010) cautioned that such a relationship might be bi-directional, such that a child's initial problematic behaviours could also lead to caregiver instability. For the current study, it is possible that such a relationship is at play, given that child behaviour and changes in reporter were measured concurrently; however, this finding does imply that these variables continue to influence one another over time.

In summary, there were several time-stable and time-varying predictors of behavioural resilience, which varied depending on the outcome (i.e., conduct problems, emotional problems, or prosocial behaviour). Such findings underscore the complexity in understanding foster children's developmental outcomes and imply that a comprehensive approach is needed whereby elements from various contexts of a child's life are taken into consideration in the evaluation of their behavioural functioning.

### **Study Limitations**

The current study had several limitations, the first of which is the non-experimental design that precludes causal explanations. Second, information on the socio-economic status of the foster families in our sample was not available, which may limit the generalizability of

findings. Third, data were gathered only from caregiver and worker reports, so there may have been reporting biases such as social desirability, especially with regard to the family-level variables (i.e., parenting behaviours). Fourth, the SPSS method by which missing data were imputed is limited. Future research should consider using multiple imputation by way of SAS PROC MI (Graham, 2012). Finally, the definition of resilience was narrower than has sometimes been used in previous research, given that the focus was primarily on behaviours. It is acknowledged that resilience in one domain does not necessarily indicate resilience in other domains; however, the focus was on behaviours due to research indicating that a number of children in out-of-home care struggle with such difficulties. Results should be interpreted with an understanding that they are part of a broader process that encompasses multiple domains and competencies.

### **Study Implications**

The study findings reveal that examining behavioural outcomes over time among maltreated children in child welfare is important, given that distinctive groups of children were found, indicating heterogeneity among this population. While a considerable number of children were resilient over time (58.6-89.8%), it is important to keep in mind that the focus was on only one domain of functioning, namely behavioural. Therefore, the results need to be interpreted in terms of a broader context where children in out-of-home care might have varying levels of functioning across other equally important domains (e.g., educational, social, and cognitive).

The current study also identified a number of variables that appear related to promoting behavioural resilience among children in out-of-home care. These variables are both static and dynamic variables that cut across various contexts (i.e., within the child,

within the foster family, with regard to the child welfare experience). These findings emphasize the importance of considering child functioning within an ecological model, which posits that many factors play a role in child behavioural outcomes. Influences more immediate to the child are assumed to have more of a direct impact compared to distal influences; however, such variables also work together and mutually affect one another to impact on children's behavioural outcomes. Furthermore, the findings indicate the importance of adapting a developmental perspective when assessing outcomes of children in out-of-home care given that key developmental processes may be disrupted upon removal from the family home. Therefore, it will be vital for prevention and intervention to ensure the best home environment possible for these children and put into place efforts to help them build on their strengths and address their weaknesses.

### **Study 3: Child Resilience in Out-of-Home Care: Child Welfare Worker Perspectives**

The study of resilience and its associated factors is highly applicable to the child welfare population inasmuch as children living in out-of-home care have often experienced much adversity and are particularly vulnerable to the development of behavioural problems. Previous research has identified a number of factors that are associated with child resilient outcomes. Such variables have primarily been identified through quantitative research findings (detailed previously in study one and two) and include individual differences such as internal developmental assets, connections to biological parents, strong connections to one or more effective foster parents, and community level variables such as effective schools (Bell et al., 2013; Masten, 2006). Therefore, the focus of the current study was to review the relevant qualitative literature, albeit limited, and to address two aims, the first of which was to gain child welfare workers' perceptions on the well-being and functioning of children in out-of-home care. The second aim was to explore factors identified by child welfare workers

as influencing these children's well-being, using an ecological perspective that inquires about possible sources of resilience from within the children themselves, their foster family, and their community (including the worker and the child welfare agency).

### **Qualitative Perspectives on Resilience**

While the majority of previous research on resilience among children in out-of-home care has been quantitative in nature, several qualitative studies have been conducted (Drapeau, Saint-Jacques, Lepine, Begin, & Bernard, 2007; Fernandez, 2006; Hass & Graydon, 2009; Johnson-Garner & Meyers, 2003; Schofield & Beek, 2009). Past studies have indicated that the point of view of children and adolescents is important because they are able to provide insight into their own functioning that may not be apparent from the reports of others. Drapeau et al. (2007) conducted interviews with 12 adolescents 14 to 17 years of age living in out-of-home care in Quebec (Canada) who were identified by child welfare practitioners as resilient in at least three out of five domains, specifically scholastic participation or employability, peer relationships, adult relationships, personal characteristics, and behaviour. Resilience was determined based on practitioner ratings on several items for each of the five domains, and competence in each domain was considered equal to or greater than that of other youth in out-of-home care. Findings from the adolescent interviews revealed three turning points that were associated with resilience, namely action (i.e., a sense of achievement), self-reflection, and relationships. Turning points were defined as points in an adolescent's trajectory that set them on a path to greater resilience. These turning points reflected four major themes, including an increase in self-efficacy, distancing oneself from risk (e.g., removal from a group of antisocial friends), new opportunities in the

environment (e.g., volunteering in the community), and multiplication of benefits in multiple domains (i.e., family, school, social life, and behaviour).

Hass and Graydon (2009) also investigated sources of resilience among a U.S. sample of 44 young adults (mean age of 22 years) who were removed from their biological homes as children. Resilience was defined as the completion of a post-secondary educational or vocational program or at least junior standing in a four-year University program. The young adults identified a variety of factors associated with their success, most significantly a sense of competence, goals for the future, social support, and involvement in community service activities.

Finally, a five-year longitudinal study using a prospective, repeated mixed-methods design examined the nature of children's needs, strengths, and difficulties as well as caregiver responses to these needs (Fernandez, 2006). The sample consisted of 59 children 2 to 15 years of age placed with non-relative foster caregivers in Barnardos, Australia. Qualitative data were collected by way of semi-structured interviews with children over the age of 10 and their caregivers in order to investigate factors associated with better adjustment. Findings indicated that, from the children's perspective, a stable placement, cohesive relationships with their foster caregivers, contact with biological parents, and friendships were important contributors to their well-being.

In addition to the perspectives of children and youth, foster caregiver perspectives on resilience among children in out-of-home care have been previously investigated. Such perspectives are also of importance given that foster caregivers spend a significant amount of time with the children in their care, and positive caregiver-child relationships can work to attenuate effects of the adversity and stressors experienced by a child prior to entering out-

of-home care (Masten & Shaffer, 2006). For instance, in a U.S. sample, Johnson-Garner and Meyers (2003) investigated factors associated with child resilience through interviews with 30 African-American kinship caregivers. In order to recruit families for participation, child welfare practitioners were asked by the study authors to identify children between 7 and 17 years of age on their caseloads who they perceived to be either resilient or non-resilient. Practitioners were provided with a definition of resilience that included child, family, and contextual factors. The findings from caregiver interviews revealed that resilient children lived in households where their kinship caregivers had better adjusted to their caregiving role, had more secure relationships with the child's birth parents, and had higher levels of social support in comparison to caregivers of non-resilient children. Features common to both households with resilient and non-resilient children were healthy communication, cohesion, and a sense of loyalty (Johnson-Garner & Meyers, 2003). In a more recent U.K. study, Schofield and Beek (2009) conducted interviews with 32 foster caregivers. Interview questions focused on the caregiver's view of the child's secure base, defined as five interacting dimensions linked with resilient functioning, namely availability (i.e., helping young people to trust), sensitivity (i.e., helping young people to manage their feelings and behaviour), acceptance (i.e., building young people's self-esteem), co-operation (i.e., helping young people to feel effective), and family membership (i.e., helping children to belong). Foster caregivers confirmed the importance of each dimension for child development and resilient functioning, with a particular emphasis on the need for continuous and long-term support (Schofield & Beek, 2009).

In sum, the qualitative literature (while limited) illustrates that a number of variables appear related to resilience across several different domains of functioning. Similar to

findings from the quantitative research literature, these variables cut across the various systems identified in the ecological perspective, including a sense of competence and self-efficacy (ontogenic development), social support (microsystem), and opportunities to participate in the community (mesosystem; Klein, Kufeldt, & Rideout, 2006). This information has been derived primarily from children in out-of-home care and from caregivers (primarily foster parents).

Interestingly, the perspectives of child welfare workers employed in child welfare settings have largely been overlooked as sources of information despite the fact that they have daily contact with children in out-of-home care. While limited, qualitative studies that have interviewed child welfare workers have revealed important findings. In a study by McMurray, Connolly, Preston-Shoot, and Wigley (2008), 19 social workers from the U.K. were asked to review their case lists and identify youth whom they perceived to be at risk for being placed in out-of-home care. This resulted in the identification of 52 children 0 to 16 years of age. Interviews were conducted with each worker and were structured around the three following domains: the child's developmental needs; the caregiver's capacity to respond appropriately to the child's needs; and the wider family and environmental factors. The workers were also asked to reflect upon ways to promote resilience. Findings revealed that workers had difficulty conceptualizing and assessing resilience because of the multiple definitions and meanings that the term held. Despite this difficulty, they indicated that the majority of children with whom they worked were resilient (regardless of whether or not the child exhibited behavioural or emotional problems), and they highlighted the role of professionals, family members, and the educational system in promoting resilience.

A more recent U.S. study utilized both quantitative and qualitative methods (Thomas & Reifel, 2010) to collect data from 102 child welfare workers on their self-reported knowledge and skills in using resilience-based assessment, intervention, and case management within the child welfare system. Results revealed that the majority of child welfare workers identified concepts (e.g., vulnerability, adversity/trauma) as well as risk (e.g., multiple placements) and protective (e.g., sense of being loved) factors associated with resilience. Most also highlighted the importance of using a resilience-based approach when working with children in out-of-home care. This was described as an approach that works to identify strengths within the individual and/or family environment in an effort to foster supports that will assist individuals and families in recovering from trauma and adversity. In a similar vein, Daniel (2006) explored the use of resilience as a construct to assist social workers in the U.K. with assessment and planning. Specifically, eight social workers of eight children between 5 and 11 years of age who had experienced neglect were recruited for training on the concept of resilience and semi-structured interviews. Findings from this mixed-methods study indicated that all workers were familiar with the concept of resilience and had incorporated it into their work in some way. Most notable among findings from the interviews was the conclusion that a child's secure base (i.e., positive relationship with an adult) underpinned all other domains discussed (i.e., education, friendships, talents and interests, positive values, social competencies).

### **Study Objectives**

The perspectives of all individuals involved in children's out-of-home placement are important for furthering our understanding of resilience as each provides unique insight into this concept that may not be apparent from the reports of others. Past studies have indicated

that child welfare workers' perceptions of resilience are of value given that the promotion of resilience is often integral to their work with maltreated children and adolescents, especially the ones living in out-of-home placements. As seen, existing quantitative data has been based primarily on the U.K. and U.S. child welfare systems. Furthermore, the use of qualitative research methods in this area is rare. However, this information can complement findings from quantitative analyses in a way that can help to provide a more in-depth understanding of resilience (Pope & Mays, 1995; Ungar, 2003). Therefore, the current study had two aims, the first of which was to gain child welfare workers' perceptions on the well-being and functioning of children in out-of-home care. The second aim was to explore factors identified by child welfare workers as influencing these children's well-being, using an ecological perspective that inquired about possible sources of resilience from within children themselves, their family (foster and biological), and their community (including the worker and the child welfare agency).

## **Method**

### **Sample and Procedure**

To be included in the current study, child welfare workers were required to be currently employed within a child welfare agency (Children's Aid Society) in the province of Ontario (Canada). After receiving University ethics approval for the project, the Director of Psychological Services at the participating child welfare agency was contacted who then distributed an invitation to participate in the study to all child welfare workers within the agency. The first author also gave a brief presentation to a group of child welfare workers at the participating agency for purposes of recruitment. Interested child welfare workers contacted the first author directly by telephone or email, and were screened for participation

based on the above-mentioned criteria, following which an appointment was scheduled at a date and location convenient for the participant. Each child welfare worker who agreed to participate was instructed to review his/her current and previous caseload prior to the interview to identify at least one example of a child (0-18 years of age) whom he/she felt was functioning particularly well and at least one example of a child who was functioning poorly. The purpose of doing so was to help facilitate discussion during the interview by allowing the workers to think about what factors might contribute to each child's functioning ahead of time.

Eleven child welfare workers (4 males, 7 females) were interviewed between September 2012 and June 2013. Regarding level of education, 4 workers had Bachelor of Social Work degrees, 4 had Bachelor of Psychology degrees, 1 had a Bachelor of Sociology degree, 1 had a Master's degree in Social Work, and 1 had a Child and Youth Worker college diploma. Time worked in a child welfare setting ranged from 5 to 31 years, with an average of 16 years.

