SYMPTOMATOLOGY, STRESS RESPONSES AND COPING RESOURCES IN SCHOOL-AGE ROMANIAN ADOPTEES

by

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The objective of this study was to examine symptomatology; stress responses for everyday academic and social stressors; and cognitive coping resources among 11-year-old children adopted from Romanian orphanages. Two groups were established by the amount of time spent within the institutional system. Early adoptees (EAs, n=25) spent less than 6 months while late adoptees (LAs, n=14) endured 6 months or more of institutionalization. A comparison group of non adopted, same-age peers (Canadian Born (CBs), n=25) was included.

The first goal was to investigate whether there were differences between EAs and LAs in ratings of symptomatology and stress responses. The second goal was to compare all Romanian adoptees (RAs) to CBs on the same set of factors. The third goal was to identify predictors of symptomatology and predictors of stress responses for RAs only. The main findings were as follows. EAs and LAs did not differ in any symptom ratings or stress responses, showing a lack of evidence for duration of deprivation as a grouping factor. Significant differences were detected by adoption status. Ratings were higher for RAs than CBs in parent-rated symptomatology, including the rate of RAs who exceeded the borderline clinical cut-off. RAs reported less secondary control coping for social stressors than CBs. Models to predict symptoms from stress responses were not supported, with one exception. More disengagement coping for social stress and less
involuntary disengagement for academic stress predicted less externalizing and
generalized symptoms by teacher report. Models to predict stress responses from
cognitive coping resources were significant except for disengagement coping. One of the
main findings was that predictors of secondary control coping varied by stressor domain.

In conclusion, the findings were important in demonstrating that duration of
deprivation does not differentiate between post-institutionalized preadolescents in aspects
of psychosocial adjustment. Adoption status is a significant factor. Stress responses do
not contribute to models of symptoms. The cognitive coping resources of perceived
academic competency and social-support contribute to models of stress responses, yet
with room to improve the predictive power of the models. Implications of the findings
are discussed along with limitations and directions for future research.
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Chapter 1

Introduction

1.1. Reasons for Studying Children Adopted from Romania

The fall of the Ceausescu regime in Romania in December 1989 gained immediate worldwide attention due to disturbing images released of Romanian orphanage children (e.g., ABC News Program 20/20, 1989, as cited in Johnson, Edwards & Puwak, 1993) and has remained a topic of intrigue (e.g., Dunphy, 2001; Gadd, 1998; Talbot, 1998). Estimates have indicated that there may have been as many as 200,000 children being raised within the 628 state-run institutions, which represents roughly 4% of Romania’s child population (Hines et al., 1991, as cited in Johnson et al., 1993).

The extensive media coverage that portrayed the state of the Romanian orphanages and the children living within these institutions led to an overwhelming response by prospective adoptive parents; by mid April 1991, 1,818 children had been adopted directly from institutions (PACT, 1991, as cited in Johnson et al., 1993). The breakdown by country was as follows: Romania (26%), United States (20%), France (13%), Canada (11%), Germany (10%), Italy (8%), England, Switzerland and Belgium (5% each) and elsewhere (23%) (PACT, 1991, as cited in Johnson et al., 1993). By the end of June 1991, a total of 6,752 international adoptions of Romanian children had occurred, which included both home-reared and institution-reared youngsters (Unicef, 1992).

As a group, the Romanian orphanage children endured more severe and pervasive deprivation than any other group of institution-reared children studied to date (Marcovitch, Cesaroni, Roberts & Swanson, 1995; Rutter & the ERA, 1998). Early pervasive deprivation followed by the widespread, humanitarian response of adoptive parents to the plight of the
Romanian orphanage children produced a rare opportunity to study an “experiment in nature” (Haugaard & Hazan, 2003; O’Connor, 2003), defined as “…naturally arising conditions in which there is a possibility of separating otherwise confounded processes or opportunities to examine processes that for ethical or practical reasons would not have been possible…” (O’Connor, 2003, p. 837). Studies concerned with the impact of institutionalization on children’s development are not new (e.g., Bowlby, 1953; Goldfarb, 1947; Hodges & Tizard, 1989a, 1989b; Spitz, 1945a, 1945b, as cited in Maclean, 2003; Tizard & Hodges, 1978) and the literature on the outcomes of international adoption has been well summarized (e.g., Gunnar, van Dulmen, and the International Adoption Project Team, 2007; Maclean, 2003; Van Ijzendoorn & Juffer, 2006; Wilson, 2003). However, there continues to be interest in addressing previously studied questions about the consequences of extreme forms of early deprivation, both as the children become older and in an attempt to improve upon the methodologies of previous works.

Aspects of development in post-institutionalized Romanian children that have been studied to date include: physical and medical recovery; developmental and cognitive catch-up; behavioural and social development; and the ability to form attachment relationships (e.g., Ames, 1997; Benoit, Jocelyn, Moddemann & Embree, 1996; Chisholm, 1998; Chisholm, Carter, Ames & Morison, 1995; Fisher, Ames, Chisholm & Savoie, 1997; Goldberg, 1997; Groze & Ileana, 1996; Johnson et al., 1992; Kreppner, O’Connor, Dunn, Andersen-Wood & the ERA, 1999; Marcovitch et al., 1995, 1997; Morison, Ames & Chisholm, 1995; O’Connor, Bredenkamp, Rutter & the ERA, 1999; O’Connor, Rutter & the ERA, 2000; Rutter & the ERA, 1998; Rutter et al., 1999; Sabbagh, 1995).

Findings from studies that took place immediately following adoption and into the preschool years have informed adoptive parents, prospective adoptive parents as well as
professionals invested in the care of post-institutionalized children about early challenges that the children and their families may face and about the early signs of recovery. Researchers continue to study the subsequent development of post-institutionalized Romanian youngsters in order to provide information about long-term outcomes and to identify issues that are pertinent at each stage of development.

1.2. Brief Overview of Study and Main Questions

The basis for the design of this study originated from the early group of studies of Romanian adoptees that typically examined the effects of deprivation on children by dividing them into two groups according to the amount of time spent in the institutional system or other preadoptive settings. Typically, the studies compared children who spent less than 4 (Ames, 1997) to 6 months (Marcovitch et al., 1997; Rutter & the ERA, 1998) in preadoptive settings against children who spent 6 (Marcovitch et al., 1997; Rutter & the ERA, 1998) to 8 months (Ames, 1997) or longer in these settings. Studies identified the amount of time spent within the institutional system as ranging anywhere from 0 to 53 months and a smaller number of children were adopted directly from biological homes or neonatal hospitals in the first few months of life (Ames, 1997; Marcovitch et al., 1997; Rutter & the ERA, 1998). There is a reasonable amount of evidence indicating that regardless of their age at adoption, children did not vary significantly in their prenatal experiences or family backgrounds (Ames, 1997; Rutter & the ERA, 1998). Furthermore, it has been surmised that the children who were adopted directly from homes or hospitals would likely otherwise have grown up in the orphanages had they not been adopted in the first few months of life (Ames, 1997).

It has been argued that approximately 6 to 8 months of institutional rearing represents a sufficient amount of time endured under these circumstances to observe the effects of
deprivation on children’s development. As well, 8 months represents the approximate age at which successful development in many areas relies on extensive adult involvement, which was virtually absent in the Romanian institutional system (Ames, 1997).

In keeping with previous studies’ division of the children into groups by the amount of time endured within the institutional system, the two adoptive groups included in this study will subsequently be referred to as the early and late adoptees.

The goal of the current study was to investigate aspects of Romanian adoptees’ behavioural and social/emotional functioning that were hypothesized to be important to their daily management during the school-age years several years following adoption. The literature to date, reviewed below, is mixed regarding the long-term impact of deprivation on the psychological development of Romanian adoptees. By comparing early adoptees to late adoptees, the importance of length of deprivation to the children’s current psychosocial functioning was addressed.

In order to tease apart the influence of deprivation from adoption, a second set of comparisons was conducted. The total group of Romanian adoptees was compared to a Canadian-born, non-adopted group of same-age youngsters. This evaluated whether adoption status is an important consideration in understanding various aspects of their psychosocial functioning during preadolescence.

Adoption has long been considered a risk factor for adjustment problems. However, Haugaard’s (1998) critique of the literature underscores that the risk posed by adoption for subsequent adjustment problems is mainly found within clinically-based studies that are overrepresented by adopted youngsters. In contrast, he found modest or no effects of adoption on adjustment problems in studies of nonclinical samples. In my estimation, Romanian adoptees
in the current study represented a quasi-clinical group. Although the participants were not selected from a clinical pool, they have histories of considerable and widespread difficulties that have frequently required professional intervention (see participants section). From this perspective, they appear to be at some risk as a group for experiencing behaviour and social/emotional difficulties.

Haugaard (1998) and Haugaard and Hazan (2003) also argued that considerable heterogeneity within groups of adoptees can influence estimates of risk of adoption. They highlight preadoption circumstances as particularly important factors to consider for research design. Purely from a research perspective then, it is beneficial that adoptees in my study all come from similar backgrounds and circumstances. As previously indicated, this includes prenatal/perinatal experiences and early histories of pervasive deprivation.

Each set of comparisons therefore provided key pieces of information about current functioning among the adoptees. The specific questions that were posed to address group differences were as follows:

1. Are there group differences in traditionally conceptualized behaviour ratings of symptomatology?
2. Do the groups differ in the ways in which they report coping with everyday stressors?

Relationships among key variables were also examined exclusively within the group of Romanian adoptees. The specific questions that I addressed were as follows:

1. Are child-reported coping preferences predictive of behavioural ratings of symptomatology?
2. Are coping preferences influenced by cognitive coping resources that conceivably originated within the context of early experiences of deprivation?

The following diagram provides an overview of the ways in which I conceptualized the
underlying relationships between these key factors and how group differences might arise.

Essentially, I applied a coping framework as an alternative to an attachment framework in order to understand the ways in which early deprivation may contribute to current psychosocial well-being.

**Figure 1.** Conceptualization of Relationships between Key Coping Variables Proposed to Contribute to Group Differences.

As shown in this diagram, coping resources such as self-perceived competencies and social support are thought to influence coping preferences and other stress responses. The specific model of stress responses used in this study is further described in section 1.5. Coping and stress response tendencies are hypothesized to predict symptoms, resulting in symptomatic differences between the three groups of children.

Following is a review of theoretical issues and empirical studies that served as the
impetus for developing and addressing my key questions. The main topics that are discussed include: pervasive deprivation as a context for early experience; study outcomes that point to challenges in day-to-day functioning; coping with daily stress as an alternative paradigm to attachment for understanding behavioural and social/emotional challenges; and cognitive coping resources proposed to be associated with the ability to cope.

1.3. Pervasive Deprivation as a Context for Early Experience

The Romanian orphanage system has been documented as an environment with: an extremely poor child-to-caregiver ratio, ranging from 8:1 to 35:1; a high proportion of under-educated staff members; and extreme scarcities in all basic necessities (Ames, 1990; Ames & Carter, 1992; Castle et al., 1999; Rosenberg, Pajer & Rancurello, 1992; Stephenson et al., 1993). These factors created a situation in which even the most highly rated orphanages were inadequate for meeting children’s basic physical, psychological and social needs (Ames, 1990; Ames & Carter, 1992; Federici, 1998, as cited in Wilson, 2003; Groza, Ileana & Irwin, 1999). Stimulation, personal attention and care were generally absent from the Romanian orphanage system (Ames, 1990; Ames & Carter, 1992). Physical contact and verbal exchange between the children and staff were typically minimal (Ames, 1990; Ames & Carter, 1992; Groza, Ileana & Irwin, 1999). As a result, infants were reported to remain in the same position for extensive periods of time (Sweeney & Bascom, 1995, as cited in Groza, Ileana & Irwin, 1999) and to feed themselves independently through propped-up bottles (Ames, 1990; Ames & Carter, 1992). Similarly, children up to three years of age spent the majority of their time in cribs, walkers and playpens in one of two adjacent rooms, where there was very little activity or interaction among the children and between the children and staff members (Ames, 1990; Ames & Carter, 1992). In summary, children within Romanian orphanages experienced more extensive physical and
nutritional, psychological and social deprivation than any other group of institutional children studied to date (Marcovitch et al., 1995; Rutter & the ERA, 1998).

The Romanian orphanage lifestyle was found to be highly regimented and routinized (Ames, 1990). Atypical behaviours of infants and young children observed within the orphanages reflected the negative impact of early deprivation on children’s general adaptive functioning within the institutional settings. These included: limited crying to communicate basic needs in the absence of language skills; an absence of protest in situations that would typically elicit resistance; an excess of stereotyped behaviour; and a general lack of effort by children to engage familiar adults and peers, yet attempts to gain strangers’ attention (Ames, 1990; Kaler & Freeman, 1994). It has been suggested that these behaviours were adaptive strategies developed by the children in response to the demands of their depriving daily lives (Ames, 1997).

In a recently published study, investigators looked at whether an extreme change in caregiving environments could alter children’s developmental trajectories for psychopathology in preschool-age children (Zeanah et al., 2009). Children living within the Romanian institutional system were randomly assigned to one of two groups between 6 and 30 months of age: continued care within the institutional system or foster care in Romanian homes. They were also compared to a community-based group of Romanian children without any institutional experience. Baseline data from psychiatric interviews identified significantly higher rates of disorder among children with any amount of institutional experience in comparison to never-institutionalized children (53.2% versus 22.0%). Two to four years following that initial assessment when the children reached 54 months of age, there was a significant reduction in the prevalence of internalizing disorders among foster care children. There were no group
differences for externalizing disorders. The authors concluded that a change in rearing environments for the better can make a difference to a child’s psychological well-being in only a short time.

Thus removing children from the adverse circumstances of a grossly deprived institutional upbringing and placing them in adoptive homes is indisputably in their best interest (assuming that the opportunity to be reunited with capable, biological families is not an option). Adoptive homes provide post-institutionalized children with opportunities that would otherwise never be available to them. Subsequent catch-up; the potential for recovery; and identification of persistent and new problem areas have all been topics of continuing interest as the children have accrued more time in their adoptive families (e.g., Maclean, 2003; Rutter, Colvert et al., 2007; Rutter, Kreppner et al., 2007).

The ensuing review of the research from follow-up studies of Romanian adoptees demonstrates that there are well documented gains for all children. Nevertheless, persistent and new behavioural and social/emotional difficulties are more likely among late adoptees than early adoptees as well as other adopted and non-adopted comparison groups. This has been documented to some extent well into the preadolescent years.

1.4. Review of Post-Adoption Outcome Studies for Romanian Children

1.4.1. Early Follow-Up Studies

Early follow-up studies of the children’s physical, developmental, behavioural, social and emotional functioning (Ames, 1997; Chisholm, 1998; Chisholm et al., 1995; Fisher et al., 1997; Groza & Ileana, 1996; Jenista, 1992; Marcovitch et al., 1997; Morison, Ames, & Chisolm, 1995; Rutter & the ERA, 1998; O’Connor et al., 1999, 2000; Sabbagh, 1994) have provided consistent evidence that within the first year following adoption, many children continued to display
physical, developmental and cognitive delays. As well, children behaved in ways that were considered adaptive to the circumstances of their early orphanage upbringing.

At approximately one year following adoption, significant catch-up in physical growth, developmental skills and cognitive development has been consistently reported for a large portion of the adoptees (Ames, 1997; Chisholm, 1998; Chisholm et al., 1995; Fisher et al., 1997; Goldberg, 1997; Morison et al., 1995; O’Connor et al., 1999, 2000; Rutter & the ERA, 1998; Rutter et al., 1999).

Much of the behaviour linked to institutional rearing was found to decrease within two to three years following adoption (Ames, 1997; Beckett et al., 2002; Marcovitch et al., 1995). However, during this early period of time following adoption, mild to moderate increases in more traditionally defined behavioural difficulties that often benefit from professional intervention (e.g., social behaviour problems, generalized, internalizing and externalizing behaviour problems) were reported for many of the late adoptees (Ames, 1997; Benoit et al., 1996; Hoksbergen, Rijk, Dijkum, & Laak, 2004; Marcovitch et al., 1997).

The extent of the difficulties that late adoptees may endure was well illustrated by Ames and colleagues (1997), who grouped late adoptees according to the number of serious problems that they continued to present with three years following adoption. The serious problems that they identified included: estimated intelligence at or below 85; atypical insecure attachment ratings; severe behaviour problems; and ongoing stereotyped behaviour. Thirty five percent of the late adoptees had none of these problems; 35% presented with one or two of these problems; and 30% presented with three or four of these problems. Thus a notable portion of the children continued to exhibit difficulties that were quite concerning, particularly in the behavioural and social/emotional domains despite remarkable developmental gains.
Taken together, early outcome studies from the post-institutional years led to cautiously optimistic conclusions regarding the potential for recovery following pervasive deprivation, although with some less favourable outcomes reported for late adoptees. These results represented the basis from which I began to develop my own set of questions about current behavioural and social/emotional issues in preadolescent Romanian adoptees. Outcomes of these studies also reinforced the importance of conducting comparisons between early and late adoptees several years following adoption.

1.4.2. Follow-Up Studies concerned with Behavioural and Social/Emotional Issues during Preadolescence

Maclean (2003) raised an important issue in her review of the literature concerning the impact of institutionalization on development. She maintained that one of the challenges of conducting research in this field is that there is no single comparison group that can effectively serve the purpose of addressing all questions concerning children’s recovery following deprivation. Rather, different questions call for distinct types of control groups. The following review of more recently completed studies illustrates this point well. The results are somewhat mixed concerning behavioural and social/emotional presentation during preadolescence. Some of the discrepancies can be attributed to differences in design and in the selection of various comparison groups, which made it challenging to compare my own results to some of the findings. It has only reinforced my belief that additional investigation into these issues will contribute further to our understanding of the ways in which youngsters with extreme forms of early deprivation function in their daily lives.

Groza, Ryan and Cash (2003) examined parent ratings of behaviour problems in a large U.S. sample of children who had been adopted from Romania by an average age of 21 months.
They did not include any comparison groups. Data were collected at age 6 years and again at age 10. Of particular interest to my study, the researchers found that scores on the Child Behavior Checklist (CBCL) at age 10 were significantly higher than at age 6 for internalizing problems and the total problem score index. However, despite this increase, at both ages the majority of children received ratings within the nonclinical range for most behaviour problem areas. Changes over time tended to be in the direction of clinical to nonclinical ratings. Shifts from the nonclinical to clinical range that did occur were most likely for generalized problem behaviour. Regression analyses found that neither time within any of the preadoptive settings (i.e., institution, hospital or family) nor age at placement predicted behaviour problems at age 10. Rather, CBCL scores at age 6 and scores on a measure of parent-child relationship satisfaction at ages 6 and 10 were more consistently predictive of problem ratings.

Rutter, Beckett and colleagues (2007) have been actively pursuing a longitudinal study that has followed a group of Romanian adoptees with up to 42 months of previous institutional experience. They have been compared to a group of Romanian adoptees with no history of institutionalization as well as a domestic group of adoptees in order to test specifically for the long-term effects of institutional deprivation on post-institutionalized youngsters (rather than adoption). As part of this research project, Kreppner and colleagues (2007) looked at both institution-specific impairment (i.e., cognitive impairment, quasi-autism and disinhibited attachment) and general areas of psychopathology (i.e., inattention/overactivity, conduct, emotional or peer relationship problems) at age 11. Contrary to Groza and colleagues’ (2003) findings that age at placement was not predictive of problems at age 10, Kreppner’s group found that 6 months of institutionalization marked a critical cut-point at both 6 years (cf. Rutter et al., 2001) and 11 years of age. Children with 6 months or more of institutional experience exhibited
higher rates of impairment than the combined group of adoptees with less than 6 months or no institutionalization in their histories. Post-institutionalized children with multiple impairments were more likely to exhibit the institution-specific patterns of behaviour, whereas general forms of psychopathology were more likely among adoptees with little or no previous institutionalization when there was impairment. There was a high degree of continuity from age 6 to age 11 in all groups when impairment was present, which was again in contrast to findings from the U.S. sample (Groza et al., 2003). New cases of impairment from age 6 to age 11 were more likely for children who endured greater than 6 months of institutional rearing. Nonetheless, there was a high degree of individual difference in outcome regardless of background history, with limited success in identifying specific factors that contributed to the variation.

Colvert and colleagues (2008) focused more specifically on emotional and conduct problems within the same UK sample at age 11. They relied on parent/teacher composite ratings. Compared to findings at age 6, they found a significant increase at age 11 in the level of impairment and in the number of new cases of marked emotional disturbance, but not conduct problems, among previously institutionalized adoptees. This was not the case for Romanian and domestic adoptees without institutional experience. Furthermore, within the group of post-institutionalized children, emotional disturbance was strongly associated with previously identified deprivation-specific patterns of impairment (i.e., quasi-autistic features, disinhibited attachment, cognitive impairment and inattention/overactivity). However, these patterns did not account for the rise in new cases of emotional disorder at age 11. New cases were more typical of children without histories of deprivation-specific problems, which is somewhat consistent with Groza and colleagues’ (2003) findings. Several competing hypotheses for the emergence of new cases of emotional disorder among previously unaffected, post-institutionalized children
were tested, yet ruled out as likely explanations. These included various indices of preadoption adversity; risk associated with the adoptive family environment; educational attainment; and self-esteem. Somewhat surprisingly, neither a continuous measure of duration of deprivation nor a 6-month cutoff point explained the new onset of emotional problems at age 11.

Taken together, results of the UK study that looked at behavioural and social/emotional functioning at age 11 are particularly important in highlighting that problems continue for some children and that new problems can emerge at this age for other children. A lack of support for several proposed explanations for the presence and increase in problems underscores the need for further investigations of factors that may potentially contribute to behavioural and social/emotional challenges several years following adoption.

In the third phase of a Canadian, longitudinal study of Romanian adoptees (Ames, 1997; Fisher et al., 1997; Maclean, 2003), researchers evaluated behavioural and social/emotional ratings at age 10 ½ (Audet, Kurytnik, & Le Mare 2006). Comparisons were made between a group of Romanian children adopted following 8 months or more of institutionalization and a group adopted prior to 4 months of age. They also compared the adopted groups to a Canadian born, non-adopted group of children matched on sex and age. Out of all the research designs described, the one used in this study is most similar to my own.

For the group with 8 months or more of institutionalization, although internalizing difficulties were more problematic for children within the first year following adoption, the externalizing domain became more problematic by age 4.5 and remained as such through preadolescence (Audet et al., 2006). Results from parent ratings of symptomatology indicated higher levels of externalizing and total behaviour problems for the late adoptee group in comparison to the early adoptee and Canadian-born groups at age 10 ½. Approximately 40% of
the youngsters in the late adoptee group scored within the clinical range for parent-rated externalizing difficulties compared to less than 10% of early adoptees and 13% of Canadian-born children. In the case of comparable teacher ratings, late adoptees were rated with significantly more total behaviour problems than early adoptees and a similar trend was apparent for externalizing difficulties. However, consistent with results of the UK and U.S. studies previously described, there was a lack of association between duration of deprivation and behaviour problems beyond age 4½.

To summarize, the presence of behavioural and social/emotional difficulties among preadolescent Romanian adoptees has been well established in the literature; however, there are inconsistencies concerning the types and severity of problems and whether they are related to the duration of early institutional experience. Higher rates of behavioural and social/emotional problems have also been detected among other groups of post-institutionalized youngsters who endured far less severe deprivation than the Romanian adoptees (e.g., Juffer & van IJzendoorn, 2005; Hodges & Tizard, 1989a, 1989b; Tizard & Hodges, 1978; Tizard & Rees, 1975; Verhulst, Althaus, & Versluis-den Bieman, 1992). Therefore, it is not surprising to find difficulties within samples of post-institutionalized Romanian children. Screening for elevated levels of generalized, internalizing and/or externalizing behavioural problems that may benefit from more in-depth inquiry and professional intervention represented a logical first step in the investigation into behavioural and social/emotional functioning of Romanian adoptees in the current study.

1.5. Indicators of Potential Challenges in the Current Management of Daily Demands

Elevations in reports of internalizing and externalizing behavioural symptomatology are useful indicators of psychological maladjustment resulting from stress and adversity (e.g., McMahon, Grant, Compas, Thurm, & Ey, 2003); however, on their own these behaviour ratings
are limited in the amount of information they provide regarding the nature and context of the
presenting difficulties. One way of understanding potentially higher levels of symptomatology
among late adoptees in comparison to early adoptees or non-adopted peers several years
following adoption is to examine the ways in which the children are currently coping, or dealing
with, the demands of normative stressors in their day-to-day lives.

