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LESS THAN KIN, MORE THAN KIND: THE ROLE OF POSITIVE PARENTING IN THE DEVELOPMENT OF SOCIAL AND PSYCHOLOGICAL FUNCTIONING AMONG YOUTH IN FOSTER CARE

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LESS THAN KIN, MORE THAN KIND: THE ROLE OF POSITIVE PARENTING IN THE DEVELOPMENT OF SOCIAL AND PSYCHOLOGICAL FUNCTIONING AMONG YOUTH IN FOSTER CARE

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Less than kin, more than kind: The role of positive parenting in the development of social and psychological functioning among youth in foster care

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ABSTRACT

The present study examined the importance of parental nurturance, parent-child cohesion, and parent-child relationship quality in the prediction of social functioning and internalizing and externalizing problems among youth in foster care. Data came from 257 youth in foster care, aged 10-18 years old, and from their primary caregivers, as part of an annual interview required of youth in the Ontario child welfare system. Parent- and youth-reports of parenting and of youth outcomes were obtained as part of this interview. Results were inconsistent across age groups, however, higher parent ratings of nurturance generally predicted fewer internalizing problems in youth, and better youth ratings of parent-child relationship quality predicted increased youth prosocial behaviour and fewer internalizing problems. Inconsistency of results may be related to variables of particular importance to the foster-parent child context that were not accounted for in the present study (i.e., attachment).

DEDICATION

For all the youth who reside or have resided in the care of the Ontario child welfare system; may this work and others like it inspire research that will continue to improve the lives of these youth in the years to come.

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CHAPTER I

Introduction

Statement of the Problem

Presently, approximately 18,000 children and adolescents reside in the care of the Ontario child welfare system (OACAS, n.d.). These youth represent a population that is at high risk for maladaptive developmental outcomes, including poor social competence (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Marquis & Flynn, 2009), and hyperactivity and inattention, depression, anxiety, conduct disorder, and substance abuse (Flynn & Biro, 1998; Stein, Evans, Mazumdar, & Rae-Grant, 1996). Estimates for the prevalence of psychological disorders among youth in foster care range from 30-80% (AACAP, 2001; Burge, 2007; Stein, Rae-Grant, Ackland, & Avison, 1994). In light of these findings, it is particularly important to investigate factors that may foster healthy development among these youth.

In the context of the traditional, biological parent-child relationship, a positive parenting style has been associated with numerous adaptive developmental outcomes, including fewer symptoms of depression and anxiety, less delinquent and antisocial behaviour, improved academic functioning, and higher self-esteem (Gray & Steinberg, 1999; Steinberg, 2001; Steinberg, Mounts, Lamborn, & Dornbusch, 1991; Steinberg, Elmen, & Mounts, 1989), as well as better adjustment in adulthood (Pearson, Cohn, Cowan, & Cown, 1994). The consistency of these findings provides support for the role of positive parenting practices in the development of healthy psychosocial functioning among youth. Given the strength of these relations, the

extension of these findings to the foster parent-foster youth context merits exploration.

Unfortunately, there has been relatively little study of the role of foster parenting practices in the development of foster youth (Haugaard & Hazan, 2002; Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006). Given the high rates of poor developmental outcomes among these youth, this finding is particularly troubling. Extension of findings from traditional parenting literature to the foster parent-foster youth context will contribute to literature concerned with facilitating resilient outcomes among youth in foster care. Further, identification of foster parenting practices that lead to positive developmental outcomes among youth in foster care may inform training programs for foster parents and caregivers.

Parenting Style

Parenting has long been studied as an important factor in the socialization of children. Early parenting researchers focused their efforts on identifying measurable dimensions of parenting, arriving at constructs such as emotional warmth/hostility and detachment/involvement (Baldwin, 1955), and warmth and permissiveness/strictness (Sears, Maccoby, & Levin, 1957). However, it was not until Baumrind's model (1966) that specific, "naturally occurring patterns of affect, parenting practices, and values" (Darling & Steinberg, 1993; p. 490) were identified and differentiated. Baumrind (1966) introduced three parenting typologies (authoritative, authoritarian, permissive) that were differentiated primarily on the basis of parental control. This was the first model to conceptualize the construct of parenting "style." Later, Maccoby and Martin (1983) presented a model that also

differentiated parenting typologies, however, in this model parenting style was defined along the dimensions of demandingness and responsiveness. While the Baumrind (1968) and Maccoby and Martin (1983) models differed somewhat in the dimensions they incorporated, compared with their predecessors, these models were the first to use dimensions of parenting to differentiate distinct styles of parenting.

Although the study of differentiating parenting patterns or styles was essential to the advancement of the field, Darling and Steinberg (1993) suggest that there is a need for research to examine how these parenting styles influence the development of the child. To that end, they distill a large body of parenting research into two distinct components of parenting. Parenting style, defined as the environment created by the parent's attitudes towards the child, or the emotional climate in which parenting takes place, is essentially a moderator of the effectiveness of specific parenting behaviours. On the other hand, parenting practices are specific parenting behaviours, which impact the child's behaviour and development directly. Together, these definitions provide a clearer conceptualization of the ways in which parenting influences child development.

Positive Parenting

In recent years, there has been a considerable body of research devoted to identifying parenting practices that are linked with specific, positive developmental outcomes in children. In general, the combination of these practices has come to be known as a "positive or effective parenting style" (Perkins, 2009). Parenting practices that have shown promise as part of a positive parenting style include

parental warmth (Chen, Liu, & Li, 2000), reasoning (Arsiwalla, 2010), consistent discipline (Barry, Dunlap, Lochman, & Wells, 2009), monitoring (Petit et al., 2001), and encouragement of autonomy (Bogels & van Melick, 2004; Bayer, Sanson, & Hemphill, 2006). In general, the combination of these parenting practices, or the use of a positive parenting style, has been linked with adaptive developmental outcomes among children, including lower psychological distress and fewer internalizing and externalizing problems (Steinberg, Mounts, Lamborn, & Dornbusch, 1991), better academic functioning and better psychosocial functioning (Steinberg, Elmen, & Mounts, 1989), and better adult adjustment (Pearson, Cohn, Cowan, & Cown, 1994). Data from the National Longitudinal Survey of Children and Youth (NLSCY) has provided ample evidence for the positive developmental outcomes associated with the use of parenting practices that make up a positive parenting style. Using NLSCY data, Landy & Tam (1998) examined the effect of different parenting practices, including hostile parenting practices and positive parenting practices, on a variety of child outcome measures, including emotional disorder, conduct disorder, hyperactivity, repetition of a grade, relationship problems, and the likelihood of having more than one of the aforementioned problems. In the sample of Canadian children aged 2-11 years, results suggested that positive parenting reduced the likelihood of having an emotional disorder by 41%, reduced the likelihood of having conduct disorder by 25%, reduced the likelihood of repeating a grade by 52%, and reduced the likelihood of having relationship problems by 27%. Conversely, hostile parenting practices significantly increased the likelihood of poor outcome on all outcome variables. Similarly, Chao

& Willms (2002) identified elements of a positive parenting style that were associated with specific child outcomes. In this study, consistent discipline was positively associated with pro-social behaviour and preschool vocabulary, and reasoning with the child (i.e., discussing behaviour problems) was positively associated with pro-social behaviour and academic performance in mathematics.

Conversely, parenting lacking in these qualities has been associated with poor developmental outcomes. For example, inconsistent discipline has been associated with aggressive social behaviour (Barry et al., 2009), and over-involved/protective parenting and parenting that is low in warmth/engagement have been associated with child internalizing difficulties (Bayer et al., 2006). The effects of poor parenting also extend to the academic functioning of the child. Gadeyne and colleagues (2004) found that low parental support and high parental control were associated with poor academic achievement in children. Taken together, this suggests that positive parenting is an important factor in the development of adaptive functioning in children.

An exploration of all positive parenting practices is beyond the scope of this study however, some parenting practices have consistently demonstrated associations with positive developmental outcomes in children. Some of these include parental nurturance, or the ability to be consistently warm, loving and accepting of the child (Arim, Dahinten, Marshall, & Shapka, 2011; Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007; Steinberg et al., 1991; Trentacosta et al., 2009). Also, parent-child cohesion, or the level of engagement between a parent and child, often measured as time spent in enjoyable activities together, has been

associated with healthy developmental outcomes in youth (Crosnoe & Trinitapoli, 2008; Gribble et al., 1993; Hofferth & Sandberg, 2001). A healthy conflict resolution style, involving the use of constructive reasoning, instead of tactics such as aggression or withdrawal, has also been found to play a role in positive youth development (Branje, van Doorn, van der Valk, & Meeus, 2009; Dadds, Atkinson, Turner, Blums, & Lendich, 1999; van Doorn, Branje, & Meeus, 2008; Kashani, Burbach, & Rosenberg, 1988). Finally, a high-quality parent-child relationship, typically defined as a relationship high in closeness and warmth, and which allows for open and honest communication, has been linked with adaptive functioning among youth (Bulanda & Majumdar, 2009; Grant et al., 2006; Mallers, 2010; Sentse & Laird, 2010; Shelton et al., 2008). A discussion of these constructs and the specific positive developmental outcomes associated with each follows.

*Parental nurturance***.** Parental nurturance refers to the caregivers' ability to provide "pervasive attention, emotional investment, and behaviour management" (Dishion & Bullock, 2002; p. 231) to children in his/her care. The influence of nurturance on positive developmental outcomes in children is thought to occur through a mechanism related to attachment theory (Bowlby, 1969, 1988). Arim and colleagues (2011) suggest that low nurturance is akin to a disturbance in parent-child attachment. This disturbance constitutes a threat to the feelings of security that are associated with secure attachment, which results in the child experiencing negative feelings such as anxiety, or anger. These negative emotions can lead to disturbances in the child's behaviour, such as internalizing or externalizing difficulties.

Research findings support the notion that parental nurturance contributes to adaptive functioning in children, including psychosocial and psychological functioning. In a study of 19,000 Canadian children between the ages of 2 and 11 years, Chao and Willms (2002) found that parenting high in warmth, caring, and responsivity was associated with increased likelihood of pro-social behaviour and reduced likelihood of behavioural problems (including internalizing and externalizing difficulties). More recently, Arim and colleagues (2011) used two longitudinal cohorts from NLSCY data to test the relation between adolescents' perceptions of parental nurturance and direct and indirect aggression in adolescents. Increases in the perception of parental nurturance predicted decreases in adolescent aggressive behaviour, supporting the role of parental nurturance as a contributor to adaptive functioning in youth. Research independent of the NLSCY has also identified parental nurturance as playing an important role in child development. In a sample of 10,000 high-school students, higher levels of parental nurturance were associated with better academic achievement, higher psychosocial maturity, lower levels of psychological distress, such as depression and anxiety, and less delinquent behaviour (Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

These findings have been replicated in the last two decades, with research indicating an association between the presence of parental nurturance and positive developmental outcomes such as social development and pro-social behaviour (Landy & Tam, 1996), and between the absence of nurturance and developmental problems, such as externalizing difficulties (Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007), and internalizing problems (Wood, McLeod, Sigman, Hwang, &

Chu, 2003). Further, the effect of parental nurturance has been replicated in special samples, such as high-risk children (i.e., children with behaviour problems, children of low socioeconomic status; Trentacosta et al., 2008), and children of parents with depression (Elgar et al., 2007). Trentacosta et al.'s findings (2008) are concordant with the findings of Steinberg et al. (1991), who found that the effect of parental nurturance on academic achievement, psychosocial maturity, psychological distress and conduct disorder transcends ethnicity, socioeconomic status, and family structure. This finding makes it particularly promising that the effect of parental nurturance should hold in the context of the foster parent-child relationship.

Parent-child cohesion. Parent-child cohesion has often been referred to as "engagement" in the literature (Cook & Willms, 2002). This term generally refers to the amount of time spent by the parent and child in enjoyable activities together, such as eating dinner as a family, or enjoying a family outing on a weekend. Cohesion is thought to be associated with better child adjustment because of the modeling experience it constitutes for the child (Gribble et al., 1993). That is, children who observe their parents engaging in enjoyable activities despite stressful or harsh life circumstances, or who observe their parents participating in these activities as a manner of coping with these circumstances, learn positive coping mechanisms for managing difficult life situations. Further it may be that parents who spend more time with their children create an emotional climate that allows them to gain a better understanding of the challenges the child is facing, which enables them to better help the child cope with these stressors (Gribble et al., 1993).

Research has supported the positive influence of parent-child cohesion on child adjustment. Cook and Willms (2002), using data from the NLSCY, were able to specify that for every 1-point increase on their measure of cohesion (termed *engagement*), which corresponded to approximately one additional parent-child activity per week, an increase of .08 could be observed in the child's score on the 10-point scale for pro-social behaviour. Similarly, they found this same one additional activity per week was associated with a 3% decrease in the likelihood of problem behaviour, including emotional disorder, anxiety, and direct and indirect aggression. Further, in a sample of 2,818 children aged 0-12 years, Hofferth and Sandberg (2001) examined the associations between parent reports of time spent by children in different activities and child achievement, internalizing difficulties, and externalizing difficulties. Their findings indicated that time spent in family activities, particularly eating meals together, was significantly associated with fewer total problems, as well as internalizing and externalizing problems.

Interestingly, research from Gribble and colleagues (1993) suggests that children who have experienced stressful life events, which is typical of children entering the child welfare system (Stein et al., 1996), report less parent-child cohesion than "normal" children. In this study, Gribble and colleagues compared stress-resilient with stress-affected ($\geq$ 4 stressful life events) children on parent and teacher ratings of adjustment. Both parent and child ratings of cohesion were significantly lower among stress-affected children. Given the positive developmental outcomes associated with cohesion, this finding supports the

continued research of the relation between cohesion and child adjustment in children who have experienced harsh life circumstances.

Conflict resolution style. A healthy parent-child conflict resolution style is generally free of aggression and violence (Kashani, Burbach, & Rosenberg, 1988), and incorporates skills such as trying to understand the opposing party's position and constructive reasoning (Branje et al., 2009). It has been suggested that conflict resolution influences child development through modeling. For example, Dadds et al. (1999) found that children tend to adopt the same conflict resolution style as their parent(s). Further, van Doorn and colleagues (2008) suggest that adolescents who learn poor conflict resolution tactics from their parents (i.e., coercion) are more likely to behave similarly in other social interactions. There may be an additional manner in which conflict resolution influences the development of internalizing problems, as Branje et al. (2009) posit that the relation between poor conflict resolution style and internalizing difficulties is related to the finding that adolescents with internalizing problems have difficulty establishing autonomy (Allen, Hauser, Eickholt, Bell, & O'Conner, 1994). They suggest that the conflict that arises from trying to establish autonomy may create a "hostile emotional tone" (p. 201) in the parent-child relationship, which leads to the development of internalizing problems in the adolescent.

Findings from Kashani, Burbach, and Rosenberg (1988) provide support for the role of conflict resolution style in the development of psychological distress. In this study, adolescents were sorted into three groups: a depressed group, a psychiatric control group, and a community control group. Providing support for

the modeling hypothesis articulated previously, adolescents' self-report of their own conflict resolution style was positively associated with adolescents' reports of parental conflict resolution style. Additionally, both depressed and psychiatric control adolescents reported family conflict resolution styles higher in violence and verbal aggression than community controls, suggesting that a negative conflict resolution style may be a non-specific risk factor for psychopathology. More recently, in a study of 284 adolescents and their parents, van Doorn and colleagues (2008) found that negative reports of family conflict resolution tactics, such as a demand-withdrawal pattern, and expression of hostility, were positively associated with delinquent behaviour (i.e., stealing, starting fires). Branje et al. (2009) provide further evidence for the relation between conflict resolution style and adjustment in a study of 1,313 early- and middle-adolescents. In this study, adolescents completed an inventory assessing types of conflict resolution style (referring to resolution of conflict with parents), as well as measures of internalizing and externalizing problems. Findings suggest that a negative conflict resolution style, characterized by conflict engagement (i.e., "Letting myself go, saying things I do not really mean"), withdrawal (i.e., "Not listening to him/her anymore"), and/or exit (i.e., "Saying that I don't want to have anything to do with him or her") was associated with higher levels of aggression, depression, and anxiety than adolescents reporting other conflict resolution styles. Taken together, the combination of these findings provides evidence for the role of conflict resolution in child adjustment within the context of the traditional (biological) parent-child relationship.

Parent-child relationship quality. A good-quality parent-child relationship is typically high in feelings of closeness and parental warmth, and low in parental hostility (Shelton et al., 2008). When defined in this way, the parent-child relationship is closely related to the construct of parent-child attachment (Papini & Roggman, 1992). Grotevant and Cooper (1986) suggest that a secure parent-child attachment during early adolescence is associated with positive developmental outcomes because this relationship provides a strong emotional foundation and emotional support for the adolescent to successfully navigate the challenges that are part of adolescence.

Findings from research have provided evidence for the role of the parent-child relationship in child development. Bulanda and Majumdar (2009) had adolescents complete measures of parent-child relationship quality, operationalized in terms of parent-child closeness, the child's perception of parental warmth, level of communication between parent and child, and the child's overall assessment of the strength of the parent-child relationship. Their findings indicated that higher quality parent-child relationships were predictive of higher levels of adolescent self-esteem, an indicator of psychological health. Further, in a 2008 study (Shelton et al.), monozygotic twins completed reports of parent-child relationship quality, operationalized as scores on parental warmth and hostility scales. Differences between twins on parent-child relationship quality were significantly related to conduct problems, with lower relationship quality being associated with increased conduct problems. In a review of research concerning mediators and moderators of the relation between environmental stressors and child psychopathology, Grant et

al. (2006) repeatedly found that the parent-child relationship had been identified as a mediator of this relation, suggesting that the parent-child relationship is one way in which the effect of environmental stressors on the child can be attenuated.

Interestingly, the parent-child relationship (termed *parental support*) has, in some cases, been found to play a more important role than alternate sources of support in the development of indicators of psychological health, such as self-esteem (Heinomen et al., 2003). Given the evidence for the role of the parent-child relationship in the development of adaptive functioning in youth, this finding makes continued research of this construct particularly important.