### **Interview Grid**

A semi-structured interview grid was developed, which included three types of questions, namely main questions, probes, and follow-ups. Main questions were prepared ahead of time in order to direct the discussion. Probes were used throughout the interview to signal the interviewee that longer and more detailed answers, specific examples, or evidence were needed and to indicate that the interviewer needed more precise information (Rubin & Rubin, 1995). Follow-up questions were also used as they are designed to pursue themes that are discovered, elaborate in even more depth the context of answers, and explore the implications of what has been reported by the interviewee.

The interview lasted approximately 60 minutes and collected demographic information (e.g., education level, time worked in child welfare) and each worker's perceptions on how children are doing in out-of-home care. The interview questions were designed based on previous studies that have interviewed child welfare workers on similar topics (e.g., Daniel, 2006; McMurray et al., 2008). In addition, the ecological model (Belsky, 1980; Bronfenbrenner, 1979; Lynch & Cicchetti, 1998) was used to inquire about factors related to the child, the child's family (foster and biological), other significant individuals, and the community (including the worker and the child welfare agency). Specifically, child welfare workers were asked to describe factors from each of the levels of the ecological model that they perceived to contribute to a child's functioning. It should be noted that the term "resilience" was not directly used as a part of the interview questions. In qualitative interviewing, there is a risk associated with the use of terms like "resilience" in that one might only learn about the interviewee's particular definition of the term. The approach in the current study allowed for a more open inquiry about the construct and permitted workers to define child functioning in their own words.

### **Data Analysis**

All interviews were audio-recorded, transcribed, and then transferred into QDA Miner, a data analysis software package used for coding textual data, retrieving, and reviewing coded data and documents. Data analysis was rooted in conventional content analysis (Hsieh & Shannon, 2005; Miles & Huberman, 1994), a technique used to describe a phenomenon of interest, making use of the exact words from the text that appear to capture key thoughts or concepts. The first step in data analysis was open coding of each interview transcript. A code is most often a word or a short phrase that summarizes an idea in a portion

of a transcript (Saldãna, 2009). Specifically, this involved reading each line of a transcript and naming each segment of the data. Upon completion of the initial coding phase, final names were selected by examining all initial codes, finding ones that fit together, and renaming each one to encompass the entire idea present in the codes. Upon finalizing the code names, categories were established, which involved grouping codes with similar ideas and characteristics together (Saldãna, 2009). Several categories required further refinement, and subcategories were established where needed. Appendix F provides documentation of categories and subcategories as well as accompanying code examples.

The first author completed all of the coding, and a number of strategies were employed in order to ensure validity throughout the research process. One strategy was reflexivity, which is the practice of active, deliberate self-awareness (Finlay, 2002). The goal of reflexivity is to identify the interests, assumptions, and personal issues that one might have in relation to one's study (Ahern, 1999; Maxwell, 1998; King & Horrocks, 2010). Specifically, prior to conducting the interviews, this included writing in a journal to document thought processes, motives, and assumptions with regard to the study. During the interview stage, emotional reactions and other associated feelings were documented, and finally, in the interview analysis stage, remaining open to alternative ideas and interpretations of the data collected was of importance (Finlay, 2002). Another strategy to ensure quality and rigor in qualitative research was searching for disconfirming evidence (Ahern, 1999; Maxwell, 1998). This strategy was used once the data analysis stage had begun, and it involved the first author searching the interview data to find discrepant evidence or negative cases that did not concur with what had been concluded. This strategy better ensured that important information was not overlooked due to researcher bias. Finally,

peer review was used to identify any potential threats to validity or flaws in logic or methods. In particular, discussions occurred between co-authors as well as a consultation between the first author and a local qualitative researcher to gain feedback and suggestions during the data analysis stage.

### **Results**

A number of themes were identified through the analysis. In general, child welfare workers identified several sources that contribute to child resilient functioning in out-of-home care, with particular emphasis on characteristics of children and their foster families. Less salient, but still of importance, were themes related to other significant individuals (e.g., grandparents), community characteristics, and factors related to the worker and to the child welfare agency.

#### **About the Child**

Child welfare workers identified a number of variables related to the children themselves that contributed to resilient functioning in out-of-home care. These included specific characteristics of the child, the child's means of relating with others, commitment to school, participation in activities, and early history. When asked to describe an example of a child who is doing well in out-of-home care, one worker said, *"I really think it's her personality that I was always amazed, surprised that she was doing so well when everyone expected something bad to happen, like expected to see her having a harder time, but she still did really well."* Several workers echoed this theme of consistency in response to challenging life circumstances as a contributing factor of resilience. For example, another worker reported, *"She is great, she is really, really bubbly and personable and sociable and really resilient kid, and she is a good advocate for herself and with all that she's been*

*through, she's still able to smile.*" Other child characteristics considered to contribute to resilience in out-of-home care were having goals and knowing what one wanted in life. The influence of a child's intelligence (i.e., being smart or bright) and social skills (i.e., ability to make friends) were also discussed.

In addition to characteristics of the child, the majority of workers identified the child's ability to relate to others and to develop meaningful relationships as promoting resilient functioning. For example, one worker stated, *"I think it's those kids that are able to develop relationships and go into relationships where they can give and take, like a healthy relationship."* The importance of children forming connections was also emphasized, as illustrated in the following quotation: *"the kids that did really well were the kids that were able to foster these relationships and maintain these relationships. They'd create a family of their own."* Finally, workers also overwhelmingly specified that commitment to school was an indicator of resilient functioning in out-of-home care. One worker reflected, *"What we found is children do the best in care when they're doing well in school."* Workers expressed that those children who enjoy school and who want to succeed academically tend to do well in out-of-home care.

With regard to activities, over half of interviewees indicated that children doing well in out-of-home care are typically involved in extracurricular activities. One worker maintained that when children develop an interest in something, it increases their motivation, which subsequently can impact multiple domains of functioning. He stated, *"I find that the youth that discover kind of their passion become motivated, and when they become motivated, again strength based, they tend to want to develop what's positive and they tend to do better at places where they didn't before."* Finally, workers highlighted the importance

of early history on children's current functioning. Workers stated that children entering out-of-home care can have a range of early adverse life experiences, including parental drug and alcohol abuse, exposure to intimate partner violence, and sexual abuse. However, it was often indicated that those children doing well did not have extensive histories of trauma. For example, one worker noted, "...he didn't have the significant trauma in his early years like some of the other youth that we deal with."

Interestingly, when workers were asked to describe children whom they believed to be functioning poorly in out-of-home care, similar themes (although in the opposite direction) were identified. For instance, one worker said, "*I think that this youth doesn't have the same internal factors, lack of self-esteem, lack of appropriate role models, those types of things that help you to grow and feel a sense of self-worth.*" Poorly-functioning children were described as angry, aggressive, and emotionally delayed or immature. Furthermore, workers tended to describe these children as having more significant mental health issues, such as posttraumatic stress disorder and depression.

With regard to their relationships with others, workers identified non-resilient children as lacking important connections. Several of the interviewees discussed the way in which some children simply did not seem interested in developing relationships, while others had a desire to connect with others but were hindered by their mental health or behavioural difficulties and/or by multiple placement moves. Behavioural problems were discussed extensively as an impediment to resilient functioning for children in out-of-home care. Particularly among adolescents, substance use as well as participation in risky sexual behaviour, and/or criminal activity (e.g., stealing) were identified as contributing to poor relationships and multiple placement moves, thereby limiting opportunities to develop

meaningful connections with others. Furthermore, workers noted that these behavioural problems also tended to contribute to problems in school. For instance, one worker described a child on her caseload as follows: *“He’s got some issues at the school, but he is a 15 year old boy. I don’t think they’re issues because he’s a child in care, he’s been exposed, but he’s got some issues because he’s a 15 year old boy and likes to talk back and doesn’t want to do homework.”*

Finally, child welfare workers also discussed children’s early history as contributing to poor functioning. For example, children with greater exposure to a range of maltreatment types (e.g., physical and/or sexual abuse, exposure to intimate partner violence, and parental drug/alcohol use) over longer periods of time were not identified as exhibiting resilience. Workers noted that greater and more chronic maltreatment often signals highly deficient parenting on the part of the biological parents, which includes lack of structure and inconsistent parenting practices. One worker spoke of a young girl’s life prior to the age of 8 (when she entered care), *“no boundaries, no curfew, no discipline, do what you want, when you want, with who you want, and what not.”* Once in care, workers noted this early instability often continued in the form of multiple placement moves or several reentries into care; however, interviewees emphasized that multiple moves are not always due to a child’s behaviour. Rather, moves may be the result of a poor match between the foster parent and child while others are unsuccessful attempts to reintegrate the child back into the biological home.

### **About the Foster Family**

Child welfare workers all underlined the importance of the foster family for child resilient functioning in out-of-home care. In particular, workers discussed specific foster

caregiver characteristics, their ability to relate to the child, and the environment they provide as key contributing factors. With regard to foster caregiver characteristics, patience, problem solving skills, and honesty were among the factors outlined. Several workers also mentioned that warm and nurturing foster caregivers are important in promoting resilient functioning for children in out-of-home care. These are foster caregivers that care for the child, who understand the child's needs, and who make the child feel reassured. One worker described a foster caregiver as "*superwoman*", and another stated, "*I think she's amazing and if I could clone her and foster all the children that I work with, it would be great.*" Along similar lines, workers highlighted the importance of the foster caregiver-child relationship. One salient aspect of building this relationship involved the initial match between the foster caregiver and child. Interviewees stressed that a good match is critical to the child's success. For instance, one interviewee reported, "*I've seen foster parents that can do it for one kid but not another kid, like I think it's just, it's that match.*" Related to the match is the way in which the foster caregiver relates to the child. Having good communication skills and spending time with the child were perceived as highly important aspects to the relationship. One worker maintained that it is about spending free time with the child, "*...and so when I say free, it's not because you did good in school, it's not because you did something great, it's free, it's free because parents spend time with their kids.*"

Over half of the workers identified that a strong relationship between the foster caregiver and child is formed when the foster caregiver understands that maintaining a connection to the biological family is key. Such a connection can help prevent children from experiencing a loyalty conflict or feeling stuck in the middle between their foster family and biological family. One worker stated, "*...it gives the children permission to say, I have a*

*bigger family.*” Also, such a connection with the biological family tends to foster a better relationship between the biological family and the child welfare agency because the family is reassured about who is taking care of their child. One worker said this *“takes the fear away and it dissipates and then when we have a better working relationship with the family, then it’s smoother for the child, right, then we can progress and move toward working together.”*

Finally, child welfare workers identified the foster family home environment as a contributing factor to resilient functioning for children in out-of-home care. Integrating children into the family home is vital to their well-being in out-of-home care. For example, one worker spoke about foster caregivers who included the child in their family vacation plans while another spoke of a foster family who helped a young woman in their care move away to college with the understanding that they would still be there as a support for her. Interviewees stressed that a predictable, stable, and caring environment contributes to children succeeding and doing well in out-of-home care and beyond.

When workers were asked to identify family-level characteristics that could hinder resilient functioning for children, the discussion focused on the biological family. As previously mentioned, children often struggle with loyalty conflicts which have been characterized by psychological distress and behavioural problems that arise from a child’s conflicting feelings of loyalty, trust, and affection toward their biological parents and their foster parents. Workers noted that loyalty conflicts are worse when the biological parent is not supportive of the child’s placement in a foster home. One worker described how a child in such a situation might feel: *“...they worry that if I love my mommy, that this mommy over here (my foster mommy) is going to be upset and then if I love my foster mommy, my real mommy is going to be really upset and mad, so you know kids are caught, they’re really*

*caught in this loyalty thing.*” Another aspect that was discussed is the context in which children enter out-of-home care. For instance, interviewees mentioned that children are often blamed by their biological parents for their circumstances. One worker described an instance where a biological mother refused to participate in services offered because she believed there was something wrong with her child and not the family more generally. Similarly, another worker recalled that upon dropping the child off at the child welfare agency, a biological parent stated, *“you’re the problem and once they fix you, you can come back home.”* Entering care under these negative circumstances was thought to contribute to a child’s adjustment once placed into a foster home.

### **Other Significant Individuals**

In addition to the foster family, workers spoke of other individuals who can play a significant role in promoting children’s resilient functioning in out-of-home care. Grandparents were often highlighted as positive influences in a child’s life. One worker said, *“...he also has an amazing, amazing relationship with his maternal grandfather. And so does he help and contribute to his well-being? Absolutely.”* Other significant individuals identified included counselors, teachers, siblings/stepsiblings, members of the extended family (i.e., aunt, uncles, and cousins), friends, and community groups.