At the time that this study was being developed, the literature covered research
concerning Romanian adoptees only within the first few years following adoption. Several key
findings about the late adoptees’ development during the preschool years seem to offer support
in favour of the position that experiences of daily life at home and at school were likely more
overwhelming, threatening or challenging for late adoptees in comparison to early adoptees.
These findings include: partial cognitive catch-up (Ames, 1997; Benoit et al., 1996; Marcovitch
et al., 1997; Rutter & the ERA, 1998); poor school readiness skills and knowledge (Ames, 1997);
poor problem-solving behaviour (e.g., impulsivity and helpless confirmation-seeking) (Ames,
1997); ineffective task orientation (e.g., inattentive, overactive, controlling, reactive to failure
and impersistent) (Ames, 1997); and socializing difficulties (Ames, 1997; Benoit et al., 1996;
Kreppner et al., 1999; Rutter et al., 1999). Despite the obvious improvements to the children’s
quality of life following adoption, these findings raise the issue that the demands of daily life
outside of the orphanages were likely experienced as challenging.

More recent findings in the Romanian adoptee literature continue to highlight similar
issues for a portion of the children well into the preadolescent years, although there is less clarity
than in the earlier wave of studies regarding the importance of duration of deprivation. This is
particularly the case for studies focused on behavioural and social issues (Colvert et al., 2008;
Groza & Ryan, 2002; Groza, Ryan, & Cash, 2003; Gunnar & Van Dulmen, 2007; Sonuga-Barke
& Rubia, 2008). During the period of preadolescent development, investigators have identified the following issues for some but not all Romanian adoptees: persistence in cognitive impairment (Beckett et al., 2006; Maclean, 2003); lower than expected scholastic attainment (Beckett et al., 2007); higher rates of special education and other special service support (Castle et al., 2006); and disinhibited attachment (Rutter, Colvert et al., 2007). These particular problematic areas are obviously not necessary conditions to establish that adoptees have difficulty coping. However, their presence certainly raises the possibility that at least some of the adoptees experience everyday life as challenging and stressful during preadolescence. As far as I could determine, there are no empirical studies that use a coping framework to better understand the ways in which post-institutionalized children (in general and specifically from Romania) manage in stressful situations and whether the ways in which they cope are associated with their behavioural and social/emotional presentations.

1.6. Coping as an Alternative to Attachment for Understanding Current Difficulties

To date, the studies within the Romanian adoption literature that have utilized an attachment framework (Bowlby, 1969, 1973, 1980) have come closest to answering questions about the children’s ability to handle stressful situations. Generally, researchers have found an overrepresentation of insecure and atypical attachment relationships between Romanian children and their adoptive parents (Ames, 1997; Chisholm et al., 1995; Chisholm, 1998; Goldberg, 1997; Marcovitch et al., 1997; Sabbagh, 1994) as well as a strong representation among the children of indiscriminant friendliness toward strangers (Ames, 1997; Chisholm, 1998; Chisholm et al., 1995; O’Connor et al., 1999, 2000; Sabbagh, 1994). These represent less favourable attachment classifications and behaviour, respectively.

An attachment framework represents a well researched, empirically-validated theory;
however, there are some potential shortcomings when it is applied to the study of Romanian adoptees with a history of pervasively depriving institutional experience. Qualitatively different patterns of attachment have consistently been identified in the attachment literature (e.g., Ainsworth, Blehar, Waters & Wall, 1978; Main & Solomon, 1986) and they have been helpful in understanding how children understand and utilize important interpersonal relationships, particularly in times of stress (e.g., Bowlby, 1980). Essentially, experiences derived through early, selective caregiver-child relationships are internalized as mental representations of self and others, which are referred to as internal working models (Bowlby, 1969, 1973, 1980). However, attachment theory defines the experiences that contribute to the early development of internal working models in rather narrow and specific terms. According to attachment theory, ideas about relationships and expectations begin to develop through internalized relationship experiences with select caregivers during the period of infancy. Some of the underlying themes that have been proposed to develop out of these social experiences relate to issues of trust, reliability, predictability and support (e.g., Ainsworth, 1982, 1990). Internal representations of self and others that develop as a result of early attachment relationships have been found to play an important role in guiding a child to interpret and anticipate actions of others as well as in guiding a child’s own behaviour in interpersonal situations and relationships (e.g., Ainsworth, 1989; Crittenden, 1990, 1992; Sroufe, 1983).

With a highly atypical early history, it would stand to reason that the basic tenets of attachment theory may not accurately apply to a unique group such as Romanian adoptees, who endured pervasive deprivation and did not have the opportunity to secure any form of relationship with an adult. This is particularly relevant to the theory’s main assumption that internal working models develop within the context of a selective caregiver-child relationship
that typically begins to establish itself from birth (e.g., Ainsworth et al., 1978; Bowlby, 1969, 1973, 1980). This was generally not the case for the Romanian children, who received little if any individualized and responsive care from birth until the time that they were adopted (Ames, 1997; Marcovitch et al., 1997; Rutter & the ERA, 1998). In this regard, the late adoptees represent a unique group of children that stands apart even from other groups of disadvantaged children, such as abused or neglected children, who have typically had some type of early experience, albeit negative, with selective caregivers. Hence even with evidence that late adoptees can develop some form of later attachment to adoptive parents, it remains unclear whether the behaviours that are coded to define the various attachment relationship classifications hold the same underlying meanings for children with this type of background (Ames, 1997; Marcovitch et al., 1997; Goldberg, 1997; Sabbagh, 1994).

Indeed, several unexpected findings from the preschool attachment studies of Romanian adoptees and their adoptive parents (e.g., Ames, 1997; Chisholm, 1998; Goldberg, 1997; Marcovitch et al., 1997; Sabbagh, 1994) provide some evidence to suggest that traditional attachment classifications derived from behavioural ratings may be inappropriate for understanding the expectations that the children have developed about themselves and others.

For example, studies have found that a significant number of Romanian adoptees whose behaviour was consistent with a classification of secure attachment, the most desirable form of attachment, also displayed a significant amount of indiscriminately friendly behaviour toward strangers (Marcovitch et al., 1997; O’Connor et al., 2003; Sabbagh, 1994). Securely attached children are considered to be confident in their expectations regarding their caregivers’ actual and perceived availability and they typically engage in appropriate coping behaviour in times of perceived interpersonal stress. This is evident by the appropriate amount of exploratory
behaviour and proximity-seeking to their caregivers that they demonstrate (Ainsworth, 1978). Indiscriminate friendliness has been defined as affectionate and friendly, yet shallow and superficial, social approach toward most adults, including strangers, without the child demonstrating fear or caution that is typically observed in the presence of strangers (e.g., O’Connor, Bredenkamp, Rutter, & the ERA, 1999; O’Connor et al., 2003; Tizard, 1977; Tizard & Rees, 1975).

Indiscriminate friendliness is a core feature of Reactive Attachment Disorder that is commonly diagnosed among young children who have experienced grossly pathological care before age 5 (DSM-IV, 1994). Secure attachment and indiscriminate friendliness should not, theoretically, co-occur (Goldberg, 1997). The fact that they have been found to co-occur among many of the late adoptees has been construed as evidence of “false secures” (Goldberg, 1997; Sabbagh, 1994). These findings, along with findings of unusually high numbers of traditionally coded atypical attachment relationship classifications among the late adoptees (Ames, 1997; Marcovitch et al., 1997; Goldberg, 1997), highlight the potential difficulties inherent in using an attachment framework to understand post-institutionalized children’s beliefs and expectations about themselves and others as well as their ability to cope in times of perceived stress. However, these findings offer preliminary evidence that early experiences in the context of severe social and psychological deprivation have been internalized and may continue to impact upon late adoptees’ coping preferences.

To some extent, attachment theory can be viewed as a theory of coping, yet with a more narrowly defined scope. It is particularly useful in explaining the early contribution of caregiver-child relationships to the development of lasting coping patterns that are primarily activated when individuals are dealing with interpersonal issues. It does not apply as readily to situations
that have a primary focus beyond interpersonal relationships, such as academic challenges. However, results from the Romanian adoption studies that have used an attachment framework (e.g., Ames, 1997; Rutter & the ERA, 1998) have helped substantiate the need to further investigate the adoptees’ views on their ability to cope with stress.

A departure from attachment theory to entertain a coping paradigm may broaden our understanding of the ways in which Romanian adoptees manage in their present day lives, while maintaining an appreciation for the impact of early experience on current functioning. From this perspective, I adapted the view that coping, in general, represents as a group of processes of adaptation applied during times of stress, regardless of whether the outcomes reflect successful or failed resolution (Compas, Connor-Smith, Saltzman, Harding Thomsen, & Wadsworth, 2001). A goodness of fit between the selected mode of coping and the stressful situation relies on the availability of a diverse repertoire of coping behaviours and reactions in addition to flexibility in choice of coping efforts (e.g., Babb, Levine, & Arsenault, 2010; Dise-Lewis, 1988).

1.6.1. Coping with Daily Stressors

Daily hassles, which encompass normative stressors, are the focus of the current study. They constitute one general class of stressors that has been defined in the literature as those disruptions and demands that are experienced as frustrating, irritating and annoying and that may accumulate over time (e.g., Carson, Swanson, Cooney, Gillum & Cunningham, 1992). Daily hassles in the lives of children typically include minor problems encountered at home and at school and difficulties in relationships with friends, parents and siblings (e.g., Ames et al., 2005; Causey & Dubow, 1992; Compas, Malcarne, & Fondacaro, 1988; Sears & Millborn, 1990). However, daily events that are perceived to be stressful have been found to be only modestly associated with children’s and adolescents’ internalizing and externalizing symptomatology.
(Banez & Compas, 1990; Compas et al., 1989a). The ways in which children cope with daily stress have been identified collectively as a key factor in accounting for children’s adjustment and symptoms of psychopathology (e.g., Carson et al., 1992; Rutter, 1983).

The effects of coping on the relationship between stress and outcomes of adjustment have also received attention in the treatment literature because coping thoughts and behaviours have been found to be amenable to change through intervention, thus providing an opportunity to assist individuals in becoming better adapted and adjusted in their daily lives (e.g., Folkman, 1991; Kendall, 1991; van Bilsen, Kendall & Slavenburg, 1995).

1.6.2. Reasons to Identify Preferred Ways of Coping among Romanian Adoptees

It has been argued that one’s ability to deal with stress is fundamentally a developmental process (Compas & Banez, 1989; Skinner & Edge, 1998; Skinner & Zimmer-Gembeck, 2007). This view suggests that while coping is shaped by developmental acquisitions, it also has the ability to influence development by contributing to one’s experiences, which in turn become consolidated over time and guide one’s belief systems about the nature of the self and the world. Thus coping that is developed early on in life has the potential to influence the development and utilization of coping skills over the lifespan (e.g., Fields & Prinz, 1997; Lipsitt, 1983; Rutter, 1983; Skinner & Edge, 1998).

Similar to attachment theory, within the coping literature there is support for the view that one’s ability to cope effectively with stress begins as early as infancy (e.g., Karraker & Lake, 1991), particularly with the assistance of caring, supportive and responsive caregivers (e.g., Campos, Campos & Barrett, 1989; Kopp, 1989). Study results have also indicated that socialization experiences are influential in school-age children’s (Kliewer, Fearnow, & Miller, 1996) and adolescents’ (Zimmer-Gembeck & Locke, 2007) ongoing development of their coping
repertoires. As well, coping is impacted by normal changes that occur over the course of development in the areas of motor, cognitive, attentional and social/emotional functioning (e.g., Ayers, Sandler, West, & Roosa, 1996; Babb, Levine, & Arseneault, 2010; Compas, 1987; Compas, Malcarne & Banez, 1992; Eisenberg, Fabes, & Guthrie, 1997; Losoya, Eisenberg, & Fabes, 1998; Maccoby, 1983).

Given that the Romanian adoptees’ early backgrounds included virtually no individualized and sensitive caregiving in institutional settings (Ames, 1990; Ames & Carter, 1992; Groza, Ileana & Irwin, 1999; Mcmullan & Fisher, 1992) and that the majority of children presented with significant developmental delays as well as variations of behavioural and social difficulties while living within the institutions (Ames, 1990; Ames & Carter, 1992; Kaler & Freeman, 1994), there is reason to suspect that the children may be at-risk for the development of coping styles ill-suited to manage daily stressors that arise as part of non-orphanage lifestyles.

This seems particularly relevant in the case of late adoptees who, in this sample, endured at least 6 months of early institutional experience. It stands to reason that prolonged and pervasive deprivation could have impacted negatively on the early development of beliefs about personal competencies and the availability of supportive others. As a result of the experiences endured and the associated beliefs about self and others that were presumably internalized within the context of deprivation, Romanian adoptees likely developed ways to adapt to their particular life circumstances that were consistent with their experiences and daily routines. However, the same strategies are not adaptive to daily functioning outside of the rigid and impersonal orphanage lifestyle. It is therefore conceivable that Romanian adoptees who display behavioural and social/emotional difficulties may in fact be demonstrating difficulties in their ability to cope with the demands of normative stressors (e.g., social and academic situations). Alternatively,
through years of new experiences following adoption, the children may have successfully altered their beliefs about themselves and others and their preferred means of coping in order to better meet the demands of their new lives. The possible contribution of early institutional experience to individual variations in outcome by way of the development of internalized mental sets and coping strategies has been proposed as a potentially important avenue for exploration (Kreppner et al., 2007); however, it was not under investigation at the time that I began this study. As far as I was able to determine, a coping framework has not yet been applied in the post-institutionalization literature. As such, this portion of the study is considered exploratory.

From a clinical perspective, information about preferred coping responses in specific types of situations can provide important information from the child’s or adolescent’s perspective about challenges they face that can be used for treatment planning (e.g., Kendall et al., 1997; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). Gleaning information specifically about coping could prove to be helpful, particularly in cases in which concerns are raised but not corroborated by the levels of symptom ratings (i.e., when the ratings do not reach clinical levels).

1.7. Lazarus and Folkman’s Cognitive-Transactional Model of Coping

Several contemporary models of coping have emerged that address stress and coping specific to childhood and adolescence (e.g., Band & Weisz, 1988, 1990; Compas, 1998; Eisenberg et al., 1997; Skinner & Wellborn, 1994). Although these models vary from one another in the ways that coping and related processes are conceptualized, they all share a common link to Lazarus and Folkman’s (1984) cognitive-transactional model of coping that was originally developed to address stress, cognitive appraisal and coping in adults.

The cognitive-transactional model of coping (Lazarus & Folkman, 1984) is a process
model that focuses on the relationship between an individual and the social environment. In this particular model, coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person.” (p. 141) According to this definition, coping pertains to a repertoire of effortful cognitive and behavioural responses that may be applied by an individual in an attempt to alleviate stress in situations appraised to be overly taxing. Coping is therefore defined as a response to a specific demand that is context bound and that does not necessarily produce successful outcomes. Rather, coping is seen as any effortful attempt to deal with the situation that is perceived as stressful, regardless of the outcome. As well, this model views coping as a goal-directed process that continuously changes as the demands of a stressful encounter are appraised to have changed.

The concept of cognitive appraisal plays a central role in Lazarus and Folkman’s (1984) model (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Primary appraisal refers specifically to one’s judgment of a situation as either irrelevant or stressful. The stressfulness of an event is determined by the significance or meaning it holds for the individual based on one’s beliefs and thoughts. According to this model, stressful situations arise from appraisals that contain themes of challenge and in particular, threat or harm/loss, thus highlighting the wide range of everyday situations that could potentially be stressful to an individual. Secondary appraisal refers to one’s evaluation of coping resources (psychological and social) and options available for managing stressful situations. Based on one’s appraisals, various coping efforts are then employed.

1.8. Overview of a Multidimensional Model of Stress Responses

The definition and function of coping and the range of responses varies slightly according
to each conceptual model (e.g., Band & Weisz, 1988; Compas, 1998; Eisenberg, Fabes, & Guthrie, 1997; Skinner & Wellborn, 1994). For the purpose of the current study Compas, Connor, Saltzman, Thomsen and Wadsworth’s (1999) multidimensional model of responses to stress was chosen for its strong position within the literature as a broadly defined, empirically supported conceptual model of stress responses that includes, but is not limited to, coping.

This model clearly distinguishes between stress responses along the broad dimension of voluntary responses versus involuntary responses. According to this model, voluntary responses, or coping efforts, are defined as those intentional efforts that are selected in order to regulate emotion, cognition, behaviour, physiology and the environment specifically in response to stressful events or circumstances. Voluntary responses are further distinguished according to their intended goals. The intended goal of primary control coping is to alter objective conditions of the stressful situation. The goal of secondary control coping is adaptation to the problem. Studies have found that primary strategies begin to develop as early as infancy whereas secondary strategies do not tend to emerge and become spontaneously employed until approximately 7 or 8 years of age (Altshuler & Ruble, 1989; Band & Weisz, 1998; Compas, Banez, Malcarne, & Worsham, 1991).

In contrast, involuntary responses to stress are those that occur automatically and do not require conscious or effortful control. Within this model, they are conceived of as either temperamentally-based or conditioned reactions to stress.

Both voluntary and involuntary stress responses are distinguished further according to whether they achieve engagement with or disengagement from a stressor, also referred to as approach and avoidance responses. The model clearly distinguishes between voluntary and involuntary stress responses. However, Compas and colleagues (2001) acknowledge that during
a stressful situation, the coping process can include more than one stress response. Furthermore, they argue that voluntary and involuntary responses have the potential to influence each other.

The model also advocates for the importance of taking into account contextual factors to acknowledge that children respond differently depending on the type of stressor and the level of control that they perceive themselves as having in each of these situations. Situations characterized by high levels of perceived stress and low levels of perceived control tend to be associated with more avoidant coping than situations that are perceived as low in stress and/or high in levels of perceived control (e.g., Altshuler & Ruble, 1989; Causey & Dubow, 1992; Compas et al., 1988). From a developmental perspective, it has been found that the ability to make accurate perceptions of situational controllability tends to reach maturity at approximately age 12 (Compas et al., 1991; Gamble, 1994).

The current study was concerned with the ways in which Romanian adoptees cope with academic and social demands. They are distinct classes, yet both are considered to be at least somewhat within children’s control. This is in contrast to other types of stressors, such as illness, over which children have very little control and fewer coping options (e.g., Band & Weisz, 1990; Compas, Worsham, Ey & Howell, 1996). Academic and social situations may be perceived as stressful to varying degrees for individual youngsters.

The rigid and predictable circumstances of institutional rearing would seem to serve as an ideal context in which conditioned responses to stress could easily develop alongside a narrower range of voluntary responses to stress. Several years following adoption, it remains to be seen how children feel that they are able to cope in stressful situations. Therefore, inclusion of both voluntary and involuntary responses to stress seems appropriate for a study that focuses in part on the influence of early adversity on current ways of responding to stress.
1.9. Coping Resources Hypothesized to be Important to the Development of Coping in Romanian Adoptees

In recent years, there has been increasing interest in proposing and examining factors that can account for differences in individuals’ coping styles used in stressful situations across the lifespan (e.g., Compas, 1998; Marchand & Skinner, 2007; Taylor & Stanton, 2007). These factors, commonly referred to as coping resources, pertain to many aspects of the self and the social environment that individuals draw upon that may either facilitate or interfere in the ability to cope with many forms of stress (Compas, 1998; Eisenberg et al., 1993, 1997; Lazarus & Folkman, 1984; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997; Skinner & Wellborn, 1994; Zimmer-Gembeck & Locke, 2007). For example, temperament, problem-solving ability, competency beliefs and social support have all been identified as important coping resources that may help or hinder the stress response process (e.g., Compas, 1987; Edwards, Gfroerer, Flowers, & Whitaker, 2004; Garmezy, 1983; Gore & Eckenrode, 1996; Gunnar, 1994; Kliewer, Fearnnow & Miller, 1996; Rutter, 1983). While each of these resources likely plays a role in the coping process among the current adoptees, this study focused specifically on cognitive appraisals that could be theoretically linked to the children’s early experiences of gross deprivation above and beyond length of deprivation. The relevance of these particular coping resource factors to current coping among the Romanian adoptees will now be briefly outlined.

1.9.1. Length of Institutionalization

Length of institutionalization was included as a general marker of early deprivation in order to determine whether it impacts directly on preferred coping styles. There is a lack of research studies on coping among previously deprived adoptees, including studies that look specifically at the association between length of deprivation and coping. However, length of
time spent in an institution has been found to be associated with several outcome variables among the Romanian children in the first 2 to 4 years following adoption, including: growth retardation (Ames, 1997; Johnson et al., 1992; Rutter, 1998); delayed development and partial cognitive catch-up (Ames, 1997; Marcovitch et al., 1997; Rutter & the ERA, 1998); overall behaviour problems (Ames, 1997; Fisher et al., 1997); and social problems (Ames, 1997; Fisher et al., 1997).

Results from recent studies of school-age Romanian adoptees are less consistent about the long-term effects of duration of deprivation on key aspects of development, including intelligence (LeMare, Vaughan, Warford, & Fernyhough, 2001; Beckett et al., 2007) and behavioural and social/emotional issues (Colvert et al., 2008; Groza, Ryan, & Cash, 2003; Kreppner, et al., 2007). Based on these mixed findings and the exploratory nature of this portion of the study, it was difficult to predict whether duration of deprivation would impact on coping styles. However, it is an important factor for consideration. If duration of deprivation functions as a predictor, I anticipate a negative association with preferred coping styles and a positive association with less desirable coping and stress responses.

It may not be the duration of deprivation as much as the sustained impact of the experiences that children internalized while living within the orphanage settings that is predictive of current coping. As such, I included a set of predictors reflecting cognitive appraisals that stem from children’s belief systems about oneself and others. The following section outlines why they are considered important to understand the ways in which post-institutionalized children currently cope.

### 1.9.2. Beliefs about Oneself and Others

Proponents of cognitive coping models (e.g., Compas et al., 1988; Lazarus & Folkman,
applied models of cognitively-based therapies (e.g., Kendall, 1991; Kendall & MacDonald, 1994) similarly emphasize the importance of taking into consideration one’s beliefs and expectancies in order to understand the personal significance of stressful situations to the individual, in addition to determining the ways in which beliefs and expectancies may influence one’s coping tendencies. These models have drawn upon cognitive (e.g., Beck, 1967; Beck & Emery, 1985) and social cognitive (e.g., Dodge, 1993) theories as well as attachment theory (e.g., Bowlby, 1969, 1973, 1980). They all stress the importance of internalized experiences in the development of beliefs about self, others and the world that may continue to influence patterns of adaptive functioning, such as coping. However, cognitive and social cognitive models place less emphasis than attachment on the notion that one’s representations of self and others begin to develop exclusively in the context of early and selective caregiver-infant relationships (e.g., Dubois & Felner, 1996). Rather, they also underscore the relevance of a variety of early experiences, both in and outside of interpersonal relations and in a variety of contexts in the development of children’s beliefs and expectations regarding themselves and other people (e.g., Dubois & Felner, 1996; Lochman, White, & Wayman, 1991). This is an important consideration in studying Romanian adoptees whose early beliefs and expectations regarding aspects of self and others would have begun to develop in the absence of opportunities to share experiences with selective caregivers and peers.

The general term “schema” has been used in the cognitive and social cognitive literatures to refer to information and experiences that have been encoded into abstract cognitive representations in memory (e.g., Westen, 1991). In accordance with this definition, a schema is an organized structure of internalized knowledge that guides the ways in which an individual views him/herself, others and the world and that can affect the encoding, storage and retrieval of
information (Beck, 1967; Fiske & Taylor, 1984; Young, 1990).

Schemas provide the mechanism through which past experience influences current behaviour. That is, they influence the ways in which individuals experience and react to the world (e.g., Beck, 1967, 1976; Hammen & Goodman-Brown, 1990; Ingram & Kendall, 1986; Kendall, 1991), including the ways in which individuals cope in times of perceived stress (e.g., Beck & Emery, 1985). Schemas are often referred to as lenses or templates that serve to filter new events and to trigger information stored from past experiences as well as information processing about new experiences (e.g., Crick & Dodge, 1994; Kendall, 1985; Mahoney, 1991). Schemas therefore screen new experiences and draw on past events to influence current processing (Kendall, 1985, 1991).