This summary of research concerning the influence of parenting practices including nurturance, cohesion, conflict resolution, and good parent-child relationship quality provides support for the role of positive parenting in the development of children's healthy psychological adjustment within the context of the traditional (biological) parent-child relationship. In light of the importance of positive parenting for child development in this context, the extension of this relation to other parenting contexts should be explored for helping youth in alternate parenting situations achieve similar positive developmental outcomes. Youth in the child welfare system represent a population that is at high risk for poor developmental outcome in many of the areas in which these parenting practices have been found to have an effect (Clausen et al., 1998; Flynn & Biro, 1998; Marquis & Flynn, 2009). The extension of findings from the traditional parenting literature to this special population may help to facilitate healthy psychological development among these youth.

The Canadian Child Welfare System

Prior to 1874, in Ontario, children who were deserted or orphaned had two avenues for the procurement of services (OACAS, 2010). The first was criminal conviction: if convicted of a crime, the child would be provided with basic necessities by the penal system. The other avenue was apprenticeship, which involved the child being taken in by a tradesperson in exchange for the child's labour. However, the year 1874 saw the appointment of privileges to charitable organizations for intervention and prevention of child maltreatment (OACAS, 2010). This was a prelude to the *Act for the Protection and Reformation of Neglected Children* (1888), which allowed courts to make children the wards of institutions or charitable organizations, and encouraged entry into foster homes over institutionalization.

In 1891, John Joseph Kelso successfully advocated for the establishment of the first Children's Aid Society in Toronto, which was soon followed by the passing of *An Act for the Prevention of Cruelty to and Better Protection of Children* (1893). This act allowed Children's Aid Societies to be legal guardians of children in their care, and provided them with funds from local municipalities to cover the cost of caring for children (OACAS, 2010). Between 1891 and 1912, 60 Children's Aid Societies were opened in Ontario, and in 1912 they banded together as the Association of Children's Aid Societies of Ontario (now the Ontario Association of Children's Aid Societies).

Between 1912 and 1984, the child welfare system underwent a number of changes, however, it was in 1984 that significant changes were brought about with

the passing of the *Child and Family Services Act* (CFSA; 1984). Among the major changes that this act included were the Provincial government accepting responsibility for funding child welfare services, a transition to professional service delivery (from a reliance primarily on charity and benevolence), and a transition from institutional and protection-oriented services to non-institutional services with a focus on prevention (OACAS, 2010).

The 1990s saw the beginning of another child welfare reform in Ontario. In 1998, a series of comprehensive reforms to the Ontario child welfare system began, and in early 2000, significant amendments were made to the CFSA, dictated by the Child Welfare Reform Agenda (OACAS, 2010). With the goal of upholding the purpose of the CFSA, that is, promoting the protection, best interests, and well being of the child, the changes included neglect and emotional harm being declared grounds for protection, and better definition of the public's legal obligation of duty to report child maltreatment. Perhaps most importantly, in a shift from the former "do no harm" approach to foster parenting, the changes also included the province-wide implementation of the *Looking After Children: Good Parenting, Good Outcomes* (LAC) approach (Flynn, Vincent, & Legault, 2006).

The LAC approach has its origins in the United Kingdom, where it was developed by a working group of experts in the field (Parker, Ward, Jackson, Aldgate, & Wedge, 1991) who were commissioned to consider how outcomes in child welfare could be identified and measured. There are three main tenets to the LAC approach, which highlight the value of its adoption in the Ontario child welfare system (Kufeldt et al., 2000; Flynn & Byrne, 2005). The first premise of the LAC

approach is a rejection of the traditional approach to child welfare that seeks to minimize harm and offer a minimal level of support to children in care. Instead, LAC encourages a proactive approach to foster parenting that seeks to provide children in care with a quality of care "equal to [that provided by] well-informed parents in the community who have adequate resources" (Flynn & Byrne, 2005; p. 12). That is, this approach seeks to maximize positive developmental outcomes in children, instead of only preventing or reducing harm. The second tenet of the LAC philosophy emphasizes the importance of collaboration between individuals involved in the child's welfare (i.e., foster parents, social workers, teachers, other professionals) to better monitor and facilitate the child's development. Finally, the third tenet of the LAC approach is an emphasis on measurable outcomes. The premise of this emphasis lies in the fact that monitoring outcomes provides a means for individuals involved in the child's care to track the child's developmental progress and to compare this progress with developmental norms based on the general population (Flynn & Byrne, 2005).

To put the third tenet of the LAC approach into practice, the working group developed an instrument for use in the child welfare system to assess both the quality of care children are receiving, as well as the progress in the child's development over time (Kufeldt et al., 2000). This instrument, referred to in the Canadian child welfare system as the Assessment and Action Record (AAR-C2; Flynn & Ghazal, 2001), assesses child development in seven domains: health, education, identity, family and social relationships, social presentation, emotional and behavioural development, and self-care skills. Questions are developmentally

appropriate, and different versions of the questionnaire are available for six different age categories, ranging from 0-21 years. The assessment incorporates multiple perspectives, typically taking the form of a conversational interview with the child, the foster parent or person most knowledgeable about the child, and the child welfare worker.

In 2001, the AAR-C2 (Flynn & Ghazal, 2001) was implemented in participating Children's Aid Societies in Ontario, and in 2005 (Flynn & Byrne, 2005) a review of preliminary findings was published, based on the data obtained from these reports. Findings were conducive to identifying priority areas in child welfare, and the authors stated that in many cases, individual Children's Aid Societies had taken the initiative to address these areas, such as hiring educational consultants to address the problems youth were experiencing with academic achievement. Based on this success, in 2006, a policy directive issued by the Ministry of Children's and Youth Services saw the LAC approach (and consequently, the AAR-C2) adopted in Children's Aid Societies province-wide (OACAS, n.d.).

Children in Foster Care in Canada

The adoption of the LAC approach has greatly facilitated the study of psychological adjustment and child development among children in the Ontario child welfare system in recent years, however, even prior to its implementation, the health and well-being of children in care was studied extensively. Although there is evidence of resilience among youth in care, for example, in areas such as health and self-esteem (Flynn, Ghazal, Legault, Vandermeulen, & Petrick, 2004), the overwhelming majority of research indicates that children in care experience high

levels of psychological distress and behavioural problems, and low levels of academic achievement, social competence, and pro-social behaviour (Clausen e al., 1998; Flynn & Biro, 1998; Marquis & Flynn, 2009; Stein et al., 1996).

In particular, compared with children in the general population, children in care appear to fare relatively worse on a variety of developmental outcomes. In a study of 492 children in Canadian foster care (Marquis & Flynn, 2009), scores on subscales of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), which is part of the AAR-C2, were compared with scores from children of the same age in the British general population. Results indicated that Canadian in-care youth exhibited higher levels of behavioural problems and lower levels of pro-social behaviour than the sample from the general population. In another study, data from children from the Prescott-Russell Children's Aid Society were compared with a sample from the NLSCY (Flynn & Biro, 1998). The discrepancy between in-care children and children from the general population was most pronounced in the area of education, with more than 40% of the in-care sample having repeated a grade, compared with 9% of the general population sample. However, the in-care children also fared poorer on measures of negative behaviour, including hyperactivity and inattention, emotional disorder and anxiety, conduct disorder and physical aggression, indirect aggression, and property offences. In some cases, children in care have even been found to score poorer on measures of psychological functioning (i.e., internalizing and externalizing symptoms) than children from a clinical sample (Stein et al., 1996).

Estimates for the prevalence of psychological disorders among children in care vary considerably, from 31.7% to 80% (AACAP, 2001; Burge, 2007; Leslie et al., 2000). Most recently, Burge (2007) reported the prevalence of psychological disorders in a sample of permanent wards from Ontario to be 31.7%. However, the author took care to state that prevalence of disorders among non-permanent wards might be significantly higher, in light of the uncertainty related to being in temporary wardship and the distress related to recent entry (or re-entry) into the child welfare system. Thus, overall, the prevalence of psychological disorders among children in care might be closer to the 41-63% reported by Stein et al. (1994), which is considerably higher than the 14% prevalence reported for children in the general population (Waddell et al., 2002).

In light of these sobering statistics, and the evidence that children in-care generally fare worse than children from the general population on a variety of measures of functioning, research concerning factors that may contribute to positive developmental outcomes among these youth seems particularly important. Given the wealth of evidence linking positive parenting with adaptive functioning among youth who are not in care, the potential extension of this relation to the foster parent-child context merits exploration.

Foster Parenting Research

Despite the overwhelming amount of research supporting the influence of parenting on psychological adjustment of youth, the influence of foster parenting on the adjustment of foster youth has been a relatively under-studied area (Haugaard & Hazan, 2002). However, in recent years, the implementation of the AAR-C2 has

facilitated increased research in this area (Legault, Anawati, & Flynn, 2005; Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006).

There are important differences between the foster parent-child relationship and the biological parent-child relationship that have been considered in studies of foster parenting. Research concerning the success of foster-parenting strategies, where success was defined as less likelihood of placement breakdown, greater placement satisfaction, and/or improvement on measures of youth psychological functioning, has identified parenting behaviours that are important specifically within the foster parent-child context. Baker, Gibbs, Sinclair, and Wilson (2000) identified that that foster parents who were more caring, accepting, and encouraging, were more clear in their expectations, and were not easily upset by a child's failure to respond to their displays of warmth and affection, as well as foster parents who tried to understand situations from the child's perspective and spent more time doing enjoyable activities with the child, were likely to experience greater success in the placement. Similarly, in a largely qualitative study, Lipscombe, Farmer, and Moyers (2003) surveyed a group of foster parents to determine what type of parenting strategies were employed most frequently, and whether these strategies were related to placement disruption. Strategies unique to foster parenting that were commonly reported included sensitive responding to displays of internalizing and externalizing behaviour, allowing the young person to discuss their past as needed, and facilitating friendships and leisure activities for the young person. Together, these findings indicate that there are unique aspects of the foster parent-child relationship that require a specialized set of parenting

behaviours. However, there is also evidence that, in some ways, the foster parent-child relationship functions similarly to that between a biological parent and child. Research concerning the efficacy of standardized parent-training programs in the foster parent-child context provides evidence that some positive parenting practices function similarly in fostering positive outcomes among both biological and foster children. For example, Linares and colleagues (2006) provided training in the Incredible Years program (Webster-Stratton, 2001) to both foster and biological families, and relative to a group of families who did not receive any parenting intervention, both types of families reported decreased externalizing behaviour among children. Further, some of the parenting behaviours that have been linked with greater foster parenting success are highly similar to positive parenting practices that have been studied in mainstream parenting literature. For example, in the Baker et al. (2000) study, behaviours such as caring, acceptance, and encouragement were linked with greater success among foster youth. These practices bear great similarity to some of the parenting behaviours that have been studied in the context of parental nurturance (Chao & Willms, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991). Thus, although the foster parent-child relationship is certainly unique and differs in many ways from the biological parent-child relationship, this suggests that some aspects of parenting (i.e., non-specific parenting practices) can transcend the differences between the biological and foster family contexts to have a similar effect on the developmental outcome of biological and foster children. The present study focused primarily on the role of these non-specific positive parenting practices in the foster-parenting context, as the model of

foster parenting and the methods of monitoring youth development (i.e., AAR-C2) adopted by the Ontario child welfare system are consistent with this model.

One of the earlier studies of foster parenting and child development used a sample of 38 children in the child welfare system from upstate New York (Smith, 1994). The author used an in-home interview/observation as the method of assessment for the parenting variables and the foster mother completed measures of the child's emotional and behavioural problems and social competence. Results were somewhat mixed, with parenting variables such as avoidance of punishment being negatively associated with externalizing behaviour, and a measure of authoritative parenting being positively associated with pro-social behaviour. However, other parenting variables included in the analyses, such as warmth and acceptance, were unrelated to any of the outcome variables. The inconsistency of the results obtained may be related to the small sample size that was used. Regardless, because the design was correlational, no causal inferences could be made.

More recently, Perkins-Mangulabnan and Flynn (2006) have utilized some of the data produced from the AAR-C2 (Flynn & Ghazal, 2001) to explore the relation between foster parenting practices and child development. In a sample of 367 adolescents aged 10-17 years from the Ontario child welfare system, the authors explored the relation of parent-reported parental nurturance, conflict resolution style (termed *parent-child conflict*), and parent-child cohesion (termed *shared activities*) with adolescent-reports of outcome variables, including adolescent pro-social behaviour, emotional disorder, conduct disorder, and indirect aggression.

Results indicated that nurturance was positively associated with pro-social behaviour, and negatively associated with conduct disorder and indirect aggression. Further, poorer conflict resolution style was predictive of higher levels of emotional disorder, conduct disorder, and indirect aggression. Although the results were somewhat mixed, with parent-child cohesion predicting none of the outcome variables, and nurturance and conflict resolution style predicting only some of the outcome variables, they nevertheless provide support for the role of positive foster parenting practices in the development of healthy adolescent functioning. However, increasing the use of multiple informants may increase the clarity of results. Although the authors worked to reduce method variance by using different informants for the predictor and outcome variables, incorporating both parent- and child-reports of parenting, as well as parent- and child-reports of adjustment may increase the ability of the research to produce clear and consistent results.

In a related study, Perkins (2009) explored the prediction of adolescent outcomes from foster parenting practices in a series of mini-studies using a sample of adolescents from the Ontario child welfare system. In one of these studies, she completed a longitudinal analysis of nurturance, conflict resolution style, and parent-child cohesion as predictors of pro-social behaviour, emotional disorder, conduct disorder, and indirect aggression. Results provided no support for a longitudinal relation between quality of parenting experienced by the adolescent and adolescent outcome, with none of the parenting practices predicting any of the outcome variables above and beyond the demographic and contextual variables considered. A similar methodology to Perkins-Mangulabnan and Flynn (2006) was

employed, in which parent-reports of the different parenting practices were used as predictors, and adolescent-reports of each outcome were employed as outcome variables. Some research has suggested that youth tend to under-report psychopathology (Hodges, Gordon, & Lennon, 1990; Klein, 1991; Rey, Schrader, & Morris-Yates, 1992), which may have the effect of reducing the association between parenting practices and adolescent outcomes. One way to remedy this problem is to incorporate information from multiple informants in the assessment of predictor and outcome variables. In this case, using parent- and adolescent-reports of parenting, as well as parent- and adolescent-reports of outcomes may provide a clearer picture of the relation between foster parenting and foster youth outcomes.

Despite the absence of an effect in the longitudinal analysis of Perkins (2009), another of the mini-studies conducted as part of this project examined the prediction of adolescent outcomes from nurturance, conflict resolution style, cohesion, and parental monitoring. The results of this analysis provided continued support for the role of a healthy conflict resolution style, which was associated with lower levels of emotional disorder and conduct disorder. Together with earlier work (Perkins-Mangulabnan & Flynn, 2006), these findings support the role of foster parenting practices, such as nurturance, cohesion, and conflict resolution, in the development of adaptive functioning among foster youth. However, this research also highlights the need for methodological changes. Future research investigating the influence of foster parenting in producing positive developmental outcomes among foster youth will benefit from the incorporation of multiple informants in the assessment of predictor and outcome variables.

Study Purpose and Hypotheses

The purpose of the present study was to examine the relation between foster parenting practices, including parental nurturance, parent-child cohesion, conflict resolution style, and quality of the parent-child relationship, and foster youth outcome in the areas of social functioning, internalizing problems, and externalizing problems. A unique aspect of the present study was the incorporation of both parent- and child-reports of parenting and of developmental outcomes. An additional unique feature of this study was the collection of data at two time-points, which permitted exploration of the relation between parenting and youth outcome over time.

Previous research concerning foster parenting practices as predictors of outcomes among foster youth has generally used parent reports of parenting practices and youth reports of outcome variables (Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006). Although this practice reduces the impact of method variance, which can be problematic when data for all variables are provided by the same source, in the context of parent-child research, using only the youth's report of adjustment may reduce the association between parenting practices and outcomes. That is, it may be that because youths typically underreport symptoms of poor social functioning (Rey, Schrader, & Morris-Yates, 1992), and internalizing and externalizing problems (Salbach-Andrae, Klinkowski, Lenz, & Lehmkuhl, 2009), the association between foster parenting practices and foster youth outcomes does not appear consistent in research findings to date. However, when possible, the present study aggregated parent- and youth-reports of pro-social functioning, internalizing

problems, and externalizing problems to improve the accuracy of measurement for these variables.

Further, to the author's knowledge, no research to date has examined the prediction of foster youth outcomes from foster youth reports of parenting. The use of youth reports of parenting in the prediction of outcomes may influence the results because research has suggested that parents typically provide more positive ratings of parenting quality than children (Cohen & Rice, 1997; Paulson, 1994; Paulson & Sputa, 1996; Tein, Roosa, & Micheals, 1994). Further, there is evidence that, in some cases, adolescent perceptions of parenting may be a better predictor of adolescent outcome than parent perceptions of parenting. Findings from this area of research indicate that youth-report of parenting practices is more closely related to youth outcome than parent-report of parenting practices for areas such as academic achievement (Paulson, 1994) and substance use (Cohen & Rice, 1997). Based on the availability of data collected through the AAR-C2 (Flynn & Ghazal, 2001), foster youth reports of parental nurturance and of parent-child relationship quality were used in the analyses.

Most importantly, this research will increase the sparse body of literature concerning the role of foster parenting in the development of foster youth by exploring the extension of findings from traditional biological parent-child research. The lack of research in the area of foster parenting and foster youth development is particularly troubling given the relatively high rates of poor developmental outcomes among foster youth (AACAP, 2001; Leslie et al., 2000; Stein et al., 1994).

By addressing some of the methodological problems in previous research, findings from this study will continue to bridge important gaps in this area of research.