### **About the Community**

With regard to the community, child welfare workers discussed the importance of institutions (e.g., schools), the setting (rural vs. urban), and the socioeconomic changes that children often experience upon placement in out-of-home care. About one third of interviewees positioned the school as a key institution involved in promoting child success. One worker stated, *“I think a good school placement too where the school is strength-based*

*and is not already labeling the child as a problem because they're with CAS really helps contribute to their success.*" Several workers mentioned that not all children encounter the same level of support from their school, but when they do, it can make a difference. For example, one worker noted, *"most of our kids have had real bad experiences with school, so school is absolutely huge."*

Over half of child welfare workers also identified the significant role that the placement setting can have for a child in out-of-home care, and in particular, the impact of a rural placement. Children placed in rural settings are physically removed from the negative influences to which they were exposed. Such a setting also makes it difficult for children to run away. Finally, workers reported that living in the country provides children with new experiences (e.g., horseback riding, camping) and space to connect with the outdoors. One worker noted, *"what I have found, and I have had foster families in rural environments, is that children do embrace and connect with that type of living."*

Finally, almost half of the interviewees discussed the impact of the change in socioeconomic status that often accompanies placement in out-of-home care. While socioeconomic status is not used as a matching tool to find a foster family for a child, many children do experience a positive change in socioeconomic status upon entering out-of-home care. For instance, one worker said, *"Oh yeah for sure, the children that come into foster care will experience a very different socioeconomic difference between the families that care for them and their own families."* This move toward greater socioeconomic advantages is thought to provide children with a wider range of opportunities and activities that they otherwise would not have had the chance to experience. Interviewees also often associated the change in socioeconomic status with living in safer neighbourhoods, which provides

children with greater freedom to participate in community clubs and events, which in turn can promote resilient functioning.

### **About the Worker**

In discussing their own role in promoting child resilience, workers identified a set of key desirable characteristics, one of which was communication skills. More specifically, workers noted the need to communicate effectively about the child to several individuals, including the foster family, the family of origin, as well as professionals in the field and community. Furthermore, workers discussed the importance of patience, a non-judgmental attitude, sincerity, and honesty. Lastly, workers emphasized the importance of having a love for children. One worker expressed, *“You just need to be doing this ‘cause you love children, that makes a big difference.”*

Several workers also discussed the importance of the worker-child relationship. The majority of workers underlined that spending time with the children on their caseload is key to the development of a good relationship; however, a common concern was the lack of time to do so. One worker stated, *“I wish I could spend more time with my kids to get to know them a little bit more”*, while another worker reflected on the changes to their workload that have occurred over time, *“people need to spend time and to get to know kids. I feel very fortunate that when I was doing protection, it was in a time where we didn’t have computers at our desks and the big expectation was that you spent time with the kids.”* The general consensus among workers was that current administrative requirements and caseload size often interfered with the time they could spend with the children in their care. Another important aspect to this relationship is the stability and continuity that a worker can provide. One worker described the long-term relationships that he/she has developed with children

over a number of years, *“The other thing is I’ve been around long enough to see these kids as adults now ‘cause they still come in, and drop in and look me up and that kind of thing.”*

Providing consistent support to the child was believed to be important. Another worker stated, *“I think, I mean in my mind, the consistency, because I was around for the kids was important. And I think that makes a huge difference because you can go from the beginning to the end.”*

Furthermore, workers expressed the importance of their role as an advocate for the child across multiple systems; for example, within the school and the child welfare agency. Within the school system, one worker described her work with respect to education around Attention Deficit Disorder (ADD), *“I’m really good with kids with ADD, and I’m working with school boards with respect to that because the problem with ADD is that a lot of these kids look normal right, but there are subtle differences to it...and teachers don’t always see that”*. Within the child welfare agency, workers expressed that advocating is often necessary in order to ensure the best placement for the children that come into their care. One worker noted, *“I find that internally there’s a lot of politics that I often find we have to advocate for the kids that we’re supposed to help internally. It just doesn’t make any sense to me”*, and another worker stated *“...wanting to fight for change, don’t lose sight of that because it’s a really good place to do that when you’re in a really bureaucratic and government agency like CAS, that’s where, those are the places that need to change, know what I mean?”*

Workers voiced that, in addition to supporting and advocating for the child in their care, they are often a key support to foster caregivers. It is important for workers to develop a good working relationship with foster caregivers to ensure that the foster caregiver feels comfortable asking for help when needed. One worker described, *“It’s the relationship*

*building that's the most important thing because I think our foster families need to know someone is truly there for them to do that job really well."* Workers also noted that part of their role is also to reassure foster caregivers. One worker said, *"A lot of it is to make sure they're doing the right thing, they just need to talk to someone or bounce back the idea, am I doing the right thing, just like any parent would. So I think I play that role as well"*.

### **About the Agency**

Regarding the influence of the child welfare agency on child resilient functioning in out-of-home care, workers discussed the role of finances and funding, organizational level impacts (i.e., working as a team, adaptability, openness to change), and agency goals. In terms of finances and funding, workers spoke about the impact that agency funding can have on children. For many children, out-of-home care placement leads to a great increase in resources. For instance, children with an interest in postsecondary schooling are provided with the funding for their studies. One worker stated, *"...and I think if I can talk about, you know, a young lady that 5 years ago, did amazingly well, compared to somebody maybe 20 years ago, the difference is the funding."*

Furthermore, workers highlighted the importance of working as a team with others involved in the child's life to provide support. One worker stated, *"You know it's like sort of that whole piece of, that whole teamwork that needs to take place. I need to have faith in what the foster home or group home parent is telling me, I need to then be able to liaison with the other professionals involved and we need to actually all work together and you know, sort of set a plan where everybody is on the same page, and I think kids do better if that happens to take place."* Individuals on this team might include the child welfare worker, his/her supervisor, co-workers, the staff psychologist, and the child's family (foster and/or

biological). Workers also spoke specifically about the support they receive from individuals within the agency (i.e., co-workers, supervisors) in the completion of their work. One worker stated, “*we support each other and that’s really really key too because child welfare is very stressful, you know, it’s not easy situations we deal with most of the time.*” Other organizational characteristics which were highlighted included adaptability and openness to change. In general, workers reported that an open mind is needed to promote change and progress within the agency. One worker stated “*I embrace any change that comes up because I know we’re [the agency] always trying to improve and it’s not always welcome because we don’t always like change, it’s hard on us, but change is constant.*”

Turning to agency goals, the majority of interviewees spoke about permanency and the impact of this goal on children in out-of-home care. When a child enters out-of-home care, child welfare workers must first attempt to locate a kin member who might be able to care for that child. If one cannot be located, a search for an appropriate foster family is conducted with the ultimate goal of placing the child in a permanent home, if returning to the family of origin is not an option. The purpose of providing children with permanency is to avoid the negative impact that instability can have. One worker noted, “*What we don’t want is disruptions for the children because that’s when we know we’re not helping them.*”

Workers also expressed that a permanent home contributes to greater success upon aging out of care, as these children are more likely to remain connected with their foster families who provide much needed support. One worker discussed the difficulties faced by children who age out of care without such supports in place, “*...they really are alone because they have nowhere to fall back on...most of our kids are afraid about aging out of care at either 18 or*

*21 and that's hugely compounded if they have mental health issues and there's nobody there to pick up the ball."*

### **Discussion**

The current study used semi-structured interviews to investigate child welfare worker perceptions on child resilient functioning in out-of-home care. Workers also identified factors that they perceive to influence child resilience, working from an ecological perspective that inquired about possible sources from within children themselves, their families, and their community (including the worker and Children's Aid Society). It is clear from the interviewees' reports that resilience is not solely the result of factors within an individual but rather it is influenced by a number interconnected systems working together. Children in out-of-home care interact with multiple environments (e.g., home, school, community), and these environments interact with one another to influence outcomes (Schofield & Beek, 2005). This finding is in line with previous research, which has indicated that sources of resilience cut across various systems identified in the ecological model including for instance, a sense of competence and self-efficacy (ontogenic development), social support (microsystem), and opportunities to participate in the community (mesosystem; Klein et al., 2006).

A number of workers stated that they found it difficult to identify children exhibiting either resilient or non-resilient functioning because many of the children on their caseloads have "ups and downs". Workers emphasized that it is important to take the context into account when evaluating resilience (e.g., placement stability) and that this can contribute to instances when children are doing well and other instances when they are not. Furthermore, workers discussed that child functioning in out-of-home care is often compared to normative

standards; however, sometimes a child's functioning might not meet normative standards (e.g., learning disability, developmental disability), but their improvement over time is considerable given his or her circumstances. These conclusions are consistent with the quantitative literature, which indicates that resilience may not be consistent over time, and suggest that expectations for child functioning in out-of-home care might need to be adapted to better take into account the child's circumstances.

Despite the variability in identifying children exhibiting resilient and those exhibiting non-resilient functioning, workers identified risk and protective factors from various levels of the ecological model. One factor that was discussed in all interviews was the importance of relationships and social support (i.e., microsystem influences). In particular, the foster caregiver relationship was highlighted as critical to a child's well-being. The need for such a significant relationship is a common finding among both quantitative and qualitative studies that have interviewed children in out-of-home care, foster caregivers, and child welfare professionals (Cheung et al., 2011; Daniel, 2006; Drapeau et al., 2007; Fernandez, 2006; Johnson-Garner & Meyers, 2003; Legault et al., 2006; McMurray et al., 2008; Schofield & Beek, 2009; Thomas & Reifel, 2010). In order to exhibit resilience, children in out-of-home care need to feel loved and supported. Workers reported that those children who do poorly tend to lack connections with others and have little social support.

Furthermore, child welfare workers pointed out that, while having one significant relationship is critical, children who are multiply connected seem to function at an even better rate. In addition to a positive foster caregiver-child relationship, other key relationships mentioned were those children have with their family of origin, extended family members, counselors, teachers, siblings/stepsiblings, friends, community groups, and

their worker. Gilligan (2006) noted that a broad social network including individuals who naturally belong to the child's network (e.g., siblings, aunts, grandparents) is key to ensure the child has stability and continuity in his or her network, and support in place when needed. These relationships are also important in providing the child with a sense of support. In this vein, another important aspect of the relationships that a child has is the longevity of these connections. Workers stressed that relationship stability is a key contributing factor to resilient functioning among children in out-of-home care. Specifically, children who experience fewer placement changes have a better opportunity to develop longer lasting relationships with their caregivers, a sense of trust, and attachment in comparison to children who experience multiple disruptions (Thomas & Reifel, 2010). For children who do experience placement changes, workers discussed the importance of maintaining contact between the child and his/her previous foster family, where possible, to provide the child with a form of relationship continuity. Gilligan (2006) and Fernandez (2006) report similar findings, namely that it is important to pay attention to both a child's developing and existing attachments.

The significance of the worker-child relationship was also highlighted. While previous quantitative and qualitative research on this relationship is limited, one study (Finlay, 2003) concluded that children value their relationship with their worker, but they often report that workers are unavailable, change frequently, and do not listen to their concerns. It has also been reported that workers' administrative roles and heavy caseloads often compromise their ability to form relationships with the children in their care (Department for Education and Skills, 2007). In the current study, workers confirmed these findings, indicating that additional time to spend with the children on their caseload would

be beneficial. Despite these limitations, workers spoke of their efforts to foster supportive and long-lasting relationships with the children in their care. Bell (2002) refers to the worker-child relationship as a 'secondary attachment' so that, while child protection workers are not a substitute for a parent, they nevertheless reflect some aspects of a parental role in their responsibilities to the children in their care.

While the importance of cohesive relationships between the child and other significant individuals has been investigated previously, an interesting finding from the current study was the meaning attributed to the quality and the respect in the relationship between the foster family and the family of origin (i.e., mesosystem influences). Child welfare workers stressed that, when possible, it is a priority to encourage communication between the foster family and biological family as early as possible into a child's placement. Doing so was reported to help prevent children from experiencing loyalty conflicts (Poulin, 1986), which can have an impact on their integration into the new home. In sum, it would seem that a positive relationship with a constant flow of communication gives children freedom to form attachments with members of their foster family while maintaining ties with their family of origin.

Beyond the importance attributed to a child's relationships, workers also identified internal factors that promote a child's resilience (i.e., ontogenic development). These are consistent with those previously identified in the quantitative and qualitative literature on resilience and include such characteristics as intelligence, appealing qualities (e.g., social, academic), and a positive outlook on life (Bell et al., 2013; Masten, 2006). While workers spoke of the importance of these internal factors, they also emphasized that these do not

promote resilience when operating on their own. In order for a child to exhibit resilience, a combination of personal factors and external factors (e.g., social support) is necessary.

Many of the interviewees also spoke about the impact of a child's early history, indicating that resilient children tend to have fewer adverse life events compared to those who are functioning more poorly. This finding corroborates a recent review of the literature by Romano and colleagues (2013), which delineates that childhood maltreatment often represents complex trauma because maltreatment experiences are relational in nature with people they trust, include several experiences of different types of trauma, are chronic and long-lasting, and begin early in a child's life. Such experiences disrupt key developmental processes such as emotion regulation, attachment, and executive functioning (Romano et al., 2013). Therefore, it is reasonable that workers perceived children to be doing well in cases where complex trauma was avoided.