Schemas become strengthened through use, resulting in relatively stable structures that an individual relies on to fill in missing information in an efficient yet not necessarily accurate manner and to guide future experiences (e.g., Baldwin, 1992; Beck, 1967; Dodge, 1993). Although it has been found that schemas can be altered through exposure to a variety of experiences, preexisting beliefs are believed to be more readily accepted over new ones (e.g., Lochman & Lenhart, 1995). Schema-congruent information has been found to be processed more efficiently than schema incongruent information (e.g., Dodge, 1985; Hammen & Zupan, 1984); however, schemas can also contribute to poor problem-solving choices (e.g., Lochman, Nelson & Sims, 1981).

Self-schemas pertain specifically to information derived from personal experiences that is internalized and used to form assumptions and beliefs about the self (Safran, 1990). Interpersonal (Safran, 1990) and relational (Baldwin, 1992) schemas more closely resemble the attachment theory construct of an internal working model in that they refer more specifically to
internalized beliefs and expectations about self and others in the context of relationship experiences (Baldwin, 1992; Safran, 1990; Westen, 1991).

Schematic content, such as cognitive representations of the self and others, and schematic processing are both important components of schema models (e.g., Baldwin, 1992). However, the current study focused exclusively on schematic content that is accessible to individuals through self-reports as opposed to unconscious or automatic content that is more readily accessible through specialized experimental techniques (e.g., Hammen & Zupan, 1984; Rudolph, Hammen, & Burge, 1997). Specifically, the constructs of self-competence and perceived social support have been selected as the cognitive representations of self and others, respectively. Each construct will now be briefly outlined.

### 1.9.3. Perceived Self-Competence

The construct of perceived self-competence has been selected to represent self-schema information in the current study. Perceptions of personal competence and efficacy have been identified as important determinants of stress appraisal and coping efforts (e.g., Bandura, 1986; Frydenberg, 1997; Lazarus & Folkman, 1984; Rutter, 1983), yet this is a relatively new area of empirical investigation in the child coping literature. Several studies have found associations between self-competency beliefs and preferred coping styles for everyday stressors (Bempechat, London, & Dweck, 1991; Boldero, Frydenberg, & Fallon, 1993, as cited in Frydenberg, 1997; Harter, 1992; Seiffge-Krenke, 1990). Essentially, they have found that the more competent youngsters feel, the more likely they are to utilise coping strategies that are functional, effective or adaptive and conversely, poor perceptions of competence have been found to be associated with less desirable means of coping.

Self-perceptions of personal competence are relevant to a discussion of coping among
Romanian adoptees in the following way. The children’s early history of severe deprivation and delays in all areas of development was followed by significant (though not always complete) catch-up in many areas after time spent in adoptive homes. As well, within the institutions the children experienced inconsistent and unresponsive caregiving and a lack of attention from peers, which would conceivably have contributed to the development of poor self-competency beliefs. Preexisting beliefs are supposed to be more readily accepted over new ones. As such, a shift from negative experiences and outcomes to developmental gains and advantageous circumstances does not guarantee that competency beliefs will improve, yet the opportunity would seem to present itself. Hence it is worthwhile to examine how the children currently perceive themselves and whether their views are predictive of their coping styles.

For the purposes of this study, the construct of self-competence will be defined according to Harter’s (1985a, 1985b, 1985c, 1986, 1990) extensive work in the area of self-perceptions. Harter (1985a, 1985b, 1985c, 1986, 1990) distinguishes between self-concept, which refers to self-descriptions that do not involve judgments of worth, and self-worth and self-competence, which refer to evaluative aspects of the self. Furthermore, Harter has demonstrated that school-aged children and adolescents not only make judgments regarding the global worth that one has for the self as a person, referred to as self-worth, they also make evaluations about domain-specific competencies and skills, referred to as perceived self-competence. Thus Harter’s cognitive-developmental model of self-worth underscores the importance of global judgments of self-worth as well as the evaluation of domain-specific competencies. Although the model identifies five specific domains of perceived self-competence, the current study is focused exclusively on two domains; scholastic competence and social acceptance. They were selected because they represent the beliefs in self most likely to influence the adoptees’ coping tendencies.
in the specific domains of academic and interpersonal stressors, respectively.

In a related manner, Le Mare, Warford and Fernyhough’s (2001) investigation into peer relations among preadolescent Romanian adoptees found that late adoptees did not differ from early adoptees or Canadian-born non adopted peers in self-ratings of social competence or loneliness. They also did not differ by peer or teacher ratings for peer acceptance or in terms of parent ratings of number of good friends. However, compared to non-adopted peers, children with a history of more than 24 months of institutionalization reported a reduced sense of general self-worth and also reported that they received less support from close friends, neither of which could have been detected by clinical ratings of symptomatology. Based on these results, it was suggested that adoptees with lengthier histories of institutionalization may benefit from intervention to assist them in developing close relationships with friends in order to strengthen their perceived sense of social support. These results underscore the value in utilizing self-report data once the children are capable in order to gain a better understanding of their own experiences and perceptions of their social/emotional functioning, at least from a non-clinical perspective.

**1.9.4. Expectations for Social Support**

The period of time in which late adoptees were institutionalized provided virtually no opportunity to develop early and selective relationships. Thus the appraised availability of social support in their adoptive lives was considered a crucial resource to evaluate in relation to preferred coping styles. Perceived social support, which has been linked to one’s history of social experiences as well as current coping tendencies (e.g., Ptacek, 1996; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997), has therefore been selected to represent an important aspect of interpersonal and relational schemas. Support-seeking itself has been identified as one class
of coping that is frequently used by children (e.g., Dubow & Tisak, 1989). Alternatively, perceived social support has been defined as the cognitive appraisal of an individual’s valued connections to others (Barrera, 1986) or the supportive provisions potentially available from within one’s social network (Ptacek, 1996). There is general agreement among researchers in the field of social-support that one’s cognitive appraisal of the availability and adequacy of social support has the greatest impact on adjustment, as opposed to other dimensions of social support, including the size of one’s network or the frequency of helping behaviours received from others (e.g., Barrera, 1981, 1986; Ptacek, 1996; I.G. Sarason, B.R. Sarason, & Pierce, 1994).

B. R. Sarason, Pierce and I. G. Sarason (1990) have suggested that perceptions of social support are based on a history of experiences with important support providers. These researchers compare perceived social support to the working model concept of attachment theory (Bowlby, 1980) described earlier. They suggest that attachment histories in infancy as well as subsequent interpersonal relationships provide information for cognitive structures or working models related to the self and others, particularly about one’s expectations for the availability and accessibility of social support when needed. Secure attachment and hence, higher levels of perceived support should, theoretically, be associated with appropriate exploratory behaviour, which should provide the opportunity to further develop one’s coping skills (Pierce, I. G. Sarason, & B. R. Sarason, 1996). They have outlined three distinct ways in which perceived social support may influence coping. First, high levels of perceived social support may lead to lifestyles in which stressful events are less likely to occur. Second, high levels of perceived support may lead an individual to actually develop effective coping skills through his/her variety of experiences in the social environment. Third, high levels of perceived support may lead individuals to seek and receive assistance from others when it is needed.
Similarly, Skinner and Wellborn (1994) have suggested that children who sense that social support is available and that their psychological needs are being met are better able to cope with stress in more active, flexible and positive ways. In contrast, children who perceive their close relationships to be unsupportive and who feel that their psychological needs are ignored or insulted are more likely to cope in a passive, rigid and negative manner.

Although several researchers have theorized about the likely associations between perceptions of support and coping, empirical studies with child populations are lacking. Among young adolescents, however, it has been found that perceptions of supportive parenting styles are strongly associated with more effective means of coping, such as problem-focused coping and the use of social support where appropriate, whereas perceptions of unsupportive parenting styles have predicted less effective means of emotion-focused coping as well as distraction and avoidance (e.g., Dusek & Danko, 1994). In a related manner, Hardy, Power, and Jaedicke (1993) found that a high level of parental support, although in this case reported by parents, was associated with a greater variety of positively regarded coping strategies generated by school-age children for use with everyday stressors. As well, parental support was found to be positively associated with avoidance coping in situations that were rated as uncontrollable. Kliewer, Fearnow and Miller (1996) also provided evidence for a positive association between child-rated parental acceptance and active coping tendencies for everyday problems (i.e., not specific to a particular class of stressor) among 10-year-old children.

More recent studies have provided evidence highlighting the importance of perceived social support and related constructs to the effective use of coping. For example, Calvete and Connor-Smith (2006) found that perceptions of overall social support (from family, friends and significant others) are associated with reduced reliance on avoidant coping strategies and
increased use of primary and secondary coping strategies among university students, particularly for high levels of social stress. Zimmer-Gembeck and Locke (2007) provided empirical support in favour of a positive relationship between perceived socialization experiences with significant others (i.e., parents and teachers) and young adolescents’ coping behaviours. The aspects of the relationship with parents and teachers that were evaluated through adolescent self-reports included: involvement (e.g., emotional availability); structure (e.g., reasonable limit setting); and autonomy (e.g., opportunities for decision-making). Results indicated that socialization by both parents and teachers (as reported by adolescents) is influential in the use of active coping behaviours among adolescents at home and at school. By child report, these aspects of the relationship with parents also influenced the children’s use of avoidant coping and wishful thinking at home, whereas this was not the case for comparable child ratings of socialization by teachers. These studies provide evidence in favour of continuing to research the potential influence of various aspects of perceived relationships with significant others on the development of coping preferences in children and adolescents.

Additional tests in normative samples are warranted in order to determine whether children’s own perceptions of social-support are predictive of their preferred means of coping with different types of stressors. It stands to reason that a similar relationship between perceived social support and coping should exist and resemble the relationships outlined above.

Pierce and colleagues (1996) and I.G. Sarason, Pierce and B. R. Sarason (1990) have also argued that relationship-specific expectations and general expectations of social support may be related, yet they reflect different aspects of perceived social support. Therefore, they may each play a unique role in the coping process. An approach that utilises the construct of perceived social-support can offer a broader view of one’s sense of available support than one in which
attachment classifications are applied and it also recognizes the important role that people other than primary caregivers may play in influencing coping. In order to address this concern, it was decided that it would be particularly important to assess perceived support from a variety of potential support providers, including parents, friends and teachers, all of whom could potentially be assistive to the adoptees in coping with many interpersonal and academic stressors.

At the time of data collection, the children in this study were obviously older than children who participated in the early wave of studies. Verbal competency was not considered a barrier to communication for the purpose of this study. Therefore, self-reports were deemed a reasonable alternative to experimental attachment paradigms and parent reports. They provided an opportunity to gain the children’s perspectives in addressing the possibility that their competency beliefs and perceived social support may be influencing their coping preferences.

1.10. Summary of Study Goals

The first goal of the study was to determine whether there were group differences in behaviour ratings of symptomatology and stress response ratings. Comparisons were first made between early and late adoptees to address the issue of length of deprivation. Based on previous research, it was hypothesized that higher rates of symptomatology would be endorsed for the late adoptee group in comparison to the early adoptee group. The portion of the study concerning coping and automatic stress responses was exploratory due to a lack of empirical studies looking at stress response ratings with any groups of post-institutionalized children. As such, there were no specific hypotheses regarding group differences in responses to stress.

The second goal of this study was to determine whether there were group differences in symptomatology and stress responses between the Romanian adoptees as a total group and a Canadian-born, non-adopted group of same-age youngsters. These comparisons addressed the
separate issue of adoption status as a potentially important factor. It was hypothesized that ratings of symptomatology would be higher for the adopted group of children. Once again, there were no specific hypotheses in the case of stress responses.

The third goal of this study was twofold and also exploratory in nature. It pertained exclusively to the combined group of Romanian adoptees. First, I evaluated the ability of coping and stress response preferences to account for symptomatology in the adoptive group. Next, I examined whether cognitive coping resources were predictive of stress responses above and beyond the influence of length of institutionalization. The coping resources included: social and academic self-competency beliefs; and overall perceived social-support comprised of ratings about parents, friends, classmates and teachers.
Chapter 2

Method

2.1. Research Design

The current study is a passive-observational, between-group research design. This design is necessary given that experimental control is not possible, as a result of an inability to directly manipulate the independent variables of interest and thus to randomly assign subjects to groups (Cook & Campbell, 1979).

2.2. Participants

The participants in this study consisted of three groups of English-speaking children and their parents who were recruited between June 2002 and February 2004 (see recruitment section below). The overall sample consisted of 64 child participants spread across 54 families.

Romanian adoption groups. Before describing the adoptive groups it is important to note that there are no recorded statistics available prior to 1993 concerning the number of children adopted from Romania into families in Ontario, Canada where my study took place (Ontario Ministry of Community and Social Services, 2000; B Johnstone, personal communication, October 16, 2009). Therefore, I could not determine whether this sample of children from Romania is representative of the population of Romanian adoptees in Ontario who joined their families between 1990 and 1993. The Ministry of Community and Social Services Oversees adoption home studies and approval of applications to adopt in Ontario. They had records of 629 applications for adoption of Romanian children by Ontario residents between 1990 to 1993 (Ontario Ministry of Community and Social Services, 2000), yet that does not necessarily reflect the number of completed adoptions. As far as I could determine (Ministry of Community and...
Social Services, 2000; B Johnstone, personal communication, October 16, 2009), the ministry only has data from 1993 through June 2000, which indicates that 140 Romanian-born adopted children received landed status in Canada. Figures are missing from 1990 through 1992, which represent the years in which the children in this study were adopted.

The first group of children included 25 (15 boys, 10 girls) Romanian adoptees who were adopted prior to six months of age from Romanian institutions, hospitals or biological homes (early adoptee (EA) group). The second group of children consisted of 14 (5 boys, 9 girls) Romanian adoptees who were adopted directly from Romanian institutions or hospitals following 6 months or more of institutional care (late adoptee (LA) group). Of note, for some of the analyses, the two groups of Romanian adoptees have been combined into one group, the Romanian adoptee (RA) group.

Length of institutionalization in the final setting was initially selected as the ideal grouping factor. However, some of the children in each of the two groups spent time in more than one setting prior to adoption and spent the least amount of time in the last setting, which contributed to group misrepresentation for analyses that depended on this factor. Four children in the EA group were in multiple settings, which represent 16% of the group. In the LA group, 5 children lived in more than one setting, representing 36.71% of the group. As a result, age at adoption was selected as a more relevant grouping factor to reflect the total amount of time spent in temporary settings prior to adoption. Age at adoption and length of time in the final institutional setting are, however, highly correlated for both groups (EAs: $r = .91, p < .001$; LAs: $r = .90, p < .001$).

**Canadian matched sample.** The third group of children consisted of 25 (13 boys, 12 girls) Canadian-born, non adopted children (CB group) matched to a subgroup of the Romanian
adoptees. To establish this group, 25 children from the RA group were first randomly selected using a table of random numbers. Prospective recruits for the CB group were then matched to RAs according to each child’s sex and age at recruitment (within 6 months) and based on mother’s highest level of education. All children were successfully matched on gender. Due to challenges in finding exact age matches for all 25 of the RAs, six pairs of children were included whose ages differed by 7 or 8 months rather than the intended 6 months. However, a relatively narrow age range was still maintained for the overall sample of children. Using the 7-point educational factor from the Hollingshead (1975) Four Factor Index of Social Status, CB children were also matched to the Romanian children within 1 level of their mothers’ highest level of completed education. Scores range from 1 (less than seventh grade) through 7 (graduate degree); however, in this study only categories 4 through 7 were endorsed (high school completion through graduate degree). This demographic variable was chosen over occupational status, given that there was a notable number of mothers in the RA sample who were not working at all outside of the home at the time of recruitment (23%) or who only worked part-time (33%), yet the majority of them had received some form of post-secondary education (95%).

**Total sample.** Sample characteristics and demographic variables are displayed in Table 1. Overall, the total sample consisted of 64 children divided among the three groups (EA, LA and CB groups). Analyses to confirm successful matching showed that the three groups did not differ by gender ($\chi^2(2, N = 64) = 2.12, ns$). A significant difference was found among the three groups by age ($F(2,61) = 3.33, p < .05$). Tukey post hoc analyses showed that, as anticipated, LAs were significantly older than EAs, but CBs did not differ from either Romanian adoptee group. Despite age differences, current age was not found as a correlate of any of the study’s key factors. T-scores also controlled for age on measures of symptomatology. As well, although
age differences existed the overall range was narrow (10 to 14 years) and representative of early adolescence. There were no group differences in mother’s highest level of education ($\chi^2(6, N = 64) = 4.28, ns$). Follow-up analyses also indicated that the groups did not differ according to marital status ($\chi^2(4, N = 64) = 3.12, ns$). Marital status was defined as households with both biological/adoptive parents; single parent households; or households with one birth/adoptive parent and a partner (in the household of the parent respondent). The majority of children were living within two-parent households with both biological/adoptive parents.

Follow-up analyses to test group differences on non-matched, child-focused variables indicated group differences for the presence of parent-reported: learning problems ($\chi^2(2, N = 64) = 22.85, p < .001$); classroom support ($\chi^2(2, N = 61) = 10.82, p < .01$); current psychiatric diagnoses ($\chi^2(2, N = 64) = 18.06, p < .001$); and a history of psychiatric diagnoses ($\chi^2(2, N = 64) = 12.16, p < .001$). Fewer participants among the Canadian-born group were reported to have learning problems; to be in partially or fully supported classrooms; or to have past or present psychiatric diagnoses than among the two adoptive groups. Learning problems were defined by the presence or absence of any parent-reported learning difficulties. Classroom support was defined as the presence or absence of any formal educational support provided to the child on a regular basis at school. The presence of psychiatric diagnoses was defined by parent endorsement of one or more diagnoses in the areas of: anxiety, mood disorders, externalizing problems, attention/hyperactivity, reactive attachment disorder, social problems and any other psychiatric problems. This was completed twice; once for current diagnoses and once for a history of diagnoses in any of the categories listed.

Child participants were also screened for estimated full scale intelligence quotients (IQ). Using a four-subtest short form of the Wechsler Intelligence Scale for Children – Third Edition
IQ scores varied by group membership ($F(2, 62) = 3.54, p < .01$). As expected, LAs ($M = 89.50, \ SD = 15.00$) received lower estimated IQs than EAs ($M = 100.00, \ SD = 14.17$) and CBs ($M = 107.44, \ SD = 9.70$). EAs and CBs did not differ from each other. The differences between LAs and the other groups were small, however, and estimated IQs for all three groups fell within the Average range.

*Inclusion and exclusion criteria.* Families all lived within commuting distance of the Greater Toronto Area (GTA), Ontario. With the exception of two families who lived in rural areas, the sample was otherwise representative of urban and suburban communities. The 10- to 14-year age range was selected to reflect the fact that the study began running 10 to 12 years following the beginning of adoptions from Romania.

In order to participate in the study, the adoptees were required to be members of their adoptive families for a minimum of five years. As it turned out, there was no significant difference in the amount of time (in months) accrued within adoptive homes between EAs ($M = 138.35, \ SD = 4.47$) and LAs ($M = 129.00, \ SD = 23.73$), $t(37) = 1.46, \ ns$. It is also of note that time in adoptive homes was eliminated as a potential covariate as it did not correlate with any of the study’s dependent variables. The children were all required to be English-speaking and living with at least one adoptive parent. At least one parent needed to complete a set of questionnaires for each participating child.

Because the focus of this study was on coping with normal, everyday stressors, children would have been excluded from the current study if, within the past 12 months, there were major family transitions/disruptions (e.g., divorce, separation, remarriage, new live-in partner, or death of a parent or sibling) or in the event that the target child experienced a traumatic event in his/her life within the year. Traumatic events were defined according to those listed under Posttraumatic
Stress Disorder in the Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV; American Psychiatric Association, 1994). None of the children screened for the study were excluded on these bases. Children were not excluded if they were receiving or had previously received psychological or psychiatric treatment for reasons other than trauma.

2.3. Measures

The battery consisted of questionnaires to be completed by all of the children and by one parent for each child participant. There was also one questionnaire for teachers of Romanian adoptees.

2.3.1. Parent Questionnaires

Background and Demographic Information Questionnaire. This is a general information questionnaire that was compiled specifically for this study. It focused on adoption history, developmental information about the target child and demographic information about the family. Parents of Canadian-born children completed a version of the questionnaire that did not contain items about adoption. A copy of this questionnaire is presented in Appendix A.

Child Behavior Checklist/4-18 (CBCL/4-18; Achenbach, 1991; Achenbach & Edelbrock, 1991). The CBCL is a 118-item scale completed by parents that assesses the presence and severity of a wide variety of symptomatology described in terms of behavioural problems as well as social competencies in 4- to 18-year-old youngsters. Parents are asked to consider the past 6 months as a time frame when responding to the questionnaire. The items are scored on a three-point scale, ranging from 0 (not true) to 2 (very true or often true). Higher scores indicate more severe problems. Scores are obtained based on separate norms for boys and girls at two age levels: 4 to 11 and 12 to 18. T-scores are derived for three broad-band dimensions. The
Internalizing Index taps withdrawn, anxious types of behaviour that are generally found to be less disruptive to others yet more uncomfortable for the child. The Externalizing Index taps acting out behaviours that are typically found to be disruptive to other people. The Total Problem Index represents an overall index of general behavioural and social/emotional difficulties that includes all CBCL items (i.e., Internalizing and Externalizing subscales plus three additional subscales). In order to differentiate between ratings by parents and teachers with the same factor names, parent scales will be prefaced with “CBCL” while teacher scales will be prefaced by “TRF”.

Achenbach (1991) has provided substantial evidence for reliability and validity of the CBCL. Retest reliability for the items and all of the scales has been established by Achenbach and colleagues, ranging from .65 to .87 for periods as long as two years. Construct validity has been supported with correlations ranging between .52 to .86 between the CBCL and similar behaviour checklists (Achenbach, 1991). As well, discriminant analyses have indicated that referral of a child for either internalizing or externalizing difficulties correlates highly with high T-scores on the behaviour problem scales of the CBCL, but not with scores on the competence scales. Studies have also shown that the CBCL scores reliably discriminate between clinically-disordered children and non-disordered children (e.g., Achenbach, 1991; Biederman et al., 1995; Rishel, Greeno, Marcus, Shear, & Anderson, 2005; Schmeck et al., 2001).

2.3.2. Child Questionnaires

The Responses to Stress Questionnaire (RSQ; Connor-Smith et al., 2000). The Responses to Stress Questionnaire (RSQ) is a 57-item, self-report questionnaire that has successfully been utilized with youngsters in the 10- to 19-year age range (Connor-Smith et al., 2000; Jaser et al., 2006; Wadsworth, Raviv, Compas, & Connor-Smith, 2005; Wadsworth,
Reickmann, Benson, & Compas, 2004). This questionnaire is based on a conceptual model that includes a broad range of purposeful coping efforts as well as involuntary responses to specific domains of stress. For the current study, children completed two versions of the questionnaire to look at the separate domains of social and academic stressors. They are identical, other than substituting references to social stressors with schoolwork-related stressors. A copy of the social version of the questionnaire can be found in Appendix B.

The RSQ consists of 19, three-item subscales that are aggregated into five factors; three coping factors and two factors of involuntary responses to stress, as follows. Primary Control Engagement Coping refers to voluntary efforts to alter the stressor or one’s reactions to the stressor (e.g., I try to think of different ways to change the problem or fix the situation; I let someone or something know how I feel). Secondary Control Engagement Coping pertains to voluntary responses focused on adapting to the problem (e.g., I tell myself that everything will be alright; I realize that I just have to live with things the way they are). Disengagement Coping refers to volitional responses that are oriented away from a stressor or one’s reactions (e.g., I try to stay away from people and things that make me feel upset or remind me of the problem; I deal with the problem by wishing it would just go away, that everything would work itself out). Involuntary Engagement includes temperamentally-based and conditioned reactions that are not under one’s control and that are oriented toward a stressor or one’s reactions to a stressor (e.g., I keep remembering what happened or can’t stop thinking about what might happen; I feel sick to my stomach or get headaches). Involuntary Disengagement also pertains to responses that are not under one’s volitional control, yet they are oriented away from a stressor and one’s reactions (e.g., My mind just goes blank, I can’t think at all; When I have problems, I just can’t be near anything that reminds me of the situation). In order to differentiate between the factors for the
two versions of the measure, each factor has been prefaced with the term “Social” or “Academic” (e.g., Social Primary Control Engagement Coping or Academic Involuntary Disengagement). For quick reference, I have summarized key information about the five factors that comprise the RSQ. It can be found in Table 2.