Based on the literature review of parenting and foster-parenting research, it was hypothesized that:

Foster parent report of parenting practices

1) Higher levels of parent-reported nurturance, cohesion, and positive conflict resolution would be predictive of higher adolescent social functioning
2) Higher levels of parent-reported nurturance, cohesion, and positive conflict resolution would be predictive of fewer adolescent internalizing difficulties
3) Higher levels of parent-reported nurturance, cohesion, and positive conflict resolution would be predictive of fewer adolescent externalizing difficulties

Foster youth report of parenting practices

4) Higher levels of youth-reported nurturance and parent-child relationship quality would be predictive of higher adolescent social functioning
5) Higher levels of youth-reported nurturance and parent-child relationship quality would be predictive of fewer adolescent internalizing difficulties
6) Higher levels of youth-reported nurturance and parent-child relationship quality would be predictive of fewer adolescent externalizing difficulties

CHAPTER II

Methods

Participants

Participants were 270 adolescents (135 male, 135 female) from the Windsor-Essex area. Participants were between 12 and 18 years of age (M=14.17, SD = 2.14) at the time of data collection, and all were classified as Crown wards.

Data were collected at two time points: data for Time 1 was collected between June 1, 2008, and May 31, 2009, whereas data for Time 2 was collected between June 1, 2009, and May 31, 2010. Initially, data were obtained from the Windsor-Essex Children's Aid Society for 111 participants at Time 1 and 161 participants at Time 2, for a total of 272 participants. Of the 161 participants at Time 2, 34 also had Time 1 data; thus, there were 127 new participants at Time 2. Data for one participant was removed because of discrepancies between Time 1 and Time 2 data, resulting in a sample of 110 participants at Time 1, and 160 participants at Time 2 (N=270), with 34 participants having return data.

There were some unanticipated differences between the AAR-C2-2006 forms used with youth aged 10-15 years old and those used with youth aged 16-18 years old. Specifically, youth who are 16-18 years of age completed a different youth-report of internalizing problems ("Depression Scale"), a different youth-report of prosocial behaviour ("Positive Social Interactions"), and were not required to complete any youth-report measures of externalizing problems. Therefore, analyses were modified to accommodate these differences. For simplicity, and in order to make use of the youth-report data from the 10-15 year olds, all proposed analyses

were performed separately for each age group. Analyses were performed separately for youth aged 10-15 years old and for youth aged 16-18 years old; therefore, these samples are described individually.

*Youth aged 10-15 years old***.** Following data imputation and after exclusion of cases that were still missing data following the imputation procedure (n = 9), this sample comprised 165 youth (86 male, 79 female), aged 10-15 years, with a mean age of 12.92 years (SD=1.57). These youth had been enrolled in the foster care system for an average of 6 years (M=5.84, SD=3.16). On average, these youth lived with approximately two other youth (M=2.49, SD=2.23) and with two adults in the foster home (M=2.09, SD=1.49). The most frequently-cited reason for entering the foster care system among youth aged 10-15 years old was neglect (63%), followed by emotional harm (39%), physical harm (32%), domestic violence (27%), other (16%), problematic behaviour (16%), abandonment (16%), and sexual harm (12%). Percentages total greater than 100% because 64% of Time 1 participants cited multiple reasons for entering the foster care system. Additionally, 2.4% of Time 1 participants did not provide information concerning reason for entry into the foster care system.

Youth aged 16-18 years old. Following data imputation and after exclusion of cases that were still missing data following the imputation procedure (n = 4), this sample comprised 92 youth (45 male, 47 female), aged 16-18 years, with a mean age of 16.43 years (SD=0.50). The participants had lived in foster care for an average of 7 years (M=7.28, SD=3.99). On average, these youth lived with three other youth (M=2.54, SD=2.85) and three adults (M=2.80, SD=4.04) in the foster home. The most

frequently cited reason for entry into the foster care system was neglect (70%), followed by emotional harm (39%), problematic behaviour (33%), physical harm 20%), abandonment (19%), sexual harm (10%), and domestic violence (9%). Seventeen percent of participants cited "Other", and 3% of participants did not provide any data concerning reason for entry into the foster care system. Percentages total greater than 100% because 64% of participants cited multiple reasons for entering the foster care system.

Youth with longitudinal data (aged 10-15 years old). In the present study, data was collected at two time-points, however, there were relatively few participants for whom data was obtained at both Time 1 and Time 2. Through consultation with the Windsor-Essex Children's Aid Society, it was determined that internal system problems and youth-related issues were important factors in the rate of missing data. For example, if the AAR-C2 interview data is not recorded and entered into the database by a particular cutoff date, it is not included in the data sets. Additionally, one youth in particular had run away from the foster home during the time period in which the interviews were being conducted, and as such, there was no data for this individual.

Only longitudinal data from youth in the younger age group (aged 10-15 years old) was examined in the longitudinal analyses, as there were only eight youth in the older age group (aged 16-18 years old) with Time 1 and Time 2 data. Among the youth in this younger sample, only two cases were missing data on imputed variables after imputation. Because the only analyses performed with these data were correlations, and the sample was already quite small (N=26), these cases were

not excluded. Thus, this sample comprised 26 youth (14 male, 12 female), aged 10-15 years, with a mean age of 12.50 years (*SD*=1.42). The participants had lived in foster care for an average of 6 years (*M*=5.80, *SD*=2.38). On average, these youth lived with two other youth (*M*=1.77, *SD*=1.84) and three adults (*M*=1.77, *SD*=.77) in the foster home. The most frequently cited reason for entry into the foster care system was neglect (69%), followed by domestic violence (27%), emotional harm (23%), physical harm (15%), abandonment (15%), and problematic behaviour (12%). Twenty percent of participants cited "Other" as a reason for entry into the foster care system. Percentages total greater than 100% because 50% of participants cited multiple reasons for entering the foster care system.

Procedure

The Assessment and Action Record (AAR-C2; Flynn & Ghazal, 2001) is an instrument designed to help accomplish the objectives of the *Looking After Children: Good Parenting, Good Outcomes* (LAC) approach (Parker, Ward, Jackson, Aldgate, & Wedge, 1991) to foster care that was implemented across Ontario in 2007. The AAR-C2 (Flynn & Ghazal, 2001) is completed annually with each foster youth and his/her primary caregiver. Administration typically takes the form of a conversational interview between the youth's child welfare worker, the youth, and the caregiver; however, when this is not possible or is inappropriate the administration may take another form. The child welfare worker is required to indicate how the AAR-C2 (Flynn & Ghazal, 2001) is completed, as this measure can be administered in a variety of ways, including (a) in a face-to-face conversation

conducted by the child welfare worker, (b) in a face-to-face conversation conducted by the child welfare worker in conjunction with a member of the child's First Nations, Métis, or Inuit community, (c) in a telephone conversation conducted by the child welfare worker, (d) through self-administration by the caregiver, (e) through self-administration by the young person, and/or (f) by another method. Of the 270 cases in the present study, 69% (n = 186) of social workers reported that all or part of the administration took place in a face-to-face conversation, 23% (n = 63) reported that all or part of the interview was completed in a telephone conversation conducted by the child welfare worker, 39% (n = 105) reported that all or part of the interview was completed through self-administration by the foster parent, 14% (n = 37) reported that all or part of the interview was completed through self-administration by the young person, and 7% (n = 20) reported that all or part of the interview was conducted in another manner. Percentages total greater than 100% because some interviews were conducted using a combination of the above procedures.

Measures

The Canadian edition of the AAR-C2 (Flynn & Ghazal, 2001) assesses child development across seven domains: health, education, identity, family and social relationships, social presentation, emotional and behavioural development, and self-care skills. In 2006, the AAR-C2 (Flynn & Ghazal, 2001) was revised to the AAR-C2-2006 (Flynn, Ghazal, & Legault, 2006), and the AAR-C2-2006 was implemented in Children's Aid Societies across Ontario. Thus, the 2006 edition of this instrument

was used in the collection of data for this study. All measures of parenting and youth outcomes were obtained from the various scales included within the AAR-C2-2006. Participants completed the version of the AAR-C2-2006 designed for youth aged 10-11 years, 12-15 years, and 16-17 years, according to their age at time of participation.

Demographic and contextual information. The AAR-C2-2006 (Flynn, Ghazal, & Legault, 2006) includes questions regarding sex, age, ethnicity, number of youth in the foster home, number of adults in the foster home, number of years in foster care, and reason for entry into care. The youth care worker fills in information concerning the youth's sex and age, as well as number of youth and adults in the foster home and number of years in foster care. Together, the youth care worker and the foster parent indicate the reason for entry in foster care, and the youth is asked to complete the section concerning ethnicity.

Measures of parenting: Foster parent report

Parental nurturance. This 8-item scale measures the foster parent's provision of warmth, control, and encouragement of autonomy. Scale items include "I speak to the youth in a warm and friendly way" and, "I inform the youth about what behaviour is or is not acceptable." Foster parents rated each statement on a scale ranging from 1 (*Never*) to 3 (*Always*), and the total score is converted to produce a scale score between 0 and 16 (Flynn, Vincent, & Legault, 2006). A higher score reflects a greater level of parental nurturance. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, the internal consistency of this scale is acceptable ($\alpha = .67$; Flynn, Vincent, & Legault, 2006). In

the present study, the internal consistency of this scale was also acceptable (α = .70; Kline, 1999).

Parent-child cohesion. This 7-item scale reflects the amount of time the foster parent and foster youth spend in enjoyable activities together. Scale items include "How often do you do a family project or family chores together?" and, "How often do you have a discussion together?" Foster parents rated each statement on a scale ranging from 1 (*Rarely or never*) to 5 (*Every day*), and the total score is converted to produce a scale score between 0 and 28 (Flynn, Vincent, & Legault, 2006). A higher total score indicates more time spent together in enjoyable activities. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .72; Flynn, Vincent, & Legault, 2006). In the present study, the internal consistency of this scale was acceptable (α = .74; Kline, 1999).

Conflict resolution style. This 8-item scale provides an assessment of the number of disputes between the foster parent and foster youth, and of the manner in which the foster parent and foster youth typically resolve disputes. Scale items include "When we argue, we stay angry for a very long time" and, "When we disagree, I refuse to talk to him/her." Foster parents rated each statement on a scale ranging from 1 (*Not at all*) to 3 (*Pretty often*), and the total score is converted to produce a scale score between 0 and 16 (Flynn, Vincent, & Legault, 2006). A higher total score indicates greater frequency of conflicts, and of poor conflict resolution. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has acceptable internal consistency (α = .60; Flynn,

Vincent, & Legault, 2006). In the present study, the internal consistency of this scale was not acceptable (α = .14; Kline, 1999) and therefore the scale was not used in the analyses.

Measures of parenting: Foster youth report

Parental nurturance. This 7-item scale provides an assessment of the youth's perception of nurturant parenting. Scale items include "[How often does your foster parent or other adult caregiver] smile at [you]?" and, "[How often does your foster parent or other adult caregiver] make sure that [you] know that [you are] appreciated?" Foster youth rated each statement on a scale ranging from 1 (*Never*) to 3 (*Always*), and the total score is converted to produce a scale score between 0 and 14 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater degree of parental nurturance perceived by the youth. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has excellent internal consistency (α = .86; Flynn, Vincent, & Legault, 2006). In the present study, the internal consistency of this scale was good (α = .88; Kline, 1999).

Parent-child relationship quality. This 4-item scale provides an assessment of the youth's perception of his/her relationship with both the male and female caregiver. A separate rating is provided for each caregiver; however, the items within each scale are identical. Scale items include "How well do you feel [he/she] understands you?" and, "How much affection do you receive from [him/her]?" Foster youth rated each statement on a scale ranging from 1 (*Very little*) to 3 (*A great deal*). The final item on each scale, "Overall, how would you describe your relationship with [him/her]?" was rated on a scale ranging from 1 (*Not very close*) to

3 (*Very close*). The total score is converted to produce a scale score between 0 and 8 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a higher perceived quality of relationship by the foster youth. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .79; Flynn, Vincent, & Legault, 2006). In the present study, the internal consistency was good for both the male and female caregiver scales (α = .79 and .86, respectively; Kline, 1999).

Measures of youth outcome: Foster parent report

Social adjustment. The parent report of social adjustment was assessed using the peer problems and pro-social behaviour subscales from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) within the AAR-C2-2006. The 5-item peer problems scale provides an assessment of the youth's social relationships with their peers. Scale items include "Would rather be alone than with other children" and, "Picked on or bullied by other children." Foster parents rated each statement on a scale of 1 (*Not true*), 2 (*Somewhat true*), and 3 (*True*), and the total score is converted to produce a scale score between 0 and 10 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a fewer positive social relationships. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .71; Flynn, Vincent, & Legault, 2006). In a representative sample of British children aged 5-15 years, this scale had acceptable internal consistency (α = .57; Goodman, 2001). In the present study, the internal consistency of this scale was similarly poor, .57 (Kline, 1999).

The 5-item pro-social behaviour scale provides an assessment of the youth's proclivity for pro-social behaviour. Scale items include "Considerate of other people's feelings" and, "Shared readily with other children, for example, books, games, food." Foster parents rated each statement on a scale on a scale of 1 (*Not true*), 2 (*Somewhat true*), and 3 (*True*), and the total score is converted to produce a scale score between 0 and 10 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater incidence of pro-social behaviour. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .79; Flynn, Vincent, & Legault, 2006). In a representative sample of British children aged 5-15 years, this scale had acceptable internal consistency (α = .65; Goodman, 2001). In the present study, the internal consistency of this scale was good (α = .81; Kline, 1999).

Internalizing problems. The parent report of internalizing problems was assessed using the emotional symptoms subscale from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) within the AAR-C2-2006. The 5-item emotional symptoms scale provides an assessment of the number of emotional disorder symptoms the foster parent perceives in the youth. Scale items include "Often complains of headaches, stomachaches, or sickness" and, "Many worries or often seems worried." Foster parents rated each statement on a scale of 1 (*Not true*), 2 (*Somewhat true*), and 3 (*True*), and the total score is converted to produce a scale score between 0 and 10 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater number of emotional symptoms. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good

internal consistency (α = .73; Flynn, Vincent, & Legault, 2006). In a representative sample of British children aged 5-15 years, this scale had acceptable internal consistency (α = .67; Goodman, 2001). In this present study, this scale was also acceptable (α = .67; Kline, 1999).

Externalizing problems. The parent report of internalizing problems was assessed using the conduct problems subscale from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) within the AAR-C2-2006. The 5-item conduct problems scale provides an assessment of the number of behaviours related to conduct disorder that the foster parent perceives in the youth. Scale items include "Often loses temper" and, "Steals from home, school, or elsewhere." Foster parents rated each statement on a scale of 1 (*Not true*), 2 (*Somewhat true*), and 3 (*True*), and the total score is converted to produce a scale score between 0 and 10 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater number of behaviours related to conduct disorder. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .76; Flynn, Vincent, & Legault, 2006). In a representative sample of British children aged 5-15 years, this scale had acceptable internal consistency (α = .63; Goodman, 2001). In the present study, the internal consistency of this scale was acceptable (α = .64; Kline, 1999).

Measures of youth outcome: Foster youth report

Social adjustment. The youth report of social adjustment was assessed using the friendships and pro-social behaviour scales from the AAR-C2-2006. The 2-item friendships scale provides an assessment of the youth's social relationships with

their peers. Scale items include "I have many friends" and, "I get along easily with others my age." Foster youth rated each statement on a scale on a scale of 1 (*False or mostly false*), 2 (*Sometimes false or sometimes true*), and 3 (*True or mostly true*), and the total score is converted to produce a scale score between 0 and 4 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater number of positive social relationships. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has acceptable internal consistency (α = .66; Flynn, Vincent, & Legault, 2006). In the present study, this scale had acceptable internal consistency (α = .72; Kline, 1999).

The 3-item pro-social behaviour scale provides an assessment of the youth's proclivity for pro-social behaviour. Scale items include "I help other people my age (friend, brother, or sister) who are feeling sick" and, "I comfort other young people (friend, brother, or sister) who are crying or upset." Foster youth rated each statement on a scale of 1 (*Never or not true*), 2 (*Sometimes or somewhat true*), and 3 (*Often or very true*), and the total score is converted to produce a scale score between 0 and 6 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater incidence of pro-social behaviour. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .72; Flynn, Vincent, & Legault, 2006). In the present study, the internal consistency of this scale was acceptable (α = .78; Kline, 1999).

The version of the AAR-C2 that is used with youth who are 16 years and older does not contain the previously described youth-report scale for prosocial behaviour. Thus, another scale, titled positive social interactions, was used as a

substitute for a measure of prosocial behaviour among youth aged 16-18 years of age. This 4-item scale provides a measure of how the youth gets along with other individuals in their daily life. Youth are asked to indicate, in the past six months, how well they have gotten along with "other young people, such as friends or classmates" and, "[their] foster mother or female group home worker (or other female caregiver)." Foster youth rated each statement on a scale of 1 (*Frequent or constant problems*), 2 (*Occasional problems*), and 3 (*No problem or hardly any problems*), and the total score is converted to produce a scale score between 0 and 8 (Flynn, Vincent, & Legault, 2006). A higher total score indicates more positive social interactions. Based on the data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has acceptable internal consistency (α = .68). In the present study, this scale had good internal consistency (α = .84; Kline, 1999).

Internalizing problems. The youth report of internalizing problems was assessed using the anxiety/emotional distress and depression scales from the AAR-C2-2006. The 8-item anxiety/emotional distress scale provides an assessment of the youth's level of anxiety and emotional disorders. Scale items include "I am unhappy, sad, or depressed" and, "I am nervous, high-strung, or tense." Foster youth rated each statement on a scale of 1 (*Never or not true*), 2 (*Sometimes or somewhat true*), and 3 (*Often or very true*), and the total score is converted to produce a scale score between 0 and 16 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater level of anxiety and/or emotional disorders. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has very good internal consistency (α = .81; Flynn, Vincent, & Legault, 2006).

In the present study, this scale had very good internal consistency (α = .87; Kline, 1999).

Another scale, referred to as a depression scale, was used as a substitute for a measure of internalizing problems among youth aged 16-18 years of age. The 12-item depression scale assesses the number of depressive symptoms the youth perceives in him-/herself. Scale items include, "[During the past week] I did not feel like eating; my appetite was poor" and, "[During the past week] I had trouble keeping my mind on what I was doing." Foster youth rated each statement on a scale ranging from 1 (*Rarely or none of the time; less than 1 day*) to 4 (*Most or all of the time; 5 to 7 days*), and the total score is converted to produce a scale score between 0 and 36 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a higher number of depressive symptoms. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has very good internal consistency (α = .80; Flynn, Vincent, & Legault, 2006). In the present study, this scale had poor internal consistency (α = .47). The reliability was improved when several scale items were removed. These items included, "I felt hopeful about the future", "I was happy", and "I enjoyed life." With the removal of these items, the reliability of the remaining nine items was acceptable (α = .78; Kline, 1999).