Given that maltreatment experiences can disrupt key developmental processes, it is not surprising that children in out-of-home care often also have problems in their functioning at school (Cicchetti & Toth, 1995, Shonk & Cicchetti, 2001). In the current study, workers emphasized the importance of a commitment to school, indicating that resilient children tend to like school and perform well academically. While the link between maltreatment and a commitment to school was not discussed specifically in the interviews, it is clear from the workers' perspectives that various domains of functioning overlap (i.e., behavioural, emotional, school, social relationships). This is because functioning in one area of life influences functioning in other areas, so one would expect that the behavioural impacts of a maltreatment history would also "spill over" into other areas of functioning, such as a child's school performance (Durlak, Weissberg, & Pachan, 2007; Greenberg et al., 2003).

With regard to community influences (i.e., exosystem influences), workers indicated that the school, placement setting (rural/urban), and foster family's socioeconomic status are contributing factors to child resilience. This is in line with previous quantitative research by Masten (2006), who identified effective schools, opportunities to develop valued skills and talents, community quality (e.g., safety, positive organizations), connections to prosocial organizations (e.g., clubs, religious groups), and socioeconomic advantages as key correlates that promote behavioural resilience among children, especially for those in out-of-home care. In sum, the current and previous findings indicate that the community is an additional source of support and encouragement possible for children in out-of-home care.

Finally, with regard to the impact of the child welfare worker and child welfare agency on child resilient functioning, workers identified a number of noteworthy variables (e.g., worker communication skills, agency finances and funding). Previous qualitative research on these effects is scarce; however, investigating these influences is important because children in out-of-home care are involved in the child welfare system and, as per the ecological model, might be influenced by characteristics of this system, be it at a more global level (e.g., agency characteristics) and/or worker level. Limited quantitative research findings have indicated worker education and experience (Cheung et al., 2011; Ryan et al., 2006) and agency location and number of resources (Attar-Schwartz, 2008; Rosenthal & Curiel, 2006) as contributing factors. These variables were not discussed in the current study's interviews. However, workers identified their ability to communicate with the child and other professionals as well as agency funding, goals, and obstacles as worker and child welfare agency variables that influence child resilience.

### **Study Limitations**

The current study has several limitations, which need to be considered. First, this study utilized a sample of child welfare workers currently employed within one child welfare agency in the province of Ontario (Canada). Therefore, the sample is not representative of the population nor can the findings be generalized beyond the study population. Second, given that child welfare workers participated on a voluntary basis, it is possible that sampling bias occurred. Third, in Ontario, child welfare workers participate in Ontario Looking After Children (OnLAC) training in order to complete the provincially mandated Assessment and Action Record. This measure assesses seven domains of child functioning (i.e., health, education, identity, family and social relationships, social presentation, emotional and behavioural development, and self-care skills), with a focus on resilience. Therefore, it is possible that a preconceived definition of resilience could have influenced workers' responses to interview questions.

### **Conclusion**

The findings from the current study highlight the dynamic interrelationships between the various levels of the ecological model and how these can impact a child's functioning in out-of-home care. In assessing children's functioning in out-of-home care, workers indicated that it is important to include children, their families (foster and biological), other significant individuals to whom they are connected, their community, their worker, and the child welfare agency. Furthermore, workers emphasized that it is important to take into account the relationships between these various individuals and institutions (e.g., foster family and family of origin, family and child welfare agency, family and community) as the nature of these connections can also have an impact on child functioning. Finally, the findings demonstrate the value of gaining the often-neglected perspectives of child welfare workers

given the unique insight they provided about their experiences working with children and families involved in the child welfare system.

### **General Discussion**

Research on resilience and its associated factors among maltreated children living in out-of-home care is limited (especially with regard to qualitative studies), and the majority of studies that do exist use U.K. or U.S. based samples, despite differences across child welfare systems in terms of social welfare policy, federalism, principle activities, and the organization of services (Herrick & Stuart, 2005). Furthermore, past research has tended to focus on the adolescent period. However, the school-age period is the time during which children may be particularly vulnerable to the development of behavioural problems, making preventative efforts critical at this time (Costello et al., 2005; Skovgaard et al., 2007).

The current dissertation aimed to address these gaps in the literature by investigating the prevalence and correlates of resilience among maltreated school-age children living in out-of-home care within Ontario (Canada). This was done both at single and multiple time points with the use of sophisticated statistical techniques as a way to understand children's functioning both at a given moment and over the course of several years. Working from an ecological perspective, correlates of resilience were investigated in order to account for direct (i.e., child and foster family) influences and to tease apart more distal (i.e., child welfare worker and child welfare agency) influences on child outcomes, some of which have not been investigated previously (e.g., worker caseload). Furthermore, the use of qualitative semi-structured interviews provided child welfare workers with the opportunity to present their own perceptions of resilience among maltreated children living in out-of-home care. As well, the use of interviews provided insight into the extent to which quantitative results map

onto the ways in which child welfare workers define resilient functioning as well as the factors they identify as being associated with resilience.

### **Major Findings**

With regard to the definition of resilience, findings across all three studies concur that it is important to examine child functioning across multiple domains in order to gain a comprehensive developmental picture of functioning. Specifically, quantitative findings from study one and two indicated that, while children may be functioning well in one area of their life (e.g., behaviours), they will not necessarily be doing well in other domains (e.g., relationships with others). This finding was expanded on in qualitative findings from study three, which emphasized that child resilience is not the sole result of factors from within an individual, but it is influenced by a number of interconnected systems. Finally, findings indicated that resilience may not be stable over time, given the heterogeneity found among trajectory groups in study two and the challenge child welfare workers had in identifying resilient children in study three.

Turning to the factors associated with resilience, the importance of relationships and social support were highlighted in all three studies. In particular, the foster caregiver-child relationship was a salient indicator of resilience. Children with a positive and supportive attachment to a foster caregiver were more likely to exhibit behavioural resilience in both study one and two. This finding was echoed in semi-structured interviews with child welfare workers who emphasized the impact that a nurturing relationship with a foster caregiver can have on the functioning of a child in out-of-home care. In addition to the provision of a stable home, spending quality time with the child, and foster parenting practices that involve praise, communication, and consistency contribute to the development of this relationship.

With regard to child-specific factors, internal developmental assets were associated with behavioural resilience in both study one and two, indicating the importance of supporting the child in the development of these internal resources, which include a commitment to learning, positive values (e.g., honesty, responsibility), social competencies (e.g., planning and decision making), and positive identity (e.g., self-esteem, sense of purpose). Similarly, semi-structured interviews with child welfare workers revealed the significance of several child characteristics that map onto this scale (e.g., intelligence, commitment to school). One way to foster the development of such assets would be to target specific assets as part of a child's annual plan of care. This might be accomplished through involvement in extracurricular activity, provision of opportunities to succeed within the home and school, and modeling of such behaviours by those with whom the child has direct interaction (i.e., foster parents, teachers). Over time, it is likely that this strategy will lead to an increase in assets, thereby contributing to resilient outcomes (Filbert & Flynn, 2010).

Concerning worker and agency level influences on child resilience, study one indicated that specific worker-level characteristics (i.e., education, time worked in child welfare, caseload) did not significantly predict child behavioural resilience. However, study one findings indicated that the worker might have an important indirect influence, particularly for conduct problems among maltreated school-age children in out-of-home care. Specifically, workers indirectly influence the well-being of children in their care through their interactions with foster parents and the organization of services for children and their families (both biological and non-biological).

Due in part to these findings and other considerations (e.g., statistical power), worker and agency level influences were excluded from study two. Interestingly, however, semi-

structured interviews with child welfare workers in study three coincided with findings from study one. Specifically, workers described their own influence as well as agency level influences that have an impact on children's functioning but at a more distal level. For instance, workers spoke of their own impact in terms of maintaining good communication with various family members and other professionals as well as advocating for the children on their caseload. Additionally, workers spoke about the importance of child welfare agency financial support and agency goals (e.g., permanency) in terms of their indirect influence on child outcomes.

### **Limitations**

The current dissertation has several limitations, each of which are important to consider. First, study one and two were correlational in design and had limited generalizability due to limitations of the dataset (e.g., lack of foster family socioeconomic information). Second, study one and two included foster caregiver and child welfare worker reports, which may have introduced reporting biases such as social desirability especially with regard to the family-level variables (i.e., parenting behaviours). It should be noted that the AAR does incorporate child self-reports only after the age of 10 years; however, this age range was outside the scope of the current dissertation. Third, while the current dissertation used a longitudinal design to track child behavioural functioning across a 4-year period, additional longitudinal investigations are needed to continue examining resilience and its associated factors among maltreated children in out-of-home care over the long term. Finally, the measures used to assess parenting practices in study one and two (i.e., positive and ineffective parenting) were limited as they assessed the frequency of such interactions with the child rather than the quality of the foster caregiver-child relationship.

### **Implications and Future Research**

The findings from the current dissertation have several theoretical, research, and applied implications. With regard to theoretical and research implications, the findings indicate that the study of resilience is complex. Given that the definition of resilience and positive adaptation varies across research studies, there is a need to ensure that this definition is re-evaluated on a consistent basis in order to account for new research findings.

Specifically, the current dissertation confirms that resilience is the dynamic relationship among various individuals and systems. Therefore, ensuring that these findings, along with other considerations (e.g., child age), are taken into account will be important for future research. In a similar vein, while the current dissertation focused on predictors of behavioural resilience, it is important to note that such predictors differed within this domain (i.e., across conduct problems, emotional problems, and prosocial behaviour), and it is likely that predictors of resilience would differ between domains had other areas of functioning been investigated. Such findings support the continued use of specificity in resilience research, such that resilience and its associated factors are investigated across various domains of functioning (e.g., behaviour, social relationships, academic performance) individually rather than globally.

Despite variations in the definition of resilience, a major finding from the current dissertation is that resilient children were identified in all three studies, indicating that there *are* children in out-of-home care who are faring comparably to those in the general population. Future research should continue to investigate resilience and its associated factors from multiple perspectives, using the ecological model as a guide. In particular, the current dissertation highlighted the importance of a child's family and social relationships

(i.e., microsystem influences) as well as the indirect impact that child welfare workers and child welfare agencies (i.e., exosystem influences) can have for child functioning in out-of-home care. The dynamic relationships and interactions among various levels of the ecological model and the various ways in which these can influence child outcomes also require further attention (i.e., mesosystem influences). Particularly, the impact of the relationships between a child's family of origin and the child welfare agency as well as between the family of origin and foster family was highlighted. In addressing such issues, it will also be important for future research to take into consideration differences between child welfare systems, nationally and internationally, and how this might impact study findings and conclusions.

Finally, the current dissertation indicates the critical importance of taking into account the age of the child at the time of placement in out-of-home care. Specifically, placement at a younger age compromises key developmental tasks that are more likely to have already been attained in children of an older age, for example, attachment and emotional regulation (Arvidson et al., 2011; Romano et al., 2013). Younger children have also not yet had the opportunity to develop a supportive peer group, which might buffer the impact of out-of-home placement for older children and adolescents (Kolko et al., 2010).

In sum, the current dissertation exemplifies the way in which quantitative and qualitative methodologies can be used to complement one another to bring about a greater understanding of resilience. In particular, the quantitative findings from study one and two provided valuable information regarding the prevalence and predictors of behavioural resilience both at single and multiple points in time. Qualitative findings from study three expanded on this through the child welfare worker's provision of greater contextual

information regarding the various factors that influence resilience among maltreated children living in out-of-home care. The continued use of both quantitative and qualitative research methodologies will be of importance for future research.

Turning to practical implications, the current dissertation indicates that maltreated children living in out-of-home care need supports in place across multiple contexts and from multiple individuals with whom they interact. Specifically, the foster home and school are two important contexts in which school-age children spend the majority of their time. Therefore, it follows that support for children in out-of-home care should aim to incorporate each of these contexts and the individuals within these settings (i.e., foster caregivers, teachers). Moreover, these supports need to address both a child's difficulties as well as their strengths, given findings that children may be functioning at varying rates across various domains. In addition, the findings indicate that the interrelationships among individuals across these contexts can also influence child outcomes. For example, a positive relationship between the foster parents and family of origin can work to prevent children from feeling that they need to choose one caregiver over the other. Therefore, support for the development of key relationships (such as those between foster and biological parents) should be encouraged by the child welfare sector.

Results from the current dissertation also highlight the importance of children's attachment to the foster caregiver for their well-being. Such a salient finding points toward the value of training programs for foster caregivers that have a particular focus on the enhancement of this relationship. A recent review of evaluations of foster parent training programs (Festinger & Baker, 2013) concluded that there is a lack of evidence regarding the effectiveness of current foster parent training programs. Furthermore, while the typical

training programs that foster parents receive (i.e., Model Approach to Partnerships in Parenting, Parent Resources for Information, Development, and Education) include a focus on the development of relationships, these programs have been criticized for the overwhelming focus on policies and procedures rather than the content related to effectively meeting the needs of children in their care (Festinger & Baker, 2013). Such results highlight the need to evaluate such training programs to ensure that important components are not being overlooked.