To complete the questionnaire, children first report on the recent occurrence of domain-specific, stressful events in their lives by checking off any applicable situations from a given list. Next, they rate the stressor domain severity on a 4-point scale ranging from “not at all” (1) to “a lot” (4). They are instructed to think about the events they endorsed while they complete the rest of the questionnaire about the ways that they coped and responded in those stressful situations. They endorse each of 57 items on a 4-point scale ranging from “not at all” (1) to “a lot” (4), which reflects the degree to which or frequency with which each response was enacted when faced with these stressors since the start of the school year. At times, children are also asked to provide examples to substantiate their responses. Five subscale scores are obtained by summing item scores and providing an average score for each subscale. Higher scores indicate greater endorsement of a particular type of response to stress. Proportion scores were also obtained by calculating the total score for each scale divided by the total responses made by an individual. These scores provided an index of the relative degree to which each response category was endorsed while controlling for base rate differences in item endorsement. Connor-Smith and colleagues (2000) favour the use of proportion scores because of research that indicates that individuals often use multiple coping strategies to address any given stressful situation and higher levels of distress are associated with more coping of all types. Therefore, relative uses of strategies are seen as more useful in identifying effective and noneffective responses to stressors. Both sets of scores were included for group differences, yet proportion scores were used for
correlational analyses.

Tests of psychometric properties of the RSQ have yielded good results for samples of youngsters ranging in age from 11 through 19 (Connor-Smith et al., 2000). Several versions of the RSQ were administered, including those pertaining to social stress, family conflict, economic strain and recurrent pain. Internal consistency reliabilities for the five factors across these samples and four versions of the RSQ were reported to be adequate to strong (Cronbach’s alphas ranging from .67 to .92). However, internal consistency reliabilities did not support the use of the 19, three-item parcels. Test-retest reliability over a one- to two-week period for social stress was found to be adequate (ranging from .69 to .81) for a sample of older adolescents. Construct validity of the RSQ was examined using a multi-method, multi-trait approach by correlating the RSQ scales with another self-report coping measure with similar scales and parent-reports on the RSQ. Overall, adequate convergent and discriminant validity were found. Expected convergent validity correlations fell mainly in the .4 to .5 range for comparisons between two self-report measures of coping; in the .3 to .4 range with respect to comparisons between the child and parent versions of the RSQ; and in the .3 range for correlations with heart rate reactivity. Conversely, discriminant validity was demonstrated by findings of expected, nonsignificant correlations between factors on the RSQ and factors from a different self-report measure of coping that represented different constructs.

For the current study, Cronbach’s alpha was computed for each of the five factors for both versions of the questionnaire. It ranged from .72 to .92, indicating good internal consistency reliability on the RSQ for the total sample of children.

*The Self Perception Profile for Children (SPPC; Harter, 1985c).* The SPPC was developed for youngsters in the 8- to 15-year age range to assess perceived competence in 6
distinct areas of life. Only the domains of Scholastic Competence and Social Acceptance were used in the current study. Scholastic competence is defined as one’s perception of self-competence or ability within the domain of academic performance (Harter, 1985c). Social acceptance is defined as the degree to which a child feels accepted by peers and feels popular in his/her peer group (Harter, 1985c). The SPPC can be found in Appendix C.

The measure was constructed according to a structured alternative format in order to reduce children’s tendency to answer in a socially desirable manner. Each scale is comprised of 6 items. For each item, respondents are first asked to identify which of two statements best describes them. Then, they must rate whether the chosen statement is “really true” or “sort of true” about themselves. Each item is scored along a 4-point scale. The higher the score is, the higher the level of perceived competence/adequacy. The six item scores are averaged to create overall scores of Scholastic Competence and Social Acceptance.

Internal consistency reliabilities for the SPPC have been found to range from .71 to .86 across several samples of children in the third to eighth grades (Harter, 1985c). Test-retest reliabilities for the subscales have been found to range from .70 to .87 (Harter, 1985c). Harter (1982, 1985c) has also provided support for the convergent, discriminant and construct validities of the SPPC. Convergent validity has been demonstrated by correlating teacher’s ratings with the children’s own ratings. Discriminant validity has been shown by demonstrating that children with learning disabilities rate scholastic competence, but not the other domains, to be significantly lower than children without learning disabilities. Construct validity has been supported by examining the relationship between SPPC scores and behaviours assumed to be related to perceived self-competency.

For the current study, Cronbach’s alpha was .86 for Scholastic Competence and .84 for
Social Acceptance. Thus there is good internal consistency reliability on the Harter scales for the total sample of children.

The Social Support Scale for Children and Adolescents (SSSCA; Harter, 1985d). The SSSCA is a self-report questionnaire for children in the 8- to 18-year age range. It was designed to measure the perceived support and regard which significant others manifest toward the self. The items tap the degree to which the respondent believes that other people treat him/her like a person, like them the way they are, care about their feelings, understand them and listen to their problems (Harter, 1985d). Separate subscales tap four possible sources of support available to the youngster: parents, teachers, classmates and close friends. For the current study, an overall support-from-others index score was computed based on the four subscales. It is referred to as Total Social Support. The SSSCA can be found in Appendix D.

The question format of this measure follows the same structured alternative format as the SPPC. Each scale is comprised of six items. Each item is scored on a 4-point scale, whereby a score of 1 represents the lowest level of perceived support and a score of 4 represents the highest level of perceived support. Total Social Support internal consistency reliabilities reported by Harter (1985d) are strong, ranging from .74 to .88 across samples of third to eighth grade children. Support for the construct validity of the SSSCA was also provided by Harter (1985d) by examining the relationships of the individual subscale scores to scores assumed to be related to them. For example, classmate support scores were found to be moderately correlated with scores on the social acceptance subscale of the SPPC, ranging from .62 to .69.

For the current study, Cronbach’s alpha was .88 for Total Social Support, indicating good internal consistency reliability for the total sample of children.

The Multidimensional Anxiety Scale for Children (MASC; March, 1998). The MASC
is a self-report questionnaire designed to assess a variety of anxiety symptoms in children and adolescents in the 8- to 19-year age range. The MASC consists of 39 statements. Children are asked to check off how often each statement has been true of them “recently”. Responses are scored on a 4-point scale, ranging from “never true about me” (0) to “often true about me” (3). Higher total MASC scores are indicative of higher levels of general anxiety symptoms. Raw scores are converted to T-scores based on separate norms for males and females in four-year intervals. In the current study, the MASC Total T-score provided a general index of self-reported anxiety symptoms.

Based on extensive psychometric evaluation of the normative sample (March, 1998), internal consistency reliability of the MASC has been reported to range from adequate to strong, with Cronbach’s alpha ranging from .64 to .86 for all major factor scales and .88 to .89 for the total MASC scale when examined separately for males and females. Furthermore, test-retest reliability has generally been found to be excellent over three-month periods, ranging from .72 to .93. Factorial validity of the MASC was confirmed by testing the four-factor structure of the MASC in both a nonclinical and a clinical normative sample as well as by examining the intercorrelations of the MASC scales based on the normative sample, which yielded low to moderate correlations among them (March, 1997). The four-factor model has also been confirmed in a large sample of children with Attention Deficit Hyperactivity Disorder (March et al., 1999). Strong support for discriminant validity of the MASC was found from its ability to distinguish between anxiety-disordered and non anxiety-disordered youth with 87% accuracy. With respect to construct validity, completion of the MASC separately by parents and their children has found parent-child agreement to be poor to fair, with the greatest concordance for easily observable symptom clusters and for mother-child over father-child or father-mother pairs.
(March, Parker, Sullivan, Stallings, & Conners, 1997). Furthermore, adequate convergent and divergent validity have also been established using alternative self-report measures of anxiety and self-report measures of depressive symptoms (March et al., 1997).

**The Children’s Depression Inventory (CDI; Kovacs, 1992)** The CDI, derived from the Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961; Beck, 1967) for adults, is a 27-item, self-report questionnaire that assesses and quantifies the severity of a range of depressive symptomatology in children between the ages of 7 and 17. Each item is represented by three statements of varying severity. They are rated on a 0- to 2-point scale, with 0 representing the absence of a symptom and 2 representing the severe form of a depressive symptom. Children respond by selecting the statement that best describes their feelings and behaviours over the past two weeks. Higher CDI scores indicate increasing severity of depressive symptomatology. Total raw scores are converted to T-scores based on separate norms for male and female children in two age ranges. In the current study, the CDI Total T-score provided a general index of self-reported depressive symptomatology.

The psychometric properties of the CDI have been reported in several studies. The internal consistency reliability coefficients have generally been found in the low to upper .80s for both normal and psychiatric populations (e.g., Kazdin, French, & Unis, 1983; Nelson, Politano, Finch, Wendel, & Mayhall, 1987; Smucker, Craighead, Craighead, & Green, 1986). Test-retest reliability coefficients have been reported to range from .38 to .87 (e.g., Blumberg & Izard, 1986; Finch, Saylor, Edwards, & McIntosh, 1987; Kovacs, 1981; Nelson & Politano, 1990; Saylor, Finch, Spirito, & Bennett, 1984; Smucker et al., 1986), with much of the variability resulting from the time interval between assessments and study sample characteristics. Findings regarding the validity of the CDI are more inconsistent. Good concurrent validity has been
reported in some cases (Doerfler et al., 1988; Knight, Hensley, & Waters, 1988; Reynolds, Anderson, & Bartell, 1985); however, while there is some evidence that CDI scores and parent report measures are significantly correlated for prepubertal children, other studies have reported weak relations between CDI scores for children in grades 4 through 12 and parent and teacher measures of childhood depression (Doerfler et al., 1988). Studies regarding criterion validity have also yielded mixed findings. Several studies have found good discriminant validity for the CDI (e.g., Kovacs, 1985; Smith, Mitchell, McCauley, & Caulderon, 1990), yet others have found that it does not distinguish as well between various diagnostic categories as it does between clinicals and normals (e.g., Carey, Faulstich, Gresham, Ruggiero, & Enyart, 1987; Knight et al., 1988; Saylor et al., 1984; Wendel, Nelson, Politano, Mayhall, & Finch, 1988). Studies of CDI convergent validity have found that high CDI scores are associated with self-reports of high anxiety, low self-esteem and poor self-concept (e.g., Doerfler et al., 1988; Felner, Rowlinson, Raley, & Evans, 1988; Kovacs, 1985; Reynolds, Anderson, & Bartell, 1985; Saylor et al., 1984).

Completion of both the MASC and the CDI provided self-report information on a range of internalizing symptoms.

**Wechsler Intelligence Scale for Children - Third Edition (WISC-III; Wechsler, 1991).**

The WISC-III is intended for children ages 6 through 16. It contains 13 subtests in total; 6 in the Verbal Scale and 7 in the Performance Scale. The WISC-III uses the Deviation Intelligence Quotient (IQ) (M=100, SD=15) for the Verbal, Performance and Full Scale IQs. An estimate of IQ is calculated by comparing a child’s score with the scores earned by a representative sample of his/her age group based on 4-month age groups.

For the current study, a four-subtest, short-form version of the WISC-III was utilized to obtain estimates of cognitive functioning for all child participants. The four subtests were
administered in the same sequence as they appear in a standard administration of the full WISC-III battery. The short-form consisted of two verbal subtests (Information and Vocabulary) and two performance subtests (Picture Completion and Block Design). This combination was selected because it has demonstrated strong reliability (.94) and validity (.89) (Sattler, 1992).

2.3.3. Teacher Questionnaire

Teacher Report Form (TRF; Achenbach, 1991). The TRF is a companion measure to the CBCL that is completed by a child’s primary teacher. It is very similar in structure, items, scoring and interpretation to the CBCL (described above). The TRF is appropriate for use with children between the ages of 5 and 18. There are 89 items that are common to the CBCL and the TRF, as well as several additional items on the TRF that are more specific to a school setting. As in the case of the CBCL, the current study utilized scores for the broad-band dimensions referred to as the Internalizing, Externalizing and Generalized Indices. The scales will be prefaced by TRF to differentiate them from the CBCL scales. Teacher ratings were obtained exclusively for the two Romanian groups to avoid concerns among parents of CBs regarding the potential for unnecessary stigmatization by teachers.

Similar to the CBCL, reasonably good psychometric properties have been reported for the TRF (Achenbach, 1991).

2.4. Procedure

Recruitment. Methods of recruitment included mail-outs, advertisements and word-of-mouth.

A brief letter describing the study was mailed to 150 families in Ontario who had been members of SPARK (Support for Parents Adopting Romanian Kids), a parent support group that
is no longer active. In order to maintain anonymity and privacy, the SPARK founder organized the mail-out and asked parents to respond to the primary investigator if they were interested in the study. Fifteen letters were returned and there were seven inquiries from interested parents whose children were too young to participate. Nine children were recruited through this mail-out. In order to maintain privacy and anonymity, I was unable to collect information about families who declined to respond.

A second letter was sent to all parents of Romanian adoptees whose children had previously been assessed by one of the study’s investigators through her private practice in child psychology. The letter briefly outlined the study and explained that the primary investigator would contact parents within a month’s time to invite them and their children to participate in the study and to answer any questions they might have. A phone number for the investigator was also included in order for parents to initiate contact. Seventeen families with a total of 19 identified children received letters. Two letters were returned; parents of two children did not respond to follow-up phone calls; and four children whose parents were willing to participate were too young (as determined by the inclusion and exclusion criteria). The remaining 11 children and their parents participated. There was no information available about families who declined to participate. Therefore, it was not possible to determine whether there were differences and perhaps a sampling bias between the groups of participants and eligible non-participants.

The remaining 19 participants in the adoptive groups and all 25 Canadian-born children were recruited through word-of-mouth (i.e., investigators’ networks or non-adopted, recruited families with contacts in the community).

Other attempted methods of recruitment included advertising on 3 local websites
intended for parents of international adoptees for the duration of the recruitment and testing phases and twice in the events section of a local newspaper. Although there were several inquiries about the study, these sources did not lead to recruitment of any participants due to age restrictions (i.e., children were too young at the time of the study). A snowball technique to recruit for the Canadian-born group did not result in any referrals. This method involved contacting all participating adoptive families and asking them to refer one or more non-adoptive families with children who were similar in age to their own.

In summary, all subjects were recruited through more direct means of contact rather than general advertising methods. Among the adoptees, 51% of participants were recruited through mail-outs and 49% through word-of-mouth networking. All Canadian-born children were recruited by word-of mouth.

The primary investigator was the only individual who had contact with families throughout all phases of the study. The initial phone contact with parents was completed to explain the details of the study; to determine whether they were willing and qualified to participate with their child (based on inclusion and exclusion criteria); and to make arrangements to meet with the child and his/her parent(s). Parents of adoptees only were also offered a brief screening of their child’s core academic skill levels, which included a written report of results within two months of data collection. Seventy-four percent of adoptive parents requested the screening. All children received a small gift in appreciation of participation (i.e., a coupon to a local restaurant and packaged candy).

**Data collection.** Parents provided written consent for themselves and their children to participate at the time of the home meeting. Parents of adoptive children also provided written consent for teacher participation. There was no direct contact with teachers. Child participants
provided written assent. All parents and children agreeing to a home meeting participated fully and none of the families withdrew at any point.

Parents completed a package of questionnaires while their child met with the investigator. Following the session with the child, the investigator met briefly with parents in order to answer any questions and to ensure that the questionnaires were completed without deliberate omissions. At that time, parents of adoptees were also provided with a teacher questionnaire and a cover letter that briefly explained the nature of the study. The questionnaire was to be completed by the child’s main teacher and returned to the investigator in a postage-paid, return envelope. Teacher questionnaires were returned completed for 16 children in the EA group (64% of the group) and 10 children in the LA group (71% of group). Although the letter to teachers provided a phone number, none of the teachers contacted the investigator.

Children met one-on-one with the investigator for approximately two to three hours in total, depending on whether an academic screening was completed and on the number of breaks taken. This was determined on an individual basis. Prior to administering the measures, the investigator explained the procedures and received written assent from each child.

The measures were administered in the following order: the Responses to Stress Questionnaire, social stress version (RSQ; Connor-Smith et al., 2000); the Self-Perception Profile for Children (SPPC; Harter, 1985); the Responses to Stress Questionnaire, academic stress version (RSQ; Connor-Smith et al., 2000); the Social Support Scale for Children and Adolescents (SSSCA; Harter, 1985); the Multidimensional Anxiety Scale for Children (MASC; March, 1997); the Children’s Depression Inventory (CDI; Kovacs, 1992); and a four-subtest, short-form of the WISC-III (Wechsler, 1991).

This particular order of administration was chosen for two reasons. First, the measures of
internalizing difficulties were placed after the coping measures to reduce chances of potentially biasing responses to the coping measures. Second, potentially frustrating measures of cognitive ability were administered at the end of the battery. With assistance from the investigator on an as-needed basis, all children understood well enough to complete all measures and there were no intentional omissions. At completion of the testing session, each child was given the opportunity to ask questions about the measures and the study.

For children whose parents had opted for a brief screening of academic skill levels (as a gesture of appreciation for participating in the study), it was administered following completion of the assessment battery.
Chapter 3

Results

3.1. Overview of Results Section

Two sets of comparisons were included in the analyses that looked at group differences. The first set of comparisons fulfilled objective one by examining potential differences in symptomatology and responses to stress between Early Adoptees (EA group) and Late Adoptees (LA group). This was completed to determine if there were group differences based upon length of deprivation, which is represented in the current study by age at adoption. A second set of comparisons was conducted to examine differences between the entire group of Romanian adoptees (RA group) and a group of non-adopted, Canadian-born children (CB group). Although potentially affected by prenatal factors, objective two comparisons were completed in order to address the question of group differences by adoption status. The third objective was twofold and only included Romanian adoptees; first, to determine whether stress responses were predictive of adult-rated symptomatology and second, to look at whether cognitive coping resources were predictive of proportional stress response scores.

Wilk’s lambda was the statistical test used in these and subsequent multivariate analyses. An alpha level of .05 was set for statistical tests, unless otherwise specified.

Prior to conducting all analyses, all variables were examined through various SPSS programs for accuracy of data entry, missing values and fit between their distributions and the assumptions of univariate and multivariate analyses. There were no missing values and

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1 Given the association between estimated intelligence and adoption status, all analyses were run covarying for overall estimated intelligence scores. Covariation by intelligence did not significantly alter the results and therefore to conserve power, intelligence was dropped as a covariate for the presented results.
univariate outliers were still deemed to be within a range that was acceptable for inclusion in the study. All cases were maintained.

3.2. Objective 1: Early Adoptee versus Late Adoptee Group Comparisons

The first goal of the present study was to determine whether there were group differences between EAs and LAs in reports of symptomatology and in responses to stress. Child report, parent report and teacher report data were included for comparisons in symptomatology. Comparisons of stress responses were by child report only. Group means and counts (for borderline clinical cut-off scores) for symptomatology are presented in Table 3. Group means for social stress responses are presented in Table 4 and for academic stress responses in Table 5.

3.2.1. Symptomatology

Child report. A two-way, between groups multivariate analysis of variance (MANOVA) was used to examine the dependent variables of anxious and depressive symptomatology by the independent variables of group membership and gender. No significant multivariate effect of group membership, $F(2, 34) = 0.91, ns$; gender, $F(2, 34) = 1.78, ns$; or interaction of gender by group membership, $F(2, 34) = 2.92, ns$, was detected.

Parent report. A two-way, between groups MANOVA was used to examine the dependent variables of internalizing and externalizing symptomatology by the independent variables of group membership and gender. By parent report of problem behaviour on the CBCL, no significant multivariate effect of group membership, $F(2, 34) = 1.02, ns$; gender, $F(2,$

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2 The pattern of results was consistent when participants over the age of 13 and participants of Below Average IQ were deleted from analyses. Therefore, the results are presented for the whole sample.
3 Group counts for children with total scores above the clinical cut-offs on the MASC and CDI also did not differ between EAs and LAs.
A separate two-way, between groups analysis of variance (ANOVA) was conducted to examine the dependent variable of total problems on the CBCL by the independent variables of group membership and gender. This was done due to problems inherent in including a dependent variable (in this case, CBCL Total Problem Index) that is comprised of the other dependent variables (Internalizing and Externalizing Indices). For overall problem behaviour, no significant main effect for group membership, $F(1, 35) = 1.80, ns$; gender, $F(1, 35) = .92, ns$; or interaction of gender by group membership, $F(1, 35) = 4.25, ns$, was detected.

**Teacher report.** To further confirm comparability of symptomatology across the two Romanian groups, teacher reports were gathered from the TRF. Similar issues regarding the use of the three broadband CBCL measures in one multivariate analysis of variance applied to the TRF. Once again, two separate analyses were completed to address this issue. Using a two-way, between groups MANOVA, a multivariate effect of group membership for internalizing and externalizing symptomatology was found to be nonsignificant, $F(2, 21) = .58, ns$, as were the effect of gender, $F(2, 21) = .14, ns$, and the interaction of group membership by gender, $F(2, 21) = 1.15, ns$.

A separate two-way, between groups ANOVA was conducted to examine the dependent variable of overall problem behaviour on the TRF by the independent variables of group membership and gender. No significant main effect for group membership, $F(1, 22) = 1.41, ns$; gender, $F(1, 22) = .14, ns$; or interaction of gender by group membership, $F(1, 22) = 1.15, ns$, was detected.  

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4 Group counts for children with scores above the clinical cut-off on the CBCL indices did not differ between EAs and LAs.
5 Group counts for children with scores above the clinical cut-off on the TRF indices did not differ between EAs and LAs.
In summary, contrary to expectation, there were no significant differences in indices of symptomatology between EAs and LAs. This was the case for child, parent and teacher ratings.

3.2.2. Responses to Stress

Prior to conducting response to stress factor comparisons, two separate t-tests were conducted for social and academic stressors to determine whether ratings of stress severity differed as a function of group membership (EA versus LA). EAs (M = 2.28, SD = .89) and LAs (M = 2.71, SD = .99) did not differ in their stressfulness ratings for social stressors, \( t(37) = .73, \text{ ns} \). Similarly, EAs (M = 2.08, SD = .81) and LAs (M = 2.29, SD = .91) did not differ in their ratings of stress severity for academic stressors, \( t(37) = 1.40, \text{ ns} \). Given the significant associations between stress severity ratings and several of the response to stress factors in both domains\(^6\), all analyses were initially run covarying for stressfulness scores. Covariation by stress severity did not significantly alter the results and therefore to conserve power, it was dropped as a covariate for the presented results.

In total, four analyses were conducted for comparisons of EAs and LAs. Factor rating comparisons were followed by proportion score comparisons for each of the two stressor domains.

**Social Stressors - Factor Ratings.** Using a MANOVA to compare EAs to LAs on average responses to social stress, no significant multivariate effect of group membership, \( F(5, 31) = 0.59, \text{ ns} \); gender, \( F(5, 31) = 0.25, \text{ ns} \); or interaction of gender by group membership, \( F(5, 31) = 0.94, \text{ ns} \), was detected.

**Social Stressors - Proportion Scores.** In comparing EAs to LAs, no significant multivariate effect of group membership, \( F(4, 32) = 1.24, \text{ ns} \); gender, \( F(4, 32) = 1.02, \text{ ns} \); or

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\(^6\) Correlations between stress responses and severity of stress ratings are available upon request.
interaction of gender by group membership, \( F(4, 32) = 1.86, \text{ns} \), was detected based on proportion scores for responses to social stress.

**Academic Stressors - Factor Ratings.** In a comparison of EAs to LAs on average ratings of responses to academic stress, no significant multivariate effect of group membership, \( F(5, 31) = 0.97, \text{ns} \); gender, \( F(5, 31) = 0.87, \text{ns} \); or interaction of gender by group membership, \( F(5, 31) = 1.71, \text{ns} \), was detected.

**Academic Stressors - Proportion Scores.** In comparing EAs to LAs using proportion scores for responses to academic stress, no significant multivariate effect of group membership, \( F(4, 32) = 1.24, \text{ns} \); gender, \( F(4, 32) = 1.02, \text{ns} \); or interaction of gender by group membership, \( F(4, 32) = 1.86, \text{ns} \), was detected.

In summary, EAs and LAs did not differ in average factor ratings or in their proportional use of stress responses in the domains of social and academic stressors.

### 3.3. Objective 2: Romanian Adoptee versus Canadian-Born Group Comparisons

The second goal was to determine whether there were group differences between the total group of Romanian Adoptees (RAs) and Canadian-born, non-adopted youngsters (CBs) in reports of symptomatology and in responses to stress. The set of analyses is identical to that from objective 1. Group means and counts (for borderline clinical cut-off scores) for symptomatology are presented in Table 3. Group means for social stress responses are presented in Table 4 and for academic stress responses in Table 5.

