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The Interrelationships Among Family Stress, Parenting Behavior, and Behavior Problems: An Investigation of Internationally Adopted Chinese Girls

Cheryl Gelley

University of South Florida, cherylduong@mail.usf.edu

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The Interrelationships Among Family Stress, Parenting Behavior, and
Behavior Problems: An Investigation of Internationally Adopted Chinese Girls

by

Cheryl D. Gelley

A thesis submitted in partial fulfillment
of the requirements for the degree of
Education Specialist
Department of Psychological and Social Foundations
College of Education
University of South Florida

Co-Major Professor: Tony X. Tan, Ed.D.
Co-Major Professor: Shannon M. Suldo, Ph.D.
Robert F. Dedrick, Ph.D.

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Abstract

Although there have been many studies investigating international adoptees' outcomes in relation to their pre-adoption experiences, there is a paucity of research investigating the influence of post-adoption experiences. Guided by the proximity of the family to the child in Bronfenbrenner's (1979) ecological systems theory of human development, this study addressed a gap in the literature by investigating the interrelationships among family-related variables (e.g., stress in family environment, parenting behavior) and 648 internationally adopted Chinese girls' behavior problems. Moderate, positive relationships were found between family stress and both internalizing ($r = .43, p < .001$) and externalizing ($r = .59, p < .001$) behavior problems. Modest, inverse relationships were found between authoritative parenting and both internalizing ($r = -.08, p < .01$) and externalizing ($r = -.15, p < .001$) behavior problems. Additionally, modest to moderate, positive relationships were found between authoritarian and permissive parenting and internalizing ($r = .18, p < .001$; $r = .19, p < .001$, respectively) and externalizing ($r = .39, p < .001$; $r = .34, p < .001$, respectively) behavior problems. Finally, authoritarian and permissive parenting behaviors were partial mediators between family stress and both internalizing ($R^2 = .08, p < .001$; $R^2 = .08, p < .001$, respectively) and externalizing ($R^2 = .20, p < .001$; $R^2 = .16, p < .001$, respectively) behavior problems while authoritative parenting was not a mediator to either type of behavior problem. The implications of these findings and suggestions for future research are discussed.

CHAPTER I: Introduction

Statement of the Problem and Theoretical Framework

Behavior problems in school-age children are quite prevalent, with studies estimating prevalence rates of clinical levels as low as 12% or as high as 20% (Belfer, 2008; Costello, Egger, & Angold, 2005; Merikangas et al., 2010; Roberts, Attkisson, & Rosenblatt, 1998). Past research supports that both genetic (Haberstick, Schmitz, Young, & Hewitt, 2005; Keiley, Lofthouse, Bates, Dodge, & Pettit, 2003; van der Valk, van den Oord, Verhulst, & Boomsma, 2003) and environmental factors (Fanti & Henrich, 2010; Keiley et al., 2003; Laird, Jordan, Dodge, Pettit, & Bates, 2001) can influence children's behavior problems. Bronfenbrenner's (1979) ecological systems theory of human development emphasizes the importance of the environment in a child's development. Thus, the present study further investigated the influence of family-related variables (e.g., family stress and parenting behavior), which are most proximal to the child in this model.

Parenting behavior is an important environmental variable that influences a child's development (e.g., Maccoby & Martin, 1983). Baumrind (1991) identified four distinct parenting styles, three of which are consistently supported in the literature and relevant to adoptive families (e.g., authoritarian, authoritative, permissive). The fourth parenting style, commonly known as uninvolved, is likely irrelevant to adoptive families because adoptive parents actively seek out a child. The literature supports that an authoritative parenting style leads to more optimal outcomes, but the literature is mixed

on the outcomes of children whose parents are either authoritarian or permissive (e.g., Milevsky, Schlechter, Netter, & Keehn, 2007; Williams et al., 2009). Thus, it is important to further investigate the impact of parenting behavior.

Family stress is another significant environmental variable. In the literature, family stress is typically conceptualized in terms of marital discord (e.g., Leve, Kim, & Pears, 2005), major life events (e.g., Milan & Pinderhughes, 2006), and/or economic disadvantage (e.g., Conger & Conger, 2002). The literature provides support that family stress impacts children's behavior problems (e.g., Milan & Pinderhughes, 2006; Stadelmann, Perren, von Wyl, & von Klitzing, 2007). The literature also supports that parenting practices may serve as a mediator in the relationship between family stress and behavior problems (e.g., Cui & Conger, 2008; Smith & Hancock, 2010). The current study examines this relationship in adopted girls from China.

Because the majority of the research on this relationship has been conducted with children who live with their biological parents, it is difficult for researchers to determine if the mediating impact of parenting is due to genetics or the environment. When conducting research with families whose children are not biologically related to their parents (i.e., internationally adoptive families), researchers can obtain valuable information about the separate influences of genetics and the environment.

Given that more than 1.5 million U.S. households include at least one adopted child (U.S. Census Bureau, 2003), with approximately 258,000 of these children being born in foreign countries, it is important to investigate the impact of family variables on adoptees' behavior problems. Many adoptive families also have higher incomes than typical U.S. families. The median annual household income for adoptive families is

\$8,000 higher than non-adoptive families (U.S. Census Bureau, 2003). Additionally, a recent study (Hellerstedt et al., 2008) found that 87.2% of families adopting internationally earned an annual income of at least \$50,000. Thus, it may be less appropriate to consider socioeconomic status (SES) as a contributing factor to family stress in adoptive families. Although adoptive families are unique in that they have a higher SES than typical U.S. families, adoptees still face many of the same challenges that non-adopted children face.

Behavior problems in international adoptees are of interest among researchers. Behavior problems are typically discussed along two dimensions, internalizing and externalizing problems. Internalizing problems include symptoms indicative of anxiety, depression, withdrawal, phobias, and somatic complaints while externalizing problems include symptoms indicative of aggression and delinquency (Achenbach & Edelbrock, 1978). While most of the more recent literature appears to support that internationally adopted children evidence more externalizing problems, the results are mixed for internalizing problems. And because adopted children are a unique population, they face a set of unique challenges (i.e., the impact of both pre- and post- adoption experiences). Examples of pre-adoption experiences include prenatal exposure to toxins, abuse and neglect, malnutrition, and institutionalization (Rutter, 2005), which may negatively impact a number of developmental outcomes, including behavior problems. Challenges in the post-adoption environment (i.e., within the adoptive family) may include the transition to adoptive parenthood and adoptees' confusion of identity. While a plethora of research has investigated the relationship between behavior problems and pre-adoption experiences, less research has been conducted on the relationship of behavior problems

and post-adoption experiences. Thus, there is a need for more research on post-adoption experiences.

Rationale and Purpose

Bronfenbrenner's (1979) ecological model emphasizes the importance of environmental variables in children's development. Because family variables are the most proximal to the child in this model, it is important for researchers to determine their influence. There is little research examining the relationships among family stress, parenting behavior, and behavior problems, especially in adoptive families. Conducting research on these relationships with adoptive families provides researchers with a unique opportunity to isolate the effects of the environment from genetic influence. The purpose of this study is to determine which family-related variables are predictive of behavior problems among adopted Chinese girls.

Research Questions

1. What is the nature of the relationship between family stress and adopted Chinese girls' behavior problems?
2. What is the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems?
3. To what extent does parenting behavior mediate the relationship between family stress and adopted Chinese girls' behavior problems?

Definition of Key Terms

Family Stress

Family stress is described by difficulties or dissatisfaction with housing, finances, employment, social relationships, and marital/romantic relationships (Corney & Clare, 1985).

Parenting Behavior

Three types of parenting styles have been identified (Baumrind, 1991) and are widely recognized by researchers: Authoritarian (more demanding but less responsive), Authoritative (more demanding and more responsive), and Permissive (less demanding but more responsive).

Behavior Problems

Internalizing behavior problems include symptoms related to anxiety, depression, withdrawal, and somatic complaints while externalizing behavior problems include symptoms related to aggression and delinquency (Achenbach & Edelbrock, 1978). In general, behavior problems include internalizing and externalizing behavior problems but also include social (e.g., not getting along well with peers), thought (e.g., seeing or hearing things), or attention problems (e.g., inattentive, impulsive; Achenbach & Rescorla, 2001b).

Contributions to Research and Practice

The current study contributes to both research and practice in many ways. For one, the international adoption literature is scant in terms of studies investigating the influence of post-adoption environmental variables (e.g., family environment). Much of the research to date has examined the impact of pre-adoption adversity (e.g., early

institutional care). Additionally, there is no literature to date examining parenting behavior as a mediator between family stress and behavior problems in internationally adopted children. Because adopted children are unique, in that they experience many challenges in addition to the challenges that all children face, the results of this study also provide some insight into the development of behavior problems in this population. Finally, conducting research with adoptive families provides researchers with the opportunity to examine how optimal environment conditions might combat children's own genetic pre-dispositions.

CHAPTER II: Review of Relevant Literature

This chapter reviews literature on the relevance of family-related, ecological variables to school-age children's development. The review begins with a discussion of the general literature on the impact of genetic factors on children's behavior problems (i.e., internalizing and externalizing problems), followed by a more extensive review of environmental influences. Subsequent sections focus on the influence of two important aspects of the children's environment, namely family stress and parenting behavior, on children's behavior problems. Next, the mediating effect of parenting behavior on the impact of family stress on children's behavior problems is highlighted. Then, pertinent literature on internationally adopted children's behavior problems in relation to various factors that are specific to internationally adopted children (e.g., pre-adoption adversity, age at adoption) is reviewed. Finally, a rationale for the current study is discussed, followed by concluding comments and the purpose of the present study. Hypotheses regarding anticipated findings to the research questions for the current study were informed by existing literature.