In sum, findings from the current dissertation highlight the need for a greater fusion between research and practice. Specifically, research findings such as those from the current dissertation can be used to inform professionals within the child welfare sector about the factors important for promoting resilient outcomes for children in out-of-home care and what might be of importance to include in preventive and intervention efforts. On the other hand, in using practice to inform research, we can ensure that the research being conducted has real-world applicability. Professionals working within the child welfare sector can inform researchers on the reality of the situation and what is needed. It is the strengthening and development of this bi-directional relationship that will contribute to better outcomes for children living in out-of-home care. As a step toward this goal, the current dissertation used both quantitative and qualitative methodologies, and it can be concluded that it is critical to put into place supports that cut across the various contexts in which these children are embedded to ensure they have the optimal opportunity to lead healthy, happy, and productive lives.

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Table 1

*Description of study variables*

Variable	%	M (SD)	Range
Outcomes			
Conduct problems	-	2.99 (2.54)	0-10
Emotional problems	-	2.39 (2.26)	0-10
Prosocial behaviour	-	7.56 (2.36)	0-10
Peer relationships	-	2.31 (2.19)	0-10
Academic performance	-	3.54 (2.58)	0-8
Child-level variables			
Sex			
Boys	52.7	-	-
Girls	47.3	-	-
Age	-	7.40 (1.40)	5-9
Age at first placement	-	2.95 (2.30)	0-9
Number of placements	-	4.70 (2.70)	0-15
Contact with biological parents			
No	39.2	-	-
Yes	59.5	-	-
Maltreatment exposure	-	1.96 (1.20)	0-5
Internal developmental assets	-	13.47 (4.86)	0-20
External developmental assets	-	14.65 (1.22)	0-16
Family-level variables			
Ineffective parenting	-	8.28 (3.74)	0-28
Positive parenting	-	14.52 (2.68)	0-20
Worker-level variables			
Education			
Non-university certificate/college	14.2	-	-
University certificate below bachelor	4.1	-	-
Bachelor degree	59.8	-	-
University certificate above bachelor	8.9	-	-
Master's degree	13.0	-	-
Time worked in child welfare			
Less than 1 year	4.4	-	-
1-3 years	14.8	-	-
4-9 years	51.5	-	-
10 years and over	29.3	-	-
Caseload	-	13.27 (2.52)	7-27

*Note.* M = mean, SD = standard deviation

Table 2

*Correlations among predictor and outcome variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Emotional problems	-																		
2. Conduct problems	.30**	-																	
3. Prosocial behaviour	-.08	-.34**	-																
4. Academic performance	-.13**	-.15**	.26**	-															
5. Peer relationships	.26**	.44**	-.39**	-.25**	-														
6. Child sex	.05	.01	.16**	.17**	-.07	-													
7. Child age	.10*	-.01	.07	.06	.11*	.03	-												
8. Age at first placement	.02	-.00	-.01	.00	.05	-.04	.34**	-											
9. Number of placements	.06	.11*	.00	.12**	.07	.00	.08	.12**	-										
10. Contact with biological parents	.04	-.04	.10*	.04	-.08	-.01	.08	.24**	.13**	-									
11. Maltreatment exposure	.08	.08	-.06	.13**	.10*	-.01	.00	.01	.18**	-.01	-								
12. Internal assets	-.22**	-.35**	.52**	.41**	-.35**	.12**	.04	-.04	-.03	.00	.01	-							
13. External assets	.02	-.09	.22**	.11*	-.17**	.11**	.04	-.03	-.08	-.01	-.11*	.39**	-						
14. Ineffective parenting	.22**	.51**	-.16**	-.09*	.23**	.01	-.06	.04	.09*	.04	.04	-.21**	-.10*	-					
15. Positive parenting	.05	-.07	-.01	-.12**	.02	-.07	-.20**	-.13**	-.13**	-.18**	.03	-.03	.09*	-.26**	-				
16. Worker education	.07	-.03	-.06	-.05	.00	-.04	.06	.00	.02	-.12**	-.04	.02	.06	.06	.07	-			
17. Worker caseload	-.02	.03	-.03	-.04	.07	.13**	-.02	-.05	-.08	-.07	.04	-.05	-.03	-.03	.02	.13**	-		
18. Time worked in child welfare	.07	.01	-.07	.04	-.00	-.10*	.06	-.07	-.01	-.03	-.01	.00	.14**	-.12**	.04	.09	-.07	-	

Note. \*p < .05 \*\*p < .01 \*\*\*p < .001

Table 3

*Multilevel base model of random effects for conduct problems, emotional problems, and prosocial behaviour*

	Conduct problems		Emotional problems		Prosocial behaviour	
	Estimate	T-ratio	Estimate	T-ratio	Estimate	T-ratio
Fixed effects						
Intercept	1.59 (0.33) <sup>a</sup>	48.61***	1.48 (0.02)	70.74***	2.49 (0.02)	107.90***
Random effects						
Child-level variance	0.33		0.36		0.24	
Family-level variance	0.15		0.12		0.18	
Worker-level variance	0.02					
CAS-level variance	0.01					
Total variance	0.51		0.48		0.42	
Child-level VPC	0.65		0.75		0.57	
Family-level VPC	0.30		0.25		0.43	
Worker-level VPC	0.04					
CAS-level VPC	0.02					

*Note.* VPC = variance partitioning coefficient.<sup>a</sup> Standard errors are in parentheses

\*p &lt;.05, \*\* p &lt;.01, \*\*\* p &lt;.001

Table 4

*Multilevel model of fixed and random effects for conduct problems, emotional problems, and prosocial behaviour*

Fixed effects	<u>Conduct problems</u>		<u>Emotional problems</u>		<u>Prosocial behaviour</u>	
	Estimate	T ratio	Estimate	T ratio	Estimate	T ratio
Intercept	1.57 (0.06)	28.40***	1.45 (0.04)	35.20***	2.56 (0.04)	57.73***
Child-level variables						
Sex (0= girl, 1= boy)	0.05 (0.05)	1.02	-0.03 (0.04)	-0.82	-0.21 (0.04)	-4.87***
Age	0.06 (0.05)	1.39	0.16 (0.04)	4.23***	-0.00 (0.03)	-0.43
Age at first placement	0.03 (0.04)	0.65	-0.02 (0.03)	-0.77	-0.02 (0.03)	-0.76
Number of placements	0.02 (0.03)	0.57	0.02 (0.04)	0.57	-0.03 (0.03)	-1.09
Biological parent contact	-0.02 (0.05)	-0.34	0.06 (0.04)	1.46	0.12 (0.05)	2.46*
Maltreatment exposure	-0.10 (0.09)	-1.09	0.19 (0.06)	3.06**	0.16 (0.05)	3.19***
Internal developmental assets	-0.05 (0.02)	-2.95**	-0.02 (0.02)	-1.38	0.01 (0.01)	1.08
External developmental assets	-0.12 (0.09)	-1.35	-0.01 (0.07)	-0.19	0.08 (0.06)	1.29
Family-level variables						
Ineffective parenting	0.06 (0.01)	4.62***	0.03 (0.01)	5.39***	-0.02 (0.01)	-3.19**
Positive parenting	0.00 (0.02)	0.25	0.02 (0.01)	2.70**	-0.01 (0.01)	-0.83
Worker-level variables						
Education	-0.04 (0.03)	-1.40				
Caseload	-0.05 (0.43)	-0.11				
Time worked in child welfare	-0.01 (0.04)	-0.19				
Random effects						
Child-level variance	0.32		0.35		0.23	
Family-level variance	0.11		0.10		0.16	
Worker-level variance	0.05					

*Note.* <sup>a</sup> Standard errors are in parentheses.

\*p < .05, \*\*p < .01, \*\*\*p < .001

Table 5

*Bivariate associations between predictor variables and conduct problem trajectories (N = 313)*

Predictor variables	Conduct problem trajectories				F	$\chi^2$
	No problems %	Low, stable %	Moderate, stable %	Moderate-high, descending %		
<u>Time-stable</u>						
Sex						6.65
Boys	7.0	25.2	17.3	6.1		
Girls	7.3	24.6	9.6	2.9		
Age at first placement <sup>a</sup>	3.1	3.2	2.9	3.1	0.21	
Number of placements <sup>a</sup>	3.5	4.1	4.6	5.3	3.78**	
Placement type						7.50
Kinship = 1	3.8	8.9	2.9	0.6		
Foster = 0	10.5	40.9	24.0	8.3		
Adverse life experiences <sup>a</sup>	4.1	4.8	5.2	5.3	1.91	
Child attachment to caregiver						27.53***
Little or no attachment	0	6.1	8.9	2.2		
Definite attachment	13.7	43.5	16.6	6.7		
Caregiver training						4.88
No	1.6	8.0	1.9	0		
Yes	12.8	41.9	2.5	8.3		
Caregiver years fostering						6.08
Up to 3 years	3.2	13.7	4.2	1.9		
4-9 years	8.0	25.2	14.7	5.4		
10 or more years	3.2	10.9	8.0	1.6		
<u>Time-varying</u>						
Changes in caregiver reporter <sup>a</sup>	0.1	0.4	0.6	0.7	5.82***	
Contact with biological parents <sup>a</sup>	2.8	2.8	2.6	2.3	0.84	
Child receiving treatment <sup>a</sup>	0.6	1.7	2.4	2.6	30.09***	
Internal assets <sup>a</sup>	15.3	14.4	13.1	11.8	10.67***	
External assets <sup>a</sup>	16.7	16.2	16.0	15.1	4.22**	
Positive parenting <sup>a</sup>	20.3	20.6	20.2	20.1	7.94***	
Number of children in home <sup>a</sup>	1.9	2.1	2.4	2.9	3.99**	

*Note.* An analysis of variance (ANOVA) was conducted for continuous variables while a chi-square analysis was used for dichotomous and categorical variables.

<sup>a</sup>Mean scores

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Table 6

*Bivariate associations between predictor variables and emotional problem trajectories (N =312)*

Predictor variables	Emotional problem trajectories				F	$\chi^2$
	No problems %	Low, stable %	Moderate, ascending %	Moderate-high, descending %		
<u>Time-stable</u>						
Sex						0.44
Boys	8.7	23.7	19.2	4.2		
Girls	6.1	20.2	14.4	3.5		
Age at first placement <sup>a</sup>	3.2	3.0	3.1	2.6	0.34	
Number of placements <sup>a</sup>	4.1	3.9	4.5	5.1	2.02	
Placement type						13.07**
Kinship = 1	4.2	8.7	2.6	0		
Foster = 0	10.6	35.3	31.1	7.1		
Adverse life experiences <sup>a</sup>	4.5	4.7	4.9	5.8	1.46	
Child attachment to caregiver						23.95***
Little or no attachment	0	4.8	9.6	2.6		
Definite attachment	13.5	38.5	23.7	5.1		
Caregiver training						7.54
No	3.2	5.1	2.2	1.3		
Yes	11.5	38.8	31.4	6.4		
Caregiver years fostering						3.49
Up to 3 years	3.5	10.9	6.4	1.9		
4-9 years	8.7	23.7	17.6	4.2		
10 or more years	2.6	9.3	9.6	1.6		
<u>Time-varying</u>						
Changes in caregiver reporter <sup>a</sup>	0.1	0.4	0.5	1.0	8.01***	
Contact with biological parents <sup>a</sup>	2.8	2.9	2.4	3.0	2.21	
Child receiving treatment <sup>a</sup>	0.9	1.6	2.4	2.6	23.39***	
Internal assets <sup>a</sup>	15.2	14.5	13.1	12.3	6.75***	
External assets <sup>a</sup>	16.7	16.4	16.1	15.5	2.68	
Positive parenting <sup>a</sup>	20.7	20.3	20.9	20.4	1.14	
Number of children in home <sup>a</sup>	1.9	2.3	2.3	2.1	1.17	

*Note.* An analysis of variance (ANOVA) was conducted for continuous variables while a chi-square analysis was used for dichotomous and categorical variables.