Externalizing problems. The youth report of externalizing problems was assessed using the physical aggression/opposition and property offence scales from the AAR-C2-2006. The 3-item physical aggression/opposition scale provides an assessment of the youth's proclivity for physical aggression. Scale items include "I physically attack people" and, "I kick, bite, or hit other people." Foster youth rated

each statement on a scale of 1 (*Never or not true*), 2 (*Sometimes or somewhat true*), and 3 (*Often or very true*), and the total score is converted to produce a scale score between 0 and 6 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a greater level of physical aggression. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has good internal consistency (α = .73; Flynn, Vincent, & Legault, 2006). In the present study, this scale had good internal consistency (α = .82; Kline, 1999).

The 3-item property offence scale assesses the incidence of behaviours associated with property offences. Scale items include "I steal at home" and, "I destroy things belonging to my family or other young people." Foster youth rated each statement on a scale of 1 (*Never or not true*), 2 (*Sometimes or somewhat true*), and 3 (*Often or very true*), and the total score is converted to produce a scale score between 0 and 6 (Flynn, Vincent, & Legault, 2006). A higher total score indicates a higher number of behaviours related to property offences. Based on data obtained from the use of the AAR-C2-2006 in the Ontario child welfare system, this scale has acceptable internal consistency (α = .60; Flynn, Vincent, & Legault, 2006). In the present study, this scale had acceptable internal consistency (α = .74; Kline, 1999).

Construction of youth outcome variables

For the youth outcome variables, the parent- and youth-report of each outcome were used to form a composite score. To avoid loss of information that occurs when the reports are averaged, parent and youth scores on each outcome were added together to produce a composite score.

CHAPTER III

Results

Planned Analyses

Cross-sectional analyses. Two sets of analyses were performed; one with the data from youth aged 10-15 years old and one with data from youth aged 16-18 years old. To begin, bivariate correlations were examined to assess the degree of association between parent- and youth-reports of outcome variables. Parent- and youth-reports that were significantly associated with one another were combined to form a composite outcome score. Subsequently, bivariate correlations were calculated to examine the relation between demographic and contextual variables, predictor variables (measures of parenting), and outcome variables (measures of youth outcome). These correlational data were used to determine predictors for the main analyses. Only demographic and predictor variables that were significantly associated with a given outcome variable were entered as predictors. Stepwise regression analyses were conducted predicting measures of youth outcome from demographic and contextual variables and measures of parenting. Demographic and contextual variables were entered at step 1, and measures of parenting were entered at step 2.

Longitudinal analyses. As there was relatively little longitudinal data available for analysis, bivariate correlations were calculated to examine the relations between predictor variables (measures of parenting) and outcome variables (measures of youth outcome).

Preliminary Analyses

Data screening and preparation. Prior to performing the primary analyses all variables were examined for missing data and outliers. The statistical assumptions of multiple regression were evaluated and steps taken to address any violations. Correlational analyses were performed between demographic and contextual variables and all study variables to detect possible confounds.

As described earlier, there were unanticipated differences between the AAR-C2-2006 forms used with youth aged 10-15 years old and those used with youth aged 16-18 years old. Youth who were 16-18 years of age completed a different youth-report of internalizing problems ("Depression Scale"), a different youth-report of prosocial behaviour ("Positive Social Interactions"), and were not required to complete any youth-report measures of externalizing problems. Therefore, in order to make use of the youth-report data from the 10-15 year olds, all primary analyses were performed separately for each age group.

Missing data. A missing values analysis (MVA) was conducted on Time 1 and Time 2 variables for each age group (See Table 1A in Appendix A). Little's MCAR test values for each dataset indicated that the data was most likely missing in a random fashion ($p>.05$ for all datasets; Table 1A). Because data were missing on nearly all variables, data imputation was undertaken via hot-deck imputation. Hot-deck imputation was chosen as the method for data imputation because this method has less stringent distributional assumptions than parametric approaches, such as maximum likelihood estimation and multiple imputation, which generally require data to be normally distributed. Visual inspection of histograms and of skewness

and kurtosis values for the variables suggested that almost all variables deviated from a normal distribution. Hot-deck imputation is generally considered a non-parametric technique (Durrant, 2005), which avoids limitations posed by distributional assumptions. Using an SPSS macro produced by Myers (2011), data were imputed for each of the four datasets presented in Table 1A (Appendix A).

Hot-deck imputation involves imputing a value from a "donor" (another case in the dataset) that is statistically similar to the "recipient" (case with missing value) on several researcher-specified variables, and occasionally, a case is so unique that there are no other similar cases in the dataset. In this situation, the hot-deck procedure does not impute a value for the case and the value remains missing. In order to conduct a complete case analysis, n=17 cases were removed for this reason from the total sample, for a new total of N=257participants.

Values were not imputed for demographic or contextual variables, including gender, age, age at entry into foster care, number of other youths in the home, number of adults in the home, type of placement, and reason for entry into foster care. Additionally, values were not imputed for any of the parent- or youth-report variables where data was missing at a rate greater than 20%.

Among participants aged 10-15 years old, 72 participants provided data at Time 1 and 102 participants provided data at Time 2 (N=174). Following imputation of data, nine cases were removed for missing data on imputed variables, for a total of 165 participants (n=65 at Time 1, n=100 at Time 2). Time 2 data for 26 participants with return data was removed, for a total of 139 participants (n=65 at Time 1, n=74 at Time 2). After this exclusion, some participants were missing data

on one or more variables for which data was not imputed, and where the sample size for a particular analysis is smaller than *N*=139 this is noted.

Among participants aged 16-18 years old, 38 participants provided data at Time 1 and 58 participants provided data at Time 2 (*N*=96). Following imputation of data, four cases were removed for missing data on imputed variables, for a total of 92 participants (*n*=37 at Time 1, *n*=55 at Time 2). Time 2 data for 7 participants with return data was removed, for a total of 85 participants (*n*=37 at Time 1, *n*=48 at Time 2). After this exclusion, some participants were missing data on one or more variables for which data was not imputed, and where the sample size for a particular analysis is smaller than *N*=85 this is noted.

Conformity to assumptions of multiple regression. Screening regression runs were carried out on both datasets to assess the assumptions of multiple regression.

Youth aged 10-15 years old. Skewness and kurtosis values for the dependent variables were within an acceptable range (±2 and ±3, respectively), with skewness values ranging from -.50 to .59, and kurtosis values ranging from -.63 to -.46. Scatterplots for each analysis indicated that that the relationship between the independent and dependent variables was approximately linear (regression is robust to mild deviations from linearity). A q-q plot for each analysis indicated that residuals were reasonably normal. Scatterplots of residuals and predicted values suggested that there was mild heteroscedasticity between the prosocial behaviour composite score and the relationship quality scores. Transformations were attempted, however,

these did little to improve the heteroscedasticity present in the data. The assumption of homoscedasticity is robust to mild deviations when normality is not also violated; therefore, the variables were used in their original form in the analyses. Examination of residuals and Mahalanobis scores identified two outlying scores in the analyses in the prosocial behaviour analysis, however, removal of the outliers did not significantly change the variance accounted for by the model or the pattern of results (i.e., the significance of predictors). Thus, no outliers were removed for the analyses. For all analyses, the Durbin-Watson statistic was within an acceptable range ($1 \leq x \geq 3$; Field, 2009). Although the three youth-report of parenting variables were moderately correlated, tolerance and VIF values were within an acceptable range (Field, 2009). After cases were excluded for having missing data, the sample size was adequate for the analysis using the parent-report variable (Tabachnick & Fidell, 2001). The analyses were conducted and interpreted with these limitations in mind.

Youth aged 16-18 years old. Skewness and kurtosis values for these variables ranged from -0.51 to 1.05, and from -0.85 to 0.98, respectively, which is within an acceptable range (±2 and ±3, respectively). Visual inspection of histograms for the dependent variables indicated some skewness in the variables. Additionally, scatterplots of the residuals and predicted values for each analysis indicated some evidence of heteroscedasticity in the parent- and youth-report of nurturance.

Transformations of these variables were attempted to improve skewness and heteroscedasticity, but they produced little improvement and in some cases, reduced the Durbin-Watson statistic to an unacceptable level. Thus, untransformed data were used in all analyses. Scatterplots for each analysis also indicated that the relationship between the residuals and predicted scores was reasonably linear. A q-q plot for each analysis indicated that residuals were reasonably normal. Examination of residuals and Mahalanobis scores revealed 5 outlying scores among the independent variables for the parent-report analysis and one outlying score among the independent variables for the prosocial behaviour (youth-report) analysis. No outlying scores were identified among the dependent variables. When outliers were removed from the parent- and youth-report analyses, there was no change in the significance of the variance explained by the parenting practice variables, or to the pattern of the predictors. Therefore, outliers were retained for all analyses. For all cross-sectional analyses, the Durbin-Watson statistic was within an acceptable range ($1 \leq x \geq 3$; Field, 2009). The youth-report of parenting variables were moderately correlated, however, tolerance and VIF values were also within an acceptable range (Field, 2009). After removal of cases due to missing data, the sample size was small for the number of predictors (Tabachnick & Fidell, 2001). However, the sample size assumption is robust to moderate deviation, particularly when normality is upheld, therefore, analyses were carried out and interpreted with these limitations in mind.

Measure of time in foster care. In order to provide a more standardized measure of the time each youth has spent in foster care, the youth's age at entry into the foster system was subtracted from the youth's current age. This variable is referred to in analyses as "number of years in foster care".

Description of Time 1 and Time 2 samples. A summary of the samples at Time 1 and Time 2 after removal of cases with missing data following imputation (*N*=257) is presented in Table 1. To determine whether samples at Time 1 and 2 differed from one another, independent samples t-tests and chi-square analyses, for continuous and categorical variables, respectively, were used to compare the samples based on gender, age, age at entry into the foster care system, number of other youth in the home, and total number of adults in the home. The only significant difference identified was that youth who provided data at Time 1 lived with, on average, approximately one additional adult in the household than youth who provided data at Time 2. Further, participants who had return data (i.e., Time 1 and Time 2 data; *N*=32 after two cases were removed for missing data post-imputation) were compared with participants who did not have return data (*N*=70 after six cases were removed for missing data post-imputation; Table 2). Participants who had return data were younger and lived with fewer adults in the home than did participants who did not have return data.

Table 1

Means and Standard Deviations for Demographic Variables for Total Sample (N=257)

	Time 1 (*n*=102)		Time 2 (*n*=155)		Comparison of means
Youth gender	*N*	%	*N*	%	
Male	52	51.0	79	51.0	$\chi^2_{(1)}$=0.0, *p*=.99
Female	50	49.0	76	49.0	
Variable	Mean	*SD*	Mean	*SD*	
Age (years)	14.28	2.12	14.11	2.13	$t_{(255)}$=.64, *p*=.52
Age at entry into foster care (years)	7.75[a]	3.48	7.74[d]	3.82	$t_{(203)}$=.016, *p*=.99
Number of other youth in home	2.43[b]	2.58	2.57[e]	2.37	$t_{(236)}$=-.45, *p*=.66
Number of adults in home	2.85[c]	3.67	1.98[f]	1.57	$t_{(235)}$=2.49, *p*=.029

Note. Due to missing data, the sample size for calculation of some statistics is reduced: [a]*n*=79; [b]*n*=101; [c]*n*=98; [d]*n*=126; [e]*n*=137; [f]*n*=139.

Table 2

Comparison of Time 1 Participants With and Without Time 2 Data

	Participants without return data (*N*=70)		Participants with return data (*N*=32)		Comparison of means
Youth gender	*N*.	%	*N*	%	
Male	34	48.6	18	56.3	$\chi^2_{(1)}$=.52, *p*=.47
Female	36	51.4	14	43.8	
Variable	*M*	*SD*	*M*	*SD*	
Age (years)	14.64	2.08	13.50	2.03	$t_{(100)}$=2.60, *p*<.011
Age at entry into foster care (years)	8.17[a]	3.59	6.84[d]	3.13	$t_{(77)}$=1.59, *p*=.12
Number of other youth in home	2.72[b]	2.85	1.78	1.72	$t_{(99)}$=1.73, *p*.94
Number of adults in home	3.38[c]	4.35	1.75	.76	$t_{(96)}$=2.10, *p*<.038

Note. Due to missing data, the sample size for calculation of some statistics is reduced: [a]*n*=54; [b]*n*=69; [c]*n*=66; [d]*n*=25.

Analyses for Youth Aged 10-15 Years Old

Preliminary Analyses

Composite variables. Composite variables for each youth outcome measure were created summing the parent- and youth-report of each outcome. The correlations between parent- and youth-reports are presented in Table 3. The parent-report of peer relations was reverse coded so that a higher score on both parent- and youth reports would indicate better peer relationships. Although reports of peer relations and reports of prosocial behaviour were to be combined into one overall composite for social functioning, there was no significant correlation between measures of peer relations and measures of prosocial behaviour. As such, a composite for peer relationships was created from the parent- and youth-reports of this variable, and a separate composite for prosocial behaviour was created from the parent- and youth-reports of this variable. Parent- and youth-reports for internalizing problems were significantly correlated, as were reports of externalizing problems, and composite scores for each of these constructs were also created.

Table 3

Correlations for Parent- and Youth-Report of Outcome Variables Among Youth Aged 10-15 Years Old (N=139)

	1	2	3	4	5	6	7	8	9
1. Peer relations (Parent)	1								
2. Peer relations (Youth)	.256**	1							
3. Prosocial behaviour (Parent)	.162	.305**	1						
4. Prosocial behaviour (Youth)	.089	.244**	.553**	1					
5. Internalizing problems (Parent)	-.372**	-.211*	-.228**	-.272**	1				
6. Internalizing problems (Youth)	-.219**	-.368**	-.184*	-.110	.560**	1			
7. Externalizing problems (Parent)	-.345**	-.261**	-.350**	-.139	.242**	.285**	1		
8. Physical aggression (Youth)	-.224**	-.267**	-.252**	-.267**	.197*	.271**	.370**	1	
9. Property offences (Youth)	-.011	-.348**	-.109	-.099	.209*	.409**	.445**	.366**	1

**p<.01. *p<.05.

Descriptive statistics. Means, standard deviations, and minimum and maximum values for each of the variables used in the subsequent analyses can be found in Table 4. This sample was comprised of *N*=139 participants (72 male, 67 female). Bivariate correlations were conducted (Table 5) to examine associations between study variables (parent-report of parental nurturance and cohesion, youth-report of parental nurturance and parent-child relationship quality, and parent-youth composite scores for peer relations, prosocial behaviour, internalizing problems, and externalizing problems) and demographic and contextual variables (age, gender, number of years in foster care, number of other youth in the home, number of adults in the home).

Table 4

Means, Standard Deviations, and Ranges of Variables for Youth Aged 10-15 Years Old (N=139)

Variable	*M*	*SD*	*Minimum*	*Maximum*
Age[a]	12.81	1.58	10	15
Number of years in foster care[a]	5.65	3.19	0	14
Number of other youth in home[a] (*N*=132)	2.55	2.24	0	8
Number of adults in home[a] (*N*=131)	2.18	1.56	0	10
Nurturance (Parent)	15.58	0.84	10	16
Cohesion (Parent)	16.71	4.05	5	28
Nurturance[a] (Youth) (*N*=121)	12.06	2.66	1	14
Relationship quality, female caregiver (Youth)	6.58	1.91	0	8
Relationship quality, male caregiver[a] (Youth) (*N*=106)	5.98	2.10	0	8
Peer relationships (Composite)	7.50	2.39	2	12
Prosocial behaviour (Composite)	11.35	3.69	0	16
Internalizing problems (Composite)	6.93	5.40	0	20
Externalizing problems (Composite)	5.19	3.78	0	17

[a]*Original (not imputed) data used.*

Table 5.

Correlations of Independent and Dependent Variables and Demographic and Contextual Variables for Youth Aged 10-15 Years Old (N=139)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender[a]	1													
2. Age[a]	-.004	1												
3. Years in care[a]	-.260**	.118	1											
4. Other youths[a]	.103	.182*	-.091	1										
5.Adults in home[a]	.099	.076	.174*	.332**	1									
6. Nurturance (P)	-.010	.016	.041	-.074	.068	1								
7. Cohesion (P)	-.138	-.219**	.182*	.177*	.104	-.038	1							
8. Nurturance (Y)[a]	-.016	.019	.056	-.077	.057	.226*	-.030	1						
9. Relationship, female (Y)	.049	-.312**	-.127	-.122	-.085	.126	.022	.125	1					
10. Relationship, male (Y)[a]	-.069	-.155	.244*	-.156	.084	.128	.135	.124	.527**	1				
11. Peers (PY)	.053	-.042	.099	-.245**	-.093	-.010	.038	-.016	-.084	.017	1			
12. Prosocial (PY)	.078	-.234**	-.067	-.094	-.014	.003	-.030	.013	.364**	.230*	.256**	1		
13. Internalizing (PY)	.072	-.034	-.129	.312**	.038	-.085	.085	-.075	-.111	-.298**	-.400**	-.242**	1	
14. Externalizing (PY)	-.012	-.264**	-.131	.264**	-.041	.126	.137	.124	.046	-.074	-.385**	-.318**	.400**	1

Note: Y denotes a youth report variable, P denotes a parent report variable, and PY denotes a composite score.

*$p<.05$. **$p<.01$.

[a]*Original (not imputed) data*

Main Analyses

Each outcome was predicted only from the control and predictor variables with which it was significantly associated. The peer relationships composite was not correlated with any of the predictor variables, and was not used in any regression analyses. The externalizing problems composite was also not significantly correlated with any of the predictor variables, and was not used in any regression analyses. The prosocial behaviour composite was significantly associated with age, r=-.23, p=.006, and the youth-report of relationship quality with the female caregiver, r=.36, p=.001, and relationship quality with the male caregiver, r=.23, p=.02. The internalizing problems composite was significantly associated with number of other youths in the home, r=.31, p=.001, and relationship quality with the male caregiver, r=-.30, p=.002.