Behavior Problems in Children

Children's behavior problems are usually classified into internalizing and externalizing problems. Achenbach and Edelbrock (1978) characterize internalizing problems as behaviors that indicate anxiety, depression, withdrawal, phobias, and somatic complaints and describe externalizing problems as behaviors that indicate aggression and

delinquency. In childhood and adolescence, the prevalence of potentially clinical behavior problems is about 12% to 20%, with the majority of studies revealing rates in the higher end of this range (Belfer, 2008; Costello, Egger, & Angold, 2005; Merikangas et al., 2010; Roberts, Attkisson, & Rosenblatt, 1998). A great body of research has found that the development of externalizing and internalizing disorders is influenced by both genetic (Haberstick, Schmitz, Young, & Hewitt, 2005; Keiley, Lofthouse, Bates, Dodge, & Pettit, 2003; van der Valk, van den Oord, Verhulst, and Boomsma, 2003) and environmental factors (Fanti & Henrich, 2010; Keiley et al., 2003; Laird, Jordan, Dodge, Pettit, & Bates, 2001).

Genetic Factors

Twin studies have provided some evidence that children's behavior problems have a strong genetic basis. van der Valk, van den Oord, Verhulst, and Boomsma (2003) studied maternal ratings of behavior problems in a sample of approximately 1,500 monozygotic and dizygotic twin pairs at ages three and seven years. The correlations between monozygotic twins at both ages for both internalizing and externalizing problems were higher than the correlations for dizygotic twins. These researchers also found that genetic factors accounted for 66% of internalizing problems and 55% of externalizing problems while shared environmental influences (e.g., parenting, socioeconomic status of family) accounted for 23% of internalizing problems and 37% of externalizing problems. However, teacher ratings of behavior problems suggested that genetic factors had a smaller impact. For instance, longitudinal data reported by Haberstick, Schmitz, Young, and Hewitt (2005) showed that genetic factors accounted for 28%-48% of internalizing problem behaviors and 43%-62% of externalizing problem

behaviors in monozygotic and same-sex dizygotic twins when behavior problems were rated by teachers. Children's temperament, which is known to have a strong biological basis (e.g., Kagan & Fox, 2006), has also been reported to be related to children's behavioral problems. Data from the Child Development Project (CDP), a multisite longitudinal study of a sample of 500 children's adjustment (Dodge, Pettit, & Bates, 1994) provided support for this notion. Specifically, mother and teacher data from Kindergarten to 8th grade showed that having a difficult temperament (e.g., irritability, being difficult to manage, and inflexible) in Kindergarten predicted higher internalizing symptoms in early adolescence (Keiley et al., 2003). Taken together, this body of research supports the notion that children's genetic pre-dispositions are important factors in the development of behavior problems.

Environmental Factors

In addition to genetic factors, the influence of children's environment on their behavioral adjustment has also been well-documented. According to the ecological systems theory of human development proposed by Bronfenbrenner (1979), children's development is directly or indirectly influenced by factors in their environment such as their family, school/community, and culture, although children also play an active role in shaping their own environment. Research based on this theory has provided compelling evidence that family environment plays an important role in children's development. Parenting behaviors and family stress are two areas that have been shown to be particularly important in predicting children's behavior problems.

Parenting behavior. Parenting plays an important role in a child's development (e.g., Maccoby & Martin, 1983). Diana Baumrind is a seminal researcher in the area of

parenting styles and classified parenting styles into four types, including authoritative, authoritarian, permissive, and uninvolved parenting. According to Baumrind (1991), authoritative parents are both more demanding of and more responsive to their children's needs. Examples of specific parenting behaviors include monitoring and establishing clear standards for children's conduct; being assertive, but not intrusive or restrictive; using supportive rather than punitive disciplinary methods; and having a desire for their children to be assertive as well as socially responsible, and self-regulated as well as cooperative. On the other hand, authoritarian parents are demanding but are not responsive to their children's needs. Examples of authoritarian parenting behaviors include expecting total obedience from children; providing a structured, orderly environment with clear rules; and monitoring their children's activities closely. As opposed to authoritarian parents, permissive parents are very responsive to their children's needs but are not demanding. Examples of permissive parenting include being lenient; avoiding confrontation; and allowing immature behavior and self-regulation. Uninvolved parents are neither demanding nor responsive. Examples of uninvolved parenting behaviors include a lack of structuring, monitoring, and support. These parents may also be either actively rejecting or neglecting their childrearing responsibilities. The current study will investigate the first three parenting styles, as they are the most consistently supported as distinct parenting styles in the literature.

Parenting style has been linked to children's behavior problems in the literature (e.g., Lamborn, Mounts, Steinberg, & Dombusch, 1991; Milevsky, Schlechter, Netter, & Keehn, 2007; Steinberg, Lamborn, Darling, Mounts, & Dombusch, 1994; Williams et al., 2009). The positive impact of authoritative parenting and the detrimental effects of other

parenting behaviors are well established. For instance, Lamborn, Mounts, Steinberg, and Dombusch (1991) found that authoritative parenting was related to significantly higher academic competence, higher levels of psychosocial development, and lower levels of externalizing and internalizing problems among adolescents while uninvolved parenting was associated with the highest level of internalizing problems. In a one-year follow-up study of these adolescents, Steinberg, Lamborn, Darling, Mounts, and Dombusch (1994) found that adolescents with authoritative or authoritarian parents reported less or the same amount of externalizing problems. Adolescents with indulgent parents either exhibited more externalizing problems or remained stable while the externalizing problems of adolescents with uninvolved parents increased sharply. And regardless of parenting behavior, self-reported internalizing problems remained relatively stable at a one-year follow-up. Similarly, Milevsky, Schlechter, Netter, and Keehn (2007) found that authoritative parenting was related to lower levels of depression in high school students as compared to permissive parenting. The results of these studies suggest that authoritative and authoritarian parenting lead to more optimal outcomes than uninvolved and permissive parenting.

A recent longitudinal study by Williams et al. (2009) provided evidence of slightly different relationships between parenting and behavior problems in children. Williams et al. (2009) collected data on behavior problems at ages 4, 7, and 15 years and data on parenting style at seven years of age. This study found that permissive parenting was significantly related to higher internalizing problems in preschool. But inconsistent with the previous literature, their study showed that authoritarian parenting was significantly related to higher externalizing problems in preschool and no differences in

behavior problems were found in older children between parenting behaviors. Although internalizing problems increased over time, externalizing problems decreased and there were no differences by parenting behavior when children were older. The results found in this study may be inconsistent with the literature because information on parenting behavior was only collected from mothers when children were seven years old. Since the other literature has been conducted with adolescents, parents may employ different parenting practices depending on the age of their child. More research needs to be conducted to determine the influence of different parenting behaviors for different age groups. Additionally, there may be other environmental factors influencing children's development of behavior problems.

Family stress. In existing studies, family stress is typically conceptualized as a lack of spousal support (e.g., Leve, Kim, & Pears, 2005), marital conflicts (e.g., Stadelmann, Perren, von Wyl, and von Klitzing, 2007), major life events within the family (e.g., Milan & Pinderhughes, 2006), and/or socioeconomic difficulties (e.g., Conger & Conger, 2002). Because family stress can be defined in a multitude of ways, the articles in this section were selected based upon the current study's conceptualization of family stress (e.g., major life events, inadequacies or dissatisfaction with housing, employment, social relationships, and romantic relationships).

A key source of family stress lies in marital relationships. A recent large-scale longitudinal study by Mathiesen, Sanson, Stoolmiller, and Karevold (2009) investigated the predictors of children's behavior problems from 1.5 to 4.5 years old. Using different terminology from other studies (e.g., undercontrolled problems), these researchers defined undercontrolled problems as including oppositional, irritable, inattentive, and

overactive behaviors. While this conceptualization overlaps with definitions of externalizing behavior problems, undercontrolled problems are differentiated because aggressive or destructive behaviors are excluded. Data collected from the mothers showed that stress from lower levels of support from romantic partners predicted increases in undercontrolled problems. Another study investigating the influence of marital relationships on 170 children's behavior problems (Leve, Kim, & Pears, 2005) showed that, at ages 5, 7, 10, 14, and 17, marital adjustment (e.g., satisfaction with relationship, satisfaction with expression of affection, and satisfaction with level of cohesion and consensus between marital partners) significantly correlated with internalizing and externalizing problems in childhood and adolescence. However, marital adjustment was ultimately not a significant predictor of later behavior problems. The quality of parents' relationships might also be related to the stability of romantic relationships. As part of the Fragile Families Study, Osborne and McLanahan (2007) examined data on over 2,000 mothers' number of partnership changes from their child's birth to age three. They found that partnership instability was positively associated with more externalizing (e.g., aggression) and internalizing (e.g., anxiety, depression) problems in children at age three. Using data from the multi-site National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development, Cavanagh and Huston (2008) investigated the effect of family instability (e.g., changes in parents' relationships with romantic partners living in the child's home, number of family structure transitions) from birth through the end of fourth grade on children's externalizing behavior problems in first- and fifth-grade in a sample of over 1,300 children. Findings revealed some time-specific impacts. Specifically, family

instability that only occurred in early childhood was linked to teacher-reported externalizing behavior problems in fifth-grade, while family instability that only occurred in middle childhood or in both early and middle childhood was not linked to externalizing behavior problems. The results of these studies indicate that both the quality and stability of mothers' romantic relationships are related to children's behavior problems.