<sup>a</sup> Mean scores

\* p < .05 \*\* p < .01 \*\*\* p < .001

Table 7

*Bivariate associations between predictor variables and prosocial behaviour trajectories (N = 311)*

Predictor variables	Prosocial behaviour trajectories			F	$\chi^2$
	Low-moderate, increasing %	Moderate-high, stable %	High, stable %		
<u>Time-stable</u>					
Sex					10.97**
Boys	7.4	38.9	9.3		
Girls	2.9	27.7	13.8		
Age at first placement <sup>a</sup>	3.1	3.0	3.3	0.42	
Number of placements <sup>a</sup>	4.2	4.3	4.3	0.02	
Placement type					7.26*
Kinship = 1	1.0	9.3	6.1		
Foster = 0	9.3	57.2	17.0		
Adverse life experiences <sup>a</sup>	5.1	4.8	4.9	0.16	
Child attachment to caregiver					12.02**
Little or no attachment	3.2	13.5	1.3		
Definite attachment	7.1	51.4	21.5		
Caregiver training					0.57
No	1.0	7.4	3.2		
Yes	9.3	59.2	19.9		
Caregiver years fostering					2.69
Up to 3 years	2.3	14.1	6.4		
4-9 years	5.1	35.0	12.5		
10 or more years	2.9	17.4	4.2		
<u>Time-varying</u>					
Changes in caregiver reporter <sup>a</sup>	0.7	0.5	0.2	4.79**	
Contact with biological parents <sup>a</sup>	2.3	2.7	3.0	2.44	
Child receiving treatment <sup>a</sup>	2.1	2.0	1.2	12.92***	
Internal assets <sup>a</sup>	10.6	13.8	15.9	37.48***	
External assets <sup>a</sup>	14.9	16.2	17.0	14.31***	
Positive parenting <sup>a</sup>	18.0	18.6	18.3	1.21	
Number of children in home <sup>a</sup>	2.7	2.2	2.0	3.16*	

*Note.* An analysis of variance (ANOVA) was conducted for continuous variables while a chi-square analysis was used for dichotomous and categorical variables.

<sup>a</sup> Mean scores

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table 8

*Time-stable and time-varying predictors of conduct problem trajectories*

	No problems <sup>a</sup>		Low, stable <sup>a</sup>		Moderate, stable <sup>a</sup>	
	OR	95% CI	OR	95% CI	OR	95% CI
Time-stable predictors						
Sex <sup>b</sup>	0.40	0.12-1.35	0.50	0.18-1.36	1.05	0.38-2.88
Age at first placement	1.09	0.82-1.44	1.01	0.80-1.28	0.94	0.74-1.18
Number of placements	0.79	0.62-1.01	0.84	0.70-1.01	0.92	0.77-1.10
Kinship placement <sup>c</sup>	2.73	0.35-21.15	1.70	0.28-10.42	2.05	0.32-12.91
Adverse life experiences	0.93	0.74-1.18	0.98	0.81-1.19	1.06	0.88-1.28
Child attachment to caregiver <sup>d</sup>	5.75	0.55-60.65	1.20	0.63-6.38	0.54	0.18-1.59
Caregiver training <sup>e</sup>	0.75	0.09-6.61	0.42	0.07-2.58	2.21	0.31-15.68
Caregiver years fostering <sup>f</sup>						
4-9 years	1.33	0.26-6.84	2.20	0.61-7.90	0.85	0.23-3.16
10 or more years	0.59	0.08-4.10	1.01	0.22-4.60	0.38	0.08-1.77
Time-varying predictors						
Changes in caregiver reporter	0.51	0.18-1.44	1.01	0.57-1.81	1.24	0.71-2.18
Contact with biological parents	1.21	0.83-1.77	1.22	0.90-1.64	1.22	0.90-1.64
Child receiving treatment	0.19***	0.10-.35	0.49**	0.31-.77	0.74	0.47-1.16
Internal assets	1.43**	1.12-1.83	1.32**	1.09-1.59	1.11	0.92-1.35
External assets	0.99	0.66-1.48	1.05	0.76-1.43	1.20	0.87-1.65
Positive parenting	1.24	0.96-1.59	1.25*	1.01-1.53	1.12	0.92-1.38
Number of children in home	0.64*	0.41-0.99	0.70*	0.51-.95	0.77	0.57-1.04

Note. OR = Odds ratio; CI = confidence interval.

Reference groups: <sup>a</sup>moderate-high, descending group; <sup>b</sup>girls; <sup>c</sup>foster family placement; <sup>d</sup>little or no attachment; <sup>e</sup>no training; <sup>f</sup>up to 3 years.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ .

Table 9

*Time-stable and time-varying predictors of emotional problem trajectories*

	No problems <sup>a</sup>		Low, stable <sup>a</sup>		Moderate, ascending <sup>a</sup>	
	OR	95% CI	OR	95% CI	OR	95% CI
Time-stable predictors						
Sex <sup>b</sup>	1.52	0.46-5.07	1.17	0.43-3.15	1.18	0.44-3.15
Age at first placement	1.37*	1.02-1.83	1.24	0.97-1.59	1.19	0.94-1.51
Number of placements	0.99	0.77-1.27	0.92	0.75-1.13	0.97	0.79-1.18
Kinship placement <sup>c</sup>	4.16	0.53-33.01	2.94	0.45-19.11	1.50	0.22-10.44
Adverse life experiences	0.98	0.77-1.24	0.92	0.75-1.11	0.90	0.74-1.09
Child attachment to caregiver <sup>d</sup>	12.50*	1.08-145.21	2.03	0.62-6.68	0.76	0.25-2.32
Caregiver training <sup>e</sup>	0.44	0.08-2.52	1.09	0.25-4.81	2.31	0.50-10.62
Caregiver years fostering <sup>f</sup>						
4-9 years	0.64	0.13-3.18	1.03	0.28-3.83	1.04	0.29-3.82
10 or more years	0.64	0.12-6.05	1.05	0.22-5.12	0.81	0.18-3.75
Time-varying predictors						
Changes in caregiver reporter	0.36*	0.14-0.87	0.61	0.36-1.04	0.54*	0.32-0.92
Contact with biological parents	0.87	0.59-1.30	0.90	0.65-1.26	0.79	0.57-1.10
Child receiving treatment	0.30***	0.17-0.52	0.54**	0.34-0.85	0.94	0.59-1.48
Internal assets	1.25	0.98-1.59	1.20	0.99-1.46	1.07	0.88-1.29
External assets	0.92	0.60-1.42	0.95	0.67-1.35	1.03	0.73-1.46
Positive parenting	1.21	0.93-1.57	1.11	0.90-1.38	1.16	0.93-1.44
Number of children in home	1.15	0.67-1.95	1.45	0.95-2.21	1.25	0.82-1.91

*Note.* OR = Odds ratio; CI = confidence interval.

Reference groups: <sup>a</sup>moderate-high, descending group; <sup>b</sup>girls; <sup>c</sup>foster family placement; <sup>d</sup>little or no attachment; <sup>e</sup>no training; <sup>f</sup>up to 3 years.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ .

Table 10

*Time-stable and time-varying predictors of prosocial behaviour trajectories*

	Moderate-high, stable <sup>a</sup>		High, stable <sup>a</sup>	
	<u>OR</u>	<u>95% CI</u>	<u>OR</u>	<u>95% CI</u>
Time-stable predictors				
Sex <sup>b</sup>	0.53	0.21-1.34	0.26*	0.09-0.76
Age at first placement	0.95	0.77-1.17	1.05	0.82-1.35
Number of placements	1.15	0.95-1.39	1.27*	1.01-1.59
Kinship placement <sup>c</sup>	0.96	0.20-4.53	1.36	0.24-7.60
Adverse life experiences	0.98	0.83-1.17	0.98	0.79-1.20
Child attachment to caregiver <sup>d</sup>	1.39	0.51-3.81	3.49	0.79-15.35
Caregiver training <sup>e</sup>	0.62	0.13-3.04	0.71	0.11-4.57
Caregiver years fostering <sup>f</sup>				
4-9 years	1.32	0.39-4.41	1.26	0.31-5.16
10 or more years	1.57	0.42-5.83	2.08	0.41-10.58
Time-varying predictors				
Changes in caregiver reporter	0.72	0.43-1.20	0.58	0.29-1.19
Contact with biological parents	1.23	0.92-1.65	1.31	0.92-1.85
Child receiving treatment	1.01	0.70-1.46	0.61*	0.40-0.95
Internal assets	1.39***	1.17-1.66	1.90***	1.48-2.44
External assets	0.95	0.70-1.28	0.89	0.61-1.29
Positive parenting	1.23*	1.00-1.51	1.19	0.94-1.51
Number of children in home	0.78	0.56-1.07	0.65*	0.44-0.97

*Note.* OR = Odds ratio; CI = confidence interval.

Reference groups: <sup>a</sup>low-moderate, ascending group; <sup>b</sup>girls; <sup>c</sup>foster family placement; <sup>d</sup>little or no attachment; <sup>e</sup>no training; <sup>f</sup>up to 3 years.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ .

Table 11

*Correlations among conduct outcome and predictor variables (N = 313)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Conduct outcome	-															
2. Child sex	-.13*	-														
3. Age at first placement	.14**	-.09	-													
4. Number of placements	.19**	-.04	.17**	-												
5. Placement type	.14**	.01	.02	.00	-											
6. Adverse life experiences	.13*	.09	.08	.19**	.13*	-										
7. Attachment to caregiver	-.26**	.01	-.08	-.14*	-.13*	-.13*	-									
8. Caregiver training	.08	-.04	-.06	.09	.15**	-.05	-.07	-								
9. Caregiver years fostering	.06	-.03	-.18**	-.02	.27**	-.08	.06	-.09	-							
10. Changes in caregiver reporter	.20**	.05	.00	.12*	.09	.08	.24**	-.01	-.07	-						
11. Contact with biological parents	-.07	-.04	.14*	.01	-.18**	-.04	-.04	.07	-.06	.02	-					
12. Child in treatment	.39**	-.03	.14*	.17**	.14**	.15**	.15**	.00	.03	.22**	-.02	-				
13. Internal assets	-.33**	.15**	.01	-.03	-.10	.04	.17**	.01	-.12*	-.15**	.05	-.23**	-			
14. External assets	-.16**	.15**	-.09	-.20**	.05	-.08	.15**	.09	-.08	-.15**	-.02	-.14*	.63**	-		
15. Positive parenting	-.06	-.10	.03	.12*	.18**	-.03	-.01	.00	.18**	-.04	-.02	.04	-.17**	-.21**	-	
16. Number of children in home	.18**	-.02	-.05	.10	.16**	.10	-.03	.13*	.01	.10	-.02	.01	-.01	-.01	-.10	-

*Note.* Pearson correlation was used for relationship between two continuous variables and/or between a continuous and a dichotomous variable, Spearman correlation was used for relationship between a continuous and an ordinal variable, and Kendall's tau-b correlation was used for relationship between two dichotomous/ordinal variables.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Table 12

*Correlations among emotional outcome and predictor variables (N = 312)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Emotional outcome	-															
2. Child sex	.00	-														
3. Age at first placement	-.02	-.11	-													
4. Number of placements	.13*	.01	.13*	-												
5. Placement type	.19**	-.02	.04	-.01	-											
6. Adverse life experiences	.09	.09	.11	.21**	.13*	-										
7. Attachment to caregiver	-.26**	.00	-.07	-.18**	-.13*	-.13*	-									
8. Caregiver training	.10	-.05	-.04	.09	.16**	-.04	.08	-								
9. Caregiver years fostering	.06	-.02	-.18**	-.09	.32**	-.09	-.06	.06	-							
10. Changes of caregiver in reporter	.20**	.03	.02	.15*	.08	.08	-.24**	.02	-.07	-						
11. Contact with biological parents	-.07	-.05	.18**	.00	-.17**	-.02	.05	-.07	-.06	.05	-					
12. Child in treatment	.37**	-.05	.17**	.21**	.13*	.17**	-.17**	-.01	-.01	.23**	-.02	-				
13. Internal assets	-.29**	.14*	-.01	-.06	-.09	.03	.20**	.01	-.07	-.13*	.04	-.23**	-			
14. External assets	-.16**	.16**	-.08	-.22**	.04	-.08	.19**	.07	-.05	-.17**	-.04	-.15*	.65**	-		
15. Positive parenting	.03	-.07	.09	.05	.21**	-.02	-.05	.01	.17**	-.01	-.07	.06	-.20**	-.24**	-	
16. Number of children in home	.02	-.05	-.04	.11	.22**	.13*	-.08	.16**	.06	.10	-.01	.05	.00	-.03	-.09	-

*Note.* Pearson correlation was used for relationship between two continuous variables and/or between a continuous and a dichotomous variable, Spearman correlation was used for relationship between a continuous and an ordinal variable, and Kendall's tau-b correlation was used for relationship between two dichotomous/ordinal variables.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

Table 13

*Correlations among prosocial outcome and predictor variables (N = 311)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Prosocial outcome	-															
2. Child sex	.18**	-														
3. Age at first placement	.01	-.10	-													
4. Number of placements	.00	-.03	.16**	-												
5. Placement type	-.14**	.01	.02	.04	-											
6. Adverse life experiences	-.02	.08	.10	.23**	.13*	-										
7. Attachment to caregiver	.19**	.00	-.08	-.16**	-.14*	-.14*	-									
8. Caregiver training	-.04	-.02	-.02	.10	.17**	-.05	.07	-								
9. Caregiver years fostering	-.08	.00	-.16**	-.10	.29**	-.07	-.06	.05	-							
10. Changes caregiver in reporter	-.14**	.05	.02	.16**	.09	.10	-.25**	.02	-.10	-						
11. Contact with biological parents	.11*	-.07	.14*	.02	-.17**	-.04	.03	-.10	-.08	.03	-					
12. Child in treatment	-.22**	-.02	.18**	.17**	.14**	.16**	-.15**	-.01	.02	.22**	-.02	-				
13. Internal assets	.42**	.12*	.01	-.09	-.11	.02	.21**	.03	-.10	-.12*	.05	-.22**	-			
14. External assets	.27**	.12*	-.08	-.16**	.02	-.09	.19**	.11	-.06	-.16**	.00	-.13*	.65**	-		
15. Positive parenting	.00	.02	-.14*	-.08	.07	-.06	.03	.03	.12*	-.04	-.06	-.01	-.11	.11	-	
16. Number of children in home	-.14*	-.03	-.01	.06	.18**	.10	-.05	.18**	.04	.08	-.07	.02	-.01	-.01	-.10	-

*Note.* Pearson correlation was used for relationship between two continuous variables and/or between a continuous and a dichotomous variable, Spearman correlation was used for relationship between a continuous and an ordinal variable, and Kendall's tau-b correlation was used for relationship between two dichotomous/ordinal variables.