Hypotheses 1, 2, and 3: Parent-report of parenting practices. Hypotheses 1, 2, and 3 posited that higher levels of parent-reported parenting practices would be predictive of higher adolescent social functioning, fewer adolescent internalizing difficulties, and fewer adolescent externalizing difficulties, respectively. However, none of these hypotheses were supported, as based on the correlations among the data (Table 5), neither of the parent-report of parenting variables were significantly associated with any of the outcome variables. Therefore, no regression analyses were conducted for these hypotheses.

Hypotheses 4, 5, and 6: Youth-report of parenting practices. Hypotheses 3, 4, and 5 posited that higher levels of youth-reported parenting practices would be predictive of higher adolescent social functioning, fewer adolescent internalizing

difficulties, and fewer adolescent externalizing difficulties, respectively. Based on the correlation matrix (Table 5), the prosocial behaviour composite score was correlated with the youth's age, the youth-report relationship quality with the female caregiver, and the youth-report of relationship quality with the male caregiver. Further, the internalizing problems composite was correlated with the number of other youth in the home and the youth-report of relationship quality with the male caregiver. The remaining predictor (i.e., parental nurturance), outcome (i.e., peer relations, externalizing problems), and control (i.e., gender, number of years in foster care, number of adults in the home) variables were not correlated with one another, and no analyses were conducted using these variables.

For prosocial behaviour, when the youth-report of parental nurturance, relationship quality with the female caregiver, and relationship quality with the male caregiver were entered into a model, the increase in the amount of variance explained by the model was significant in the prediction of prosocial behaviour, R^2=.13, R^2 change=.08, $F_{2,102}$=4.51, p<.013. At Step 1, when the demographic/control variables were entered, younger youth age, β=-.23, t=-2.41, p<.018, was a significant predictor of prosocial behaviour. At Step 2, when the youth-report of parenting variables were entered, higher youth ratings of relationship quality with the female caregiver, β=.24, t=2.11, p=.037, but not with the male caregiver, β=.08, t=0.76, p=.449, was a significant predictor of increased prosocial behaviour.

For internalizing problems, when the youth-report of relationship quality with the male caregiver was entered into a model, the increase in the amount of variance explained was significant in the prediction of internalizing problems,

R^2=.21, R^2 change=.06, $F_{1,98}$=7.61, p=.007. At Step 1, when the demographic/control variables were entered, the number of other youths in the home, β=.38, t=4.13, p=.000, was a significant predictor of internalizing problems. At Step 2, when the youth-report parenting variable was entered, a greater number of other youths in the home, β=-.34, t=3.78, p=.000, as well as higher ratings on the youth-report of relationship quality with the male caregiver, β=-.25, t=-2.76, p<.007, were significantly predictive of fewer internalizing problems.

A summary of these analyses is presented in Table 6.

Table 6
R^2, R^2 Change, and Standardized Regression Coefficients (β) for Regression Analyses with Youth-Report Predictor Variables (Youth Aged 10-15 Years Old)

	Prosocial behaviour (*N*=106)	Internalizing problems (*N*=101)
Step 1		
R^2 (*SE*)	.05 (3.74)	.15 (5.10)
R^2 change	.05*	.15***
Age	-.23*	--[a]
Number of other youths in the home	--[a]	.38***
Step 2		
R^2 (*SE*)	.13 (3.62)	.21 (4.93)
R^2 change	.08*	.06**
Age	-.15	--[a]
Number of other youths in the home	--[a]	.34***
Nurturance (Youth)	--[a]	--[a]
Relationship quality, female caregiver (Youth)	.24*	--[a]
Relationship quality, male caregiver (Youth)	.08	-.25**

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

[a]*Not entered as a predictor.*

Analyses for Youth Aged 16-18 Years Old

Preliminary Analyses

Creation of composite variables. Composite variables for each youth outcome measure were created from the parent- and youth-report of each outcome. The correlations between parent- and youth-reports are presented in Table 7. The AAR-C2-2006 questionnaire for youth aged 16 years and older does not contain a youth-report measure of prosocial behaviour, therefore, a measure titled 'Positive Social Interactions' was used as the youth-report of prosocial behaviour for this age group. Additionally, the AAR-C2-2006 questionnaire for youth aged 16 years and older also does not contain a youth-report of externalizing problems. Therefore, the combination of parent- and youth-reports was explored only for the peer relations, internalizing problems, and prosocial behaviour outcome variables. Originally, the parent- and youth-reports of peer relations and prosocial behaviour were to be combined into a parent-youth composite for social functioning. However, there was no significant correlation between the youth-report of positive social interactions and the parent-report of prosocial behaviour or the parent-report of peer relationships. Thus, a composite score was created only for the peer relationships and the internalizing problems outcome variables. The parent-report of externalizing problems was used as the outcome variable for this construct, and the parent- and youth-report of prosocial behaviour were predicted as separate outcome variables.

Table 7

Correlations between Parent- and Youth-Report of Outcome Variables for Youth Aged 16-18 Years Old (N=85)

	1	2	3	4	5	6
1. Peer relations (Parent)	1					
2. Peer relations (Youth)	.280**	1				
3. Prosocial behaviour (Parent)	0.141	.167	1			
4. Positive social interactions[a] (Youth)	-.137	0.25	.183	1		
5. Internalizing problems (Parent)	-.332**	-.196	-.280**	-.183	1	
6. Internalizing problems (Youth)	-.005	-.238*	-.141	-.234	.359**	1

*p<.05. **p<.01.

[a]*Original (not imputed) data*

Descriptive statistics. Means, standard deviations, and minimum and maximum values for each of the variables used in the subsequent analyses can be found in Table 8. This sample was comprised of *N*=85 participants (43 female, 42 male), although some participants were missing data on individual variables, and were therefore excluded from calculations involving those variables (adjusted sample sizes are noted). Correlations among control variables (age, gender, number of years in foster care, number of other youth in the home, and number of adults in the home), predictor variables (parental-report of parental nurturance and cohesion, and youth report of parental nurturance and parent-child relationship quality), and outcome variables (peer relations composite, parent- and youth-report of prosocial behaviour, internalizing problems composite, and parent-report of externalizing problems) can be found in Table 9. The parent-report of cohesion was not significantly correlated with any of the predictor variables, and therefore, this variable was not included as a predictor in further analyses.

Table 8

Means, Standard Deviations, and Ranges of Variables for Youth Aged 16-18 Years Old (N=85).

Variable	*M*	*SD*	*Minimum*	*Maximum*
Age[a]	16.40	.50	16	17
Number of years in foster care[a]	7.18	3.92	1	16
Number of other youth in home[a] (*N*=76)	2.64	2.92	0	18
Number of adults in home[a] (*N*=75)	2.96	4.18	0	26
Nurturance (Parent)	14.78	2.13	6	16
Cohesion (Parent)	14.45	2.13	0	28
Nurturance[a] (Youth) (*N*=71)	11.03	3.14	6	16
Relationship quality, female caregiver (Youth)	6.22	1.95	2	8
Relationship quality, male caregiver[a] (Youth) (*N*=58)	5.36	2.36	0	8
Peer relationships[a] (Composite) (*N*=84)	7.08	2.28	1	12
Prosocial behaviour (Parent)	7.39	2.26	1	10
Prosocial behaviour[a] (Youth) (*N*=60)	6.07	1.74	2	8
Internalizing problems (Composite)	7.88	5.80	0	27
Externalizing problems (Parent)	3.26	2.10	0	9

[a]*Original (not imputed) data*

Table 9

Correlations of Independent and Dependent Variables and Demographic and Contextual Variables for Youth Aged 16-18 Years Old (N=85)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender[a]	1														
2. Age[a]	.038	1													
3. Years in care[a]	-.04	.326**	1												
4. Other youths[a]	-.002	-.207	-0.09	1											
5. Adults in home[a]	-.241*	.054	.042	.623**	1										
6. Nurturance (P)	.007	-.061	-.069	-.123	-.068	1									
7. Cohesion (P)	.064	-.117	-.158	.099	.126	.258*	1								
8. Nurturance[a] (Y)	.000	-.044	.090	.107	.035	.382**	.353**	1							
9. Relationship, female (Y)	-.020	.054	.024	-.056	.019	.289**	.116	.673**	1						
10. Relationship, male[a] (Y)	-.194	.080	.146	-.039	.114	.178	.380**	.593**	.635**	1					
11. Peers (PY)	.120	.110	-.176	-.028	-.038	.021	.145	-.025	.034	-.054	1				
12. Prosocial (P)	.003	.158	.120	-.222	-.107	.184	.025	.209	.199	.141	.179	1			
13. Prosocial[a] (Y)	.118	-0.15	-.043	-.020	-.124	.238	.204	.298*	.291*	.257	.008	.183	1		
14. Internalizing (PY)	.119	.0170	.010	.028	.057	-.286**	-.126	-.489**	-.373**	-.233	-.211	-.217*	-.257*	1	
15. Externalizing (P)	-.080	-.021	.124	.011	-.072	-.194	-.131	-.227	-.150	-.250	-.294**	-.269*	-.119	.357**	1

Note: Y denotes a youth report variable, P denotes a parent report variable, and PY denotes a composite score.

*p<.05. **p<.01.

[a]*Original (not imputed) data*

Main Analyses

Each outcome variable was predicted only from the control and predictor variables with which it was significantly associated. None of the control variables (i.e., gender, age, number of years in foster care, number of youth in the home, number of adults in the home) were associated with any of the outcome variables (i.e., peer relations, prosocial behaviour, internalizing problems, externalizing problems). The peer relations composite and externalizing problems scale were not associated with any of the outcome variables, and were therefore not used in any of the analyses. The parent-youth composite of internalizing problems was associated with the parent-report of nurturance, r=-.29, p<.01. The youth-report of prosocial behaviour was associated with the youth-report of parental nurturance, r=.30, p<.05, and of relationship quality with the female caregiver, r=.29, p<.05. The parent-youth composite of internalizing problems was associated with the youth-report of nurturance, r=-.49, p<.01, and relationship quality with the female caregiver, r=-.37, p<.01.

Hypotheses 1, 2, and 3: Parent-report of parenting practices. Hypotheses 1, 2, and 3 posited that higher levels of parent-reported parenting practices would be predictive of higher adolescent social functioning, fewer adolescent internalizing difficulties, and fewer adolescent externalizing difficulties, respectively. Results provide partial support for hypothesis two. Based on the correlation matrix (Table 10), the only outcome variable that was significantly correlated with the parent-report variables was the parent-youth composite measure of internalizing problems

with the parent-report of nurturance. This was the only parent-report analysis conducted for this age group. The sample size for this analysis was *N*=85.

When the parent-report of parental nurturance was entered into the model, the increase in the amount of variance explained by the model was significant in the prediction of internalizing problems, R^2=.08, *SE*=5.59, $F_{1,83}$=7.38, *p*=.008. As expected, lower ratings of parental nurturance were significantly predictive of increased internalizing problems, β=-.28, *t*=-2.72, *p*=.008.

Hypotheses 4, 5, and 6: Youth-report of parenting practices. Hypotheses 3, 4, and 5 posited that higher levels of youth-reported parenting practices would be predictive of higher adolescent social functioning, fewer adolescent internalizing difficulties, and fewer adolescent externalizing difficulties, respectively. Results provide partial support for the hypotheses four and five. Based on the correlations (Table 9), none of the control variables (i.e., age, gender, number of years in foster care, number of other youth in the home, number of adults in the home) were significantly associated with any of the dependent study variables (i.e., peer relations, prosocial behaviour, internalizing problems, externalizing problems). There were significant associations between the youth-report of prosocial behaviour and the youth-report of nurturance and relationship quality with the female caregiver, and between the parent-youth composite of internalizing problems and the youth-report of nurturance and relationship quality with the female caregiver.

For prosocial behaviour, when the youth-report of parental nurturance and relationship quality with the female caregiver were entered into a model, the

increase in the amount of variance explained was not significant, R^2=.09, R^2 change=.09, $F_{2,51}$=2.55, p=.088, in the prediction of youth-reported prosocial behaviour. Contrary to hypotheses, neither parental nurturance nor relationship quality were significant predictors of youth-reported prosocial behaviour.

For internalizing problems, when the youth-report of parental nurturance and relationship quality with the male and female caregivers were entered into a model, the increase in the amount of variance explained was significant, R^2=.27, R^2 change=.27, $F_{2,68}$=12.73, p=.000, in the prediction of internalizing problems. When the parenting variables were entered, as predicted, higher youth ratings of parental nurturance were significantly predictive of fewer internalizing problems, β=-.32, t=-2.32, p=.024.

A summary of these analyses is presented in Table 10.

Table 10

R^2, R^2 Change, and Standardized Regression Coefficients (β) for Regression Analyses with Youth-Report Predictor Variables (Youth Aged 16-18 Years Old)

	Prosocial behaviour (Youth) (*N*=54)	Internalizing problems (Composite) (*N*=71)
R^2 (*SE*)	.09 (1.69)	.27*** (5.20)
Nurturance[a] (Youth)	.24	-.32*
Relationship quality, female caregiver (Youth)	.07	-.25

*p<.05. ***p<.001.

[a]*Original (not imputed) data used,*

Longitudinal Analyses

Due to the low number of participants who provided data at both the first and second wave of data collection (*N*=26 among youth aged 10-15 years old, *N*=8 among youth aged 16-18 years old), longitudinal analyses were limited. Correlations were used to explore relations between variables for the younger age group. Correlations among the data from older youth were not explored because there was a very small number of participants (*N*=8), which was reduced further by missing data post-imputation and on variables that were not imputed.

Descriptive statistics. Means and standard deviations for each of the variables examined can be found in Table 11. This sample was comprised of 26 participants (12 female, 14 male). Paired sample t-tests were conducted to determine whether any variables changed appreciably between Time 1 and Time 2. The only significant difference observed between data from Time 1 and Time 2 was that youth were significantly older, which was expected given the longitudinal nature of the data.

Results of the longitudinal analyses provided partial support for the study hypotheses. Correlations among predictor variables at Time 1 (parent-report of parental nurturance and cohesion, youth-report of parental nurturance, and parent-child relationship quality) and outcome variables at Time 2 (parent- and youth-reports of peer relations, prosocial behaviour, internalizing problems, and externalizing problems) are presented in Table 12. As hypothesized, the parent-report of parental nurturance at Time 1 was significantly associated with the parent-, r=-.42, p = .039, and youth-reports, r=-.42, p = .048, of internalizing problems at Time 2, suggesting that higher levels of parental nurturance were

associated with lower parent and youth ratings of internalizing problems. Additionally, the youth-report of relationship quality (male caregiver) was significantly associated with the parent-report of internalizing problems at Time 2, r=-.65, p = .007, suggesting that higher relationship quality was associated with lower reports of internalizing problems.

Table 11

Descriptive Statistics for Variables in Longitudinal Analyses for Youth Aged 10-15 Years Old (N=26)

Variable	Time 1	Time 2
	Mean (SD)	*Mean (SD)*
Age[a]	12.50 (1.42)	13.50 (1.36)*
Number of years in foster care[a] (*N*=25)	5.80 (2.38)	6.85 (2.84)
Number of other youth in home[a]	1.77 (1.84)	2.17 (2.19)
Number of adults in home[a]	1.77 (0.77)	1.63 (0.88)
Nurturance (Parent)	15.42 (1.30)	15.38 (1.13)
Cohesion (Parent)	17.15 (3.67)	17.62 (4.41)
Nurturance[a] (Youth) (*N*=21)	12.33 (2.29)	11.76 (2.83)
Relationship quality, female caregiver (Youth)	6.88 (1.66)	5.96 (2.18)
Relationship quality, male caregiver [a] (Youth) (*N*=18)	6.72 (1.87)	5.65 (2.64)
Peer relationships (Parent)	4.34 (2.90)	3.38 (1.60)
Peer relationships (Youth)	3.19 (1.13)	3.26 (1.00)
Prosocial behaviour (Parent)	6.88 (2.67)	7.23 (2.45)
Prosocial behaviour (Youth)	3.73 (1.89)	3.92 (1.70)
Internalizing problems (Parent)	3.12 (2.47)	3.15 (2.59)
Internalizing problems (Youth)	3.77 (3.77)	3.62 (3.89)
Externalizing problems (Parent)	3.19 (2.53)	3.19 (1.77)
Aggression (Youth)	1.15 (1.83)	.62 (1.13)
Property offences (Youth)	1.08 (1.41)	.54 (1.07)

*p<.05.

[a]*Original (not imputed) data used.*

Table 12

Correlations of Independent and Dependent Variables in Longitudinal Analyses for Youth Aged 10-15 Years Old (N=26)

	1	2	3[a]	4	5[a]	6	7	8	9	10	11	12	13	14
1. Nurturance (P)	1													
2. Cohesion (P)	.228	1												
3. Nurturance[a] (Y)	.570**	.250	1											
4. Relationship, female (Y)	.450*	.167	.716**	1										
5. Relationship, male[a] (Y)	.033	.063	.635*	.516*	1									
6. Peers (P, Time 2)	.130	.275	.184	.168	-.161	1								
7. Peers (Y, Time 2)	-.152	.097	.079	.116	.349	.332	1							
8. Prosocial (P, Time 2)	-.119	-.328	.053	.184	.169	-.552**	.169	1						
9. Prosocial (Y, Time 2)	-.112	.195	.201	.281	.461	-.210	.272	.456*	1					
10. Internalizing (P, Time 2)	-.424*	.103	-.338	-.294	-.646**	.082	-.340	-.302	-.28	1				
11. Internalizing (Y, Time 2)	-.417*	.021	-.346	-.249	-.408	-.123	-.332	-.116	-.041	.686**	1			
12. Externalizing (P, Time 2)	.224	.223	.229	-.033	-.226	.383	.015	-.361	-.209	.212	.168	1		
13. Aggression (Y, Time 2)	.196	.255	.147	.252	-.014	.569**	-.152	-.427*	-.182	.157	-.008	.518**	1	
14. Property offences (Y, Time 2)	.175	.060	.007	.104	-.097	.014	-.066	.073	.179	.012	.331	.452*	.277	1

Note: Y denotes a youth report variable, P denotes a parent report variable, and PY denotes a composite score.