Mothers' relationships in other aspects of their lives may also influence children's behavioral adjustment. As part of the National Survey of Families and Households, Vandewater and Lansford (2005) investigated the relations between mothers' satisfaction with relationships in her social network (e.g., community, friends, neighborhood) and their 12-18 year-old children's behavior problems in 755 mother-child dyads. While the mothers' satisfaction with social relationships was not related to their adolescents' behavior problems, family warmth (e.g., whether family members have fun together, show concern and love for one another, and work well together as a team) was inversely correlated with adolescents' behavior problems. Although family warmth is not an indicator of family stress, one could argue that these two constructs are inversely related (i.e., a family who experiences less stress may have more warmth). Stadelmann, Perren, von Wyl, and von Klitzing (2007) also investigated the interrelationships in families of approximately 150 Kindergarteners in terms of cohesion (e.g., how supportive family members were towards each other), expressiveness (e.g., extent to which family members expressed themselves through their actions and feelings), and conflict (e.g., amount of anger and aggression expressed in the family) and the relationship of these indicators to behavior problems. These researchers found that family conflict when children were five years old was the most significant predictor of the children's externalizing but not

internalizing problems at age six. Quite logically, the results of these studies indicate that relationships within the family may impact family stress more than the social relationships that a parent forms with individuals outside of the family.

Another family-related variable that researchers have been interested in is the influence of major life events. Milan and Pinderhughes (2006) collected data from parents of almost 400 Kindergarten through 5th grade students on family instability (e.g., number of occurrences of major life events such as a residential move, death of family member, divorce, or separation) and behavior problems (rated by parents and teachers). Findings again showed that children who experienced the most family instability exhibited higher levels of teacher-reported externalizing behaviors at school and higher levels of parent-reported externalizing and internalizing problems at home. Similarly, Keiley et al. (2003) found that major life events within the family (e.g., death of significant person, parents' divorce/separation) predicted teacher- and parent-reported behavior problems (e.g., externalizing and internalizing) in 600 children, ages five to 14 years. Marcynyszyn, Evans, and Eckenrode (2003) also found that family instability (i.e., disruptive changes), as measured with four indicators (e.g., number of primary caregiver's romantic partners, drastic changes in parents' work hours, residential moves, and transferring schools) was related to higher levels of behavior problems in adolescents. Additionally, Mathiesen et al. (2009) found that family stress stemming from problems with housing, unemployment, and poor parent health was positively correlated with internalizing problems in children. The results of these studies indicate that major life events may influence children's behavior problems.

Overall, the literature on family stress suggests that children can be exposed to various forms of family stressors. Many of these stressors have been shown to increase the children's risk for behavior problems both at home and in school. However, most of the more recent studies have examined family stress in terms of major life events. Few studies have examined the influence of other variables (e.g., parents' social and romantic relationships), with even fewer investigating a combination of these stressors. Thus, there is a gap in the literature that needs to be addressed.

Parenting as a mediator between family stress and behavior problems. To test the mediating effect of parenting behavior (B) on the effect of family stress (A) on children's behavior problems (C), researchers usually test a hypothesized model with A entered into the model as a predictor, B entered as a mediator, and C entered as an outcome. If the combined indirect effect of A and B on C is significant, results might indicate a partial mediating effect or complete mediating effect. A partial mediating effect indicates that the relationship between A and C remains significant after the mediator (B) was included. For a complete mediating effect, the relationship between A and C is no longer significant after B is included.

Few recent studies have investigated the effect of family stress on children's behavior problems as mediated by parenting behavior. Cui and Conger (2008), as part of the Iowa Youth and Families Project (IYFP), investigated potential mediating effects of parenting behavior on the relationship between marital problems (e.g., marital distress, overt conflict, conflict over parenting) and behavioral outcomes (e.g., internalizing and externalizing problems) in adolescents. Data were collected between 1990 and 1994 and these adolescents ranged in age from 12 to 14 years. In 1988, these families had a median

family income of about \$34,000 (the equivalent of a \$63,000 income in 2010; U.S. Department of Labor, Bureau of Labor Statistics, 2010). Cui and Conger (2008) found support for their hypothesis that parenting behavior acted as a complete mediator in the relationship between marital problems and both externalizing and internalizing behavior problems in adolescents. More specifically, marital distress and conflict in 1990 and 1991 were significantly related to high negative parenting behaviors (e.g., hostility and harshness) and low positive parenting behaviors (e.g., warmth, support, and effective child management) in 1992 which, in turn, were related to adolescents' externalizing and internalizing problems in 1994. These results provide strong support for parenting as a mediator in the relationship between family stress and behavior problems. A more recent study by Smith and Hancock (2010) was conducted in a sample of unique families recruited from the contiguous United States. These families were unique in that the caregivers were custodial grandparents who had been providing full-time care for their grandchildren in the absence of the children's birth parents for at least three months. The mean age for both the grandmothers and the grandfathers in this sample was in the mid-to late 50's. Smith and Hancock (2010) found that higher levels of marital distress were related to greater dysfunctional parenting (e.g., ineffective discipline, low nurturance), which was in turn associated with higher internalizing and externalizing symptoms in their custodial grandchildren. The results of this study also indicate that parenting is a mediator in the relationship between family stress and children's behavior problems. Given the paucity of recent research on the relationships among family stress, parenting behavior, and behavior problems of children, further research is warranted.

Summary

In sum, existing studies suggest that, for non-adopted children, both genetic and environmental factors contribute to their behavior problems. Due to the fact that the majority of these studies focused on children who were biologically related to the parents, the reported relations between family stress, parenting and child behavior problems might be complicated. Specifically, the biological relatedness between parents and children make it difficult to determine how parents' and children's genetic pre-dispositions might confound the reported relationship between parenting, family stress and children's behavior problems. For instance, a father who has difficulty controlling his own impulses might model this behavior to his child, indicating an environmental influence. At the same time, the child may also inherit some difficulties with impulse control, indicating a genetic influence. As a result, it is challenging to separate the effects of genetic pre-disposition and environmental influences on children's behavior problems. Although the current study is not inclusive of all possible environmental influences, studying families where the children are not biologically related to the parents (e.g., internationally adopted children) might offer further insights in the impact of children's own genetic pre-dispositions on their development of behavior problems (e.g., If a child exhibits behavior problems despite low levels of family stress and negative parenting practices and high levels of positive parenting practices). Below, research on internationally adopted children's behavior problems is reviewed, as well as the effect of pre-adoption and post-adoption factors on their behavior problems.

Internationally Adopted Children

More than 1.5 million or approximately 4% of households in the United States include at least one adopted child (U.S. Census Bureau, 2003). Approximately 258,000 of these adopted children were born in foreign countries, with over 22,000 of these children being born in China (U.S. Census Bureau, 2003). Adoptive families are unique in that adoptive parents are generally older and first-time parents (Ceballos, Lansford, Abbey, & Stewart, 2004). Additionally, according to the U.S. Census Bureau (2003), the median household income for households with adopted children under the age of 18 was approximately \$56,000, while the annual median income for households with biological children under the age of 18 was approximately \$48,000, which is an \$8,000 difference. Because of the differences in income, SES may not be as influential of a factor in the conceptualization of family stress in adoptive families. In a recent study, researchers on the International Adoption Project (Hellerstedt et al., 2008) collected demographic data from nearly 2,000 families living in Minnesota who had internationally adopted children between 1990 and 1998. In this sample, 87.2% of adoptive parents earned an annual household income of over \$50,000 and 71% of them had earned at least a bachelor's degree. Adoptive families are a unique population in that the majority of these families have higher incomes and are more educated than typical U.S. families. However, this privilege does not link directly to more optimal developmental outcomes for adoptees than for their non-adopted counterparts. Internationally adopted children face many challenges unrelated to SES.

Behavior Problems in Internationally Adopted Children

A major challenge for international adoptees that has been studied in the literature is behavior problems (Bimmel, Juffer, van IJzendoorn, & Bakermans-Kranenburg, 2003; Brodzinsky, Smith, & Brodzinsky, 1998; Glidden, 2000; Hjern, Lindblad, & Vinnerljung, 2002; Juffer & van IJzendoorn, 2005). Externalizing problems are of particular concern for international adoptees. In Brodzinsky, Smith, and Brodzinsky's (1998) review of literature, they found that the most common clinical symptoms exhibited by adopted children were externalizing in nature (e.g., ADHD, oppositional, defiant, and conduct problems, and substance abuse). Bimmel, Juffer, van IJzendoorn, and Bakermans-Kranenburg (2003) found similar results when conducting a meta-analysis of 10 studies comparing over 2,000 internationally adopted adolescents with nearly 15,000 non-adopted adolescents. Findings include that adopted adolescents exhibited significantly more externalizing behavior problems than their non-adopted counterparts but did not differ in terms of internalizing behavior problems. However, the differences in externalizing behavior were small in practical significance, suggesting that the behavior problems of internationally adopted children are comparable to that of non-adopted peers. A more recent meta-analysis by Juffer and van IJzendoorn (2005) found that adoptees exhibited more behavior problems, both externalizing and internalizing, in adolescence and were more likely to be referred for mental health services than the non-adopted comparison group. However, these researchers also found that international adoptees exhibited fewer difficulties with behavior problems than domestic adoptees. The results of these studies indicate that externalizing behavior problems appear to be more prevalent than internalizing behavior problems among international adoptees.

Hjern, Lindblad, and Vinnerljung (2002) conducted a large-scale study in which they accessed records from the Swedish Hospital Discharge Register and the National Cause of Death Register in order to determine the prevalence of attempted and successful suicides, admittance to a hospital due to the presence of a psychiatric disorder, drug and/or alcohol abuse, and crime among international adoptees in Sweden born between 1970 and 1979. Findings from this sample of over 11,000 international adoptees include that participants were three to four times more likely to have serious mental health problems (e.g., committing suicide, suicide attempts, and psychiatric admissions), five times more likely to have a drug addiction, and two to three times more likely to commit crimes or abuse alcohol than non-adopted Swedish children with similar socioeconomic circumstances. The results of this study indicate that international adoptees' behavior problems persist well into adulthood.