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

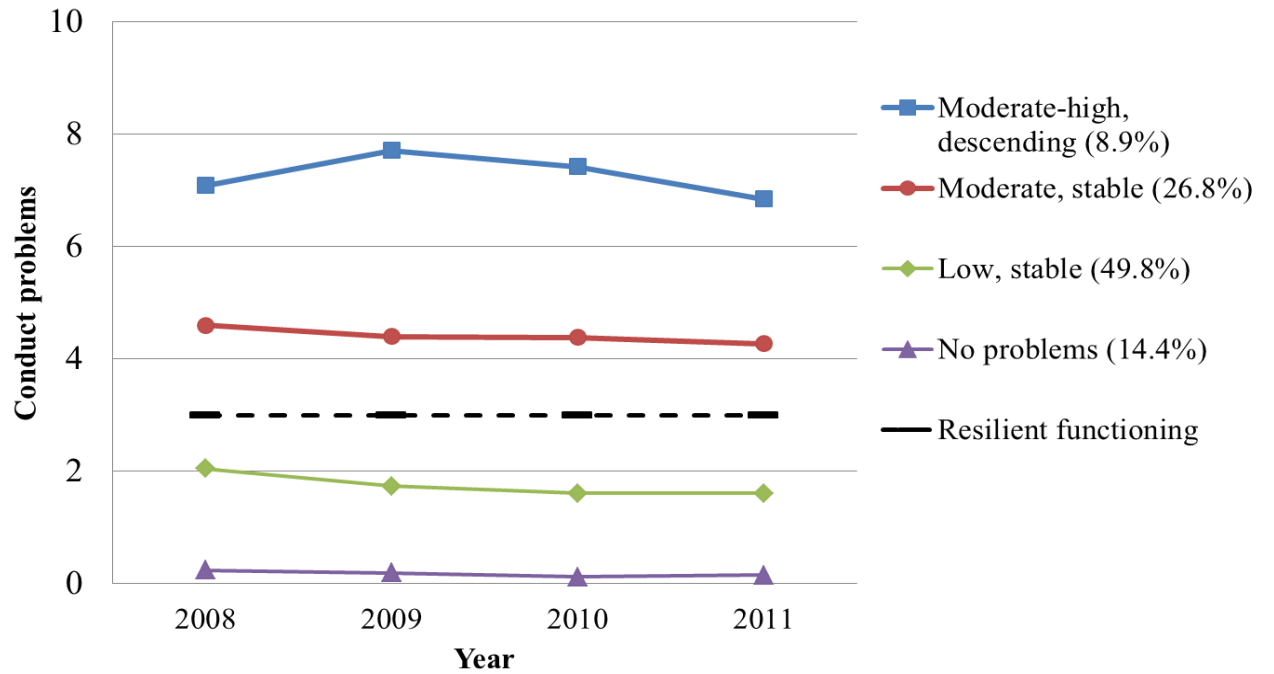


Figure 1. Conduct problem trajectory groups from 2008 to 2011 (N = 313).

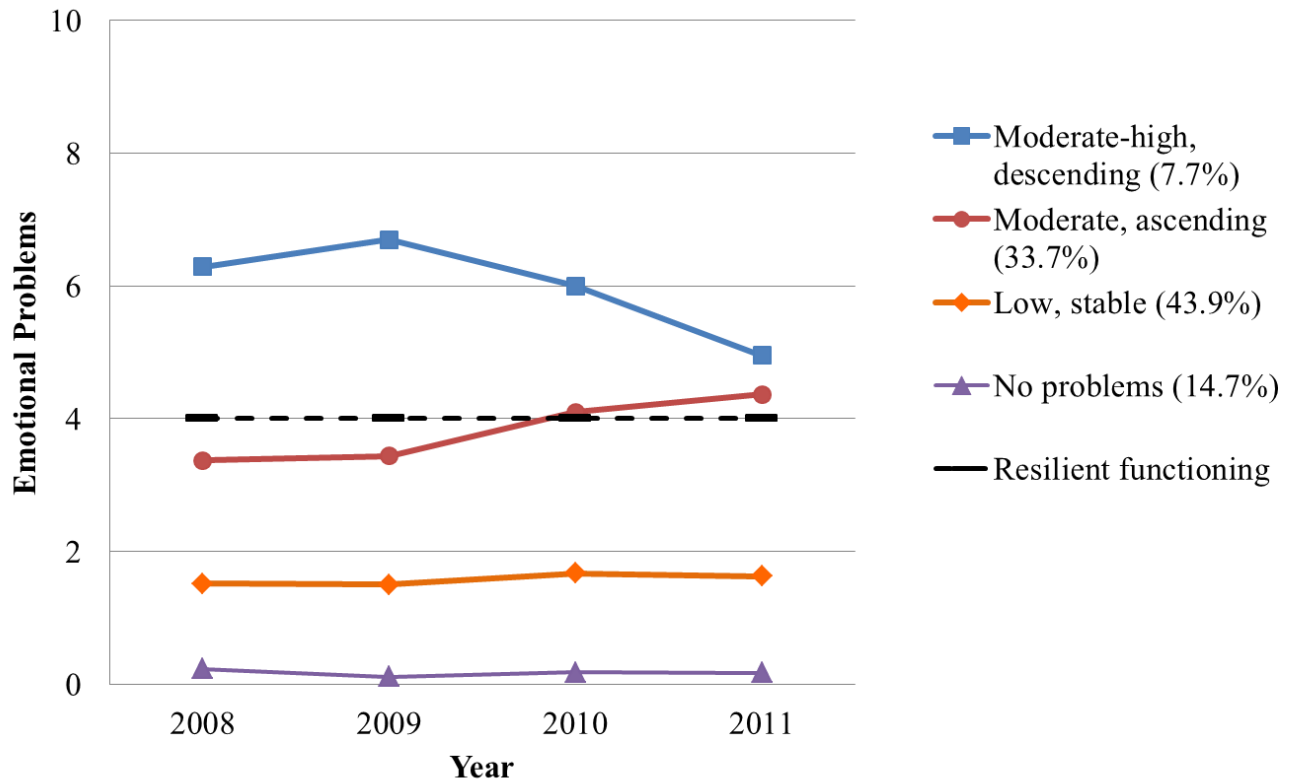


Figure 2. Emotional problem trajectory groups from 2008 to 2011 (N = 312).

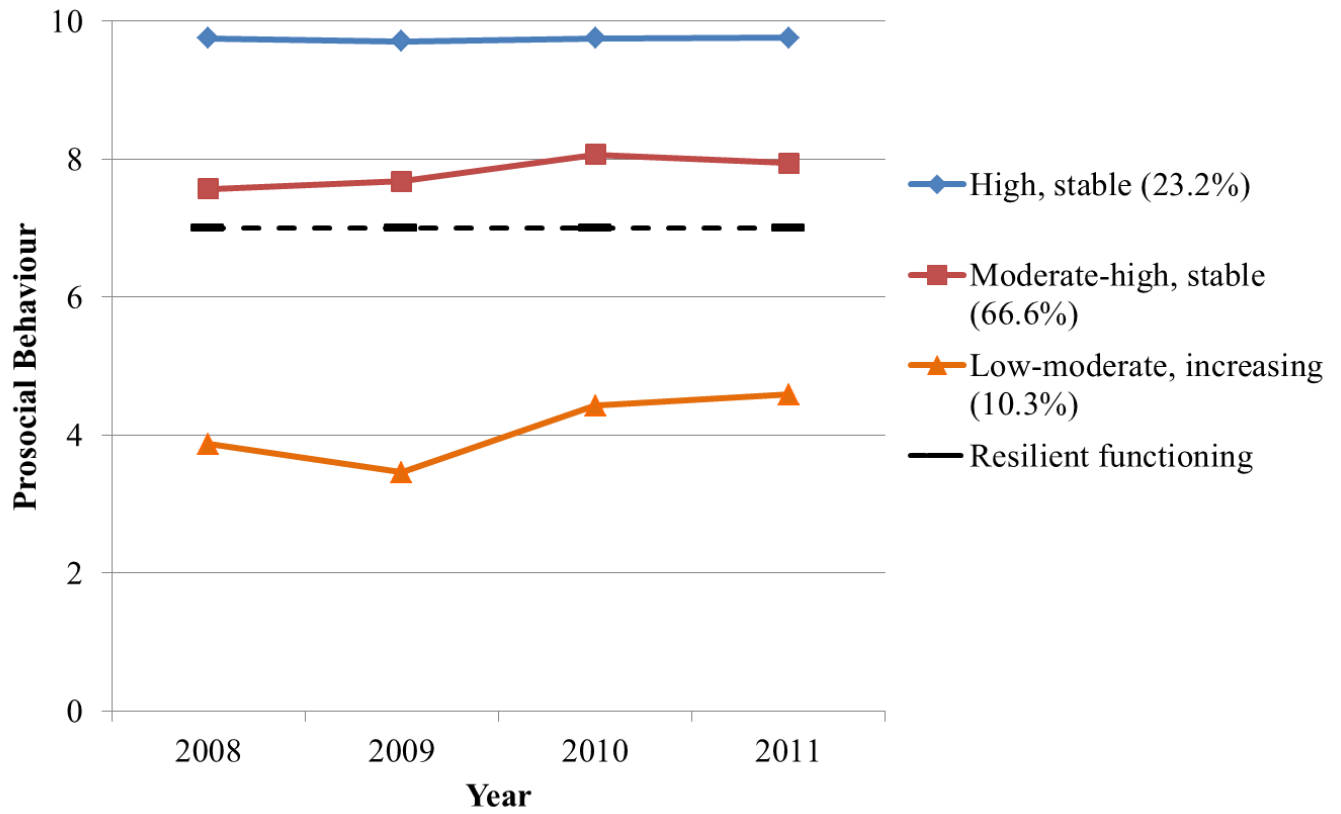


Figure 3. Prosocial behaviour trajectory groups from 2008 to 2011 (N = 311).

## **Appendix A**

### **Procedure for identifying families and workers in OnLAC dataset**

To identify families in OnLAC, the following variables were located in the data set: foster caregiver initials (variable code is fbgfq61), sex of caregiver (fbgfq63), religion of caregiver (fbgfq45a-45t), formal training caregiver has received (OnLAC, PRIDE, agency-specific, foster parenting techniques, or other; fbgfq65, 67a, 67c, 67d, 67f), caregiver health (fbgfq47), caregiver disability (fbgfq48), and smoking in the household (fbgfq49). Next, the data set was sorted by caregiver initials. If two or more children had the same caregiver initials, the responses to all other variables were checked to see if they matched also (line by line in the data set). If all other variables did match, these children were assigned the same family ID number. If they did not all match, they were assigned different family ID numbers. Occasionally, all of the variables matched except for one or two. In this case, if the variable that did not match was a non-varying item such as caregiver sex or initials, the children were assigned different family ID numbers. However, if the variable was varying (e.g., health, smoking), it was assumed that the children were from the same foster family.

To identify workers in OnLAC, a similar procedure was used. The following variables were used to identify families with the same worker: initials (fdmw1), worker education (fbgwq31), worker field of education (fbgwq32), length of time worked in child welfare (fbgwq22c), amount of training in OnLAC (fbgwq38), support from supervisor (fbgwq28a), and team membership (fbgwq37). Lastly, workers who matched on all of these variables also needed to have the same family ID. If all variables were a match, families were assigned the same worker ID number. Please note that the first letter of the variable

code changes at each cycle. In year 6, variables begin with an 'f'; in year 7, variables begin with a 'g'; in year 8, variables begin with a 'h', and so on.

## **Appendix B**

### **Invitation to Participate**

#### **Understanding how children are doing in out-of-home care**

Dear Colleague:

We are researchers at the University of Ottawa who are currently conducting a project on how children are doing in out-of-home care. Specifically, we are interested in understanding the factors that contribute to how a child is doing from the perspective of child welfare workers. We would really appreciate the opportunity to interview you about this topic.