#### 3.3.1. Symptomatology

**Child Report.** A MANOVA was used to compare child reports of anxiety and depression symptomatology between RAs and CBs. There was no significant multivariate effect of group
membership, \( F(2, 59) = .39, ns \); gender \( F(2, 59) = .96, ns \); or interaction of gender by group membership, \( F(2, 59) = .02, ns \).

**Parent Report.** A MANOVA compared parent reports of internalizing and externalizing difficulties on the CBCL between RAs and CBs. There was a significant multivariate effect of group membership for difficulties, \( F(2, 59) = 6.05, p = .004 \). No significant effect of gender, \( F(2, 59) = .60, ns \), or interaction of gender by group membership, \( F(2, 59) = .02, ns \), was detected.

Using a Bonferroni corrected alpha level of .025 (i.e., to reduce the risk of a Type 1 error), between subject effects were found for the dependent variables of externalizing problems, \( F(1, 60) = 12.31, p = .001 \), partial eta-squared \( \eta^2_p = .17 \), and internalizing symptomatology \( F(1, 60) = 5.38, p = .02 \), \( \eta^2_p = .08 \).

In keeping with the rationale discussed in the previous section concerning the need to conduct a separate analysis for the CBCL Total Problem Index, a two-way, between groups ANOVA was used to examine the dependent variable of overall problem behaviour by the independent variables of group membership and gender. A significant main effect for group membership, \( F(1, 60) = 14.67, p = .001 \), \( \eta^2_p = .20 \), was detected. However, no significant main effect for gender, \( F(1, 60) = .16, ns \), or interaction of gender by group membership, \( F(1, 60) = 2.97, ns \), was detected. As expected, parents rated RAs to be higher than CBs on internalizing, externalizing and total behaviour difficulties.

To further examine these significant findings, Yates’s continuity-corrected chi-square analyses were used to test group differences for the percentage of RA versus CB children who fell at or above the borderline clinical range (T-scores \( \geq 60 \); Achenbach, 1991) on the three broadband indices from the CBCL. Using this criteria, RAs and CBs differed significantly on the Externalizing Index, \( \chi^2(1, N = 64) = 5.77, p = .02 \), and the Total Problem Index, \( \chi^2(1, N = 64) \).
= 4.38, \( p = .04 \). The expected count for the Internalizing Index, \( \chi^2(1, N = 64) = 3.39, p = .07 \), approached significance. That is, reports of clinically relevant levels of symptomatology were more likely among RAs than among CBs for externalizing problems and generalized problems and approached significance for internalizing problems.

### 3.3.2. Responses to Stress

Two separate t-tests were conducted for social and academic stressors to determine whether ratings of stress severity differed as a function of group membership (RA versus CB). RAs (\( M = 2.15, SD = .84 \)) and CBs (\( M = 2.44, SD = .87 \)) did not differ in their stressfulness ratings for social stressors, \( t(62) = .16, ns \). Similarly, RAs (\( M = 2.44, SD = .94 \)) and CBs (\( M = 2.12, SD = .78 \)) did not differ in stressfulness ratings for academic stressors, \( t(62) = .02, ns \).

Given the association between stress severity ratings and several of the response to stress factors in both domains (see footnote 6), all analyses were initially run covarying for stressfulness scores. Covariation by stress severity did not significantly alter the results and therefore to conserve power, it was dropped as a covariate for the presented results.

**Social Stressors - Factor Ratings.** A MANOVA was used to compare responses to social stress between RAs and CBs. There was a significant multivariate effect of group membership for social responses to stress, \( F(5, 56) = 2.96, p = .02 \). No significant effect of gender, \( F(5, 56) = 0.57, ns \), or interaction of gender by group membership, \( F(5,56) = 0.65, ns \), was detected. With a Bonferroni correction of .01, examination of between subject effects indicated that only Social Secondary Control Engagement Coping differed by group membership, \( F(1,62) = 9.50, p = .003, \eta_p^2 = .14 \). CBs reported using more Social Secondary Control Engagement Coping than RAs.

**Social Stressors - Proportion Scores.** In comparing RAs to CBs, no significant multivariate effect of group membership, \( F(4, 57) = 1.80, ns \); gender, \( F(4, 57) = .52, ns \); or
interaction of gender by group membership, $F(4, 57) = .57, ns$, was detected based on proportion scores for responses to social stress.

**Academic Stressors - Factor Ratings.** A MANOVA to compare RAs to CBs revealed a significant multivariate effect of group membership for academic responses to stress, $F(5,56) = 3.38, p = .01$. No significant effect of gender, $F(5,56) = 0.43, ns$, or interaction of gender by group membership, $F(5,56) = 1.53, ns$, was detected. With a Bonferroni correction of .01, none of the between subject effects of stress responses reached significance. Given the small sample size, limited power and exploratory nature of this research, I have chosen to report the between subject effects that reached significance prior to applying a Bonferroni correction to inform future research in the area. Academic Involuntary Engagement differed by group membership, $F(1, 60) = 4.90, p = .03, \eta_p^2 = .08$. CBs reported higher levels of Academic Involuntary Engagement. As well, without a Bonferroni correction, Academic Secondary Control Engagement Coping approached significance, $F(1, 60) = 3.26, p = .08, \eta_p^2 = .05$. At a trend level, CBs reporting higher levels of Secondary Control Engagement Coping than RAs.

**Academic Stressors - Proportion Scores.** In comparing RAs to CBs, a multivariate effect of group membership, $F(4, 57) = 2.14, p = .09$ was significant at a trend level. No significant effect of gender, $F(4, 57) = .28, ns$, or interaction of gender by group membership, $F(4, 57) = 1.90, ns$, was detected based on proportion scores for responses to academic stress. With a Bonferroni correction set at .01, none of the between subject effects reached significance. Taking into consideration the small sample size and limited power to detect significant differences, I have chosen to note between subject effects without a Bonferroni correction to guide future research. On this basis, Disengagement Coping differed by group membership, $F(1, 60) = 4.53, p = .04, \eta_p^2 = .07$. There was a trend for RAs to report using proportionally more
Disengagement Coping than CBs.

In summary, two significant findings emerged and some trends were noted. CBs reported higher average ratings than RAs in Secondary Control Engagement Coping for social stressors. As well, there was a significant effect of group membership for the combined dependent variables of academic stress response ratings, yet there were no significant between subject effects. However, without a Bonferroni corrected alpha level and with the interest of future research in mind, CBs appeared to report higher average ratings of Involuntary Engagement. Also at a trend level, there was an effect of group membership for Academic stress response proportion scores. Once again, between subject effects were suggested without a Bonferroni correction, such that RAs appeared to report proportionally more Disengagement Coping.

3.4. Objective 3, Part 1: Predicting Symptomatology from Stress Responses

Prior to conducting regression analyses, all variables applicable to these and subsequent analyses were examined through various analyses for accuracy of data entry and fit between their distributions and the assumptions of multiple regression (Tabachnik & Fidell, 2001). No cases were identified through Mahalonobis distance as multivariate outliers. The Condition Indices were all less than 30 and VIF were all less than 4.

The associations between stress responses and, separately, parent- and teacher-rated symptomatology were chosen for the following reasons. First, cross-informant correlations were deemed a more stringent test of the relationship between symptomatology and coping than data from one informant. Second, it is more likely that parents and teachers, rather than children themselves, are the ones to initiate seeking professional assistance for psychological concerns. This is supported in part by the virtual lack of child-rated clinical levels of internalizing symptoms that I detected compared to the well documented parent- and teacher rated
symptomatology that exceeded the clinical cut-offs (refer to Table 2). All correlations and regression analyses in this section used proportion scores for stress responses, as recommended by Connor-Smith and colleagues (2000), to account for differences in base rate endorsements.

3.4.1. Predicting Parent-Rated Symptomatology

Due to findings that the majority of correlations between parent-reported symptomatology and stress responses were nonsignificant (30 in total), I did not include a correlation matrix table (available upon request) and hierarchical multiple regression analyses could not be pursued. There were three exceptions of significant bivariate correlations at a trend level. Academic Secondary Control Coping was negatively associated with all three CBCL indices: Internalizing Index, $r = -.27, n = 39, p = .09$; Externalizing Index, $r = -.31, n = 39, p = .06$; and Total Problem Index, $r = -.31, n = 39, p = .06$. In summary, higher reports of parent symptomatology were related to lower proportions of Secondary Control Coping in response to academic stressors at a trend level.

3.4.2. Predicting Teacher-Rated Symptomatology

Once again, the majority of associations between teacher-reported symptomatology and stress responses were nonsignificant which precluded inclusion of a correlation matrix. The following significant correlations were the only exceptions. The TRF Internalizing Index was negatively correlated with Social Disengagement Coping, $r = -.38, n = 26, p = .06$. The TRF Externalizing Index was negatively associated with Social Disengagement Coping, $r = -.51, n = 26, p = .008$, and positively associated with Academic Involuntary Disengagement, $r = .35, n = 26, p = .08$. Similarly, the TRF Total Problem Index was negatively associated with Social Disengagement Coping, $r = -.54, n = 26, p = .005$, and positively associated with Academic
Involuntary Disengagement, $r = .37, n = 26, p = .06$. The correlation between the two identified predictors, Social Disengagement Coping and Academic Involuntary Disengagement, was nonsignificant, $r = -.15, n = 26, ns$.

Based on the significant bivariate correlations that were identified between TRF indices and stress responses, separate regression analyses were conducted to examine predictors of teacher-reported externalizing and total problems on the TRF. For each regression model, the two stress response proportion scores of Social Disengagement Coping and Academic Involuntary Disengagement were entered simultaneously. Table 6 displays the unstandardized regression coefficients ($B$), standard errors, standardized regression coefficients ($\beta$), and the squared semipartial correlations ($sr^2$) for these regression analyses.

**TRF Externalizing Index.** The two responses to stress were significantly associated with teacher-reported externalizing difficulties, $R^2 = .34$ (adj. .28), $p = .009$. However, only Social Disengagement Coping contributed uniquely to teacher-reported externalizing difficulties; adoptees who reported proportionally more disengagement coping in stressful social situations were rated lower on externalizing difficulties as seen at school.

**TRF Total Problem Index.** The two responses to stress were significantly associated with total difficulties on the TRF, $R^2 = .37$, (adj. .32) $p = .005$. Social Disengagement Coping contributed uniquely to teacher-reported generalized difficulties, such that youngsters who reported proportionally more Disengagement Coping in stressful social situations were rated by teachers to have fewer generalized difficulties at school. Academic Involuntary Disengagement contributed uniquely to teacher ratings of generalized difficulties at a trend level, such that higher proportions of Involuntary Disengagement were marginally associated with higher levels of generalized difficulties.
3.5. **Objective 3, Part 2: Predicting Stress Responses from Length of Deprivation and Cognitive Coping Resources**

The goal was to determine whether competency beliefs and perceived social support were predictive of responses to stress above and beyond the duration of deprivation experienced by RAs. Group means for the variables of Social Acceptance, Scholastic Competence and Total Social Support are displayed in Table 7.7

Correlations between each of the stress response factors and the proposed set of predictors are displayed in Table 8. Correlations between the predictor variables can be found in Table 9. As seen in Table 8, length of deprivation (indexed by age at adoption in months) did not correlate with any of the stress response proportion scores in either domain. However, this variable was maintained to follow through on the original question about the proposed relationship between length of deprivation and stress responses as well as to determine if it might add to the models through interactions with the other predictors.

Of note, as seen in Table 9, Social Acceptance and Total Social Support were highly correlated. Based on Tabachnik and Fidell’s (2001) recommendation in the case of highly correlated predictors, a decision was made to eliminate Social Acceptance from the equations that also included Total Social Support as a predictor. It was evident that Total Social Support was a more crucial variable to maintain for the models. Furthermore, Social Acceptance was not maintained for any of the models due to a lack of association with any of the stress responses.

Separate regression analyses were conducted to examine each stress response as the

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7 Due to the strong correlation between Social Acceptance and Total Social Support for RAs ($r = .77, p = .000$), three separate ANOVAs were performed to examine the dependent variables of Social Acceptance, Scholastic Competence and Total Social Support separately by the independent variables of group membership and gender (for EA versus LA and again for RA versus CB). A Bonferroni adjusted alpha level of .017 was used to control for Type I error. None of the analyses yielded significant differences by group or gender or interactions between the variables.
outcome variable, with the exceptions of Social and Academic Disengagement Coping, for which there were no significant correlations with the proposed predictors. For each regression model, the first step included age at adoption to control for the hypothesized effect of length of deprivation on competency beliefs and perceived social support. Scholastic Competence and/or Total Social Support were entered on the second step in models in which they were significantly correlated with the dependent variables. Finally, interactions between predictor variables were computed by centering each of the predictor variables and multiplying each predictor variable by the centered variables (Tabachnik & Fidell, 2001). All interactions were entered on the third step, yet dropped from the final models because they were found to be nonsignificant.

3.5.1. Predicting Responses to Stress - Social Stressors

Primary Control Engagement Coping. The first step, including age at adoption, was not significant, $R^2 = .001, ns$. The second step, including Scholastic Competence and Total Social Support, was associated with Primary Control Engagement Coping, $R^2 = .17$ (adj. .10), $p = .04$. As shown in Table 10, none of the predictors made unique contributions to the final model of primary control coping for social stressors.

Secondary Control Engagement Coping. The first step, including age at adoption, was not significant, $R^2 = .000, ns$. The second step, including Total Social Support and Scholastic Competence, was associated with Secondary Control Engagement Coping, $R^2 = .20$ (adj. .13), $p = .02$. As shown in Table 10, the final model including all variables demonstrated that Total Social Support made a unique contribution, such that a higher rate of Total Social Support was associated with greater use of Secondary Control Engagement Coping when faced with social stressors.

Involuntary Engagement. The first step, including age at adoption, was not significant,
$R^2 = .01, ns$. The second step, including Total Social Support, was associated with Involuntary Engagement, $R^2 = .19$ (adj. .14), $p = .008$. As shown in Table 9, the final model including both variables demonstrated that Total Social Support made a unique contribution, such that a higher rate of Total Social Support was associated with less use of Involuntary Engagement in social stressor situations.

**Involuntary Disengagement.** The first step, including age at adoption, was not significant, $R^2 = .002, ns$. The second step, including Total Social Support and Scholastic Competence, was associated with Involuntary Disengagement, $R^2 = .32$ (adj. .27), $p = .001$. As shown in Table 10, the final model including all variables demonstrated that Scholastic Competence made a unique contribution, such that higher reported Scholastic Competence was associated with less use of Involuntary Disengagement for social stressors.

### 3.5.2. Predicting Responses to Stress - Academic Stressors

**Primary Control Engagement Coping.** The first step, including age at adoption, was not significant, $R^2 = .001, ns$. The second step, including Total Social Support, was associated with Primary Control Engagement Coping, $R^2 = .16$ (adj. .11), $p = .01$. As shown in Table 11, the final model including both variables demonstrated that Total Social Support made a unique contribution, such that stronger reports of Total Social Support were associated with greater use of Primary Control Coping for academic stressors.

**Secondary Control Engagement Coping.** The first step, including age at adoption, was not significant, $R^2 = .03, ns$. The second step, including Total Social Support and Scholastic Competence, was associated with Secondary Control Engagement Coping, $R^2 = .22$ (adj. .15), $p = .02$. As shown in Table 11, the final model including all variables demonstrated that Scholastic Competence made a unique contribution, such that holding stronger beliefs in
scholastic competence was associated with greater use of Secondary Control Engagement Coping when faced with academic stressors.

**Involuntary Engagement.** The first step, including age at adoption, was not significant, $R^2 = .000$, *ns*. The second step, including Total Social Support, was associated with Involuntary Engagement, $R^2 = .13$ (adj. .09), *p* = .02. As shown in Table 11, the final model including both variables demonstrated that Total Social Support made a unique contribution, such that higher perceived social support was associated with less use of Involuntary Engagement in stressful academic situations.

**Involuntary Disengagement.** The first step, including age at adoption, was not significant, $R^2 = .03$, *ns*. The second step, including Total Social Support and Scholastic Competence, was associated with Involuntary Disengagement, $R^2 = .33$ (adj. .27), *p* = .002. As shown in Table 11, the final model including all variables demonstrated that Scholastic Competence made a unique contribution, such that higher reported scholastic competence was associated with less use of Involuntary Disengagement for academic stressors. At a trend level, Total Social Support also made a unique contribution; higher perceived social support was marginally associated with less use of Involuntary Disengagement.

**Chapter 4**

**Discussion**

**4.1. Brief Summary of Study**

The adoption of infants and toddlers from Romanian orphanages has provided researchers the opportunity to study the impact of early deprivation on subsequent development. Research studies conducted immediately following and within the first few years after adoption
highlighted delays and problems in several areas of development, particularly for children who spent 6 to 8 months or longer in institutional care settings (cf. Maclean, 2003; Rutter & the ERA, 1998).

As discussed in the introduction, studies have begun to answer questions about longer-term outcomes for post-institutionalized children from Romania who have been living in adoptive homes for substantial periods of time. Essentially, there is promising evidence regarding the potential for recovery following extreme early adversity. However, the findings are somewhat mixed regarding the impact of early deprivation on various aspects of psychosocial development and well-being during pre- and early adolescence (e.g., Audet et al., 2006; Beckett et al., 2006; Colvert et al., 2008; Kreppner et al., 2007; LeMare, Warford, & Fernyhough, 2001; MacLean, 2003; Rutter, Beckett, et al., 2007; Rutter, Colvert, et al., 2007).

The current study sought to determine whether time spent in an institutional setting is important to psychosocial outcomes several years following adoption within a group of Romanian-born preadolescents residing in the Greater Toronto Area (GTA). Specifically, this study examined aspects of behavioural and social/emotional functioning several years following adoption in children with varying amounts of institutional experience. I examined symptomatology, stress responses and cognitive appraisals as coping resources. Inclusion of a non-adopted, Canadian-born group of same-age youngsters provided the opportunity to study the role of adoption status in current functioning.

A multi-informant approach was used that included parent and teacher reports in addition to child self-reports. In previous studies, there has been an absence of information about perceptions of post-institutional functioning that comes directly from the children. Furthermore, child-reported responses to daily stress have not been examined in the broader literature
concerning adoptive children with histories of institutionalization. Therefore, much of this study was considered exploratory.

Overall, results from the current study depicted an optimistic view of previously institutionalized Romanian children in specific aspects of psychosocial functioning. Early adoptees (EAs) and late adoptees (LAs) did not differ on the key variables of interest. Group differences that emerged were between Romanian Adoptees (RAs) and non-adopted Canadian born children (CBs). These included differences in parent ratings of symptomatology and child-reported stress response tendencies. Contrary to the hypotheses about particular relationships between key constructs, stress responses generally failed to predict symptomatology. However, there was some evidence for an association between cognitive coping resources and current stress response preferences. Each set of findings will now be discussed.

4.2. Lack of Differences between the Early and Late Adoptee Groups

Somewhat contrary to expectation, the current study did not find any group differences in either ratings of symptomatology or stress responses between EAs and LAs. This included parent, teacher and child reports of symptomatology and child reports of responses to stress. Multi-informant consistency strengthens the position that length of institutionalization does not differentiate between children several years following adoption in terms of their behavioural presentation.

There have been no previous studies of stress responses in early and late Romanian adoptees. Therefore, it is challenging to comment specifically on this finding in relation to other research. However, the lack of differences I found between EAs and LAs for ratings of symptomatology is partially consistent with findings from the UK study conducted when adoptees were 11 years of age (Rutter, Beckett, et al., 2007). As part of this large project,
Colvert and colleagues (2008) investigated conduct and emotional disturbances. They found no difference in rates of conduct disturbance between late adoptees and a pooled group of early Romanian and domestic adoptees without deprived backgrounds. Although there was more emotional disturbance reported for late adoptees compared to early adoptees at age 11, the increase in new cases of emotional disturbance at age 11 was better explained by deprivation-specific problems that already existed at age 6 rather than actual duration of institutional deprivation. The problems that Colvert and colleagues (2008) identified as originating out of deprivation included: severe cognitive impairment, quasi-autism, disinhibited attachment and inattention/overactivity. I did not inquire specifically about these problems in my own work. However, they were not raised by parents as concerns about their children’s ability to participate in the study, nor were these issues apparent to the investigator from the face-to-face meetings with children. Greater numbers of families with adoptive children who were followed from a very young age likely resulted in a more diverse UK sample, relative to ours. The UK sample likely included children with more severe issues than the children who comprised this group of late adoptees. Nonetheless, both studies provide evidence that duration of deprivation does not necessarily account for differences in behavioural and social/emotional problems at age 11.

I now consider plausible explanations for the general lack of differences found between the two adoptive groups in my study. They include: the limited age range represented by the two groups at the time of testing; a selection bias; and similar opportunities in adoptive homes.

**Limited range of age at adoption.** The average age at adoption for LAs in this study was approximately 16 months. Out of this group of 14 children, only five were adopted beyond two years of age. The small sample size precluded further analyses to test for effects of duration of deprivation on this small subsample of oldest adoptees. However, the findings in the literature
are mixed concerning the relationship between outcomes several years following adoption and age at adoption. Through their longitudinal design, Kreppner and colleagues (2007) found that up until 6 years of age, there was at least some evidence of a dose-response relationship between duration of deprivation and rates of impairment. However, this was not the case at 11 years of age. Rather, at age 11 there was no additional increase in impairment associated with duration of deprivation beyond 6 months. The range of duration of deprivation for the children in their study was much larger compared to the range in my own study. Hence a lack of differences between EAs and LAs in this investigation is not unlike the lack of a dose-response relationship that Kreppner and colleagues (2007) identified in their group of youngsters with more than 6 months of institutionalization. Gunnar and colleagues (2007) found rates of behaviour problems to be low among various groups of internationally adopted children with institutional backgrounds. However, they also found that children who were adopted at or beyond 24 months of age had higher rates of internalizing and externalizing problems independent of a background that included institutionalization (i.e., at least four months of orphanage experience). Thus, the ceiling that was established for age at adoption may simply have been too low in this study to allow for detection of potential differences between the early and late adoptee groups.

**Self-selection bias.** An alternative explanation for the lack of differences between EAs and LAs found in this study may be an adoption self-selection bias. It stands to reason that the children who were selected for adoption were likely among the most resilient within the institutional system, regardless of the amount of institutional time endured prior to adoption. Kaler and Freeman’s (1994) work demonstrated that children who engaged strangers attracted the most attention and interest from visitors to the orphanages. Within my study, the overall estimated intelligence quotient for LAs was within the average range of ability. This too, can be
construed as evidence that even the children in my study who had experienced the greatest amount of deprivation were at least somewhat resilient. Because I was unable to compare characteristics of child participants with characteristics of children whose parents declined to take part in the study, it is also possible that this sample of LAs was more resilient than the population of late adopted Romanian children in the Toronto area.

**Opportunity in adoptive families.** Groups of early and late adoptees did not differ from each other according to parents’ highest level of education and marital status, even though they were not deliberately matched on these variables. Thus, children from both groups were adopted by parents with similarly desirable demographic backgrounds. It is noteworthy that the two adoptive groups did not differ from the non-adopted group on these variables, further demonstrating that I was comparing groups with demographically similar backgrounds. The inclusion of more specific variables that address the post-adoption family environment and aspects of parenting that may be important to children’s current behavioural and psychosocial presentation was beyond the scope of this study.

Adoption of post-institutionalized children by motivated parents who have been through stringent screening processes (as is standard practice for adoptive parents) likely is associated with children’s psychosocial well-being in several ways. This notion is supported in part by findings in the literature pertaining to parental characteristics of Romanian adoptees. For example, Groza, Ryan and Cash (2003) found that the most significant predictor of behaviour symptom ratings in post-institutionalized Romanian adoptees at age 10 was the current parent-child relationship. Investigators of the UK study found that the overall level of parental risk (indexed mainly by marital difficulties and parents’ mental health) within the post-institutionalized group was low and did not differ from the level of risk found for
noninstitutionalized domestic adoptees (Colvert, 2008; Kreppner et al., 2007).