Overall, results from existing studies show that adopted children tend to have more externalizing problems than non-adopted children; for internalizing problems, results are mixed. Additionally, these problems may persist well into adulthood and lead to even worse outcomes (e.g., suicide attempts). Many internationally adopted children face a set of unique challenges, as there is a range of both pre- and post-adoption experiences that can impact their behavioral development. Researchers have sought to investigate the contributing factors to adoptees' behavior problems and have grouped these factors into two categories, pre-adoption experiences and post-adoption environment.

Pre-Adoption Experiences and Development

Pre-adoption experiences may include prenatal exposure to toxins, abuse and neglect, malnutrition, and institutionalization (Rutter, 2005) and relate to a number of different outcomes. These outcomes may include physical and cognitive development (e.g., Rutter, 1998), social and academic competence (Dalen, 2001; Dalen & Rygvold, 2006; Tan, 2006), and behavior problems (e.g., Verhulst, Althaus, & Versluis-den Bieman, 1992).

Physical and cognitive outcomes. A topic of interest among adoption researchers is the impact of pre-adoption experiences on both the physical and cognitive development of international adoptees. Several researchers have studied children adopted from Romanian orphanages, which are known for their poor conditions (e.g., undernourishment and lack of basic hygiene, healthcare, and social stimulation; Palacios & Brodzinsky, 2010). The English and Romanian Adoptees (ERA) study team (Rutter, 1998) investigated the impact of Romanian adoptees' history of institutionalization on their physical and cognitive development at age four who were living with adoptive families in the United Kingdom (U.K.). These children had experienced severe, early deprivation in a Romanian orphanage. Rutter studied two groups of Romanian adoptees, those who entered the U.K. before the age of 24 months and those who entered between the ages of 24 and 42 months, and compared these two groups to domestic adoptees within the U.K. While both groups of Romanian adoptees made considerable growth in physical and cognitive development by the age of four, the adoptees who were adopted earlier (i.e., before the age of six months) demonstrated larger gains than those children adopted slightly later (i.e., after the age of six months but before the age of two), when

compared to domestic adoptees in the U.K. A follow-up study of adoptees at age six (O'Connor et al., 2000) found that the Romanian adoptees caught up completely in terms of physical development, when compared to domestic adoptees in the U.K. The group of later-placed adoptees (i.e., between six and 24 months) continued to have lower cognitive scores and general developmental impairment when compared with earlier adopted (i.e., before six months) Romanian children. At a follow-up when these children were 11 years old (Beckett et al. 2006), adverse effects were still evident for children who were adopted from Romania after the age of six months. Adoptees showing substantial cognitive impairment at age six still evidenced this impairment at age 11. No differences were found at age 11 between the groups of Romanian adoptees entering the U.K. over the age of six months (i.e., six to 24 months, over 24 months). This finding indicates that, for children who were adopted after the age of six months, duration of institutional care no longer contributes to differences in cognitive ability at age 11. Overall, the findings from the ERA study demonstrate that a longer duration of institutional care (i.e., over six months) has a long-term impact on physical and cognitive development, even after living in an adoptive home for a number of years.

Pomerleau et al. (2005) similarly investigated the physical and cognitive development of more than 100 children adopted before the age of 18 months from China, other countries in East Asia, and Russia at time of arrival and then three and six months later. Results from this study indicate that all children, regardless of country of origin, had delays in physical and cognitive development upon arrival, when compared to normative growth percentiles. Additionally, the best predictors of cognitive development upon arrival were height-age ratio and age at time of arrival while the best predictors of

motor development upon arrival were height-age ratio and the absence of neurological signs. Children adopted from Russia had the lowest cognitive gains while children from other countries in East Asia had the highest gains in motor development. Cohen, Lojkasek, Zadeh, Pugliese, and Kiefer (2008) also examined the physical and cognitive development of 70 infants, ranging in age from eight to 21 months at time of adoption, who were adopted from China into Canadian families. Cohen et al. (2008) measured these outcomes upon the adopted children's arrival and at three time points thereafter (e.g., six, 12, and 24 months). Overall, the results of this study suggest that the effects from experiencing adverse pre-adoption experiences (e.g., living in an orphanage that likely does not have appropriate ratios of caregivers to children or adequate nutrition) continue to persist after adoption and influence physical development more than cognitive development. The results of these studies indicate the presence of physical and cognitive deficits at time of adoption, with greater delays later on in physical than cognitive development. These results may be inconsistent with findings from the ERA study team because physical and cognitive development were not measured in relation to length of institutional care but rather the presence of institutional care.

van den Dries, Juffer, van IJzendoorn, and Bakermans-Kranenburg (2010) also examined the physical, cognitive, and motor development of infants adopted from institutions but compared these children with ones who were adopted from foster care. The two groups were fairly comparable in size and all children were between the ages of 11 and 16 months when they were adopted. Additionally, data were collected on all children two and six months post-adoption. Similarly to the ERA study (Beckett et al., 2006; O'Connor et al., 2000; Rutter, 1998), van den Dries et al. (2010) measured height,

weight, and head circumference. Additionally, children's cognitive and motor development were assessed. The results of this study indicate that infants who are fostered fare better than infants who are in institutional care in terms of both cognitive and motor development, but not physical growth. However, regardless of group, these children are still below average in relation to non-adopted children on all measured outcomes (e.g., physical, cognitive, and motor development). The results of this study suggest that, while children who are in foster care prior to adoption have better outcomes than children who are institutionalized, both groups of children have worse outcomes than non-adopted children.

The results of these studies indicate that adverse pre-adoption experiences are related to poorer physical and cognitive outcomes, when compared to non-adopted children. Additionally, these differences may persist into early adolescence. Thus, it is important for researchers to identify influential environmental variables in order to promote optimal outcomes for adopted children. Another outcome that has been researched in relation to pre-adoption experiences is social and academic competence.

Social and academic competence. Social and academic competence are other outcomes of interest in international adoptees. Tan (2006) investigated the association between neglect during infancy and social competence in middle childhood in 115 girls who were adopted from China, of whom 31 had a history of neglect. These girls were adopted before the age of two and were between six and eight years of age at data collection. Consistent with the population of adoptive families, the parents in this sample were highly educated, middle-aged, and had a high household income. Because researchers face the challenge of accessing international adoptees' pre-adoption records,

early neglect was assessed by asking adoptive parents the certainty with which they felt their children either were not, somewhat, or severely neglected prior to being adopted. Parents were also asked whether they felt their child was neglected and were asked to substantiate these claims (i.e., professional assessment of delays in development) if they endorsed yes. Adoptees were only included if they replied yes and could substantiate the early neglect. Social competence was assessed with the Competence and Adaptation Scale of the Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach & Rescorla, 2001b). The findings from this study suggest that, even after living in a high quality, adoptive home for an average of six years, adopted girls with a history of neglect were less socially competent than adopted girls without this history. However, Tan (2009) found different results when investigating the relationship between pre-adoption adversity and long-term academic and social outcomes in a longitudinal study of 177 school-aged, adopted Chinese girls. The mean age of these children at the first wave of data collection was around nine years old and the mean age at the second wave was around 11 years old. The mean age of these children at adoption was approximately 19 months, with more than 90% of the sample being adopted before the age of 24 months. As a different measure of pre-adoption adversity, this study used retrospective parent report of developmental delays in five areas (e.g., gross motor skills, fine motor skills, social skills, emotional maturity, and cognitive skills) at adoption. Additionally, the CBCL/6-18 Social Competence and Adaptation Scale (Achenbach & Rescorla, 2001b) was used to gather parent-report data on children's academic performance. Parent ratings from the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) collected at the second wave of data collection was used to measure social skills (i.e., prosocial

behaviors) in four domains (e.g., cooperation, assertion, responsibility, and self-control). Analyses demonstrate that the relationship between developmental delays and academic performance was mediated by attention problems but developmental delays were not predictive of the total social skills score at the second wave of data collection. These inconsistent results may be explained by the fact that the latter study used indicators of pre-adoption adversity (e.g., developmental delays) rather than parent-reported suspected neglect.

Other researchers have examined pre-adoption adversity in relation to academic competence alone. Dalen (2001) compared the school performance of 193 internationally adopted children from Colombia and Korea with the performance of a matched non-adopted group of children. The researcher measured pre-adoption adversity using the age of adoption, which was collected with other demographic information. To measure academic competence, the children's teachers rated five academic areas using a five-point scale (e.g., 5 = *highest level*). For children adopted from Colombia, an older age at adoption was associated with poorer academic competence; for children adopted from Korea, academic performance was not associated with age at adoption. Overall, Korean adoptees did not differ from their non-adopted peers on measures of academic competence while Colombian adoptees scored lower. Dalen and Rvgvold (2006) compared the school performance of 77 internationally adopted children from China with a matched non-adopted sample. Using the same measures of pre-adoption adversity and academic competence as Dalen (2001), Dalen and Rygvold (2006) did not find age at adoption to have a significant impact on academic competence. They also did not find a large difference between the adopted Chinese children and the non-adopted children. A

limitation of these two studies is that the researchers did not use specific measures of pre-adoption adversity and instead relied on age at adoption as an indicator of pre-adoption adversity. Dalen (2001) posited that the quality of pre-adoption placement was more important than the age of children at adoption when determining children's later development. This researcher cites several studies indicating that age at adoption has little to no impact on later development. The results of these studies indicate that age at adoption did not influence later academic competence.

In sum, the literature is mixed on the effects of pre-adoption adversity on academic and social outcomes. Pre-adoption adversity is measured in several different ways (e.g., age at adoption, presence of developmental delays at time of adoption). While some studies suggest that pre-adoption adversity leads to diminished academic and social competence, others do not find any differences between adopted and non-adopted children on these outcomes. These differences may be due to the differing methods of measuring pre-adoption adversity. Another outcome of interest in the literature is behavior problems.