*p<.05. **p<.01.

[a]*Original (not imputed) data used.*

CHAPTER IV

Discussion

The purpose of the present study was to replicate and expand research on the relation between foster parenting and foster youth outcomes. Specifically, this study sought to examine how foster parent and foster youth ratings of parenting practices predicted foster parent and foster youth ratings of youth psychosocial functioning. To the author's knowledge, this is one of the first studies of children in the Ontario foster care system where foster youth ratings of parenting were studied in addition to foster parent ratings of parenting. In addition, this study is among the first to look at both parent and youth ratings of foster youth outcome. Results of the present study were mixed, but indicated links between foster youth reports of higher parent-child relationship quality and increased prosocial behaviour and fewer internalizing problems. Additionally, results were somewhat consistent with previous research from the biological parent-child literature with respect to the finding that higher parent- and youth-reported nurturance was associated with fewer internalizing problems (Trentacosta et al., 2009; Chao & Willms, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991). Aside from these two effects, the remaining results were largely inconsistent with previous studies (Branje et al., 2009; Cook & Willms, 2002; Hofferth & Sandberg, 2001; Kashani, Burbach, & Rosenberg, 1988), which lays the groundwork for future research involving parenting variables that are more relevant and more specific to the foster parenting context.

Parent-Report of Foster Parenting

Social functioning. Hypothesis one was not supported, and contrary to what was expected, there was no significant relation between foster parent ratings of nurturance and cohesion and adolescent social functioning (peer relations or prosocial behaviour). This is inconsistent with previous research that has identified a relation between nurturance and prosocial behaviour, with higher parental ratings of nurturance predicting increased prosocial behaviour (Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006).

In interpreting the lack of a significant relation between ratings of nurturance and cohesion and ratings of peer relations and prosocial behaviour, it should be noted that the youth report of peer relations used in the present study was composed of only two items, which limits the variability of scores, and may have contributed to the low correlations with this variable. However, it is also likely that parenting variables other than parental nurturance and cohesion are more important in the development of social functioning, particularly in the context of foster parenting. For example, in a study of parenting behaviours common to foster parents, some foster parents have reported directly encouraging and facilitating leisure activities and peer relationships (i.e., helping with transportation arrangements, providing exposure to an array of activities to participate in; Lipscombe, Farmer, & Moyers, 2003). In the foster parenting context, measurement of parenting behaviours that are directly related to the child's social activities, such as these, may have a more important effect on the youth's social functioning than indirect parenting behaviours, such as parental nurturance.

Internalizing problems. Hypothesis two was partly supported, as there was a moderate significant relation between the parent-report of parental nurturance and the parent-youth composite score for internalizing problems among youth aged 16-18 years old. Additionally, in the longitudinal data for youth aged 10-15 years old, there were significant, negative correlations between the parent-report of nurturance at Time 1 and parent- and youth-reports of internalizing problems at Time 2. These results should be interpreted with caution, as effect sizes were modest, with the regression analysis falling within the small range (f^2=.09; Cohen, 1988), and the correlations falling within the medium range (r^2=-42 for both; Cohen, 1988). In both cases, higher ratings of nurturance predicted lower ratings of internalizing problems, which is consistent with findings from the biological parent-child literature (Chao & Willms, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991; Trentacosta et al., 2009). Nurturance has been theorized to have its effect on psychological functioning through the development of attachment, that is, nurturance is thought to 'set the stage' for appropriate attachment by fostering the feelings of security that lead to secure attachment, which has been explored in the biological and foster parent-child contexts (Arim et al., 2011; Dozier, 2003; Stovall & Dozier, 2000). Thus, findings provide some support for the idea that provision of parental nurturance by foster parents has implications for psychological functioning in foster youth.

Externalizing problems. Contrary to the third hypothesis, there was no significant relation between any of the parent-report of parenting variables and the ratings of externalizing problems. This may reflect a poor choice of parenting

variables for predicting this outcome, although previous research has linked parental nurturance with lower levels of conduct disorder and indirect aggression (Perkins-Mangulabnan & Flynn, 2006). It may also be that the relation between parenting practices and foster youth outcome is not linear. For example, research on parent-child attachment has documented the mediating role of attachment in the relation between parenting practices and youth externalizing problems in the biological parent-child context (Doyle & Markiewicz, 2005; Bosmans, Braet, Van Leeuwen, & Beyers, 2006; Roksam, Meunier, & Stievenart, 2011). This is discussed in greater detail below.

With respect to the lack of significant relation between the parent-report of cohesion and any of the outcome variables, it may be that the measure of cohesion that was used in this sample was not well-suited to an adolescent population. As adolescents progress through adolescence, a decline in typical parent-child shared activities is observed as the youth begins to value other types of parent-child interaction more, such as talking about interpersonal issues (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Indeed, one study performed a breakdown of time spent in various parent-child shared activities from 5th through 12th grade, and it was found that many of the areas measured by the 'shared activities' scale in the AAR-C2-2006 (i.e., playing sports, playing games, watching television) experienced a decline in popularity as the youth grew older (Larson et al., 1996). Thus, in the present study, the lack of association between the parent-child cohesion scale and the outcome variables may be related to a lack of relevance of this construct (as measured by the AAR-C2-2006) for the current population.

Youth-Report of Foster Parenting

Social functioning. Hypothesis 4 was partly supported by the finding that better relationship quality with the female caregiver was significantly predictive of increased parent-reported prosocial behaviour among youth aged 10-15 years old. The effect size for this result was within the small range (f^2=.09; Cohen, 1988), which suggests that discussion of its implications should be limited as it may not generalize well to other samples and populations. Nonetheless, these results are consistent with findings from the biological parent-child context (Bulanda & Majumdar, 2009). This suggests that, much like in the biological parent-child relationship, high levels of closeness, warmth, and understanding in the foster parent-child relationship may help foster the development of skills (i.e., self-esteem; Bulanda & Majumdar, 2009) that are necessary for prosocial behaviour (Rigby & Slee, 1993).

Similar to the results with the parent-report of parenting variables, there was no significant relation between any of the youth-report parenting variables and the measures of peer relations. As stated earlier, it may be that measures of more direct foster parent influences on the social activities of foster youth (i.e., facilitation and encouragement of peer relations) are more important than indirect foster parent influences (i.e., nurturance) for foster youth social functioning. Additionally, the construct of parent-youth attachment has been deemed important for the formation of peer relations among biological parents and children (Schneider, Atkinson, & Tardif, 2001). Further, parent-youth attachment may have a mediating role in the relation between parenting practices and youth developmental outcomes among

biological parents and youth (Doyle & Markiewicz, 2005; Bosmans, Braet, Van Leeuwen, & Beyers, 2006; Roksam, Meunier, & Stievenart, 2011). As foster youth generally experience obstacles to secure attachment (Mennen & O'Keefe, 2005), the absence of significant findings in the present study may be due to the fact that the relation between parenting practices and youth outcomes (i.e., peer relations) in the foster parent-child context is more complex than the hypothesized linear relationship.

Internalizing problems. Among youth aged 10-15 years of age, it was found that better relationship quality with the male caregiver was significantly predictive of fewer parent-reported internalizing problems (f^2=.10, small; Cohen, 1988). Additionally, among youth aged 16-18 years of age, it was found that higher levels of youth-reported nurturance were significantly predictive of fewer internalizing problems (f^2=.37, large; Cohen, 1988). Finally, in the correlations among longitudinal data for youth aged 10-15 years old, better relationship quality with the male caregiver at Time 1 was moderately, significantly associated with fewer parent-reported internalizing problems at Time 2 (r^2=-.65, large; Cohen, 1988). This is consistent with earlier research concerning the foster parent-child relationship quality, where higher relationship quality with the female caregiver was linked with lower levels of anxiety (Legualt, Anawati, & Flynn, 2006). This is also consistent with literature concerning the biological parent-child relationship (Grant et al., 2006), where the parent-child relationship is thought to play a role in attenuating the effect of stressors on the child. As such, findings from the present study support the idea of the foster parent-child relationship having a similar

protective effect for foster youth, although the effect size for this relation was in the small range, and therefore, results should be replicated to confirm the existence of this effect in other samples and populations.

The finding that higher youth-reported nurturance predicts fewer internalizing problems is also consistent with literature concerning the biological parent-child relationship. Together with the finding that parent-reported nurturance also predicts fewer internalizing problems, findings with the youth-report of parental nurturance strengthen the idea that provision of nurturance by foster parents has important implications for the psychological adjustment of foster youth, for example, by providing a suitable context for positive attachment to occur (Arim et al., 2011; Dozier, 2003; Stovall & Dozier, 2000). Further, effect sizes for these relations were generally in the larger range, which suggests that it is more likely that these findings represent a true effect that will generalize to other samples and populations.

Externalizing problems. Hypothesis six was not supported, as none of the youth-report of parenting variables were significant predictors of externalizing problems. This is inconsistent with what was expected based on research concerning the foster parent-child relationship (Legault, Anawati, & Flynn, 2006), where better relationship quality with the female caregiver was associated with less aggressive behaviour. Findings are also inconsistent with literature concerning the biological parent-child relationship (Grant et al., 2006). However, similar to what has been already suggested, it is quite likely that factors other than those studied, which are more unique to the foster parent-child context, have an important

influence that was not accounted for in the present study on foster youth development of psychosocial and psychological functioning. In particular, foster parent-child attachment has been found to predict externalizing problems in foster youth (Marcus, 1991), and is thought to have a mediating influence on the relation between parenting practices and foster youth externalizing problems in the biological parent-child context (Doyle & Markiewicz, 2005; Bosmans, Braet, Van Leeuwen, & Beyers, 2006; Roksam, Meunier, & Stievenart, 2011). This is discussed in greater detail below.

Foster Parent and Youth Ratings of Parenting Practices

Generally, parent- and youth-reports of parenting practices were positively correlated, particularly among the sample of older youth. This finding could be interpreted in two ways: first, it may be that among foster parents and foster youth, perceptions of parenting are quite similar, which is in direct contrast to some research concerning the biological parent-child relationship, where parents and youth often provide very different ratings of parenting (Cohen & Rice, 1997; Paulson, 1994; Paulson & Sputa, 1996; Tein, Roosa & Micheals, 1994). On the other hand, this effect may have been influenced by the manner in which data was collected. That is, the majority of the AAR-C2 interviews were completed, at least in part, in a face-to-face conversation between the child welfare worker, the foster parent, and the foster youth. Therefore, the foster parent and foster youth may have provided higher and more consistent ratings of parenting as a result of a social desirability bias (i.e., to appease the child welfare worker). Thus, further study and

validation of these findings is necessary to confirm the accuracy of these results, however, the correlations nonetheless provide preliminary evidence of concordance between foster parent- and youth-reports of parenting practices.

In addition, although the foster parents generally rated different parenting practices than did foster youth, both parents and youth provided a rating of parental nurturance. In both age groups, the parent and youth ratings of nurturance were moderately positively related to one another (r=.23, p=.013 in youth aged 10-15 years old; r=.37, p<.001 in youth aged 16-18 years old), suggesting that there is agreement between parent and youth perceptions of parental nurturance. Further, higher parent and youth ratings of nurturance were both predictive of fewer internalizing problems, which suggests that there is no differential effect of the youth's perception of parental nurturance. This is in direct contrast with the idea that the youth's perception of parenting is more closely related to youth outcome than the parent's perception of parenting (Cohen & Rice, 1997; Paulson, 1994; Paulson & Sputa, 1996; Tein, Roosa & Micheals, 1994). Although the average score of parent- and youth-reports cannot be compared, as these scales were composed of different items and scored on different scales, the moderate positive relation between the two scales, as well as the consistency with which both scales were predictive of internalizing problems, suggests that foster parents and foster youth have similar perceptions of the quality of parental nurturance provided or experienced.

General Discussion

The present study aimed to establish a link between specific foster parenting practices and the development of social and psychological functioning among foster youth. Based primarily on findings and theoretical foundations from the biological parent-child context, as well as limited research concerning the foster parent-child context, it was thought that better ratings of parental nurturance, parent-child cohesion, positive conflict resolution, and parent-child relationship quality would be predictive of more adaptive social and psychological functioning among foster youth. Although the results were somewhat inconsistent, there was some consistency in the ability of the relationship quality variable to predict different youth outcomes. Among youth aged 10-15 years old, better relationship quality with the female caregiver was significantly predictive of increased prosocial behaviour. In the same age group, better relationship quality with the male caregiver was a significant predictor of fewer internalizing problems. Male caregiver relationship quality (at Time 1) and the parent-report of internalizing problems (at Time 2) were also significantly, negatively correlated with one another in the longitudinal data. It is possible that the relative consistency with which the relationship quality variable was predictive of youth outcomes is due to the fact that this measure is more closely related than other predictors (i.e., cohesion) to the construct of attachment. For example, the measure used to assess relationship quality taps into the affection the child receives from the parent, the closeness of the parent-child relationship, and the understanding the child feels in the relationship (AAR-C2-2006; Flynn, Ghazal, & Legault, 2006). Some measures of attachment, including the Inventory of Parent and Peer Attachment (IPPA; Armsden &

Greendberg, 1987), use similar items to assess the parent-child relationship. This inventory includes items such as, "My parent(s) understand me" (understanding), and "I tell my parent(s) about my problems" (closeness), and the Revised Inventory of Parent Attachment (R-IPA; Johnson, Ketring, & Abshire, 2003) contains reciprocal items worded for parents. This suggests that the findings from this present study, specifically, that the youth-report of parent-child relationship quality predicts some aspects of social and psychological functioning among youth in foster care, are in line with research that has linked attachment with these same outcomes (Marcus, 1991; Milan & Pinderhughes, 2000).

There was also consistency in the relation between the parent-report of parental nurturance and internalizing problems, with higher parent-reported nurturance being significantly predictive of fewer internalizing problems among youth aged 16-18 years of age. The youth-report of nurturance was also a significant predictor of fewer internalizing problems among youth aged 16-18 years of age. Finally, parent-report of nurturance (at Time 1) was significantly, negatively associated with parent- and youth-reports of internalizing problems (at Time 2) in the longitudinal data. These findings provide some support for the original hypotheses, and are consistent with what was predicted based on literature concerning the biological parent-child relationship (Chao & Willms, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991; Trentacosta et al., 2009). This suggests that, similar to what has been theorized concerning the biological parent-child relationship, provision of parental nurturance to youth in foster care may help cultivate feelings of security in these youth that are associated with secure

attachment (Arim et al., 2011). Indeed, Stovall and Dozier (2000) observed that in foster parent-infant dyads where the foster parent responded with consistent nurturance to the infant's behaviour, the infant was more likely to develop a secure attachment style with the foster caregiver.

It is also interesting to note the differential predictive utility of the relationship quality with the female and male caregiver variables. In the results of the present study, better relationship quality with the female caregiver was significantly predictive of increased prosocial behavior (in cross-sectional analyses), while better relationship quality with the male caregiver was significantly predictive of fewer internalizing problems (in both the cross-sectional and longitudinal analyses). While effect sizes in this study were small, this is consistent with some research from the biological parent-child context that maternal figures may be more influential than paternal figures in socializing children's prosocial behavior (Hastings, Rubin, & Derose, 2005). On the other hand, some research points to a unique influence of paternal figures in the development of adolescent psychological functioning. In particular, increased paternal involvement and better adolescent-father attachment was found to account for a unique portion of variance in adolescents' scores on a broad measure of psychological functioning, over and above that accounted for by maternal involvement and mother-child attachment (Williams & Kelly, 2005). Thus, findings from the present study lend credence to the hypothesis that adolescents' relationships with their maternal and paternal caregivers may have unique implications for their psychological functioning.

Findings from the present study are somewhat promising, although it should be noted that the effect sizes for regression analyses were generally within the small range, and although longitudinal correlations were somewhat stronger (medium-large), results are likely limited in generalizability until further study and replication of these effects occurs. Further, the final regression models in these analyses consistently left a large proportion of variance unexplained (73%-91%), and no single parenting practice was consistently predictive of all of the outcomes originally hypothesized (social functioning, internalizing problems, and externalizing problems). Thus, it seems likely that although this group of parenting practices explains some of the variation in foster youth outcome, other factors not accounted for in the present study may explain a great deal more of this variation.

One factor that was not taken into account in the present study was the bidirectional nature of parenting in general. A large body of research has been dedicated to elucidating the reciprocal relationship between youth and parent behaviours (Hipwell et al., 2008; Pardini, Fite, & Burke, 2008; Patterson & Fisher, 2002; Snyder & Patterson, 1995). The general nature of this relationship is that the child's characteristics (i.e., depressive symptoms, such as preferring to be alone) elicit a response from the parent (i.e., lower parental warmth), which, in turn, causes the child to respond in a manner concordant with the parent's response (i.e., withdrawing further). Recent research has explored the role of specific parenting behaviours in this bidirectional relationship, for example, the reciprocal influence of poor support for autonomy and low positive reinforcement with youth externalizing problems (Pardini, Fite, & Burke, 2008), and the reciprocal role of low parent-child

warmth and physical punishment with youth internalizing problems (Hipwell et al., 2008). Among infants in foster care, Stovall and Dozier (2000) observed evidence of a reciprocal relation between infant and foster parent behaviour, where infants who exhibited behaviour indicative of insecure attachment (i.e., avoidant response) were often met with a concordant parental response (i.e., anger or frustration with the infant). The infants in these dyads were generally found to have an insecure style of attachment, while infants from dyads where the foster parent responded with consistent nurturance more frequently had a secure style of attachment. This research provides evidence of a reciprocal relation between the foster parent and foster youth's behaviours that has implications for the youth's psychological functioning. To the author's knowledge, there has been little research concerning the reciprocal foster parent-child influence with older children, however, it does not seem far-fetched that, for example, a foster parent might respond unfavorably to a foster youth who repeatedly declines the parent's attempts to become close with the youth, leading the parent to abandon these attempts and the youth to distance him/herself from the parent further. The present study posited a unidirectional influence of foster parenting practices on youth development, however, the existence of other models of influence (i.e., bidirectional) cannot be ruled out, and may have contributed to the inconsistency of results.