Additional evidence comes from Le Mare and colleagues’ (2007) examination of service use among families of Romanian adoptees in British Columbia, Canada. They found that parents of both early adoptees (i.e., four months or less in an orphanage) and late adoptees (i.e., children with at least nine months of institutional experience) were equally likely to seek out special services for their children at age 10.5 years, particularly for behavioural and academic problems. This was in contrast to findings at 11 months post-adoption, at which time there was significantly more demand for a variety of professional services for late adoptees. The investigators attributed the equalization at age 11 to the new demands that arose in conjunction with school entry. However, they also found that parents of the adoptee groups reported seeking out more services overall than parents of a group of same-age, nonadopted youth, even after controlling for problems that required assistance. The investigators suggested that there may be a lower threshold and greater sensitivity for service needs among international adoptive parents as a group. Strong endorsement of a variety of interventions and special support service usage were also apparent among adoptees in my study. These findings demonstrate that parents are committed and motivated to continue intervening on behalf of their children several years following adoption.

4.3. Comparing All Romanian Adoptees to Canadian-Born, Non-Adopted Children

The Romanian adoptees were next combined into one group (RAs) and compared to a group of Canadian-born, non-adopted children (CBs). This was done to examine the role of adoption status as a grouping variable.

RAs in this study were recruited in one of two ways. They were either contacted because of their affiliation with a private practice in psychology in which the children had been seen at a
much younger age or, alternatively, through word-of-mouth (via the investigator’s own network and other recruited families). The majority of adoptive children contacted via word-of-mouth had also been seen by psychological or psychiatric professionals at some point in their lifetime. Hence although the overall adoptive sample was not recruited as an active clinical sample, I view it as a community sample with a strong clinical history.

In striking contrast, there were significantly fewer participants in the Canadian-born group with parent-identified histories of psychological, psychiatric and educational issues than in the adoptee group. There was also a complete lack of endorsement by parents of CBs of any current psychiatric diagnoses. Thus, I seemed to be comparing a sample of adoptees with strong clinical histories to an unusually healthy non-adopted sample, based on an overall estimated prevalence rate of 14% for psychiatric disorders in community samples of children in Canadian cohorts (Waddell, Offord, Shepherd, Hua, & McEwan, 2002). The absence of mental health issues in the Canadian-born group may be due to the fact that parents were willing to participate because they had no concerns about their children’s mental health. The sample of CBs may not be representative of the general population, and therefore the results must be generalized with caution.

It is not surprising, then, to find some group differences in behaviour and stress responses between RAs and CBs whose backgrounds differ not only in adoption status but also in their clinical histories. It is somewhat in line with Haugaard’s (1998) explanation about adoption as a potential risk factor for the development of various problems in adjustment. He concluded that being adopted may increase children’s risk for the development of adjustment problems, but he qualified it by revealing that there is an overrepresentation of adopted children in clinical studies. RAs in this study could be considered at-risk due to their strong clinical histories. The following
section discusses differences identified between RAs and CBs on symptomatology and stress responses.

4.3.1. Comparing RAs and CBs on Symptomatology

By parent report, all three CBCL indices of internalizing, externalizing and generalized difficulties were significantly higher for RAs than CBs. This is somewhat consistent with findings from more recent studies of behavioural and social/emotional presentations among preadolescent Romanian adoptees (Audet et al., 2006; Colvert et al., 2008; Kreppner et al., 2007) in that late adoptees in each study tended to have the highest problem ratings compared to various comparison groups.

In this study, effect sizes (Cohen, 1988) ranged from moderate (for internalizing) to large (for externalizing and generalized). Furthermore, approximately one third of RAs had scores that exceeded the clinical cut-off for CBCL indices, which was in contrast to the significantly lower number of clinical cut-off ratings for CBs. At least from parents’ perspectives then, adoption status proved to be an important grouping factor.

Of note, estimated intelligence was included as a covariate in the analyses due to the association I found with adoption status. However, inclusion of this factor failed to alter the results and was therefore not pursued. Although I used a well-established short-form of estimated intelligence, other aspects of cognitive functioning, such as features of executive functioning, might have impacted the findings. I raise this as a possibility for future research.

I consider two possible explanations for group differences by adoption status; prenatal/perinatal risk factors and issues pertaining specifically to the children’s understanding and acceptance of the adoption experience.

Prenatal and perinatal risk. Adoption status may represent a general marker for prenatal
and perinatal risk factors for all Romanian adoptees that continues to influence the ways in
which children behave over time (Maclean, 2003). I have no reason to suspect that these factors
were notably different for EAs versus LAs in this study. It has been pointed out that, for
practical reasons, it was impossible for researchers to systematically study prenatal and perinatal
risk to Romanian children. However, it has been determined with a fair degree of certainty that
prenatal care was similar for the two groups of Romanian adoptees. Furthermore, the
circumstances contributing to the decision to place children in care were politically and
economically motivated for both groups of infants rather than due to any serious health issues or
developmental problems among the children who were ultimately adopted (Ames, 1997; Rutter
& the ERA, 1998). It may be the case, then, that higher CBCL scores for RAs compared to CBs
reflect behaviors stemming from constitutional risk.

**Adoption-related experiences.** It is also possible that age 11 marks a time in development
in which RAs’ capacity to understand adoption-related issues and to question aspects of their
own adoptions becomes more sophisticated. Higher ratings of symptomatology by parents of
RAs compared to CBs may be behavioural indicators of the struggles that children are
experiencing in coming to terms with new aspects of the adoption experience. Empirical studies
have demonstrated that there are new adoption issues that children experience and contend with
as they become more cognitively mature and gain a better understanding of the circumstances
surrounding their adoption (e.g., Brodzinsky, 1987; Brodzinsky, Radice, Huffman, & Merkler,
1987; Brodzinsky, Singer, & Braff, 1984). The significant findings for adoption status are in line
with findings in the adoption literature that even infant-placed adoptees are at-risk for
experiencing various facets of adoption-related stress over the course of development (Smith &
Brodzinsky, 1994).
The only empirical study that I could locate reporting specifically on Romanian adoptees’ own thoughts and feelings about adoption issues was carried out as part of the large-scale project in the UK (Hawkins et al., 2007). By child report at 11 years of age, there were few differences between early and late Romanian adoptees and a group of domestic adoptees. Generally, the results demonstrated that during preadolescence adoption experiences were discussed in a positive light, yet they remained a sensitive topic for the majority of children, regardless of their pre-adoption circumstances. It is possible that greater endorsement of behavioural symptoms by parents of RAs compared to CBs is representative, to some extent, of difficulties arising out of new questions and conceptualizations of the children’s adoption experiences. This is a worthwhile line of investigation for future research.

**Practical implications of group differences in symptomatology.** Although differences in parent-rated indices of symptomatology were apparent between RAs and CBs, the average scores for RAs were somewhat below established clinical cut-off points (Achenbach & Edelbrock, 1991).

Nevertheless, I was interested in determining whether there were group differences in the rates of children whose CBCL scores were at least within the borderline clinical range, which signifies an existing or potential problem area (Achenbach & Edelbrock, 1991). Approximately 30% of RAs scored above the borderline cut-off for each CBCL index in comparison to less than 10% of CBs, which represents a significant difference. A rate of approximately 30% within or above the borderline clinical range is consistent with rates described by Kreppner and colleagues (2007) and Hoksbergen and colleagues (2004), who also examined rates of clinical problems among Romanian adoptees. The data from this study suggest that RAs are more likely than CBs to present with behavioural and social/emotional problems that would usually benefit from
professional attention. Therefore, the anticipated referral rate for post-institutionalized adopted youngsters appears to be higher compared to same-age, non-adopted peers.

Although the emphasis of my work has been on the children that may be facing behavioural and social/emotional challenges, it is equally important to highlight that two thirds of RAs received CBCL ratings that were within the non-clinical range. Therefore, by parent report, the majority of adopted children were rated as functioning within an age-appropriate range in the behavioural and social/emotional arenas.

Due to practical limitations of the study, teacher ratings were unavailable for CBs. Therefore, I was unable to compare RAs and CBs on behaviour problem ratings in school settings, which would have provided key information about similarities and differences in presentation between adopted and non-adopted youngsters across situations. Of note, however, is the high rate of RAs who received teacher ratings that were above the clinical cut-offs. The rates of teacher reports that were above the clinical cut-offs exceeded the rates for all comparable parent ratings. Given the high number of teacher-reported clinical ratings for RAs, I suspect that differences in teacher-rated clinical ratings would have emerged from comparisons of RAs and CBs if these had been possible.

4.3.2. Similarities between RAs and CBs on Responses to Stress

Using a five-factor model of stress responses (Connor-Smith et al., 2000), comparisons of RAs and CBs were completed for three voluntary classes of stress responses and two involuntary classes of stress responses (refer to Table 2 for stress response definitions). There were more similarities than differences between the adopted and non-adopted groups. This was apparent across both the social and academic spheres.

RAs did not differ from CBs in their stressfulness ratings for social or academic stressors.
Ratings hovered around the lower midrange of the scale. It would appear then, that the normative stressors that were examined do not generate vastly different primary appraisals of challenge, threat or loss (Lazarus and Folkman, 1984) between RAs and CBs. This finding reduces the likelihood that differences in stress responses were the result of differences in stressfulness ratings. Furthermore, stressfulness ratings were not associated with any of the stress responses and therefore were not pursued as covariates in subsequent analyses.

The data showed that all stress response types were indeed endorsed to some extent by RAs and CBs. By analyzing proportional usage in addition to average factor scores, I was able to determine that there were no unusual reporting tendencies, such as extreme endorsement of a particular factor and exclusion of other factors. Amirkhan and Auyeung (2007) investigated the differences in coping response usage for individuals between the ages of 12 and 70. They concluded that there were relative rather than absolute differences in the use of popular types of voluntary coping strategies across the lifespan in reference to personal problems. That is, all age groups reported using all classes of coping strategies presented (i.e., problem-solving, support-seeking and avoidance strategies), yet to varying degrees, which is consistent with my findings. Involuntary coping responses were not included in their study.

**Primary Control Engagement Coping.** [i.e., voluntary efforts aimed directly at altering stressful situations or conditions; e.g., problem-solving and emotional regulation]. Within the current five-factor conceptual framework of stress responses (Connor-Smith et al., 2000), Primary Control Engagement Coping represents a group of controlled strategies that is considered to be highly effective in dealing with stress. It is encouraging that Primary Control Engagement Coping did not differ between RAs and CBs in response to either stress domain. For both groups, mean ratings were in the upper midrange on the rating scale and nearly 20% of
participants’ stress responses tended to come from this class of strategies. This finding suggests that, similar to non-adopted peers, children who have been adopted following early adversity perceive themselves as able to maintain or enhance direct control over normative stressful situations or emotions arising from social and academic stressors.

Primary Control Engagement Coping on the RSQ consists of problem-solving and positive strategies for emotional expression and emotional modulation. Strategies that involve seeking out social-support from other people are included within each of these subcategories rather than as an independent scale. This was done in support of the RSQ as a goal directed model to reflect the notion that individuals seek out social-support to achieve different types of goals (Connor-Smith et al., 2000).

One of the limitations of the RSQ is that the three-item parcels that comprise the five factors are too small to look at group differences for selective strategies, in this case those pertaining to aspects of social-support (Connor-Smith et al., 2000). Nonetheless, the pervasive role of social-support strategies across Primary Control Engagement Coping deserves further comment because of the literature on the prevalence of indiscriminate friendliness among Romanian adoptees even several years following adoption (cf. Maclean, 2003). It has been suggested that indiscriminate friendliness served an adaptive purpose in an institutional setting in that children who used it were better able to elicit attention from caregivers (Chisholm, 1998). Perhaps one of the benefits of persistent indiscriminate friendliness (e.g., O’Connor et al., 2003) is that it assists previously institutionalized children to develop active coping strategies that often rely on seeking out support from others. Experiences derived from superficial social approaches may help children develop primary control strategies and a more refined sense of who they can approach in their social network to help them manage in stressful situations. This is a hypothesis
Involuntary Disengagement. [i.e., automatic stress reactions directed away from stressor and associated reactions; e.g., emotional numbing and cognitive interference]. RAs and CBs also did not differ in their reported usage of Involuntary Disengagement in either stressor domain. Involuntary Disengagement is comprised of automatic stress responses that are generally considered to be unhelpful in dealing with the stressful situation. The reactions that constitute this response reflect a state of incapacitation that impacts emotional, behavioural and cognitive functions (Connor-Smith et al., 2000).

Neither RAs nor CBs acknowledged feeling particularly vulnerable to reactions of this nature when faced with academic or social stressors. It is not surprising that CBs reported limited use of this type of response, given that they are reported to be virtually free of mental health issues. It is somewhat contrary to expectation that there was no apparent difference between CBs and RAs. Involuntary Disengagement represents severe responses to stress that are thought to be temperamentally-based and conditioned and, to some extent, parallel symptoms of Post Traumatic Stress Disorder (Connor-Smith et al., 2000). On this basis, I had theorized that LAs would be at greatest risk for experiencing Involuntary Engagement during stressful situations. The low ceiling that was discovered for length of deprivation represented by the group of late adoptees may have precluded detection of any effect of Involuntary Disengagement between EAs and LAs and then by default between RAs and CBs. Furthermore, all participating children were screened for psychological trauma within the year leading up to the study. This check did not result in the exclusion of any possible child candidates. An absence of any recent trauma among participants probably reduced the likelihood of greater endorsement of Involuntary Disengagement responses.
It is important to consider the possibility that Involuntary Disengagement may not be particularly relevant to the coping process in low stress situations. The appraisal of higher levels of stress may be required to activate these automatic, yet rather extreme stress reactions.

4.3.3. Differences Between RAs and CBs in Responses to Stress

Upon comparing RAs and CBs on stress responses, one significant difference and two trends were detected. Because of the exploratory nature of this research and the small sample size, the trends will also be discussed to help delineate directions for future research.

Secondary Control Engagement Coping. [i.e., efforts focused on adaptation to the problem; e.g., positive thinking and cognitive restructuring]. RAs reported significantly lower mean levels of Secondary Control Engagement Coping for social stressors in comparison to CBs, with a moderate to large effect size (14%). A similar trend emerged for academic stressors, yet the effect size was small (5%). There are a few possible explanations for overall lower endorsement of Secondary Control Engagement Coping strategies by RAs in comparison to CBs, including: differences in perceived controllability of stress; a lag in the development of cognitive coping strategies; and defensiveness toward adaptation to stress.

Perceived Controllability. Secondary Control Engagement Coping has been found to be particularly well suited to situations in which the stressor cannot be changed or the stressor is viewed as uncontrollable (e.g., Band & Weisz, 1988; Compas, 1987; Compas et al., 2001). It may be the case that RAs feel a greater sense of control over stressful academic and social situations than CBs. If this is the case, they may find less use for secondary control strategies to adapt to situations that, in their estimation, are readily amenable to primary control strategies. Ratings of perceived control over stressors were not collected as part of this study so I was unable to test this hypothesis. Parents reported that RAs were significantly more likely than CBs
to receive formalized support at school. A more protective environment, such as a specialized classroom, likely provides greater structure, predictability, and supervision, and reduced opportunity to experience stressful situations as uncontrollable. Situations are likely set up to encourage and reinforce frequent use of primary control strategies to address challenges in the classroom, including social challenges. RAs may have limited use for secondary coping strategies in low stress academic and social situations.

**Lag in the development of cognitive coping strategies.** Alternatively, lower endorsement of secondary control strategies by RAs may be due to a lag in their development of these more sophisticated cognitive strategies in comparison to CBs. Longitudinal work would be required to investigate this possibility. The strategies that constitute Secondary Control Engagement Coping are cognitively demanding and sophisticated. In my estimation, they require more “thinking” than “doing” in order to succeed at adapting to the stressful circumstances. Studies have found that secondary control strategies tend to emerge later than primary control strategies, usually by late childhood (Band & Weisz, 1990; Compas, 1998). There were no associations between any of the stress responses and estimated intelligence in my study; however, other subtle cognitive differences that were not evaluated may make it more challenging for RAs to engage in the abstract and flexible thinking called upon to implement secondary control strategies.

**Defensiveness toward adaptation.** Finally, RAs may feel defensive about the way that they portray themselves to other people, thereby influencing the way that they report on their use of Secondary Control Engagement Coping. This is in keeping with Brodzinsky’s (1994) work that highlights the complexities and changes in stress associated with the adoption experience over the course of development. Because secondary control strategies emphasize adaptation rather than attempts to change a stressful situation, it is possible that the questionnaire items
pertaining to secondary control were interpreted by RAs as indicators of weakness when faced with stressful situations. RAs may endorse these strategies to a lesser extent in order to portray themselves in a socially desirable manner. It may be more difficult for children who have been adopted to describe themselves in ways that they perceive as suggesting vulnerability.

Recent empirical work by Richards and Steele (2007) has provided preliminary evidence that children’s reports of their own coping strategies can be influenced by defensiveness. They found that children identified as repressors (i.e., self-reports of high defensiveness and low anxiety yet high physiological stress reactivity) reported using significantly fewer avoidant coping strategies than non-repressors, which the authors interpreted as the need for the children to portray themselves in a psychologically healthy manner.

Richards and Steele’s (2007) study did not focus on adopted children, yet it represents an important contribution to the child coping literature that has implications for my work concerning coping tendencies in adopted youngsters. It raises the possibility that questionnaire items pertaining to Secondary Control Engagement Coping may have been interpreted with a negative connotation because they are worded in a way that suggests relinquishing control in stressful situations. Perhaps the need to feel that one has remained in control of a stressful situation is a sensitive issue for adopted children.

Future research concerning coping efforts of international adoptees may wish to follow Richards and Steele’s (2007) lead to probe deeper into the ways that children interpret various coping options. For example, one could ask children to complete measures of social desirability of various coping options, and/or collect measures of physiological stress reactivity. As well, Richards and Steele (2007) suggested that observational data obtained in naturalistic settings would enhance our understanding of the role of defensiveness in coping.
Disengagement Coping. [i.e., conscious and deliberate efforts to orient away from stressors and associated reactions; e.g., avoidance and distraction]. I detected a trend in which a greater proportion of the RAs’ than the CBs’ coping repertoire was comprised of Disengagement Coping in the domain of academic stressors. Disengagement Coping represents voluntary and conscious efforts to avoid a stressor or one’s reactions to a stressor using strategies that reflect denial, avoidance, distraction and wishful thinking. It has been associated with poorer adjustment in comparison to primary and secondary coping, yet it is also well-recognized that avoidance offers temporary relief in stressful situations (e.g., Connor-Smith et al., 2000). RAs did not report proportionally less use of Primary or Secondary Control Engagement Coping than CBs; however, they reported being more likely to select disengagement strategies in response to academic stressors. Perhaps RAs are more inclined to use disengagement (e.g., avoidance) tactics if they find that they are unsuccessful in their use of primary or secondary coping strategies. Although disengagement strategies are not thought of as efforts that achieve a sense of control, they may provide temporary relief and hence, a temporary sense of control, for adopted children. They may view disengagement as a better alternative than secondary strategies in the event that the stress cannot be alleviated through the use of primary control strategies. To substantiate this hypothesis, a systematic examination of the interplay between various stress responses used to address a particular stressor would be required, as recommended by Connor-Smith and colleagues (2000).

Involuntary Engagement. [i.e., automatic reactions and arousal focused on the stressor; e.g., intrusive thoughts and emotional arousal]. The second trend that emerged also pertained specifically to the domain of academic stress. It was contrary to expectation that RAs reported lower mean levels of Involuntary Engagement than CBs. RAs therefore describe themselves as
less severely impacted by a variety of automatic responses and heightened arousal that maintain attention on the stressor. Involuntary Engagement includes unproductive preoccupation with a stressful event as well as various forms of uncomfortable arousal (Connor-Smith et al., 2000).

As discussed in the previous section, RAs reported proportionally more reliance on Disengagement Coping than CBs, which requires active efforts to direct one’s attention away from a stressor and associated reactions. In doing so, they may be better able to stave off automatic involuntary reactions focused on the stressor. That is to say, efforts used to avoid thinking about the stressor may protect RAs to some extent from experiencing the ill effects of Involuntary Engagement.

Along similar lines, higher reports of Involuntary Engagement for CBs perhaps suggest that in the event that they become aroused by school-related stress they may experience it more intensely than RAs. They may become more preoccupied by the stressful event than RAs, even though they do not rate this domain to be more stressful than RAs. Parents reported that CBs had fewer learning problems as well as less formal support at school in comparison to RAs. It is possible that CBs are more sensitive than RAs to occasional incidents of academic challenge if this is a domain that is generally not perceived as stressful. Furthermore, when stressful academic situations do arise for CBs, they may invoke higher levels of arousal and preoccupation because they feel threatened in a domain that is likely important to them and typically within their control.

An alternative possibility for the reported difference in Involuntary Engagement between the groups is that RAs may be more focused on other domains of their lives and therefore they may not find themselves as highly impacted by occurrences of academic stress. For example, they may be more focused on peer relations, extra-curricular activities or issues associated with
their adoption. Ratings to evaluate the personal importance attributed to each of the stressor domains would be valuable additions to future studies.

4.4. Stress Responses as Predictors of Symptomatology

One of the goals of this study was to determine whether stress responses were predictive of symptomatology in Romanian adoptees. I was specifically interested in determining whether reports of stress responses provided by RAs were predictive of symptomatology as reported by parents and teachers. Cross-informant models were deemed a more stringent test of the potential relationship between coping and symptomatology than those derived from child-only data. As well, I sought to examine these models because it is more likely that parents and teachers are the ones who seek professional assistance for psychological issues, rather than the children themselves.

**Predicting parent-rated symptomatology.** Contrary to expectation, there was a general lack of support for stress responses as significant predictors of parent-rated symptomatology in this study. The only trend that emerged was in reference to Academic Secondary Control Coping; negative associations with each of the CBCL indices were marginally significant yet in the expected direction. One interpretation is that RAs who allocate greater portions of their coping efforts toward Secondary Control strategies during stressful academic situations are showing attempts to be flexible and accommodative and parents are therefore less likely to observe problem behaviours at home. Alternatively, it may be the case that RAs who display fewer behaviour problems are also better equipped to attempt to use Secondary Control Engagement Coping when faced with academic stressors. Both alternatives seem plausible yet due to the fact that they are based on trend reports, they require replication before reaching any firm conclusions.
Predicting teacher-rated symptomatology. Stress responses were found to be better predictors of teacher-rated Externalizing and Total Problem Behaviour Indices. Each final model included the predictors of Social Disengagement Coping and Academic Involuntary Disengagement. The overall models explained 28% of the variance in TRF Externalizing and 32% of the variance in TRF Total Problem Behaviour.

The unique, inverse contribution of Social Disengagement Coping to each model may be suggesting that RAs who choose to “quietly” find ways to avoid social stress at school are also the children who do not display behaviours that disturb others and would typically draw attention from teachers. Teachers may not be concerned by children who make the choice to disengage from stressful social situations because they are acting in non-confrontational ways. To a lesser extent, an increased display of Involuntary Disengagement in the face of academic stress was associated with increased teacher reports of externalizing and generalized problem behaviours. In stressful academic situations, teachers likely notice these incapacitating disengagement responses because they impact negatively on achievement of immediate academic goals, such as work completion or participation in a lesson. Children who react to academic challenges at school by freezing or escaping, either emotionally or physically, are likely to be rated by teachers as experiencing difficulty.

Research in the child coping literature has produced mixed findings regarding associations between coping and symptomatology (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001), including the stressors of peer problems (e.g., Causey and Dubow, 1992; Compas, Malcarne & Fondacaro, 1988; Connor-Smith et al., 2000) and academic demands (e.g., Causey and Dubow, 1992; Compas, Malcarne & Fondacaro, 1988). Based on a comprehensive review of studies, Compas and colleagues (2001) concluded that associations between coping
and symptomatology tend to be small to moderate (.10 to .40), yet they also pointed out that several nonsignificant findings in the literature can be attributed to studies with small sample sizes (N<100). It is possible, then, that additional effects could not be detected due to the small sample size of this study.

Another issue to consider is the choice of outcome or adjustment measure in evaluating the effectiveness of stress responses. Griffith, Dubow and Ippolito (2000) provided evidence in favour of using stressor-specific measures of appraised coping effectiveness over measures of global adjustment, such as anxiety. By employing a measure of perceived coping efficacy, they were able to account for larger portions of variance across family, school and peer stressor domains in their sample of adolescents. Along similar lines, it has been suggested that non-clinical measures may be better measures of stress response effectiveness (Compas et al., 2001). These might include positive indicators of well-being, such as life satisfaction ratings like happiness (e.g., Suldo, Shaunessy, & Hardesty, 2008) or alternatively, objective measures of functioning, such as academic achievement (Suldo, Shaunessy, & Hardesty, 2008).