Behavior problems. A major outcome that is strongly linked to adoptees' pre-adoption experiences is behavior problems. Several studies have shown that adverse pre-adoption experiences are related to behavior problems in children and adolescents. The most common measures of pre-adoption adversity include institutional deprivation, neglect, and indicators of pre-adoption adversity at time of adoption.

Several studies have investigated behavior problems in relation to pre-adoption institutional deprivation. Ames (1997) conducted a study with children who had been adopted from a Romanian orphanage and found that one-third of the children who had

spent at least eight months in the orphanage ($n = 46$) had at least three serious problems related to psychological outcome measures, as compared with none in the comparison group ($n = 46$) and only one child in the group that was adopted early ($n = 29$). Rutter et al. (2007) summarized data from the ERA study, in which researchers collected data when international adoptees were four (Rutter, 1998), six (O'Connor et al., 2000), and 11 years old (Beckett et al., 2006) in order to research the impact of early institutional deprivation before the age of 42 months. In relation to behavior problems, the results of this study indicate that problematic behavior patterns at age six are still evident at age 11 and manifest as more of an emotional disturbance, meaning that the severity of these behaviors increased to potentially clinical levels.

As part of the International Adoption Project, Gunnar and van Dulmen (2007) also researched the impact of being reared in an institution. The sample included nearly 2,000 children ages four through 18 who were internationally adopted in the 1990's. Approximately 900 of these children had been under institutional care for at least 75% of their lives. The type and length of institutional care was measured with parent report. The CBCL/6-18 (Achenbach & Rescorla, 2001b) was used to measure behavior problems. This study found that early institutional care is related to higher rates of attention and social problems, but not to internalizing or externalizing behavior problems. This finding is inconsistent with other studies investigating institutional deprivation. However, increases in behavior problems were associated with being adopted after the age of 24 months. Because age at adoption is a logical indicator of length of institutional care, these results suggest that there may actually be a relationship between pre-adoption experiences and behavior problems. However, these constructs are so inter-related that

one cannot definitively determine their separate influences. Cederblad, Hook, Irhammar, and Mercke (1999) also investigated the behavior problems of 211 internationally adopted children at 13 to 16 years of age, with 75% of their sample from Asia and 25% from Latin America. When compared with a similar-aged youth random sample (Irhammar & Cederblad, 2000), the researchers found that the two groups did not differ significantly in terms of behavior problems. But for about 20 children who had spent at least seven months in an orphanage or foster home in their birth country, they showed greater social problems, withdrawn behavior, and attention problems. These results indicate that, in addition to experiencing externalizing and behavior problems, internationally adopted children who have experienced institutional deprivation might also experience attention and social problems.

Overall, the results of the studies investigating institutional deprivation found that this predictor impacts both externalizing and internalizing problems, with slightly stronger support for externalizing problems. In addition, two studies (e.g., Cederblad et al., 1999; Gunnar & van Dulmen, 2007) found links to attention and social problems.

Another predictor that has been studied in relation to behavior problems is neglect. A meta-analysis conducted by Juffer and van IJzendoorn (2005) reviewed several studies that were published between 1950 and January of 2005, in which adopted children's outcomes were compared to those of non-adopted children. These studies spanned all age groups (i.e., early childhood through adulthood). The researchers classified studies according to the percentage of samples that experienced extreme deprivation. If more than 50% of a sample experienced extreme deprivation (e.g., neglect, malnutrition, and/or abuse), the study was included in this review. In this review, 113

studies investigated various outcomes (i.e., 47 on total behavior, 30 on internalizing behavior, 29 on externalizing behavior, and seven on mental health referrals) of international adoptees representing many countries of origin (e.g., Romania, Russia, Korea, India, China). The results of this meta-analysis suggest that international adoptees who experienced adversity prior to adoption exhibited more total and externalizing problems than international adoptees who did not experience pre-adoption adversity but did not differ in terms of internalizing problems.

As part of the Dutch International Adoption Study, Verhulst, Althaus, and Versluis-den Bieman (1992) examined the impact of early adverse experiences on later behavior problems. In a sample of over 2,000 adoptees between the ages of 10 and 15, Verhulst et al. (1992) collected data from adoptive parents on the adoptees' background (e.g., number of changes in caretaking environment, neglect and abuse, medical conditions at age of adoption) and behavior, using the CBCL. In reference to adoptees' background, parents indicated how certain they were of the reported information and the researchers only analyzed data for those adoptees whose parents had indicated that they were confident about the background information. The variables that were most predictive of later behavior problems include early neglect and abuse and multiple changes in the caretaking environment. The researchers found that 50% of the adoptees who experienced many changes in the caregiving environment showed problem behaviors, which was defined as obtaining T scores in the clinical range on the CBCL. Additionally, neglect and abuse experienced prior to adoption seemed to increase the likelihood of adoptees' maladjustment. In this study, 24% of adoptees suffering from severe neglect showed problem behaviors and 31% of the adoptees that were severely

abused showed problem behaviors. Verhulst and Versluis-den Bieman (1995) then conducted a three-year follow-up study, in which they collected the same data on both background variables and behavior of approximately 1,500 of these adoptees between the ages of 13 and 18. They analyzed data collected with the CBCL on social competence at both time points. From initial data collection to follow-up, results indicated an increase in problem behaviors and a decrease in social competence. The problem behaviors were most pronounced for the Withdrawn and Delinquent Behavior scales. When compared to the non-adopted population, these adoptees exhibited more behavior problems. While a previous study found that early adverse experiences were related to behavior problems in early adolescence, these early experiences do not appear to directly impact increases in problem behaviors over time. Verhulst and Versluis-den Bieman (1995) hypothesize that these increases may be due to stressors related to living in their adoptive families (i.e., lack of connection with biological parents, differing ethnic background). The results from these studies suggest that early neglect is related to later externalizing and internalizing behavior problems.

Researchers have also looked at indicators of pre-adoption adversity at time of adoption as a predictor of behavior problems. Tan (2009) examined the relationship between pre-adoption adversity and behavior problems in school-age children and found that higher degrees of pre-adoption adversity were related to more internalizing and total behavior problems but not to more externalizing problems. Additionally, over a two-year period (i.e., between the ages of nine and 11), the number of children with internalizing problems was the only outcome that increased significantly. Compared to the normative sample of the CBCL/6-18 (Achenbach & Rescorla, 2001b), the prevalence found by Tan

(2009) is higher, indicating poorer outcomes in comparison to non-adopted children. In a sample of 452 girls, Tan, Marfo, and Dedrick (2010) investigated the behavior problems of preschool-aged international adoptees from China whose parents reported that their children exhibited signs and symptoms of pre-adoption adversity at the time of adoption. In an earlier study, Tan and Marfo (2006) created a list of eleven easily observable signs and symptoms (e.g., scars, delays in cognitive skills, delays in social skills, avoidance/refusal behaviors, crying/clinging behaviors) through in-depth interviews. Data were collected at two time points, once in 2005 and then again in 2007. The Child Behavior Checklist for Ages 1 ½ to 5 (CBCL/1 ½-5; Achenbach & Rescorla, 2001a) was used to measure behavior problems. The results of this study suggest that delays in social skills, avoidance/refusal behaviors, and crying/clinging behaviors at the time of adoption are the indicators of pre-adoption adversity that are the most important predictors of behavior problems. Over time, internalizing problems increased significantly while externalizing problems remained relatively stable. But compared to the normative sample of the CBCL/1 ½-5 (Achenbach & Rescorla, 2001a), the scores of the children in this sample were still much lower, indicating that, while there is a relationship between pre-adoption adversity and behavior problems in internationally adopted children, they do not have worse outcomes than non-adopted children. The results of these studies suggest that indicators of pre-adoption adversity at time of adoption are related to internalizing but not externalizing problems over time.

While most studies have investigated the impact of early adversities on behavior problems in childhood and adolescence, van der Vegt et al. (2009) investigated the long-term effects of international adoptees' early adversities on the development of psychiatric

disorders in adulthood. Early adversities were assessed with questions concerning abuse (mostly physical), neglect, and number of placements and mental health problems were assessed with The Child Behavior Checklist for Ages 4 to 18 (CBCL/4-18; Achenbach, 1991) at Time 1 (i.e., 1986) and Time 2 (i.e., 1989-1990). Additionally, home interviews were conducted to determine psychiatric diagnoses at Time 3 (i.e., 1999-2002). The mean age of the participants was approximately 12 years at Time 1, 16 years at Time 2, and 26 years at Time 3. The results of this study suggest that children who have experienced multiple adversities at an early age may be at an increased risk of developing anxiety disorders or substance abuse/dependence as an adult. The findings from these studies demonstrate that adverse experiences prior to adoption may continue to exert influence on behavior problems well into adulthood.

In sum, existing studies have found that a variety of adverse pre-adoption experiences (e.g., institutional deprivation, neglect, abuse, etc.) increase the risk for later behavioral problems in international adoptees. Many studies investigating pre-adoption experiences use parent report to collect information on adoptees' background. While researchers have collected these data with methodological rigor, researchers are limited by the fact that adoptive parents are usually the only informants. However, there is a consensus among researchers that adverse pre-adoption experiences impact children's behavior problems. The majority of the literature supports links to both externalizing and internalizing problems.

Post-Adoption Environment and Children's Behavior Problems

Although the post-adoption environment of adoptees has not been studied as extensively as pre-adoption experiences, adoptees and adoptive families still face many

challenges after adoption. These challenges include transitioning to adoptive parenthood (McKay & Ross, 2010) and adoptees' confusion of identity (Brodzinsky, Radice, Huffman, & Merkler, 1987; Westhues & Cohen, 1998).