Another factor that was perhaps not given enough weight in the formulation of hypotheses for the present study is the difference between parenting practices that are effective in the context of the biological parent-child relationship and those that are effective within the foster parent-child relationship. The hypotheses in the

present study were based primarily on evidence that was accumulated from studies of biological parents and children, although some findings have been replicated with foster parents and foster children (Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006). Although these parenting practices have been found to predict youth outcome reliably in the context of the biological parent-child relationship, in the context of the foster parent-child context, it may be that a different set of parenting practices are important for facilitating the development of social and psychological functioning in foster youth. Indeed, some research has focused on assessment of parenting strategies specific to foster parents, although this research has generally not explored the relation of these strategies with foster youth outcomes. The concept of sensitive responding has been reported by some researchers to be an important element of parenting foster youth (Lipscombe, Farmer, & Moyers, 2003; Marcus, 1991). Different parenting practices that have been studied in this area include talking constructively and openly with the foster youth about his/her past (Lipscombe et al., 2003). Adolescents who felt able to discuss traumatic or negative events with their caregiver had greater placement success (i.e., fewer placement disruptions; Lipscombe et al., 2003). In the same study, the capacity of the foster parent to respond to the child at a level appropriate for their developmental age, rather than their chronological age, was also associated with greater placement success (Lipscombe et al., 2003). In another study, foster parent empathy was related to better quality of attachment between foster parent and foster youth (Marcus, 1991). In addition to these features, some researchers have looked at qualities of the foster parent that are associated with better youth outcomes (Fish &

Chapman, 2004; Harden, D'Amour Meisch, Vick, & Pandohie-Johnson, 2008). For example, a neutral, open attitude towards managing the youth's relationship with his/her biological parents is believed to contribute to better foster youth attachment, and thus, better developmental outcomes for foster youth (Harden, D'Amour Meisch, Vick, & Pandohie-Johnson, 2008). Further, the ability to deal appropriately with behavioural or socio-emotional problems (i.e., providing consistent discipline, or counseling the child) was found to be important for reducing mental health risks among infants in foster care (Fish & Chapman, 2004). Given that these elements of foster parenting and foster parent qualities have been drawn from research that looked exclusively at foster parenting, they may account for more of the variation in youth outcome than the more general parenting practices examined in the present study.

Finally, an additional aspect of the foster parent-child context that was not appropriately accounted for in the present study was foster parent-youth attachment. Although there is not a large amount of research concerning the prevalence of insecure attachment among foster youth (Mennen & O'Keefe), researching concerning attachment in youth who have experienced abuse or neglect, which is common among foster youth (in the present study, between 63-70% of foster youth cited neglect as a reason for entering the foster care system), suggests that insecure attachment with the biological parent(s) is highly prevalent in this population (i.e., up to 80%; Morton & Browne, 1998; Carlson, Cicchetti, Barnett, & Braunwald, 1989). Given that a high number of foster youth have likely experienced some form of insecure attachment (with a biological parent) in their

early lives, it is promising that some research has linked better-quality attachment with foster parents with lower rates of internalizing and externalizing behaviour (Marcus, 1991; Mennan & O'Keefe, 2005; Milan & Pinderhughes, 2000). Indeed, in the present study, the measure of foster parent-child relationship quality, which is similar in item content to some measures of attachment (IPPA; Pace, san Martini, & Zavatinni, 2011; R-IPA, Johnson, Ketring, & Abshire, 2003), was predictive of prosocial behaviour and internalizing problems. Further, the only other predictor variable in the present study that was associated with outcome variables, parental nurturance, is believed to have its effect on youth outcome by fostering feelings of security that are necessary for attachment (Arim et al., 2011). Indeed, Stovall and Dozier (2000; Dozier, 2003) argue that provision of nurturance by foster parents, particularly in response to insecure attachment behaviours on the part of the child, are important for the development of trust and security in foster youth; traits which, in turn, promote secure attachment. Together, this suggests that some of the effects identified in the present study, which were labeled as nurturance or parent-child relationship quality, may in fact be related to the influence of foster parent-child attachment.

In addition, there is evidence from the biological parent-child literature that the relation between parenting practices and youth outcome (i.e., internalizing symptoms) is influenced by the role of parent-child attachment. For example, some research suggests that the relation between parenting practices and externalizing behavior among youth is mediated by parent-child attachment (Bosmans, Braet, Van Leeuwen, & Beyers, 2006; Doyle & Markiewicz, 2005; Roksam, Meunier, &

Stievenart, 2011). Further, in some specific cases (i.e., among youth with preoccupied attachment), attachment has been found to moderate the relation between dimensions of parenting (i.e., maternal acceptance) and youth social functioning and externalizing behavior (Allen et al., 2002). In the foster parent-child context, this might mean that despite the best efforts of a foster parent (i.e., provision of consistent nurturance), high-quality parenting practices have limited effect on youth outcome due to the youth's attachment style. In the present study, many of the effects identified may have been inconsistent due to the fact that the role of foster-parent child attachment was not specified in the model.

Limitations and Recommendations for Future Research

This research should be interpreted carefully in the context of its limitations. First, and most importantly, this was a relatively small sample of foster youth from Southwestern Ontario. Future research should attempt to incorporate a larger sample with participants from different child welfare agencies across Ontario for greater generalizability.

Further, many of the scales used in the present study had low internal reliability. Although these variables were taken from a measure that is used annually with foster youth in Ontario, and as such, did not put any additional participatory burden on foster parents and foster youth, future researchers may wish to replace some of the scales that had low internal reliability in the present study with measures that have better psychometric properties.

Additionally, hypotheses for the present study were formulated largely based on findings from the biological parent-child context. In line with previous research

concerning these constructs in foster parents and foster youth (Perkins, 2009; Perkins-Mangulabnan & Flynn, 2006), the results indicate that the parenting variables studied have inconsistent association with measures of youth social and psychological functioning. Given that this inconsistency was replicated in the present study, even when using both parent and youth reports of parenting, future research should also focus on the study of foster parenting practices that are more specific to the foster parent-child relationship (i.e., Lipscombe, Farmer, & Moyers, 2003).

Relatedly, the control variables explored in the present study were not consistently associated with any of the predictor or outcome variables. These variables were selected based on their use in previous research (Perkins, 2009) with the predictor and outcome variables from the present study, however, findings from these studies and from the present study suggest that these variables are not adequate control variables in this population. The absence of good control variables limits the generalizability of findings from the present study; therefore, future research should work to identify reliable control variables for this population, as this will help to provide a more accurate measure of the influence of parenting variables.

In the present study, the specific parenting practices rated by foster parents and foster youth were different, with the exception of parental nurturance. In the case of parental nurturance, however, the scales used to rate this construct by parents and youth were composed of different items, and thus, scores were not directly comparable (i.e., to determine whether parents gave higher ratings of

parenting than youth on average). Future research should attempt to incorporate identical scales for foster parent and foster youth ratings, as this would allow direct comparison of the child's ratings with the parent's ratings of parenting. In the context of foster care, the difference between parent and child ratings of parenting practices might be of interest to child welfare workers who wish to compare the parent and child's relative perceptions of the placement.

Finally, the accuracy of the parent and child ratings of parenting and outcomes may have been influenced by the manner in which data was collected, as the AAR-C2 is completed with the child's social worker, the child, and the child's foster parent present. That is, social desirability may influence the parent's ratings of parenting and of youth outcome, as well as the youth's ratings of parenting and of youth outcome. In the present study, the majority of AAR-C2 interviews (69%; n = 186) were conducted at least partially in a face-to-face conversation, although many were also conducted partially or completely through self-administration by the foster parent (39%; n = 105). A small minority (14%; n = 37) allowed the youth to complete all or part of the interview through self-administration. Allowing foster youth to complete parts of the interview through self report, particularly those sections concerning symptoms of psychological distress, might change the results of analyses using these scores. For example, if youth felt they were able to be more honest in their responses, and scores reflected higher levels of psychological distress, then analyses would provide a more accurate picture of the relation between parenting practices and youth outcome. Ideally, future research should attempt to incorporate both self-administration and face-to-face interview methods.

Practical Implications

Practical implications are somewhat limited by the inconsistency of effects and small effect sizes, but findings nonetheless provide modest support for the importance of the foster youth's perception of relationship quality with his/her caregiver(s) for the youth's social and psychological functioning. Additionally, findings were modest, but also supported the concept that provision of parental nurturance is linked with lower levels of internalizing problems among foster youth. Practically, this suggests that parent and youth ratings of these constructs provide a good indication of the parent-child context, and that these should continue to be closely monitored by child welfare workers, in conjunction with the youth's social and psychological functioning.

Further, foster youths' ratings of relationship quality with male and female caregivers differed in their predictive utility, with female-youth relationship being predictive of prosocial behavior, and male-youth relationship being predictive of internalizing problems. These findings reinforce the importance of monitoring the youth's relationship with each of his/her caregivers, as well as the influence of each of these relationships on social and psychological functioning.

References

Allen, J. P., Hauser, S. T., Eickholt, C., Bell, K. L., & O'Conner, T. G. (1994). Autonomy and relatedness in family interactions as predictors of expressions of negative adolescent affect. *Child Development, 65*, 179–194.

Allen, J.P., Marsh, P., McFarland, C., McElhaney, K.B., Land, D.J., Jodl, K.M., & Peck, S. (2002). Attachment and autonomy as predictors of the development of social skills and delinquency during midadolescence. *Journal of Consulting and Clinical Psychology, 70*(1), 56-66.

American Association of Child and Adolescent Psychiatry (AACAP) (2001) Psychiatric care of children in the foster care system. [Internet; cited April 9, 2011] Available from: http://www.aacap.org/cs/root/policy_statements/psychiatric_care_of_children_in_the_foster_care_system.

Arim, R.G., Dahinten, V.S., Marshall, S.K., & Shapka, J.D. (2011) An examination of the reciprocal relationships between adolescents' aggressive behaviors and their perceptions of parental nurturance. *Journal of Youth and Adolescence, 40*, 207-20.

Arisiwalla, D.D. (2010) The interplay of positive parenting and positive social information processing the prediction of chilren's social and behavioral adjustment. *Dissertation Abstracts International: Section B. Sciences and Engineering, 70*(12-B), 7878.

Armsden, G.C., & Greenberg, M.T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*, 94-109.

Baker, C., Gibbs, I., Sinclair, I., & Wilson, K. (2000). Supporting Foster Placements, *Research Summary,* Social Work Research and Developmental Unit, University of York, York.

Baker, C.B., Gibbs, I., Sinclair, I., & Wilson, K. (2000). Supporting Foster Placements. *Report from the Social Policy Research Unit, University of York, York, UK;* obtained July 3, 2012, from http://php.york.ac.uk/inst/spru/research/summs/fosterplace.php.

Baldwin, A.L. (1955). *Behavior and development in childhood*. New York, NY: Dryden Press.

Baron, R.M., & Kenny, D.A. (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-82.

Barry, T.D., Dunlap, S.T., Lochman, J.E., & Wells, K.C. (2009). Inconsistent discipline as a mediator between maternal distress and aggression in boys. *Child & Family Behavior Therapy, 31*(1), 1-19.

Baumrind, D. (1966) Effects of authoritative parental control on child behaviour. *Child Development, 37*(4), 887-907.

Baumrind, D. (1968) Authoritarian v. authoritative parental control. *Adolescence, 3*, 255-72.

Bayer, J.K., Sanson, A.V., & Hemphill, S.A. (2006) Parent influences on early childhood internalizing difficulties. *Journal of Applied Developmental Psychology, 27*, 542-59.

Bogels, S.M., & van Melick, M. (2004) The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviors and anxiety in children and parents. *Personality and Individual Differences, 37*(8), 1583-96.

Bosmans, G., Braet, C., Van Leeuwen, K., & Beyers, W. (2006). Do parenting behaviors predict externalizing behavior in adolescence, or is attachment the neglected 3rd factor?. *Journal of Youth and Adolescence, 35*(3), 373-83.

Bowlby, J. (1969) *Attachment and loss: Vol 1: Attachment*. London: The Hogarth Press and The Institute of Psycho-Analysis.

Bowlby, J. (1988) *A secure base: Clinical applications of attachment theory*. London: Routledge.

Branje, S.J.T., van Doorn, M., van der Valk, I., & Meeus, W. (2009) Parent-adolescent conflicts, conflict resolution types, and adolescent adjustment. *Journal of Applied Developmental Psychology, 30*, 195-204.

Bulanda, R.E., & Majumdar, D. (2009). Perceived parent-child relations and adolescent self-esteem. *Journal of Child and Family Studies, 18,* 203-12.

Burge, P. (2007) Prevalence of mental disorders and associated service variables among Ontario children who are permanent wards. *Canadian Journal of Psychiatry, 52*, 305-14.

Carlson, V., Cicchetti, D., Barnett, D., & Braunwald, K. (1989). Finding order in disorganization: Lessons from research on maltreated infants' attachments to their caregivers. In D. Cicchetti, & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 377-431). New York, NY: Cambrdige University Press.

Chao, R.K., & Willms, J.D. (2002) The effects of parenting practices on children's outcomes. In J.D. Willms (Ed.), *Vulnerable children: Findings from Canada's National Longitudinal Survey of Children and Youth* (pp. 149-165). Edmonton, AB: University of Alberta Press.

Chen, X., Liu, M., & Li, D. (2000) Parental warmth, control, and indulgence and their relations to adjustment in Chinese children: a longitudinal study. *Journal of Family Psychology, 14*(3), 401-19.

Cichetti, D., & Toth, S.L. (1998) The development of depression in children and adolescents. *American Psychologist, 53,* 221-41.

Clausen, J.M., Landsverk, J., Ganger, W., Chadwick, D., & Litrownik, A. (1998). Mental health problems of children in foster care. *Journal of Child and Family Studies, 7*(3), 283-96.

Cohen, D.A., & Rice, J. (1997). Parenting styles, adolescent substance use and academic achievement. *Journal of Drug Education, 27*(2), 199-211.

Cohen, J. (1988). *Statistical Power Analyses for the Behavioral Sciences* (2nd ed.) Hillsdale, NJ: L. Erlbaum Associates.

Cohen, J.G., Cohen, P., West, S.G., & Aiken, L.S. (2003) *Applied multiple regression/correlation analysis for the behavioral sciences.* Mahwah, NJ: Erlbaum.

Cook, C., & Willms, J.D. (2002) Balancing work and family life. In J.D. Willms (Ed.), *Vulnerable children: Findings from Canada's National Longitudinal Survey of Children and Youth* (pp. 183-198). Edmonton, AB: University of Alberta Press.

Crosnoe, R., & Trinitapoli, J. (2008). Shared Family Activities and the Transition from Childhood into Adolescence. *Journal of Research on Adolescence, 18*(1), 23-48.

Dadds, M.R., Atkinson, E., Turner, C., Blums, J.G., & Lendich, B. (1999). Family conflict and child adjustment: evidence for a cognitive-contextual model of intergenerational transmission. *Journal of Family Psychology, 13*(2), 194-208.

Darling, N., & Steinberg, L. (1993) Parenting style as context: an integrative model. *Psychological Bulletin, 113*(3), 487-96.

Dishion, T.J., & Bullock, B.B.M. (2002) Parenting and adolescent problem behavior: An ecological analysis of the nurturance hypothesis. In J.G. Borkowski & S. Landesman Ramey (Eds.) *Parenting and the child's world: Influences on academic intellectual, and social-emotional development* (pp. 231-249). Mahwah, NJ: Erlbaum.

Doyle, A.B., & Markiewicz, D. (2005). Parenting, marital conflict, and adjustment from early- to mid-adolescence: Mediated by adolescent attachment style?. *Journal of Youth and Adolescence, 34*(2), 97-110.

Dozier, M. (2003). Attachment-based treatment for vulnerable children. *Attachment and Human Development, 5*(3), 253-257.

Elgar, F.J., Mills, R.S.L., McGrath, P.J., Waschbusch, D.A., & Brownridge, D.A. (2007) Maternal and paternal depressive symptoms and child maladjustment: the mediating role of parental behavior. *Journal of Abnormal Child Psychology, 35*, 943-55.

Fish, B., & Chapman, B. (2004). Mental health risks to infants and toddlers in foster care. *Clinical Social Work Journal, 32*(2), 120-140.

Flynn, R. J., & Ghazal, H. (2001). *Looking After Children: Good Parenting, Good Outcomes, Assessment and Action Records.* (Second Canadian adaptation, AAR-C2.) Ottawa, ON, & London, UK: Centre for Research on Community Services, University of Ottawa, & Her Majesty's Stationery Office (HSMO).

Flynn, R. J., Ghazal, H., & Legault, L. (2006). *Looking After Children: Good Parenting, Good Outcomes, Assessment and Action Records.* (Second Canadian adaptation, AAR-C2-2006.) Ottawa, ON, & London, UK: Centre for Research on Community Services, University of Ottawa, & Her Majesty's Stationery Office (HSMO).

Flynn, R.J., & Biro, C. (1998) Comparing developmental outcomes for children in care with those for other children in Canada. *Children & Society, 12*, 228-33.

Flynn, R.J., & Byrne, B.A. (2005) Overview and findings to date of research in the Ontario Looking After Children Project. *OACAS Journal, 49*(1), 12-21.

Flynn, R.J., Ghazal, H., Legault, L., Vandermeulen, G., & Petrick, S. (2004) Use of population measures and norms to identify resilient outomes in young people in care: an exploratory study. *Child and Family Social Work, 9*(1), 65-79.

Flynn, R.J., Vincent, C., & Legault, L. (2006) *User's Manual for the AAR-C2-2006*. Centre for Research on Educational and Community Services, University of Ottawa, ON.

Gadeyne, E., Ghesquiere, P., & Onghena, P. (2004). Longitudinal relations between parenting and child adjustment in young children. *Journal of Clinical Child and Adolescent Psychology, 33*(2), 347-58.

Goodman, R. (1997) The Strengths and Difficulties Questionnaire: A research role. *Journal of Child Psychology and Psychiatry, 38*(5), 581-86.

Goodman, R. (2001) Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(11), 1337-45.

Grant, K.E, Compas, B.E., Thurm, A.E., McMahon, S.D., Gipson, P.Y., Campbell, A.J., Krochock, K., Westerholm, R.I. (2006). Stressors and child and adolescent psychopathology: evidence of moderating and mediating effects. *Clinical Psychology Review, 26*, 257-83.