4.5. Cognitive Coping Resources as Predictors of Stress Responses

Beliefs in one’s scholastic competence and social acceptance as well as perceived social support were selected as potentially important cognitive coping resources. Early upbringings in Romanian institutions are pervasively depriving. These environments are non-conducive to the development of healthy ideas about self-competencies and the perceived availability of social support. I therefore considered whether cognitive appraisals as coping resources (that conceivably began to develop in the social context of deprivation) could predict stress responses above and beyond the contribution of length of deprivation (indexed by age at adoption). The consistent lack of findings in comparisons between EAs and LAs had already provided us with a
reasonable amount of evidence that age at adoption likely does not contribute to the prediction of RAs’ current psychosocial presentation. However, in accordance with the original plan, I controlled for age at adoption in this set of predictions. In doing this, I established with greater certainty that length of deprivation is not a relevant predictor of stress response tendencies among RAs. This is consistent with findings from studies described earlier in which investigators did not find an association between duration of deprivation and behaviour during preadolescence (e.g., Groza, Ryan, & Cash, 2003; Rutter, 2007) or there was no additional effect of duration of deprivation beyond a 6-month cutoff (Kreppner et al., 2007).

Preliminary analyses of the data led to the decision to completely eliminate Social Acceptance as a predictor variable. Social Acceptance and Total Social Support were highly correlated and this finding raised concern about the potential for problems with multicollinearity. Social Acceptance was also weakly correlated at best with only a few of the stress response factors. In contrast, Total Social Support presented as a promising correlate for most of the stress responses.

Social Acceptance is a measure of perceived acceptance by peers and feelings of popularity (Harter, 1985). In comparison, Total Social Support measures overall positive regard and support that children perceive themselves as receiving from parents, close friends, classmates and teachers (Harter, 1985). The data suggest that for RAs, believing that there are people in their social network that hold them in high regard and are available to offer them support is more important than an evaluation of their likeability and popularity within their peer group when it comes to dealing with everyday, stressful situations. This does not seem unreasonable for children in the 11-year age range, who tend to rely heavily on a variety of people in their lives to assist them.
**Failure to predict Disengagement Coping.** Bivariate correlations demonstrated that Total Social Support and Scholastic Competence were each associated with some stress responses in each stressor domain. Contrary to expectation, they both failed to show any association with Disengagement Coping in either the academic or social stress domain. This is inconsistent with findings by Calvete and Connor-Smith (2006), who found that a higher level of perceived social support was associated with a lower level of disengagement coping among university students. These authors interpreted this finding as evidence in favour of a protective effect from strong levels of perceived social support. The difference between the two sets of results may be due in part to the age difference of participants, and hence differences in mental capacities and maturity levels. It is possible that RAs are too young to attend to self-competency appraisals while simultaneously making a concerted effort to disengage from a stressor. Each requires an individual’s attention to distinct lines of thought.

The eight resulting regression models (for each of the four remaining stress responses across both domains) were all significant; the relationships were in the expected directions; and the models each explained anywhere from 9% to 27% of the total variance in stress responses. Theoretically, coping resources can facilitate or constrain stress responses. However, the cross-sectional design of this study precludes conclusions regarding causality. Proposed interpretations regarding the relationships between predictors and outcomes are theoretically driven.

**Predicting Involuntary Stress Responses from coping resources.** A consistent picture emerged across the domains of academic and social stress for involuntary stress responses. Total Social Support made a unique contribution in the case of both models of Involuntary Engagement (18% in social stress domain; 13% in academic domain). This finding suggests that
the less supported children feel, the more likely they are to experience excessive preoccupation, rumination and negative arousal when faced with social or academic stress. Scholastic Competence made a unique contribution to the models of Involuntary Disengagement (17% in social stress domain; 13% in academic domain). The less academically competent children reported feeling about themselves, the more likely they were to report feeling immobilized by stress, regardless of the situation.

Low levels of perceived social support and academic competence are not construed as causes of automatic stress responses. It is possible that adopted children who hold low appraisals of social support and academic competence fail to signal that they are in need of assistance from others when they are overcome by stress-induced negative arousal. It is also possible that RAs who have strong temperamental traits, such as reactivity and inhibition (Kagan, Reznick, & Snidman, 1987; Rothbart, 1988), are more vulnerable to experiencing automatic stress responses. In turn, temperamental reactivity could interfere in a youngster’s ability to develop internalized beliefs about the availability of social support and the ability to alleviate some of the stress reaction themselves.

**Predicting Coping Response Tendencies.** The models for effortful coping responses were less consistent across domains than the models for involuntary stress responses. It was interesting to find that Total Social Support made a unique and positive contribution (16%) to Primary Control Engagement Coping exclusively in the academic domain. This finding suggests that in stressful academic situations, implementation of active strategies comprised of problem-solving, emotion regulation and emotional expression is facilitated when RAs believe that they are well supported by people in their lives.

As mentioned earlier, Primary Control Engagement Coping includes many strategies
pertaining to support-seeking in this particular model of stress responses (Connor-Smith et al., 2000). I took into consideration the possibility that the relationship between Primary Control Engagement Coping and perceived social support might have emerged as a result of shared content. However, upon closer examination of the types of statements that each construct contained, it was concluded that the overlap was not likely problematic. The coping statements pertain primarily to one’s inclination to make use of particular strategies. In contrast, the items that evaluate perceived social support tap more specifically into one’s belief system about the availability of support. Nonetheless, it makes sense that the two constructs were positively related.

It is noteworthy that unique predictors of Secondary Control Engagement Coping varied by stressor domain. Total Social Support was important in the social domain, whereas Scholastic Competence played a central role in the academic domain, which has been previously identified in the coping literature (e.g., Calvete & Connor-Smith, 2006). Both predictors related in a positive manner to Secondary Control Engagement Coping. Among RAs then, domain-specific competency and support beliefs appear to be important to their decision to use accommodative, thinking strategies to cope.

In summary, these models demonstrate that the cognitive coping resources of perceived social support and academic competency beliefs have roles in facilitating and hindering the coping process of 11-year-old children who have been adopted from Romania, whereas length of deprivation appears to be unrelated to current stress responses. It can be concluded that we need to look beyond simple indices of deprivation to understand how children with deprived backgrounds manage stress in their daily lives. As well, it is useful to examine coping resources for specific stress domains because the associations that were uncovered across two different
stress domains were at times inconsistent.

There is certainly room to improve upon the models in order to better predict coping preferences and involuntary stress responses among adopted youngsters. Temperamental traits (e.g., Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994; Lengua & Long, 2002; Lengua & Sandler, 1996) and parenting qualities (e.g., Valiente, Fabes, Eisenberg, & Spinrad, 2004; Valiente, Lemery-Chalfant, & Swanson, 2009) represent two important coping resources previously identified in the child coping literature. They may prove to be valuable in increasing our understanding of stress response tendencies specifically among post-institutionalized adopted youngsters.

4.6. Limitations

The current study was not without limitations, many of which were outlined previously in the discussion. One particular issue worth reiterating is the small sample size. A larger sample might have resulted in more robust findings or additional effects. A small sample size also precluded examination of complex models due to the limited number of variables that could be included in each analysis. For example, it would have been ideal to use a nested design to address the fact that in a few cases, one family included more than one participant. As well, with a large enough sample size and sufficient power it would have been ideal to examine mediator models. However, the general lack of evidence for a relationship between stress responses and symptomatology in the regression analyses precluded establishing a mediator model (Baron & Kenny, 1986).

Another limitation is that there was no information about families who were aware of the study yet refrained from participating in it. There was no way to ascertain the backgrounds and current circumstances of families who did not participate, which may have resulted in a sampling
bias. Several recruitment initiatives resulted in 39 qualified child participants who were adopted from Romania. Aside from families who were turned down because their children were too young to participate, it is unclear why interest in the study was not more extensive.

An additional sampling bias was apparent from the virtual absence of any reported mental health issues (past or current) within the group of non-adopted youngsters. As a result of these sampling issues, the results may not generalize to other samples of Romanian post-institutionalized youth and same-age, non-adopted peers in the Greater Toronto Area.

The complexities involved in selecting appropriate comparison groups to conduct meaningful research about post-institutionalized youth have been clearly outlined by Maclean (2003). She underscored the importance of selecting appropriate comparison groups to answer a variety of questions. By comparing early and late adoptees with varying amounts of institutional experience, it was possible to study the effect of duration of deprivation (up to approximately two years of age). By including a group of Canadian born, non-adopted children, I addressed questions about adoption status. However, to effectively tease apart the potential effects of previous deprivation from those of adoption would require inclusion of a domestic adoptee group, which is a much more difficult sample to obtain. Each comparison group has the potential to unveil unique information about issues of importance for post-institutionalized adoptees.

An additional shortcoming resulted from the fact that the study was cross-sectional rather than longitudinal. Although I made theoretical assumptions of directionality between variables of interest, the results could not be interpreted as causal. Other longitudinal studies in the field were, however, helpful in guiding interpretation of my findings.

I refrained from asking parents of Canadian born children for permission to obtain
teacher ratings of symptomatology to avoid the potential for unnecessary stigmatization by
teachers. Without these measures, however, I was unable to conduct a complete set of group
comparisons about behavioural and social/emotional presentation within the school context.

Beyond adoption status, I did not have the ability to identify the specific factors that
differentiated adoptees and non-adopted same-age peers on parent ratings of symptomatology
and on some of the stress responses. Likely, there is a complex mix of contributing factors, for
example prenatal/perinatal factors, adoption-specific issues and adoptive family factors. Teasing
apart these factors continues to be a point of discussion and one of the main challenges for
researchers (Maclean, 2003).

4.7. Future Research

The results and conclusions of this study apply specifically to preadolescents who spent
up to approximately the first two years of life in pervasively depriving Romanian orphanages.
Aside from replication of my own results with a relatively young sample of adoptees, studies are
also indicated concerning stress response tendencies for stress management among children who
endured more than two years in these deprived environments.

This study was cross-sectional in design, which limits the ability to infer causal
relationships. It would be ideal to utilize longitudinal study designs to answer questions about
the developmental course of coping and involuntary stress responses among children with
disadvantaged starts in life. Such designs have previously been recommended in the child coping
literature (Compas et al., 2001; Skinner & Zimmer-Gembeck, 2007). For example, the role of
temperamental effects on the subsequent development of coping strategies in post-
institutionalized children could be examined in future longitudinal investigations (Compas, 1987;
Compas et al., 2001; Compas, Connor-Smith, & Jaser, 2004).
There were significant findings for the effect of adoption status but not for age at adoption in this study. Adoption status should therefore be a focus of future work on children’s behavioural and social/emotional adjustment several years following adoption. For example, post-institutionalized adoptees could be compared with non-deprived domestic adoptees and/or previously disadvantaged domestic adoptees. Such comparisons would determine whether it is adoption status, deprivation, or the fact that the children were adopted internationally that influences parents’ and children’s ratings. Inclusion of teacher ratings for all groups of children would also be important.

The current study was dependent on self-report data of coping and automatic stress responses. Future studies may wish to supplement self-report questionnaires with cortisol samples in order to glean more objective information about physiological stress sensitivity and altered levels of stress hormone production (Gunnar, Talge, & Herrera, 2009).

Cortisol levels of institutionalized children were first obtained in a study of 2-year-old Romanian children residing in an orphanage (Carlson & Earls, 1997, as cited in Maclean, 2003). Cortisol levels were compared to those of same-age, Romanian children living with their biological families. Group differences in the pattern of daily cortisol production were apparent. Family-reared children displayed a typical pattern of production, with highest cortisol levels in the early morning and decreasing levels over the course of the day. None of the orphanage children displayed this pattern. The investigators suggested that orphanage experience may disturb the diurnal pattern of cortisol production. More recently, Gunnar and colleagues (2001) collected cortisol data on a small sample of post-institutionalized Romanian children approximately 6½ years following adoption, at age 6 to 12 years. They compared children with 8 months or more of institutionalization to children with 4 months or less of institutionalization.
and to a group of Canadian-born nonadopted children. All children displayed normal patterns of cortisol production, yet the long-term orphanage children had higher daytime cortisol levels than children in the comparison groups. Furthermore, length of deprivation beyond 8 months was associated with higher cortisol levels. Given the small sample size, it was difficult to interpret the findings.

Future studies of stress responses among post-institutional youngsters could also augment questionnaire data with observations of participants during normative stressful situations or in artificially induced stressful situations (Gunnar, Talge, & Herrera, 2009). Many preferred stress management responses are not easily observable. However, if observed stress responses correlated with children’s reports about preferred stress responses, self-reports would gain greater credibility.

4.8. Implications

The results suggest that factors other than duration of deprivation need to be considered in predicting behavioural and social/emotional adjustment several years following international adoption. This is at least the case for youngsters with no more than two years of early institutional deprivation. The findings add to a growing literature that demonstrates the strong potential for resiliency, developmental catch-up and recovery following removal from pervasively depriving living conditions and placement into adoptive families. The rates and severity of symptomatology that were detected among adoptees were more pronounced than those among the comparison group of non-adopted same-age peers. However, in comparison to expected rates of symptomatology in community samples, the rates among adoptees were not extreme. Although these data were based on a relatively small sample, they should help temper some of the concerns that prospective adoptive parents, service providers and policy makers hold
regarding behavioural and social/emotional challenges that adoptive families and their children may face. When such problems do occur in this population, the possible contribution of adoption-related issues or intraindividual factors (e.g., temperament or belief systems) should be considered.

This study also provided a fairly optimistic view of the potential for preadolescent, post-institutionalized youngsters to manage well when faced with normative social and academic stressors. Although preferred stress responses generally were not associated with symptomatology, they are still important to consider from a practical standpoint. Adopted children who had difficult starts in life may benefit from opportunities to further develop and refine their stress management repertoires. For example, children may find it helpful to learn when to apply certain strategies from their repertoire by learning to make other important appraisals, such as the controllability of the situation and the likely consequences of utilizing various strategies. Such learning opportunities might prevent future mental health problems. Research has demonstrated that children can be taught to cope in more effective ways (e.g., Cunningham, Brandon, & Frydenberg, 2002; Kendall, 1991; Kendall et al., 1997; Kendall, Panichelli-Mindel, & Gerow, 1995). Evidence in non-adopteep populations suggests that preadolescents and young adolescents can benefit from opportunities to develop coping strategies and the ability to use them flexibly, regardless of the presence or absence of psychological distress (e.g., Hampel, 2007; Kraag, Van Breukelen, Kok, & Hosman, 2009; Pincus & Friedman, 2004). Perhaps by proactively teaching coping strategies to post-institutionalized youngsters, we can better equip them to face the new challenges that come with the complexities of adolescence.

In summary, my study suggests that children who are removed from a deprived
institutional system and adopted by age two tend to manage adequately during preadolescence in
the sphere of behavioural and social/emotional adjustment, with a slightly heightened risk to
approximately one third of the youngsters. These findings need to be qualified by the fact that
there may have been sampling biases in this study, and that much has been done over the years to
assist these children in adapting to their new lives and the challenges that they have encountered
in the home and school environments. Adoption by caring and competent parents who began
addressing the children’s needs immediately upon arrival into their families was undoubtedly an
essential component in their successful development to date. Nonetheless, resiliency in this
population is apparent.
References


Cunningham, E.G., Brandon, C.M., & Frydenberg, E. (2002). Enhancing coping resources in early adolescence through a school-based program teaching optimistic thinking skills. Anxiety, Stress and Coping, 15, 369-381.


### Table 1

Sample characteristics and demographics for Romanian and Canadian groups

<table>
<thead>
<tr>
<th>Variables</th>
<th>Romanian Groups</th>
<th></th>
<th></th>
<th>Canadian Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Late Adoptees</td>
<td>Early Adoptees</td>
<td>Romanian Born</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=14)</td>
<td>(n=25)</td>
<td>(n=25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current age (in years)</td>
<td>12.48 (1.29)</td>
<td>11.72 (.40)</td>
<td>12.05 (.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at adoption (in months)</td>
<td>16.09&lt;sup&gt;a&lt;/sup&gt; (11.60)</td>
<td>2.25 (1.43)</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Mother’s highest level of education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school graduate</td>
<td>0 (0%)</td>
<td>2 (8%)</td>
<td>0 (0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial college/specialized training</td>
<td>2 (14.3%)</td>
<td>3 (12%)</td>
<td>3 (12%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College/university graduate</td>
<td>8 (57.1%)</td>
<td>15 (60%)</td>
<td>18 (72%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate degree</td>
<td>4 (28.6%)</td>
<td>5 (20%)</td>
<td>4 (16%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married to adoptive/biological parent</td>
<td>12 (85.7%)</td>
<td>20 (80%)</td>
<td>23 (92%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married to non birth/adoptive parent</td>
<td>1 (7.1%)</td>
<td>2 (8%)</td>
<td>2 (8%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single parent household</td>
<td>1 (7.1%)</td>
<td>3 (12%)</td>
<td>0 (0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of learning problems</td>
<td>13 (92.9%)</td>
<td>15 (60%)</td>
<td>4 (16%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra classroom support&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5 (41.7%)</td>
<td>10 (41.7%)</td>
<td>1 (4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current psychiatric diagnoses&lt;sup&gt;d&lt;/sup&gt;</td>
<td>8 (57.1%)</td>
<td>11 (44%)</td>
<td>0 (0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of psychiatric diagnoses&lt;sup&gt;d&lt;/sup&gt;</td>
<td>8 (57.1%)</td>
<td>11 (44%)</td>
<td>2 (8%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Age at adoption for the LA group is based on n=13 due to the impact on the Mean and SD of one outlier (with age at adoption of 82 months). However, the EAs and LAs differed significantly by age at adoption whether or not this case was included. This case was therefore retained for all subsequent analyses.  
<sup>b</sup>The variables beginning with mother’s highest level of education are represented by counts and percentages within each group.  
<sup>c</sup>There are two missing cases from the LA group and one missing case from the EA group regarding extra classroom support.  
<sup>d</sup>These counts represent parent endorsement of one or more child diagnoses.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Defining Features</th>
<th>Subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coping Factors</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Primary Control Engagement Coping | Voluntary responses  
Goal: to alter objective conditions of the stressful situation or one’s reactions to the stressor | Problem-Solving  
Emotional Expression  
Emotional Modulation |
| Secondary Control Engagement Coping | Voluntary responses  
Goal: to achieve adaptation to the problem | Cognitive Restructuring  
Positive Thinking  
Acceptance  
Distraction |
| Disengagement Coping          | Voluntary responses  
Goal: to orient away from a stressor or one’s reactions to a stressor | Avoidance  
Denial  
Wishful Thinking |
| **Involuntary Stress Response Factors** |                                                                                  |                                |
| Involuntary Engagement        | Automatic responses  
Oriented toward a stressor or one’s reactions to a stressor | Rumination  
Intrusive Thoughts  
Physiological Arousal  
Emotional Arousal  
Involuntary Action |
| Involuntary Disengagement     | Automatic responses  
Oriented away from a stressor and one’s reactions | Emotional Numbing  
Cognitive Interference  
Inaction  
Escape |

*Note. Adapted and compiled based on Compas et al. (2001) and Connor-Smith et al. (2000)*
<table>
<thead>
<tr>
<th>Symptomatology</th>
<th>Romanian Groups</th>
<th>Canadian Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Late Adoptees (n=14)</td>
<td>Early Adoptees (n=25)</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>CDI Total</td>
<td>46.00 (10.15)</td>
<td>44.08 (8.06)</td>
</tr>
<tr>
<td></td>
<td>1 (7.1%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>MASC Total</td>
<td>49.50 (10.29)</td>
<td>46.88 (10.85)</td>
</tr>
<tr>
<td></td>
<td>1 (7.1%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>CBCL Internalizing</td>
<td>54.50 (10.67)</td>
<td>49.20 (12.57)</td>
</tr>
<tr>
<td></td>
<td>6 (42.9%)</td>
<td>6 (24%)</td>
</tr>
<tr>
<td>CBCL Externalizing</td>
<td>55.43 (11.46)</td>
<td>52.64 (14.25)</td>
</tr>
<tr>
<td></td>
<td>5 (35.7%)</td>
<td>10 (40%)</td>
</tr>
<tr>
<td>CBCL Total</td>
<td>58.21 (9.86)</td>
<td>52.56 (14.82)</td>
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<tr>
<td></td>
<td>5 (35.7%)</td>
<td>6 (24%)</td>
</tr>
<tr>
<td>TRF Internalizing</td>
<td>61.60 (8.03)</td>
<td>55.25 (11.95)</td>
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<td></td>
<td>5 (50%)</td>
<td>7 (43.8%)</td>
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<tr>
<td>TRF Externalizing</td>
<td>57.50 (10.31)</td>
<td>57.38 (11.13)</td>
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<tr>
<td></td>
<td>6 (60%)</td>
<td>7 (43.8%)</td>
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<tr>
<td>TRF Total</td>
<td>62.30 (8.37)</td>
<td>56.75 (12.17)</td>
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<tr>
<td></td>
<td>7 (70%)</td>
<td>8 (50%)</td>
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</table>

Note. All means represent T-scores. All \( p \) values shown are based on MANOVAS for Romanian Adoptee group (n=39) versus Canadian Born group. The values listed beneath the means and SDs represent the counts and percentages, respectively, of scores within each group of children that exceed the borderline clinical cut-off scores. CDI = Children’s Depression Inventory. MASC = Multidimensional Anxiety Scale for Children. CBCL = Child Behavior Checklist. TRF = Teacher Report Form. * TRF scores and counts based on n = 10 for LAS and n=16 for EAs  * \( p<.05 \). ** \( p<.01 \). *** \( p<.001 \).
### Table 4
Mean Factor Scores and Proportion Scores for Stress Responses by Group: Social Stressor Domain

<table>
<thead>
<tr>
<th>Variable</th>
<th>Romanian Groups</th>
<th></th>
<th>Canadian Group</th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>Late Adoptees</td>
<td>Early Adoptees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=14)</td>
<td>(n=25)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<td><strong>Stress Response Factor Ratings</strong></td>
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<td>Primary Control Coping</td>
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<td>(.32)</td>
<td>2.17</td>
<td>(.51)</td>
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<td>Disengagement Coping</td>
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<td>(.42)</td>
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<td>(.65)</td>
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<td>(.45)</td>
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<td>(.71)</td>
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<td><strong>Stress Response Proportion Scores</strong></td>
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<td></td>
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<td>Primary Control Coping</td>
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<td>(.03)</td>
<td>.18</td>
<td>(.04)</td>
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<td>Secondary Control Coping</td>
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<td>(.04)</td>
<td>.23</td>
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<td>(.02)</td>
<td>.16</td>
<td>(.03)</td>
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<tr>
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<td>(.03)</td>
<td>.18</td>
<td>(.03)</td>
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**p < .01 based on MANOVA for Romanian Adoptee group (n=39) versus Canadian Born group.
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<th>Canadian Group</th>
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<td>SD</td>
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<td></td>
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<tr>
<td>Primary Control Coping</td>
<td>2.44</td>
<td>(.60)</td>
<td>2.25</td>
<td>(.71)</td>
</tr>
<tr>
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<td>2.30</td>
<td>(.70)</td>
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<tr>
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<td>(.79)</td>
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<td>1.66</td>
<td>(.61)</td>
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<td>(.44)</td>
<td>1.63</td>
<td>(.67)</td>
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<td></td>
</tr>
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<td>Primary Control Coping</td>
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<td>(.04)</td>
<td>.19</td>
<td>(.05)</td>
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<td>(.05)</td>
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<td>(.03)</td>
<td>.16</td>
<td>(.03)</td>
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<td>(.03)</td>
<td>.23</td>
<td>(.04)</td>
</tr>
<tr>
<td>Involuntary Disengagement</td>
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<td>(.03)</td>
<td>.18</td>
<td>(.03)</td>
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Table 6
Predicting Teacher-Reported Symptomatology from Responses to Stress in Romanian Adoptees (N = 26)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>SE B (final)</th>
<th>β(final)</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV=Externalizing Index</td>
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<td>Social Disengagement Coping</td>
<td>-197.29</td>
<td>72.12</td>
<td>-.470</td>
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</tr>
<tr>
<td>Academic Involuntary Disengagement</td>
<td>94.07</td>
<td>58.70</td>
<td>.28</td>
<td>.07</td>
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<td>DV=Total Problem Index</td>
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<td>Academic Involuntary Disengagement</td>
<td>104.19</td>
<td>59.31</td>
<td>.29</td>
<td>.08i</td>
</tr>
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</table>