The transition to adoptive parenthood is challenging because of the fear and anxiety associated with being a new parent, the lack of information about or experiences with children, and isolation/lack of social support (McKay & Ross, 2010). In addition, adoptees may experience difficulty adapting to their new family. Brodzinsky, Radice, Huffman, and Merkler (1987) describe the school-age developmental period as the time when adoptees generally become more aware of the meaning of adoption. Brodzinsky et al. (1998) indicate that adoptees are particularly sensitive to their adoption when they are around six to seven years of age. Around this time, adoptees experience confusion, ambivalence, and loss because they discover that belonging to a family typically implies biological links with parents (Brodzinsky et al., 1987). International adoptees especially feel this confusion because they are from a different culture than their adoptive parents and likely look different than their parents. Particularly when children are adopted later in life, family life is a challenge because adoptees either may have never developed secure attachments due to multiple foster placements or might have to sever previously established attachments (Brodzinsky et al., 1987). Ceballo, Lansford, Abbey, and Stewart (2004) reported that, on average, adoptive parents are older, first-time parents. Because of their age, these parents lacked the social support that comes along with being a parent because they found it difficult to relate to their child's peers' parents, of whom the majority was considerably younger. In addition, because of their older age, these adoptive parents' own parents were also older grandparents and not as able to assist with

caregiving responsibilities as younger grandparents. These challenges may serve as additional sources of stress for adoptive parents.

While family stress has been researched extensively in the general population, there are no studies examining the impact of family stress on the behavior problems of internationally adopted children. In reviewing the international adoption literature, it is evident that researchers are more interested in parenting stress (i.e., stress that is more specifically related to parent-child relationships) and how adoptees' behavior problems contribute to adoptive parents' level of parenting stress (Judge, 2003; Miller, Chan, Tirella, & Perrin, 2009; Rijk, Hoksbergen, ter Laak, van Dijkum, & Robbroeckx, 2006; Viana & Welsh, 2010). Although adoptive families are not as vulnerable to economic hardship, Tan, Camras, Deng, Zhang, and Lu (2012) assert that these families are still likely to experience other common sources of life stress (e.g., dissatisfaction with work and romantic relationships).

In addition, adoptive families are likely to face adoption-related stressors that typical families will not face. Palacios and Sanchez-Sandoval (2006) describe various adoption-related stressors, which include disappointment because of infertility, issues related to the adjustment of having a new child in the home, and deciding when and how to communicate details of the adoption to the adopted child. Palacios and Sanchez-Sandoval (2006) delve into greater detail on two variables that are reportedly not usually researched in regards to adoptive parents' stress: acknowledgment of differences and parenting behaviors. "Acknowledgement of differences measures the extent to which parents believe their families are absolutely similar to other families in the larger society (rejection or denial of differences) or, on the spectrum's opposite pole, that the adoptive

form introduces unique challenges that separates it from other family configurations in the culture (acknowledgement of differences)” (Palacios & Sanchez-Sandoval, 2006, p. 482). Parents who acknowledge these differences may talk more openly about adoption while parents who reject or deny these differences talk less openly about it. While it may seem that acknowledging differences is more adaptive than denying them, Palacios and Sanchez-Sandoval (2006) assert that acknowledging differences is maladaptive when parents use it to justify any problems that the family might be experiencing, even those that are typical family stressors.

Regarding how parenting behaviors impact levels of family stress, past research has indicated that, in the general population, parents who are more of a disciplinarian and are less nurturing experience higher levels of parental stress (Anthony et al., 2005). In sum, while adoptive families do not typically experience economic distress, they experience a myriad of family stressors, some of which are similar to typical families and others that are more unique to this population.

Adoptive parenting in families with internationally adopted children is an area that is very understudied. There is only one published study specifically investigating parenting practices (e.g., Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2005). These researchers investigated the effect of an intervention aimed to enhance mothers’ sensitive responsiveness because of previous literature suggesting that having a disorganized attachment style is a risk factor for later externalizing behavior problems (e.g., Lyons-Ruth, Easterbrooks, & Cibelli, 1997). The sample consisted of 130 families, of whom 90 had only one adopted child, while the other 40 had both birth children and an adopted child. All the parents were Caucasian and predominantly upper middle-class. The

children were adopted internationally from one of three countries (e.g., Sri Lanka, South Korea, and Colombia) and entered the adoptive home before the age of six. The results of this study indicate that the intervention with two components (i.e., use of personal book and video feedback) was related to higher levels of maternal sensitive responsiveness. The children of the mothers in this treatment group were also less likely to be classified as having a disorganized attachment at the age of 12 months than those children in the control group. These results indicate that more sensitive and cooperative parenting practices may relate to better outcomes for children (e.g., attachment), which may influence later behavior problems.

In sum, extensive research has been conducted on the relationship between adoptees' pre-adoption experiences and behavior problems. However, there is little research on the impact of the post-adoption environment on internationally adopted children's behavior problems. As discussed previously, family stress and parenting behavior certainly impact many developmental outcomes in the general population and may also be instrumental in adoptees' behavior problems. Thus, there is a gap in the literature regarding the relationship between family stress and international adoptees' behavior problems.

Conclusions

The literature supports that a child's environment has a clear influence on his or her development. Family variables in particular, given their proximity to the child in Bronfenbrenner's (1979) ecological model, are of interest. Because of the high prevalence of behavior problems, it is important for researchers to study its correlates (e.g., family stress, parenting behavior). Most of the research in this area has been

conducted with the non-adopted population. There is little research investigating the relationships between family stress, parenting behavior, and behavior problems in adoptive families. The adoption literature is clear in that both early experiences and the current environment might contribute to the development of behavior problems and uses this theory as a framework for conducting research on adoptees' behavior problems. Conducting research with adoptive families is similar to a natural experiment in that it provides researchers with the opportunity to examine how much of an influence a child's genetics can have on his or her later behavioral adjustment.

The purpose of the current study was to investigate (1) the relationship between family stress and adopted Chinese children's behavior problems, (2) the relationship between parenting behavior and the adopted children's behavior problems, and (3) the role of parenting behavior as a possible mediator in the relationship between family stress and the adopted children's behavior problems.

CHAPTER III: Method

The present study assessed the interrelationships among family stress, parenting behavior, and behavior problems in school-age internationally adopted girls from China. More specifically, this study examined the separate relationships of family stress and parenting behavior to behavior problems. In addition, the present study sought to determine whether parenting behavior mediated the possible relationship between family stress and behavior problems. The primary variables under investigation include family stress, parenting behavior (e.g., authoritative, authoritarian, permissive), and behavior problems (i.e., internalizing and externalizing behavior problems). This chapter describes the participants, setting, instrumentation, independent and dependent variables, procedures, and data analyses utilized within the current study.

Participants

The current study is a secondary data analysis. The sample for the current analysis was drawn from the most recent phase (i.e., Phase 3) of a large-scale, longitudinal prospective study on the development of children adopted from China. The data were provided to this researcher by the principal investigator of the aforementioned study. In this larger study, data were collected from the adoptive parents in each phase of the study.

Participant Selection

Participants in Phase 1 (i.e., baseline) of the study were recruited through 120 Internet discussion groups and six adoption agencies in early 2005. Surveys were mailed to 1,092 families in Canada and 49 of the 50 states in the U.S. to collect data on children's behavior problems, together with demographic data on the children and the adoptive family, as well as contact information (e.g., email address and phone number of both the respondent and a back-up contact). Completed surveys from 853 families (78.1%) with 1,121 Chinese children were returned. In Phase 2 (i.e., 2007), 780 of the families were successfully contacted and data were obtained from 675 families (86.5%) with 882 children, using the same method as in 2005. In Phase 3 (i.e., 2009), 662 families were successfully contacted. Among them, 15 families had not participated in Phase 2 due to a temporary disruption of contact. The contacted families were emailed an Internet link to the full survey on the Survey Monkey website to complete. Completed surveys were submitted through the Internet from 605 families (91.4%) with 848 children adopted from China. To compare families who completed surveys at all three phases of the study and those who did not participate in the last phase, *t* tests were used on the following variables: the adopted child's age at adoption and age at data collection; the adoptive mother's age and education level; the spouse's age; the family's household income; and child T-scores on the CBCL/6-18 Internalizing and Externalizing summary scales. The majority of results of these *t* tests showed that there were no significant differences ($p > .05$) between families who completed surveys at all three phases of the study and those who only participated in the first two waves of data collection. However, one *t* test (i.e., the child's age at phase 2) was significant, suggesting that the children

from families who only participated in the first two phases were significantly younger than the children from families who participated in all three phases. These means are shown in Table 1.