To participate, you must:

- Be currently employed with a Children's Aid Society in Ontario

Your interview:

- Will last approximately 60 minutes
- Will be audio-recorded and transcribed (with all identifying information removed)
- Will take place at a time and location convenient for you
- Will be offered in English

If you are interested in participating or learning more about the study, please contact Ms. Tessa Bell or Dr. Elisa Romano by telephone or e-mail.

Thank you for your cooperation!

## Appendix C

### Child Welfare Worker Consent Form

#### Understanding how children are doing in out-of-home care

##### Invitation to Participate:

You are invited to participate in the abovementioned research study conducted by Tessa Bell as part of her doctoral thesis under the supervision of Dr. Elisa Romano from the School of Psychology at the University of Ottawa.

##### Purpose of the study:

The goal is to understand your perspective as a child welfare worker on how children are doing in out-of-home care. We are also interested in better understanding some of the factors that might be related to how children are doing.

##### Participation:

Your participation will consist of taking part in one interview that will last approximately 60 minutes. The interview will be audio-recorded, and I will take hand-written notes. After the conclusion of my thesis, I can send you a brief summary of my findings if you are interested.

##### Risks from participating in this study:

There are no serious anticipated risks from your participation in this study. Some people may experience slight discomfort talking about themselves or their work experiences. If this is the case, you are free to skip any questions which may cause discomfort. It is also possible to take a short break at any point during the interview.

##### Benefits from participating in this study:

Your participation will allow you to speak about your own experiences working with children in out-of-home care. In this way, you will be helping to further understanding of children in out-of-home care and factors that might influence the way they are doing in out-of-home care.

##### Anonymity and confidentiality:

In this study, you will be assigned a number code that will be placed on all materials associated with your interview (e.g., audio-recording, transcript), and your name and signed consent form will be filed separately from these materials. As such, there will be no way to identify you when findings are disseminated by way of conference presentations or journal articles, for example. When direct quotes are used as part of dissemination activities, you will only be referred to as a child welfare worker from Ontario.

The information you provide will remain confidential. Only Dr. Romano and Ms. Bell will have access to the interview transcripts and recordings. Interviews (recordings and

transcripts) will be kept for 10 years on a password-protected computer in Dr. Romano's laboratory.

Conservation of data:

Data from this study will consist of handwritten notes and audio-recordings, which will be transcribed. The notes, audio-recordings, and transcriptions will be stored in a locked filing cabinet in Dr. Romano's laboratory as well as on a password-protected computer in Dr. Romano's laboratory. Only the graduate student (Ms. Tessa Bell) and the supervisor (Dr. Elisa Romano) will have access to these files. The files will be kept for 10 years following study completion, after which time they will be destroyed by shredding or the deletion of files.

Voluntary participation:

Participating in this project is voluntary, and there is no obligation to participate. You can end your participation at any time. You do not have to answer any question you do not want to answer. There will be no consequences for you now or in the future if you choose not to participate.

Additional information:

Should you have any questions or require additional information, please contact the Protocol Officer for Ethics in Research, Research Grants and Ethics Services, 550 Cumberland Street, Room 154, 613-562-5387 or ethics@uottawa.ca.

Informed consent:

I \_\_\_\_\_ agree to participate in the above research study conducted by Tessa Bell (School of Psychology, University of Ottawa) under the supervision of Dr. Elisa Romano.

I would like to receive a brief summary of study findings. The summary can be sent by e-mail to the following e-mail address (\_\_\_\_\_) or to the following work address (\_\_\_\_\_)

There are two copies of the consent form, one of which is mine to keep.

**Participant's signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Researcher's signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Appendix D

### Interview Grid for Child Welfare Workers

#### Introduction

I would like to thank-you for agreeing to participate in this study. As you know, my name is Tessa Bell, and I am a doctoral student studying psychology at the University of Ottawa. I am conducting interviews that will form part of my doctoral thesis. As you read in the consent form, all information from this interview will be used for purposes of my thesis only, and results may be presented in academic publications or presentations. You also read that I will be recording this interview, but I want to assure you that the recording will only be used for purposes of this project, and you will not be personally identified at any time.

Before we begin, do you have any questions?

#### General Information

If you do not have any (further) questions, I would like to start by asking you a few things regarding your background in the child welfare setting.

What is your highest level of education completed?

In what field of study is this degree/diploma?

In what year did you receive this degree/diploma?

In terms of your current position, have you received any additional education or training?

For how long have you worked within a child welfare setting?

For how long have you worked in your current position?

What are your main duties as a child welfare worker?

How would you describe your average caseload (number of cases, etc.)?

#### Resilient child questions

Prior to this interview I asked you to go through your caseload and to pick out a couple of cases. I asked that you pick one or more that for you represents a child who is doing particularly well, and one or more that represents a child who is not doing very well.

I would first like to talk to you about the child you have chosen who is doing particularly well.

- How would you describe this child?
- Can you say something more about how you made the decision to choose this child as one who is doing particularly well?

What is it about this child that you feel may have contributed to your decision to choose him/her? (e.g., positive values, talents/interests, social competencies)?

- How did you come to this conclusion (i.e., was it something the child did, said, etc.)?
- Can you give a specific example or two?
- Is this child doing well in comparison to other children who have done well or more typical children? Why would you say this?
- Have you worked with similar children before? (how is this child similar or different from a typical child with whom you might work? Does he/she remind you of other children with whom you have worked?)

While the child himself/herself may have certain characteristics that contribute to the way they are doing, sometimes there may be other people involved in the child's life that also contribute. Based on your knowledge of this case, are there any members of this child's biological or foster family that have an effect on this child doing well?

- What are some characteristics of the foster family that may contribute to their success?
- What are some characteristics of the biological family that might contribute to this child's success?
- How did you come to this conclusion (what specifically is it within the family, for example, do they participate in activities together, etc.)?
- How is (this) similar or different from other families you have encountered?
  - ❖ Would you say this might apply to a number of families with whom you have worked?

While caregivers and family members are crucial to the way a child is doing, there may also be other individuals who enter a child's life that have a significant effect as well (for example, teachers, peers, coaches, etc.). Are there any other individuals in this child's life that might play a role in the way they are doing?

- Who is this person? (or in the case of multiple people, who are they? Teachers, friends? Grand-parents, coach?...)
- How would you describe these individuals? (Ask about each individual separately)
- How do they affect the way the child is doing?
- Can you give me a specific example of how you came to this conclusion? (that these persons are important to this child?)

The community outside of the child's home may also have an effect on the way he/she is doing. For example, living in a low-income neighbourhood may expose a child to things they would not witness if living in a middle or high-income neighbourhood. Given that the community can also play a role in the way a child is doing, would you say that there is

anything in particular about the community in which this child lives that may or may not contribute to how they are doing?

- How would you describe the community?
- Can you give me a specific example of how this community might contribute to how the child is doing?

Given that children in foster care come into contact with the Children's Aid Society and individuals working within this setting such as yourself, can you describe characteristics of the agency (CAS) in which you work that may or may not contribute to how this child is doing?

- Can you describe a specific example to illustrate this?
- Can you describe characteristics of workers within the agency that might contribute to how children living in out of home care are doing?

Is there anything else that you can share about this child, his/her family, their environment, or their development that might provide insight into how they are doing?

#### Non-resilient child questions

I would also like to ask you about a few details regarding the other child that you identified, specifically the child whom you feel is not doing so well. The reason I would like to talk about this child in addition to the one that you just talked about who is doing well is to create a comparison between the two.

- How would you describe this child?
- Can you say something more about how you made the decision to choose this child as one who is **not** doing particularly well?

What is it about of this child that you feel may have contributed to your decision? (e.g., social competencies)?

- How did you come to this conclusion (i.e., was it something the child did, said, etc.)?
- Can you give a specific example or two?
- Is this child doing worse in comparison to other children who are not doing well or more typical children? Why would you say this?
- Have you worked with similar children before? (how is this child similar or different from the typical child you work with? Does he/she remind you of other children whom you have worked with?)

In addition to characteristics of the child, as we talked about earlier, sometimes there may be other people involved in the child's life who also contribute to how they are doing. Who, if any, members of this child's family (biological or foster) contribute to how they are doing?

- What are some characteristics of the foster family that may contribute to how they are doing?
- What are some characteristics of the biological family?
- How did you come to this conclusion (what specifically is it within the family, for example, do they participate in activities together, etc.)?
- How is (this) similar or different from other families you have encountered? Would you say this might apply to a number of families whom you have worked with?
  - Can you describe an example to illustrate this?

While caregivers and family members are crucial to how a child is doing, there are often other individuals who enter a child's life that may have a significant effect on their functioning as well (for example, teachers, peers, etc.). Are there any other individuals in this child's life that might play a role in how they are doing?

- Who is this person? (or in the case of multiple people, who are they? Teachers, friends? Grand-parent(s), coach?)
- How would you describe these individuals? (Ask about each individual separately)
- How do they affect how the child is doing?
- Can you give me a specific example of how you came to this conclusion?

As we discussed earlier, the community outside of the child's home may also have an effect on how he/she is doing. For example, living in a low-income neighbourhood may expose a child to things they would not witness if living in a middle or high-income neighbourhood. Given that the community can also play a role in how a child is doing, would you say that there is anything in particular about the community in which this child lives that may or may not contribute to how they are doing?

- How would you describe the community?
- Can you give me a specific example of how this community might contribute to how this child is doing?

Given that children in foster care come into contact with the Children's Aid Society and individuals working within this setting such as yourself, can you describe characteristics of the agency (CAS) in which you work that may or may not contribute to how this child is doing?

- Can you describe a specific example to illustrate this?
- Can you describe characteristics of the workers within the agency that contribute?
- Can you describe a specific example to illustrate this?

Is there anything else that you can share about this child, his/her family, their environment, or their development that might provide insight into how they are doing?

#### Worker-specific questions

Now speaking about yourself, what do you do, in everyday practice, to promote better outcomes for children in out of home care?

- What do you do that is different from other workers?
- How effective do you feel you are in doing this?
- In an ideal world, how do you see your role in promoting better outcomes?

After discussing all of this, is there anything else that you can think of that we did not already touch on that might contribute to how these children are doing?

### Conclusion

This brings us to the close of the interview.

Is there anything that I did not ask you that you wanted me to?

Is there anything that you thought I was going to ask about but did not?

Do you have any final questions or comments?

Thank-you very much for participating!

The goal of this interview was to learn about your experiences with children living in out-of-home care in terms of what factors might contribute or not contribute to their functioning. Should you have any additional questions or comments after this interview, please feel free to contact me. Thanks again for your time and participation.

**Appendix E****Interview Summary Form**

Participant number:

Date of interview:

Place:

Recording: Yes / No

Date form completed:

Participant role/type:

Interview completed by:

Other notes: Yes / No

1. What were the main issues or themes that struck you during this interview?
  
  
  
  
  
  
  
  
  
  
2. Summarize the information you got (or failed to get) from the interview.
  
  
  
  
  
  
  
  
  
  
3. What else struck you as salient, interesting, illuminating, or important about this contact?
  
  
  
  
  
  
  
  
  
  
4. What are new issues or questions that could be pursued in other interviews?
  
  
  
  
  
  
  
  
  
  
5. What are the elements of the interview that could be improved?

## Appendix F

### Categories and code examples

Categories and subcategories	Code examples
<u>Child</u>	
Child characteristics	Self-esteem, intelligence, resilient, perseverant, having goals, likable, happy, social skills, anger, aggression, emotionally immature, mental health
Relating with others	Meaningful relationships, family connection, looking for love, loyalty conflict, lack of connections, behavioural problems
Commitment to school	Doing well in school, like school, organized
Participation in activities	Extracurricular activities, developing a passion
Early history	Range of adversity, uprooted, early instability
<u>Family</u>	
Foster caregiver characteristics	Nurturing, empathetic, perseverant, problem solving skills, patience, honesty
Foster caregiver relations with foster child	Good match, communication skills, spending time, commitment, understand connection to biological family
Foster home environment	Stable, predictable, caring, integration into the family, child focused
Family of origin	Loyalty conflict, blaming the child
<u>Other significant individuals</u>	Grandparents, counselors, teachers, siblings/stepsiblings, members of the extended family (i.e., aunt, uncles, cousins), friends, and community groups
<u>Community</u>	
Institutions	Supportive schools
Setting	Rural/urban placement
Socioeconomic change	Safer neighbourhoods, positive change, greater opportunities
<u>Worker</u>	
Worker characteristics	Communication skills, love for children, patience, a non-judgmental attitude, sincerity, and honesty
Worker-child relationship	Spending time, stability and continuity, consistent support, advocating across systems
Support to foster caregiver	Reassurance, build trust and openness, good working relationship
<u>Agency</u>	
Finances and funding	Provide financial support for postsecondary education
Organizational level impacts	Working as a team, adaptability, openness to change, transparency
Agency goals	Permanency
Obstacles	Lack of foster families, concerns with foster families, restrictions