*p<.1  *p<.05  **p<.01.
Table 7
Means for Competency Beliefs and Perceived Social Support by Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Romanian Groups</th>
<th>Canadian Group</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Late Adoptees (n=14)</td>
<td>Early Adoptee (n=25)</td>
</tr>
<tr>
<td>Scholastic Competence</td>
<td>2.26 (0.64)</td>
<td>2.87 (0.90)</td>
</tr>
<tr>
<td>Social Acceptance</td>
<td>3.34 (0.74)</td>
<td>3.06 (0.76)</td>
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<tr>
<td>Total Social Support</td>
<td>3.49 (0.51)</td>
<td>3.38 (0.56)</td>
</tr>
</tbody>
</table>
Table 8
Correlations between Proportional Response to Stress Factors and Length of Deprivation, Competency Beliefs and Perceived Social Support for Romanian Adoptees (N=39)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Primary Control Engagement</th>
<th>Secondary Control Engagement</th>
<th>Disengagement Coping</th>
<th>Involuntary Engagement</th>
<th>Involuntary Disengagement</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Social Stressor Domain</td>
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<td>Length Dep.</td>
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<td>-.11</td>
<td>.05</td>
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<tr>
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<td>.04</td>
<td>-.24</td>
<td>-.53**</td>
</tr>
<tr>
<td>Social Acceptance</td>
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<td>.28(^t)</td>
<td>-.08</td>
<td>-.21</td>
<td>-.27(^t)</td>
</tr>
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<td>.41**</td>
<td>-.04</td>
<td>-.41**</td>
<td>-.40*</td>
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<td>Length Dep.</td>
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<td>.07</td>
<td>-.01</td>
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<td>Scholastic Competence</td>
<td>.27</td>
<td>.44**</td>
<td>-.21</td>
<td>-.28</td>
<td>-.51**</td>
</tr>
<tr>
<td>Social Acceptance</td>
<td>.16</td>
<td>.19</td>
<td>-.19</td>
<td>-.22</td>
<td>-.08</td>
</tr>
<tr>
<td>Total Social Support</td>
<td>.40*</td>
<td>.29(^t)</td>
<td>-.15</td>
<td>-.37*</td>
<td>-.42**</td>
</tr>
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</table>

*Note.* Length Dep = Length of Deprivation.
\(^t\)\(p<.10.\) *\(p<.05.\) **\(p<.01.\)
<table>
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<th>Variable</th>
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<td>3. Total Social Support</td>
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<td>.78***</td>
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*p<.10. *p<.05. **p<.01.
Table 10
Predicting Stress Responses from Perceived Scholastic Competence and Perceived Total Social Support after controlling for Length of Deprivation in Romanian Adoptees – Social Stressor Domain (N=39)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B (final)</th>
<th>SE B (final)</th>
<th>β(final)</th>
<th>sr²</th>
<th>R²</th>
<th>R²Δ</th>
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</tr>
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<td><strong>DV = Involuntary Engagement</strong></td>
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<td>Step 1</td>
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*p<.05. **p<.01.
Table 11
Predicting Stress Responses from Perceived Scholastic Competence and Perceived Total Social Support after controlling for Length of Deprivation in Romanian Adoptees – Academic Stressor Domain (N=39)

<table>
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<th>B (final)</th>
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<th>β(final)</th>
<th>sr²</th>
<th>R²</th>
<th>R²Δ</th>
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</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Social Support</td>
<td>-.03</td>
<td>.01</td>
<td>-.37</td>
<td>.13*</td>
<td>.13*</td>
<td>.13*</td>
</tr>
<tr>
<td>DV = Involuntary Disengagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Deprivation</td>
<td>.00</td>
<td>.00</td>
<td>.06</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Social Support</td>
<td>-.02</td>
<td>.01</td>
<td>-.27</td>
<td>.06*</td>
<td>.06*</td>
<td>.06*</td>
</tr>
<tr>
<td>Scholastic Competence</td>
<td>-.01</td>
<td>.01</td>
<td>-.40</td>
<td>.13*</td>
<td>.13*</td>
<td>.13*</td>
</tr>
</tbody>
</table>

*p<.10. *p<.05. **p<.01.
Appendices

Appendix A

Background Questionnaire for International Adoptee Study

Identification # ______________________

BACKGROUND QUESTIONNAIRE FOR INTERNATIONAL ADOPTEE STUDY:

Please fill out all questions as accurately as possible.

1. Respondent:   Mother __   Father __   Both__

2. Today’s Date (d/m/y): ___/___/___

Child’s Adoption History

3. Sex of Child: Male___  Female___

4. Child’s date of birth (d/m/y): __/__/__ & current age: __years

5. Date when you first met child (d/m/y): __/__/__

6. Date when child came home with you (d/m/y): __/__/__

7. What was the origin of adoption?   Orphanage___
                      Hospital___
                      Biological Home/Parent___

8. How long was your child in this last setting before you adopted him/her?: __________

9. If applicable, what was the child-to-caregiver ratio in this orphanage? (best estimate):

      5:1__ 10:1__ 15:1__ 20:1__ Other*____ (*please explain)________________________

10. If you adopted your child directly from an orphanage, in your opinion, what were conditions like in this orphanage?:

      Extremely Poor __ Poor ___ Fair ___ Adequate ___ Good ___

11. If he/she was not in the last setting identified since birth, where else was he/she and for how long? (List all other settings, from most recent to earliest):
(i) Type of Setting _______________ Length of Time ______________
(ii) Type of Setting _______________ Length of Time ______________
(iii) Type of Setting _______________ Length of Time ______________
(iv) Type of Setting _______________ Length of Time ______________

More Recent Information About Your Child

*Please Note: If you are completing this during the summer, please answer according to the upcoming school year.

12. Child’s grade placement: ___

13. Type of classroom: _____________

14. Estimated number of children in the class: 5 to 10 ___ 11 to 15 ___ 16 to 20 ___
   21 to 25 ___ 26 to 30 ___ 31 or more ___

15. Type of school: Public School ___ Private School ___ Other __________

16. Has your child been identified with any learning problems?: Yes ___ No ___

IF YES:

17. At what age was your child first identified with learning problems?: ____

What type(s) of learning problem(s) have been identified?: (please list all)

   (a) ______________________  (d) ______________________
   (b) ______________________  (e) ______________________
   (c) ______________________  (f) ______________________

18. Does your child have any significant physical health problems that require ongoing monitoring/medication/therapy: Yes ___ No ___

IF YES:

19. Please list all of these conditions:

   (a) ______________________  (c) ______________________
   (b) ______________________  (d) ______________________

20. Has your child ever been seen by any of the following professionals or have you consulted with any of the following professionals about your child? If so, please indicate your child’s age
when he/she was last seen by any of these professionals or your child’s age when you last sought consultation with any of these professionals:

<table>
<thead>
<tr>
<th>Professional</th>
<th>Child’s Age ___ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Worker</td>
<td></td>
</tr>
<tr>
<td>Psychologist</td>
<td></td>
</tr>
<tr>
<td>Psychoeducational Consultant</td>
<td></td>
</tr>
<tr>
<td>Psychiatrist</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

21. Has your child ever been diagnosed or identified with the following problems? Please (i) check all that apply; (ii) fill out age (in years) when first diagnosed; and (iii) check if they continue to apply to your child at the present time:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Age 1st Diagnosed</th>
<th>Currently Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Attachment Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Oppositional Defiant Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Separation Anxiety</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Specific Phobia (specify)</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Social Phobia</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Generalized/Overanxious Anxiety Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Selective/Elective Mutism</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Major Depression</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Anorexia Nervosa</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Bulimia Nervosa</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Tourette’s Syndrome</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Tic Disorder</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Social (Skills) Difficulties</td>
<td>___ years</td>
<td>___</td>
</tr>
<tr>
<td>Other(s)</td>
<td>Please specify:</td>
<td>___ years</td>
</tr>
</tbody>
</table>

22. Has your child ever received therapeutic intervention for any of the above listed areas of difficulty? Are you and/or your child currently seeking assistance from a professional to address any of these areas of difficulty? What type of professional?:

<table>
<thead>
<tr>
<th>Professional Assistance Received for:</th>
<th>Currently Receiving Professional Assistance:</th>
<th>Type of Professional Receiving Help From:</th>
</tr>
</thead>
<tbody>
<tr>
<td>YOU:</td>
<td>CHILD:</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>___ ___</td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td>___ ___</td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td>___ ___</td>
<td></td>
</tr>
</tbody>
</table>
23. Is your child currently taking any prescribed medication?: Yes ___ No ___

IF YES:

24. What type(s) of medication does he/she take? Please list all:

   (a) ________________________   (c) ________________________
   (b) ________________________   (d) ________________________

25. Are there any other problems/difficulties that you feel currently apply to your child’s general well-being that have not yet been identified in this questionnaire? Please list all:

   (a) ____________________   (d) ____________________
   (b) ____________________   (e) ____________________
   (c) ____________________   (f) ____________________

Family Information

26. What is your current marital status?:
   Married ___ If so, is it to your child’s other parent? Yes ___ No ___
   Unmarried, no partner ___
   Unmarried, live-in partner ___
   Unmarried, live-out partner ___
   Remarried ___ (*to a partner who is not your child’s other parent)
   Separated ___ Year ___ From child’s other parent? Yes ___ No ___
   Divorced ___ Year ___ From child’s other parent? Yes ___ No ___
   Widowed ___ Year ___ By child’s other parent? Yes ___ No ___

27. If you and your child’s other parent are no longer living together, please indicate the current marital status of your child’s other parent:

   Married ___
   Unmarried, no partner ___
   Unmarried, live-in partner ___
   Unmarried, live-out partner ___
   Separated ___ Year ___ (from someone other than yourself)
   Divorced ___ Year ___ (from someone other than yourself)
   Widowed ___ Year ___

28. If you and your child’s other parent no longer live together for any reason, please check where your child lives:
(i) Most of the time at my home ___
(ii) Most of the time at his/her other parents’ home ___
(iii) Split evenly between the two homes ___
(iv) Only at my home ___
(v) Other (specify) ____________

29. What is your current age?:
   Mother: ____    Father: ____

30. Check the highest grade or level of education you each completed:

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Some elementary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Completed elementary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Some high school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Completed high school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Some community or technical college or CEGEP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Completed community or technical college or CEGEP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Some undergraduate university</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8) Completed undergraduate university</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9) Some Masters level studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10) Completed Masters level studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11) Some Ph.D. level studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12) Completed Ph.D. level studies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Are you presently employed?:
   Mother: Yes ___ No ___
   Father: Yes ___ No ___

32. Please describe the type of work and whether it is part-time or full-time. If you are not currently employed, please state the type of work you used to do and when you stopped working:

   Mother:                             Father: 
   Type of Work: ____________________  Type of Work: ______________
   Currently: Full-Time ___ Part-Time ___  Currently: Full-Time ___ Part-Time ___
   Year stopped working: ____  Year stopped working: ____

*Please Note: If you do not live with the child’s other parent, answer the questions specifically about your children and your household.*
33. Do you have any other children?: Yes ___ No ___

IF YES:

34. How many other children do you have?: ___

35. What is the age and sex of each child? If you are not the biological parent, please indicate whether each child was adopted or if he/she is a step-child or foster child. If any of your children were adopted, please indicate at what age you adopted him/her and the country of adoption if it was not Canada. (*Note: You do not need to provide names for your children. Instead, you can simply place a first initial under the heading “NAME” for each child.)

<table>
<thead>
<tr>
<th>NAME</th>
<th>AGE</th>
<th>SEX</th>
<th>ADOPTED</th>
<th>AT AGE</th>
<th>COUNTRY</th>
<th>STEP-CHILD or FOSTER-CHILD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

   i)   _____   ___   ___   _______   ___   _______   _______   _______   _______   _______

    ii)   _____  ___  ___  _______  ___  _______  _______  _______  _______  _______

    iii)  _____  ___  ___  _______  ___  _______  _______  _______  _______

    iv)   _____  ___  ___  _______  ___  _______  _______  _______  _______

    v)    _____  ___  ___  _______  ___  _______  _______  _______  _______

    vi)   _____  ___  ___  _______  ___  _______  _______  _______

36. Does anyone else live in your household full-time? If so, please list their relation to you (e.g., parent, current partner’s children, etc.)

   (a) ___________________  (d) ______________

   (b) ___________________

   (c) ___________________

   (e) ________________

Thank-you!
Appendix B

Responses to Stress Questionnaire – Social Version
(Connor-Smith et al., 2000)
13. I realize that I just have to live with things the way they are.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

14. When I have problems with other kids, I just can’t be near anything that reminds me of the situation.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

15. I try not to think about it, to forget all about it.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

16. When problems with other kids come up I really don’t know what I feel.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

17. I ask other people for help or for ideas about how to make the problem better.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Check all you talked to:  

- Parent  
- Friend  
- Teacher  
- Brother/sister  
- None of these  

18. When I’m having problems getting along with other kids, I can’t stop thinking about them when I try to sleep, or I have bad dreams about them.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

19. I tell myself that I can get through this, or that I’ll do better next time.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

20. I let my feelings out. (Remember to circle a number.)  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

I do this by: (Check all that you did.)  

- Writing in my journal/diary  
- Drawing/painting  
- Complaining to let off steam  
- Being sarcastic/making fun  
- Listening to music  
- Punching a pillow  
- Exercising  
- Yelling  
- Crying  
- None of these  

21. I get help from other people when I’m trying to figure out how to deal with my feelings.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Check all that you went to:  

- Parent  
- Friend  
- Teacher  
- Brother/sister  
- Pet  
- Stuffed animal  
- None of these  

22. I just can’t get myself to face the person I’m having problems with or the situation.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

23. I wish that someone would just come and get me out of the mess.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

24. I do something to try to fix the problem or take action to change things.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Write one thing you did:  

25. Thoughts about the problems with other kids just pop into my head.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

26. When I have problems with other kids, I feel it in my body. (Remember to circle a number.)  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Check all that happen:  

- My heart races  
- My breathing speeds up  
- I feel hot or sweaty  
- My muscles get tight  
- None of these  

27. I try to stay away from people and things that make me feel upset or remind me of the problem.  

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
28. I don’t feel like myself when I have problems with other kids, it’s like I’m far away from everything.  
   How much did you do this?  
   Not at all  A little  Some  A lot  
   1  2  3  4 

29. I just take things as they are, I go with the flow.  
   1  2  3  4 

30. I think about happy things to take my mind off the problem or how I’m feeling.  
   1  2  3  4 

31. When problems with other kids come up, I can’t stop thinking about how I am feeling.  
   1  2  3  4 

32. I get sympathy, understanding, or support from someone.  
   (Remember to circle a number)  
   1  2  3  4 

Check all you went to:  
   Parent  Friend  Brother/sister  Teacher  None of these  

33. When problems with other kids happen, I can’t always control what I do.  
   (Remember to circle a number)  
   1  2  3  4 

Check all that happen:  
   - I can’t stop eating  
   - I can’t stop talking  
   - I do dangerous things  
   - I have to keep fixing/checking things  
   None of these  

34. I tell myself that things could be worse.  
   1  2  3  4 

35. My mind just goes blank when I have problems with other kids, I can’t think at all.  
   1  2  3  4 

36. I tell myself that it doesn’t matter, that it isn’t a big deal.  
   1  2  3  4 

37. When I have problems with other kids right away I feel really.  
   (Check all you feel)  
   - Angry  
   - Sad  
   - Scared  
   - Worried/anxious  
   None of these  
   (Remember to circle a number)  
   1  2  3  4 

38. It’s really hard for me to concentrate or pay attention when I have problems with other kids.  
   1  2  3  4 

39. I think about the things I’m learning from the situation, or something good that will come from it.  
   1  2  3  4 

40. When I have problems with other kids I can’t stop thinking about what I did or said.  
   1  2  3  4 

41. When something goes wrong with other kids, I say to myself, “This isn’t real.”  
   1  2  3  4 

42. When I’m having problems with other kids I end up just lying around or sleeping a lot.  
   1  2  3  4 

43. I keep my mind off problems with other kids by.  
   (Remember to circle a number)  
   - Exercising  
   - Seeing friends  
   - Playing video games  
   - Doing a hobby  
   None of these  
   1  2  3  4 

44. When problems with other kids come up, I get upset by things that don’t usually bother me.  
   1  2  3  4 

45. I do something to calm myself down when I’m having problems with other kids.  
   1  2  3  4 

Check all that you do:  
   - Take deep breaths  
   - Pray  
   - Meditate  
   - None of these  
   1  2  3  4 

46. I just freeze when I have a problem with other kids, I can’t do anything.  
   1  2  3  4
<table>
<thead>
<tr>
<th>Question</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>47. When I'm having a problem with other kids, sometimes I act without thinking.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>48. I keep my feelings under control when I have to, then let them out when they won't make things worse.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>49. When problems with other kids happen, I can't seem to get around to doing things I'm supposed to do.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>50. I tell myself that everything will be all right.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>51. When I have problems with other kids, I can't stop thinking about why they happened to me.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>52. I think of ways to laugh about it so that it won't seem so bad.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>53. My thoughts start racing when I'm having a rough time with other kids</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>54. I imagine something really fun or exciting happening in my life.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>55. When a rough situation with other kids happens, I can get so upset that I can't remember what happened or what I did.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>56. I try to believe it never happened.</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>57. When I have problems with other kids, sometimes I can't control what I do or say.</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>
Appendix C

Self-Perception Profile for Children
(Harter, 1985c)

What I Am Like

Name ___________________________ Age _______ Birthday ____________ Group _______

Boy or Girl (circle which)

SAMPLE SENTENCE

(a) \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids would rather play outdoors in their spare time} & \text{BUT} & \text{Other kids would rather watch T.V.} \\
\end{array}\]

1. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids feel that they are very good at their school work} & \text{BUT} & \text{Other kids worry about whether they can do the school work assigned to them.} \\
\end{array}\]

2. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids find it hard to make friends} & \text{BUT} & \text{Other kids find it's pretty easy to make friends.} \\
\end{array}\]

3. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids do very well at all kinds of sports} & \text{BUT} & \text{Other kids don't feel that they are very good when it comes to sports.} \\
\end{array}\]

4. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids are happy with the way they look} & \text{BUT} & \text{Other kids are not happy with the way they look.} \\
\end{array}\]

5. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids often do not like the way they behave} & \text{BUT} & \text{Other kids usually like the way they behave.} \\
\end{array}\]

6. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids are often unhappy with themselves} & \text{BUT} & \text{Other kids are pretty pleased with themselves.} \\
\end{array}\]

7. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids feel like they are just as smart as other kids their age} & \text{BUT} & \text{Other kids aren't so sure and wonder if they are as smart.} \\
\end{array}\]

8. \[\begin{array}{cc}
\text{Really True for me} & \text{Sort of True for me} \\
\hline
\text{Some kids have a lot of friends} & \text{BUT} & \text{Other kids don't have very many friends.} \\
\end{array}\]
<table>
<thead>
<tr>
<th></th>
<th>Really True for me</th>
<th>Sort of True for me</th>
<th>Really True for me</th>
<th>Sort of True for me</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Some kids wish they could be alot better at sports</td>
<td>BUT</td>
<td>Other kids feel they are good enough at sports.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Some kids are happy with their height and weight</td>
<td>BUT</td>
<td>Other kids wish their height or weight were different.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Some kids usually do the right thing</td>
<td>BUT</td>
<td>Other kids often don't do the right thing.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Some kids don't like the way they are leading their life</td>
<td>BUT</td>
<td>Other kids do like the way they are leading their life.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Some kids are pretty slow in finishing their school work</td>
<td>BUT</td>
<td>Other kids can do their school work quickly.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Some kids would like to have alot more friends</td>
<td>BUT</td>
<td>Other kids have as many friends as they want.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Some kids think they could do well at just about any new sports activity they haven't tried before</td>
<td>BUT</td>
<td>Other kids are afraid they might not do well at sports they haven't ever tried.</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Some kids wish their body was different</td>
<td>BUT</td>
<td>Other kids like their body the way it is.</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Some kids usually act the way they know they are supposed to</td>
<td>BUT</td>
<td>Other kids often don't act the way they are supposed to.</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Some kids are happy with themselves as a person</td>
<td>BUT</td>
<td>Other kids are often not happy with themselves.</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Some kids often forget what they learn</td>
<td>BUT</td>
<td>Other kids can remember things easily.</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Some kids are always doing things with alot of kids</td>
<td>BUT</td>
<td>Other kids usually do things by themselves.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Really True for me</td>
<td>Sort of True for me</td>
<td></td>
<td>Really True for me</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>---------------------</td>
<td>---</td>
<td>-------------------</td>
</tr>
<tr>
<td>21.</td>
<td>Some kids feel that they are better than others their age at sports</td>
<td>BUT Other kids don't feel they can play as well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Some kids wish their physical appearance (how they look) was different</td>
<td>BUT Other kids like their physical appearance the way it is.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Some kids usually get in trouble because of things they do</td>
<td>BUT Other kids usually don't do things that get them in trouble.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Some kids like the kind of person they are.</td>
<td>BUT Other kids often wish they were someone else.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Some kids do very well at their classwork</td>
<td>BUT Other kids don't do very well at their classwork.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Some kids wish that more people their age liked them</td>
<td>BUT Other kids feel that most people their age do like them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>In games and sports some kids usually watch instead of play</td>
<td>BUT Other kids usually play rather than just watch.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>Some kids wish something about their face or hair looked different</td>
<td>BUT Other kids like their face and hair the way they are.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>Some kids do things they know they shouldn't do</td>
<td>BUT Other kids hardly ever do things they know they shouldn't do.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Some kids are very happy being the way they are</td>
<td>BUT Other kids wish they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Some kids have trouble figuring out the answers in school</td>
<td>BUT Other kids almost always can figure out the answers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>Some kids are popular with others their age</td>
<td>BUT Other kids are not very popular.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
33. Some kids don't do well at new outdoor games BUT Other kids are good at new games right away.

34. Some kids think that they are good looking BUT Other kids think that they are not very good looking.

35. Some kids behave themselves very well BUT Other kids often find it hard to behave themselves.

36. Some kids are not very happy with the way they do a lot of things BUT Other kids think the way they do things is fine.
Appendix D

The Social Support Scale for Children and Adolescents
(Harter, 1985d)

<table>
<thead>
<tr>
<th>Sample Item</th>
<th>Really True for Me</th>
<th>Sort of True for Me</th>
<th>Sample Item</th>
<th>Really True for Me</th>
<th>Sort of True for Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some kids like to do fun things with a lot of other people</td>
<td></td>
<td></td>
<td>Other kids like to do fun things with just a few people.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids have parents who really do understand them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have parents who don’t really understand them</td>
<td></td>
<td></td>
<td>Other kids have parents who wish they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids have class-mates who wish they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have class-mates who like them the way they are</td>
<td></td>
<td></td>
<td>Other kids have class-mates who wish they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids have class-mates who wish they were different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have a teacher who helps them if they are upset and have a problem</td>
<td></td>
<td></td>
<td>Other kids don’t have a teacher who helps them if they are upset and have a problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have a teacher who helps them if they are upset and have a problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have a close friend who they can tell problems to</td>
<td></td>
<td></td>
<td>Other kids don’t have a close friend who they can tell problems to.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have a close friend who they can tell problems to.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have parents who don’t seem to want to hear about their children’s problems</td>
<td></td>
<td></td>
<td>Other kids have parents who do want to listen to their children’s problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids have parents who do want to listen to their children’s problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have class-mates that they can become friends with</td>
<td></td>
<td></td>
<td>Other kids don’t have class-mates that they can become friends with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have class-mates that they can become friends with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids don’t have a teacher who helps them to do their very best</td>
<td></td>
<td></td>
<td>Other kids do have a teacher who helps them to do their very best.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids do have a teacher who helps them to do their very best.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have a close friend who really understands them</td>
<td></td>
<td></td>
<td>Other kids don’t have a close friend who understands them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have a close friend who understands them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have parents who care about their feelings</td>
<td></td>
<td></td>
<td>Other kids have parents who don’t seem to care very much about their children’s feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids have parents who don’t seem to care very much about their children’s feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids have class-mates who sometimes make fun of them</td>
<td></td>
<td></td>
<td>Other kids don’t have class-mates who make fun of them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have class-mates who make fun of them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some kids do have a teacher who cares about them</td>
<td></td>
<td></td>
<td>Other kids don’t have a teacher who cares about them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUT</td>
<td></td>
<td></td>
<td>Other kids don’t have a teacher who cares about them.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(OVER)