Table 1. Comparison of Participants from Different Research Phases

| | n | Mean | SD | <i>t</i> value |
|--------------------------------|-----|-------|------|----------------|
| Age of Mother | | | | |
| Phase 1 & 2 Only | 80 | 43.33 | 6.38 | -1.64 |
| All Phases | 530 | 44.46 | 5.92 | |
| Age of Spouse | | | | |
| Phase 1 & 2 Only | 62 | 44.51 | 7.96 | -1.26 |
| All Phases | 387 | 45.70 | 7.14 | |
| Mother's Education | | | | |
| Phase 1 & 2 Only | 80 | 3.51 | 0.98 | -1.18 |
| All Phases | 530 | 3.63 | 0.93 | |
| Family's Income | | | | |
| Phase 1 & 2 Only | 80 | 9.49 | 3.67 | 0.19 |
| All Phases | 530 | 9.41 | 3.91 | |
| Child's Age at Adoption | | | | |
| Phase 1 & 2 Only | 119 | 3.64 | 0.56 | -1.70 |
| All Phases | 750 | 3.76 | 0.75 | |
| Child's Age at Phase 2 | | | | |
| Phase 1 & 2 Only | 131 | 6.58 | 2.88 | -2.20* |
| All Phases | 773 | 7.19 | 2.94 | |

Table 1 (cont.)

| | | | | |
|-----------------------------------|-----|-------|-------|------|
| Internalizing Problems at Phase 2 | | | | |
| Phase 1 & 2 Only | 131 | 49.34 | 9.93 | 0.10 |
| All Phases | 773 | 49.43 | 9.94 | |
| Externalizing Problems at Phase 2 | | | | |
| Phase 1 & 2 Only | 131 | 45.90 | 11.45 | 0.05 |
| All Phases | 773 | 45.85 | 10.66 | |

Note. * $p < .05$

Sample Selection Criteria for Current Analysis

The current analysis focused on families with school-age children. School-age was defined as a parent-reported age between six and 18 years old. Among the 605 families, there were 782 school-age children from 531 families. Of these 782 children, 98 were removed from analyses because they were biological children, leaving 648 girls and 36 boys. The other families consisted of preschool children whose ages ranged from 1.3 years to 5.9 years old ($M = 5.1$, $SD = 0.8$). Families with one school-age child represent a majority of the sample ($n = 328$), followed by families with two school-age children ($n = 162$), families with three school-age children ($n = 35$), families with four school-age children ($n = 5$) and only one family had five school-age children. As most of the boys were adopted as special needs children, they were excluded from the analyses. To address the dependence in the data created by having some families with two or more children in the sample, the researchers planned to randomly select one child from families with more than one school-age girl for data analyses. However, the results

were similar when analyses were conducted with the full dataset (i.e., all school-age girls) and then with a reduced dataset (i.e., one school-age girl from each family). Also, in examining the sample of school-age girls, a minor proportion (i.e., 26%) of the families had more than one school-age girl so the data for all the school-age girls were maintained for data analyses. Thus, the total number of families in the sample used for data analyses was reduced to 483 families (648 school-age girls) residing in Canada and 49 U.S. states. As of 2009 (Phase 3), these girls' ages ranged from 6.0 years to 17.8 years ($M = 9.37$, $SD = 2.72$) and their ages at adoption ranged from 3 months to 133 months ($M = 15.42$, $SD = 13.32$) or 11.08 years. Adoptive mothers' ages averaged 44.91 years ($SD = 5.79$), with 587 (91.4%) mothers reporting obtaining at least a bachelor's degree. Additionally, just over 50% of adoptive families reported that they earned an annual income of \$90,000 - \$150,000 or more.

Measures and Procedures

In the current phase of the study, the adoptive mothers completed the following measures through an online survey created by the researchers using the Survey Monkey website: Social Problem Questionnaire (SPQ; Corney & Clare, 1985), Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandlco, Olsen, & Hart, 2001), the Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach & Rescorla, 2001b), and the Recent Life Changes Form (Tan). Depending on mothers' responses to various questions (e.g., how many parents currently in household, number of children in household, child's age), mothers were automatically routed to one of several forms of the SPQ (e.g., four forms) and PSDQ (e.g., eight forms). When mothers reported that they had more than one child in their household, they were automatically routed to additional

copies of the CBCL/6-18 to complete for each of their children. An explanation of the criteria used to route respondents to different forms is provided in each survey's respective section.

Social Problem Questionnaire

Family stress was described as problems and difficulties experienced by the adoptive family. The Social Problem Questionnaire (Corney & Clare, 1985) is a 33-item validated measure that is widely used to assess family stress. The current study used a revised version of the SPQ (see Appendix A for the form used for two school-age children) that excluded seven items asking about legal troubles and living alone since they did not apply to the participants in this sample. Thus, the examiners were left with the remaining 26 questions to assess the adoptive families' level of family stress. The current study created four forms (e.g., one school-age child, two school-age children, etc.) and parents were routed to one of these forms depending on their response to a question asking about the number of adoptive children in the household. This measure asks parents to rate, on a four-point scale, whether they experienced inadequacies, difficulties, or dissatisfactions in each of the following six areas: Housing Problems (two items—1-2; e.g., whether the housing condition was adequate for the family's needs), Employment-related Difficulties (five items—3-7; e.g., satisfaction with present job or difficulty finding a job), Financial Problems (three items—8-10; difficulties meeting bills and other financial commitments), Social Difficulties (six items—11-16; e.g., problems with friends/relatives), Marital/Relationship Problems (seven items—17-23; e.g., difficulties confiding to spouse/partner), and Difficulties in Coping with Children (three items—24-26; e.g., difficulties coping with children's behavior problems and learning

challenges). The exact anchors on each scale varied by question but across all items, higher scores indicated greater family stress (i.e., inadequacies, difficulties, or dissatisfaction). The majority of the questions were close-ended with four of the questions providing opportunities for open-ended elaboration. The following special considerations were taken into account: parents who were single but not dating were not scored for the Marital/ Relationship Problems subscale and parents who were unemployed were coded as not applicable. Items coded as not applicable were excluded when calculating average composite scores.

The SPQ yields a Total Stress score, calculated by averaging across all applicable item ratings for each family. A non-child-related stress (NCR-Family Stress) score was also created, calculated by averaging across all applicable items with the exception of the Difficulties Coping with Children subscale to avoid confounding family stress scores and child behavioral outcomes measures in analyses.

Regarding support for the psychometric properties of the SPQ, Tan et al. (2012) found internal consistency reliabilities ranging from moderate (e.g., Social Difficulties $\alpha = .52$) to high (e.g., Employment-related Difficulties $\alpha = .87$) in a sample of 133 adoptive mothers of preschoolers. In regards to test-retest reliabilities, Piccinelli (1997) found coefficients ranging from .30 (Marital/ Relationship Problems) to .84 (Housing Problems). The one-week test-retest reliability for the Total Stress score was .77 (Piccinelli, 1997). Corney, Clare, and Fry (1982) measured the construct validity of the SPQ by comparing it to the Social Maladjustment Schedule (Clare & Cairns, 1978), which is a structured interview used to obtain ratings of satisfaction in multiple domains (e.g., marital and family relationships, housing, employment). They found adequate

convergent validity, with coefficients ranging from .42 (quality of relationships with relatives) to 1.0 (e.g., satisfaction with unemployment).

Parenting Styles and Dimensions Questionnaire

The Parenting Styles and Dimensions Questionnaire (PSDQ-short version; Robinson, Mandleco, Olsen, & Hart, 2001) is a 32-item measure in which respondents rate the applicability (for themselves and their spouse) of statements describing parenting behaviors (e.g., “I am responsive to my child’s feelings and needs”) using a 5-point scale (1 = *Never*, 2 = *Once in a While*, 3 = *About Half of the Time*, 4 = *Very Often*, 5 = *Always*). The current study created eight forms of the PSDQ (e.g., single-parent household and one school-age child, two-parent household and one school-age child, single-parent household and two school-age children, etc.) and parents were routed to the appropriate form depending on their response to questions asking about the number of parents in the household and how many adoptive children were living in the household. The form of the PSDQ for two school-age children is included in Appendix B. Question stems differed depending on the form that the parent encountered (e.g., “...responsive to my child’s feelings and needs...” for the one school-age child form and “...responsive to our children’s feelings and needs...” for the two school-age children form). The respondents rated the applicability of the statements separately for him or herself for each child and then his or her perception of his or her spouse’s rating for each child. Given that the majority of respondents were adoptive mothers, the current analysis only examined mothers’ self-reported parenting behaviors. All items on the PSDQ are close-ended and this measure yields scores on three parenting style scales: Authoritative (15 items), Authoritarian (12 items), and Permissive (five items). Higher scores on each scale

indicate that the respondent exhibits parenting behaviors consistent with that parenting style. The Authoritative parenting scale is comprised of three subscales: Connection, Regulation, and Autonomy Granting. The Connection subscale (five items; item numbers 1, 7, 12, 14, & 27) is characterized by a high degree of warmth, nurturance, sensitivity, and acceptance. The Regulation subscale (five items; item numbers 5, 11, 25, 29, & 31) refers to placing consistent limits on child's behavior by establishing rules using inductive reasoning and establishing consequences for undesirable behavior. The Autonomy Granting subscale (five items; item numbers 3, 9, 18, 21, & 22) describes a high degree of psychological freedom and interactions between parents and children that are bidirectional and more democratic. The score on the Authoritative parenting scale is the mean of items on the Connection, Regulation, and Autonomy Granting subscales. The Authoritarian parenting scale is also comprised of three subscales: Physical Coercion, Verbal Hostility, and Punitive/Non-Reasoning. The Physical Coercion subscale (four items; items numbers 2, 6, 19, & 32) describes using physical punishment and force (e.g., spanking) to control or discipline the child. The Verbal Hostility subscale (four items; item numbers 13, 16, 23, & 30) refers to the use of an abusive, hostile manner to control, discipline, or intimidate the child. Lastly, the Punitive/Non-Reasoning subscale (four items; item numbers 4, 10, 26, & 28) refers to punishing children without any justification or plausible reasoning. The score on the Authoritarian parenting scale is obtained from the means of items comprising the Physical Coercion, Verbal Hostility, and Punitive/Non-Reasoning subscales. The Permissive parenting scale includes only an Indulgent parenting subscale (five items; item numbers 8, 15, 17, 20, & 24), which refers to being lenient, giving in easily to children's demands, and tolerating behaviors that are

more externalizing in nature. The PSDQ yields a composite score for each parenting style scale, calculated by averaging across all applicable item ratings on a particular scale for each family. Items on which there was missing data were not included in this mean.