Gray, M.R., & Steinberg, L. (1999) Unpacking authoritative parenting: Reassessing a multidimensional construct. *Journal of Marriage and the Family, 61*(3), 574-87.

Gribble, P.A., Cowen, E.L., Wyman, P.A., Work, W.C., Wannon, M., & Raoof, A. (1993). Parent and child view of parent-child relationship qualities and resilient outcomes among urban children. *Journal of Child Psychology and Psychiatry, 34*(4), 507-19.

Grotevant, H.D., & Cooper, C.R. (1986) Individuation in family relationships: a perspective on individual differences in the development of identity and role-taking skills in adolescence. *Human Development, 29*, 82-100.

Harden, B.J, D'Amour Meisch, A., Vick, J.E., Pandohie-Johnson, L. (2008). Measuring parenting among foster families: The development of the Foster Parent Attitudes Questionnaire (FPAQ). *Children and Youth Services, 30*, 879-892.

Hastings, P.D., Rubin, K.H., & DeRose, L. (2005). Links among gender, inhibition, and parental socialization in the development of prosocial behavior. *Merrill-Palmer Quarterly, 51*(4), 467-93.

Haugaard, J., & Hazan, C. (2002). Foster parenting. In M. H. Bornstein (Ed.), *Handbook of parenting Volume 1: Children and parenting,* pp. 313-327. Mahwah, NJ: Lawrence Erlbaum Associates.

Heinonen, K., Raikonnen, K., & Keltikangas-Jarvinen, L. (2003) Maternal perceptions and adolescent self-esteem: a six-year longitudinal study. *Adolescence, 38,* 669-87.

Hipwell, A.H., Keenan, K., Kasza, K., Loeber, R., Stouthamer-Loeber, M., & Bean, T. (2008). Reciprocal influences between girls' conduct problems and depression, and parental punishment and warmth: A six year prospective analysis. *Journal of Abnormal Child Psychology, 36*, 663-677.

Hodges, K., Gordon, Y., & Lennon, M.P. (1990) Parent-child agreement on symptoms assessed via a clinical research interview for children: the Child Assessment Schedule (CAS). *Journal of Child Psychology and Psychiatry, 31*(3), pp. 427-36.

Hofferth, S.L., & Sandberg, J.F. (2001) How American children spend their time. *Journal of Marriage and Family, 63* (May 2001), 295-308.

Johnson, L.N., Ketring, S.A., & Abshire, C. (2003). The revised inventory of parent attachment: Measuring attachment in families. *Contemporary Family Therapy, 25*(3), 333-349.

Kashani, J.H., Burbach, D.J., & Rosenberg, T.K. (1988). Perception of family conflict resolution and depressive symptomatology in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*(1), 42-8.

Klein, R.G. (1991) Parent-child agreement in clinical assessment of anxiety and other psychopathology: a review. *Journal of Anxiety Disorders, 5*, p. 187-98.

Kline, P. (1999). *The Handbook of Psychological Testing* (2nd ed.). London: Routledge.

Kufeldt, K., Simard, M., Vachon, J., Baker, J. & Andrews, T. (2000). *Looking After Children in Canada: Final report.* Fredericton: University of New Brunswick.

Landy, S., & Tam, K.K. (1998) *Understanding the contribution of multiple risk factors on child development at various ages*. Human Resources and Skills Development Canada, Working Paper No. W-98-22E.

Larson, R.W., Richards, M.H., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interactions with their families from ages 10-18: Disengagement and transformation. *Developmental Psychology, 32*(4), 744-754.

Legault, L., Anaswati, M., & Flynn, R. (2006) Factors favouring psychological resilience among fostered young people. *Children and Youth Services Review, 28*, 1024-38.

Leslie, L.K., Landsverk, J., Ezzet-Lofstrom, R., Tschann, J.M., Slymen, D.J., & Garland, A.F. (2000) Children in foster care: factors influencing outpatient mental health service use. *Child Abuse and Neglect, 24*(4), 465-76.

Lieberman, M., Doyle, A-B., Markiewicz, D. (1999). Developmental patterns in security of attachment to mother and father in late childhood and early adolescence: Associations with peer relations. *Child Development, 70*(1), 202-213.

Linares, L.O, Montalto, D., Li, M., & Oza, V.S. (2006). A promising parenting intervention in foster care. *Journal of Consulting and Clinical Psychology, 74*(1), 32-41.

Linares, L.O., Montalto, D., Li, M., & Oza, V.S. (2006). A promising parenting intervention in foster care. *Journal of Consulting and Clinical Psychology, 74*(1), 32-41.

Lipscombe, J., Farmer, E., & Moyers, S. (2003). Parenting fostered adolescents: skills and strategies. *Child and Family Social Work, 8,* 243-255.

Lipscombe, J., Farmer, E., & Moyers, S. Parenting fostered adolescents: skills and strategies. *Child and Family Social Work, 8,* 243-255.

Maccoby, E.E., and Martin, J.A. (1983) Socialization in the context of the family: Parent-child interaction. In P.H. Mussen (Series Ed.) & E.M. Hetherington

(Vol. Ed.), *Handbook of child psychology: Vol. 4 Socialization, personality, and social development* (4th ed., pp. 1-101). New York, NY: Wiley.

Mallers, M.H., Charles, S.T., Neupert, S.D., & Almeida, D.M. (2010) Perceptions of childhood relationships with mother and father: Daily emotional and stressor experiences in adulthood. *Developmental Psychology, 46*(6), 1651-61.

Marcus, R.F. (1991). The attachment of children in foster care. *Psychology Monographs, 117*(4), 367-394.

Marquis, R.A., & Flynn, R.J. (2009) The SDQ as a mental health measurement tool in a Canadian sample of looked-after young people. *Vulnerable Children and Youth Studies, 4*(2), 114-21.

Marsh, P., McFarland, F.C, Allen, J.P., McElhaney, K.B., & Land, D. (2003). Attachment, autonomy, and multifinality in adolescent internalizing and risky behavioral symptoms. *Development and Psychopathology, 15,* 451-467.

Mennen, F.E., & O'Keefe, M. (2005). Informed decisions in child welfare: The use of attachment theory. *Children and Youth Services Review, 27*, 577-593.

Milan, S.E., & Pinderhughes, E.E. (2000). Factors influencing maltreated children's early adjustment in foster care. *Development and Psychopathology, 12,* 63-81.

Morton, N., & Browne, K.D. (1998). Theory and observation of attachment and its relation to child maltreatment: A review. *Child Abuse and Neglect, 22*(11), 1093-1104.

Ontario Association of Children's Aid Societies (OACAS) (n.d.-a). OACAS Publications: Statistics. Retrieved April 11, 2011, from http://www.oacas.org/pubs/oacas/statistics/index.htm

Ontario Association of Children's Aid Societies (OACAS) (n.d.-b). About OACAS: Our Programs: Looking After Children. Retrieved April 11, 2011, from http://www.oacas.org/about/programs/onlac.htm.

Ontario Association of Children's Aid Societies (OACAS) (2010). *Your Children's Aid: Child Welfare Report 2009/10*. Retrieved from www.**oacas**.org/pubs/**oacas**/papers/**oacas**childwelfare**report**2010.pdf

Pace, C.S., san Martini, P., & Zavattini, G.C. (2011). The factor structure of the Inventory of Parent and Peer Attachment (IPPA): A survey of Italian adolescents. *Personality and Individual Differences, 51*, 83-88.

Papini, D.R., & Roggman, L.A. (1992). Adolescent perceived attachment ot parents in relation to competence, depression, and anxiety: a longitudinal study. *Journal of Early Adolescence, 12*(4), 420-40.

Pardini, D.A., Fite, P.J., Burke, J.D. (2008). Bidirectional associations between parenting practices and conduct problems in boys from childhood to adolescence: The moderating effect of age and African-American ethnicity. *Journal of Abnormal Child Psychology, 36,* 647-662.

Parker, R., Ward, H., Jackson, S., Aldgate, J., & Wedge, P. (Eds.). (1991). *Looking after children: Assessing outcomes in child care.* London, UK: HMSO.

Patterson, G.R., & Fisher, P.A. (2002). Recent developments in our understanding of parenting: bidirectional effects, causal models, and the search for parsimony. In M.H. Bornstein (Ed.), *Handbook of Parenting: Practical Issues of Parenting* (2nd ed., vol. 5). Hillsdale, NJ: L. Erlbaum Associates.

Paulson, S.E. (1994) Relations of parenting style and parental involvement with ninth-grade students' achievement. *Journal of Early Adolescence, 14*(2), 250-67.

Paulson, S.E., & Sputa, C.L. (1996) Patterns of parenting during adolescence: Perceptions of adolescents and parents. *Adolescence, 31*(122), 369-81.

Pearson, J.L., Cohn, D.A., Cowan, P.A., & Cowan, C.P. (1994) Earned- and continuous-security in adult attachment: Relation to depressive symptomatology and parenting style. *Development and Psychopathology, 6*, 359-73.

Perkins-Mangulabnan, J., & Flynn, R. J. (2006). Foster parenting practices and foster youth outcomes. In R.J. Flynn, P.M. Dudding, & J.G. Barber (Eds.), *Promoting resilience in child welfare* (pp. 231-247). Ottawa, ON: University of Ottawa Press.

Perkins, J. (2009) *Foster parenting practices as predictors of foster child outcomes* (Doctoral dissertation). University of Ottawa, ON. Available from ProQuest Dissertations and Theses database. (UMI No. NR48413)

Petit, G.S., Laird, R.D., Dodge, K.A., Bates, J.E., & Criss, M.M. (2001) Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*(2), 583-98.

Piacenti, J.C., Cohen, P., & Cohen, J. (1992). Combining discrepant diagnostic information from multiple sources: Are complex algorithms better than simple ones. *Journal of Abnormal Child Psychology, 20*, 51-63.

Reitz, E., Dekovic, M., & Meijer, A.M. (2006) Relations between parenting and externalizing and internalizing problem behaviour in early adolescence:

Child behaviour as moderator and predictor. *Journal of Adolescence, 29*, 419-36.

Rey, J.M., Schrader, E., & Morris-Yates, A. (1992) Parent-child agreement on children's behaviors reported by the child behaviour checklist (CBCL). *Journal of Adolescence, 15*, 219-30.

Rigby, K., & Slee, P.T. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *The Journal of Social Psychology, 133*(1), 33-42.

Salbach-Andrae, H., Klinkowski, K., Lenz, K., & Lehmkuhl, U. (2009). Agreement between youth-reported and parent-reported psychopathology in a referred sample. *European Journal of Child and Adolescent Psychiatry, 18*, 136-43.

Schneider, B.H., Atkinson, L., Tardif, C. (2001). Child-parent attachment and children's peer relations: A quantitative review. *Developmental Psychology, 37*(1), 86-100.

Sears, R.R., Maccoby, E., & Levin, H. (1957) *Patterns of child rearing*. Evanston, IL: Row, Peterson.

Sentse, M., & Laird, R.D. (2010). Parent-child relationships and dyadic friendship experiences as predictors of behavior problems in early adolescence. *Journal of Clinical Child & Adolescent Psychology, 39*(6), 873-84.

Shelton, K.H., Harold, G.T., Fowler, T.A., Rice, F.J., Neale, M.C., Thapar, A.T., and van den Bree, M.B.M. (2008). Parent-child relations, conduct problems, and cigarette use in adolescence: examining the role of genetic and

environmental factors on patterns of behavior. *Journal of Youth and Adolescence, 37*, 1216-28.

Smith, M.C. (1994) Child-rearing practices associated with better developmental outcomes in preschool-age foster children. *Child Study Journal, 24*(4), 299-327.

Snyder, J.J., & Patterson, G.R. (1995). Individual differences in social aggression: A test of a reinforcement model of socialization in the natural environment. *Behavior Therapy, 26,* 371-391.

Statistics Canada. (1999). *National Longitudinal Survey of Children and Youth: Overview of survey instruments, cycle 3, 1998-1999.* (Statistics Canada Publication Catalogue No. 89FOO78XPE). Ottawa, ON: Author.

Stein, E., Evans, B., Mazumdar, R., & Rae-Grant, N. (1996) The mental health of children in foster care: a comparison with community and clinical samples. *Canadian Journal of Psychiatry, 41*, 385-91.

Stein, E., Rae-Grant, N., Ackland, S., & Avison, W. (1994) Psychiatric disorders of children "in care": methodology and demographic correlates. *Canadian Journal of Psychiatry, 39*(6), 341-47.

Steinberg, L. (2001) We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence, 11*(1), 1-19.

Steinberg, L., Elmen, J.D., & Mounts, N.S. (1989) Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development, 69*, 1424-36.

Steinberg, L., Mounts, N.S., Lamborn, S.D., & Dornbusch, S.M. (1991) Authoritative parenting and adolescent adjustment across varied ecological niches. *Journal of Research on Adolescence, 1*(1), 19-36.

Stovall, K.C., & Dozier, M. (2000). The development of attachment in new relationships: Single subject analyses for 10 foster infants. *Development and Psychopathology, 12*, 133-156.

Tein, J-Y., Roosa, M.W., and Michaels, M. (1994) Agreement between parent and child reports on parental behaviors. *Journal of Marriage and Family, 56*(2), pp. 341-55.

Trentacosta, C.J., Hyde, L.W., Shaw, D.S., Dishion, T.J., Gardner, F., & Wilson, M. (2008) The relations among cumulative risk, parenting, and behavior problems during early childhood. *Journal of Child Psychology and Psychiatry, 49*(11), 1211-19.

Van der Ende, J. (1999) Multiple informants, multiple views. In H.M. Koot, A.A.M. Crijnen, & R.F. Ferdinand (Eds.), *Child psychiatric epidemiology: Accomplishments and future directions* (pp. 39-52). Assen, the Netherlands: Van Gorcum.

Van Doorn, M.D., Branje, S.J.T., & Meeus, W.H.J. (2008). Conflict resolution in parent-adolescent relationships and adolescent delinquency. *Journal of Early Adolescence, 28*(4), 503-27.

Waddell, C., Offord, D.R., Shepherd, C.A., Hua, J.M., & McEwan, K. (2002) Child psychiatric epidemiology and Canadian public policy-making: the state of the

science and the art of the possible. *The Canadian Journal of Psychiatry, 47*(9), 825-32.

Webster-Stratton, C. (2001). *Incredible years: The parents, teachers, and children training series.* Seattle, WA: Carolyn Webster-Stratton.

Williams, S.K., & Kelly, F.D. (2005). Relationships among involvement, attachment, and behavioral problems in adolescence: Examining father's influence. *Journal of Early Adolescence, 25*(2), 168-96.

Wood, J.J., McLeod, B.D., Sigman, M., Hwang, W-C., & Chu, B.C. (2003) Parenting and childhood anxiety: theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry, 44*(1), 134-51.

Appendix A

Frequency (%) of Missing Data

Table 1A.
Frequency (%) of Missing Data

	Time 1 (*N*=110)		Time 2 (*N*=158)	
	10-15 years (*n* = 72)	16-18 years (*n* = 38)	10-15 years (*n* = 102)	16-18 years (*n* = 58)
Age	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Age at entry to foster care	16 (22.2%)	8 (21.1%)	19 (18.6%)	13 (22.4%)
Number of other youths in the home	0 (0%)	1 (2.6%)	10 (9.8%)	9 (15.5%)
Number of adults in the home	0 (0%)	4 (10.5%)	10 (9.8%)	7 (11.9%)
Type of Placement	1 (1.4%)	1 (2.6%)	4 (3.9%)	0 (0%)
Nurturance (Parent)	3 (4.2%)	4 (10.5)	3 (2.9%)	7 (11.9%)
Nurturance (Youth)	13 (18.1%)	8 (21.1%)	8 (7.8%)	9 (15.5%)
Cohesion (Parent)	2 (2.8%)	3 (7.9%)	3 (2.9%)	5 (8.6%)
Conflict resolution (Parent)	6 (8.3%)	4 (10.5%)	7 (6.9%)	8 (13.8%)
Relationship quality with female caregiver (Youth)	5 (6.9%)	6 (15.8%)	7 (6.9%)	11 (19.0%)
Relationship quality with male caregiver (Youth)	21 (29.2%)	11 (28.9%)	25 (24.5%)	20 (34.5%)
Peer relations (Parent)	4 (5.6%)	3 (7.9%)	6 (5.9%)	6 (10.3%)
Peer relations (Youth)	11 (15.3%)	6 (15.8%)	5 (4.9%)	4 (6.9%)
Prosocial behavior (Parent)	8 (11.1%)	3 (7.9%)	7 (6.9%)	8 (13.8%)
Prosocial behavior (Youth, 10-15 years)	6 (8.3%)	--	6 (5.9%)	--
Positive social interaction s (Youth, 16-18 years)	--	11 (28.9%)	--	17 (28.8%)
Internalizing problems (Parent)	3 (4.2%)	3 (7.9%)	3 (2.9%)	6 (10.3%)
Internalizing problems (Youth, 10-15 years)	6 (8.3%)	--	6 (5.9%)	--
Depression (Youth, 16-18 years)	--	9 (23.7%)	--	6 (10.3%)
Externalizing problems (Parent)	2 (2.8%)	2 (5.3%)	7 (6.9%)	6 (10.3%)
Aggression/Opposition (Youth)	2 (2.8%)	--	6 (5.9%)	--
Property offences (Youth)	4 (5.6%)	--	6 (5.9%)	--
Little's MCAR test	$\chi^2_{(506)}$=516. 42, *p*=.37	$\chi^2_{(313)}$=285. 37, *p*=.87	$\chi^2_{(783)}$=803. 48, *p*=.30	$\chi^2_{(410)}$=390. 83, *p*=.74

VITA AUCTORIS

Julie Norman was born in Ottawa, Ontario. She graduated from Lester B. Pearson High School in Ottawa in 2006, and went on to complete her Bachelor of Science with specialization in Psychology (*summa cum laude*) at the University of Ottawa. She is currently enrolled in the M.A./Ph.D. in Clinical Psychology program at the University of Windsor, and will receive her Master's degree in the fall of 2012.