According to Locke and Prinz (2002), the Parenting Practices Questionnaire (PPQ)/PSDQ is considered one of the few psychometrically defensible instruments available for assessing parenting behaviors. The PSDQ-short version is widely used and has adequate reliability and validity. Regarding support for reliability, internal consistency reliabilities reported by Robinson et al. (2001) on each subscale were high (e.g., Authoritative $\alpha = .86$; Authoritarian $\alpha = .82$; Permissive $\alpha = .64$). Regarding support for validity, Wu et al. (2002) conducted a multi-sample confirmatory factor analysis with over 500 U.S. mothers and found high inter-correlations for each sub-factor of the Authoritative subscales (e.g., Warmth/acceptance = .56, Reasoning/induction = .72, Democratic participation = .76) and each sub-factor of the Authoritarian subscales (e.g., Physical coercion = .80, Verbal hostility = .72, Non-Reasoning/Punitive = .60). Although these researchers did not conduct factor analyses for the Permissive subscale, Coolehan, McWayne, Fantuzzo, and Grim (2002) conducted confirmatory factor analyses on a modified, earlier version of the PSDQ (e.g., Parenting Behavior Questionnaire-Head Start) and found factor loadings for the Permissive subscale ranging from .43 (e.g., parent reported not knowing what to do when child acted up in public) to .68 (e.g., parent reported not following through when telling child that he or she would be punished).

Child Behavior Checklist for Ages 6 to 18

The Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach & Rescorla, 2001b) is a widely used broadband parent measure of children's behavior

problems that can be used for children 6-18 years old. The CBCL/6-18 is not included as an Appendix due to copyright restrictions. The CBCL/6-18 asks parents/caregivers to rate 118 items describing specific child problem behaviors on a 3-point scale (0=*not true*, 1=*somewhat or sometimes true*, 2=*very true or often true*) with higher scores indicating greater behavior problems. Parents were automatically routed to additional copies of the CBCL/6-18 depending on their response to a question asking about the number of adoptive children in the household. The CBCL/6-18 yields multiple summary scales, two of which were utilized in the current analyses (e.g., Internalizing Problems and Externalizing Problems). The Internalizing Problems summary scale is composed of items from the Withdrawn/Depressed (eight items; i.e., symptoms related to depression, withdrawal), Somatic Complaints (11 items; i.e., physical symptoms with no known medical cause and physical complaints of experiences such as nightmares, dizziness, and fatigue that may result from underlying mood problems), and Anxious/Depressed (14 items; i.e., symptoms of general anxiety and depression as well as social anxiety and phobias) syndrome scales for a total of 33 items. The Externalizing Problems summary scale is composed of items from the Rule-Breaking Behavior (16 items; i.e., deviant or risky behaviors) and Aggressive Behavior (17 items; i.e., typically aggressive behavior and socially maladaptive behaviors) syndrome scales for a total of 33 items. Higher scores on these summary scales indicate more adjustment difficulties or behavior problems. T-scores on the CBCL/6-18 were used in data analyses.

Regarding psychometric properties, the internal consistency reliabilities of the summary scales on the CBCL/6-18 are high. Achenbach and Rescorla (2001b) found high alphas for each summary scale (e.g., Internalizing $\alpha = .90$, Externalizing $\alpha = .94$).

Dedrick, Tan, and Marfo (2008) also examined the internal consistency reliabilities in a sample of over 500 girls adopted from China and found adequate alpha levels (e.g., Internalizing $\alpha = .82$, Externalizing $\alpha = .87$). In terms of construct validity, Achenbach and Rescorla (2001b) conducted confirmatory factor analyses and found high mean factor loadings for the subscales (e.g., Anxious/Depressed = .81, Withdrawn/Depressed = .60, Somatic Complaints = .54) composing the Internalizing summary scale and for the subscales (e.g., Rule-Breaking Behavior = .72, Aggressive Behavior = .90) making up the Externalizing summary scale. Dedrick et al. (2008) similarly conducted a confirmatory factor analysis and found even higher mean factor loadings for the Internalizing (e.g., Anxious/Depressed = .86, Withdrawn/Depressed = .81, Somatic Complaints = .73) and Externalizing (e.g., Rule-Breaking Behavior = .88, Aggressive Behavior = .98) subscales.

Recent Life Changes Form

The primary investigator of the larger longitudinal study from which the current data were drawn created the Recent Life Changes Form as a way to describe the stability of the home environment of the families in the sample. In the current study, adoptive mothers were asked to indicate if their family had experienced any changes since Phase 2 of the study. The six questions posed to the mothers are included in Appendix D. The first four items asked about life changes in specific areas, which include employment, residence, marital/relationship status, and health conditions. The fifth item asked adoptive mothers if they had adopted more children since Phase 2. The sixth and final item was open-ended and asked the adoptive mothers to list additional changes. Most respondents did not complete this open-ended question and responses were coded as one change whether they reported one or multiple additional changes. Scores on the Recent Life

Changes Form ranged from 0 to 6 and the total number of changes (e.g., out of a possible six) were used as an indicator of the stability of the adoptive home. Because this form was created for the purpose of the larger study, there is no pre-existing support for validity or reliability.

Statistical Analyses

A number of statistical analyses were conducted in order to answer the research questions posed in this study. SPSS 19.0 statistical software was used to answer the first two research questions, and *Mplus* 6.0 was used to answer the last research question. *Mplus* 6.0 was used to analyze the last research question because it provides a standard error for indirect effects when conducting path analyses. Additionally, *Mplus* 6.0 uses full information maximum likelihood estimation (FIML) while SPSS 19.0 uses listwise deletion. FIML is a more desirable method of estimating missing data because it maximizes the likelihood of the model with the observed data while listwise deletion removes cases when there is a missing value on any variables included in analyses.

Descriptive Analysis

Before conducting any analyses, the data were screened in order to detect the presence of outliers. Means, standard deviations, and normality data (e.g., skewness, kurtosis) were obtained for the following key variables: family stress (SPQ; Recent Life Changes Form), authoritative, authoritarian, and permissive parenting (PSDQ), and children's internalizing and externalizing behavior problems (CBCL/6-18). These descriptive statistics are later presented in order to provide a context for subsequent statistical analyses. Cronbach's alpha values were also calculated to determine the internal consistency of each subscale used in data analyses with this sample.

Preliminary Analyses

Next, correlational analyses were conducted between demographic variables and variables of interest in order to identify possible covariates and control for these covariates in subsequent analyses. These analyses revealed that three demographic variables (i.e., mother's age, recent life changes, adopted child's age) had small but significant correlations with internalizing and/or externalizing behavior problems. Household income and mother's education level were also included because they appear to be conceptually related to children's behavior problems. Additionally, the adopted child's age at adoption was included as a covariate because of a precedent in doing so in the existing literature. Thus, a total of six variables were included as covariates in the path analyses for Research Question 3.

Research Question 1

What is the nature of the relationship between family stress and adopted Chinese girls' behavior problems?

To determine the nature of the relationship between family stress and adopted Chinese girls' behavior problems, Pearson r correlation coefficients were calculated to investigate the direction and strength of the bivariate relationships between family stress and behavior problems. Specifically, correlations between the six areas of family stress and children's internalizing and externalizing CBCL/6-18 scores were examined. An alpha level of .05 or lower was assumed to be indicative of a statistically significant result. Values that were significantly positive indicated that more stress was related to more behavior problems, while values that were significantly negative indicated that more stress was related to fewer problems. Using Cohen's (1988) guidelines for

interpreting the size of a correlation, values ranging from .10 to .29 were considered small, values ranging from .30 to .49 were considered medium, and values ranging from .50 to 1.00 were considered large. Positive values indicate positive relationships while negative relationships indicate inverse relationships.

Research Question 2

What is the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems?

To determine the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems, Pearson r correlation coefficients were calculated to further investigate the direction and strength of the bivariate relationships between parenting behaviors and behavior problems. Specifically, correlations between the three types of parenting (e.g., authoritarian, authoritative, permissive) and children's internalizing and externalizing CBCL/6-18 scores were examined. An alpha level of .05 or lower was assumed to be indicative of a statistically significant result. Values that were significantly positive indicated that higher endorsement of a particular type of parenting behavior was related to more behavior problems or that lower endorsement of a particular type of parenting behavior was related to less behavior problems, while values that were significantly negative indicated that higher endorsement of a particular type of parenting behavior was related to less behavior problems or that a lower endorsement of a particular type of parenting behavior was related to more behavior problems. Using Cohen's (1988) guidelines for interpreting the size of a correlation, values ranging from .10 to .29 were considered small, values ranging from .30 to .49 were considered medium, and values ranging from .50 to 1.00 were considered large. Positive values

indicated positive relationships while negative relationships indicated inverse relationships.

Research Question 3

To what extent does parenting behavior mediate the relationship between family stress and adopted Chinese girls' behavior problems?

To determine the extent to which parenting behavior mediated the relationship between family stress and children's behavior problems, path analyses were conducted. A total of six models (e.g., family stress as predictor, three types of parenting behaviors as mediators, and two types of behavior problems as outcomes) were tested using path analyses. Additionally, the following variables were identified as covariates and controlled for in analyses: household income, the number of recent life changes, mother's age, mother's education level, the adopted child's age at adoption, and the adopted child's current age.

The models used in the current study were fully saturated, in that each parameter value could be obtained from the implied covariance matrix in only one way (i.e., degrees of freedom = 0). Thus, the model fit was perfect in each tested model and the results from each of these models are interpretable.

For each path model (Models A-F), standardized coefficients (β), standard errors (SE), and R^2 values were obtained. An alpha value of .05 or lower was assumed to be indicative of a statistically significant result. In examining the total indirect effect for each model, a standardized coefficient with an alpha level of .05 or lower was assumed to indicate whether the proposed mediator (e.g., type of parenting behavior) in the model was a mediator of the relationship between the proposed predictor (e.g., family stress)

and outcome (e.g., type of behavior problems). If the indirect effect was significant, the direct effect between the proposed predictor and outcome was examined to determine whether the mediator in the model completely or partially mediated the relationship. If the alpha level of the standardized coefficient for the direct effect was significant, the mediator in the model was considered a partial mediator. If the alpha level of the standardized coefficient for the direct effect was not significant, the mediator in the model was considered a complete mediator. In examining the R^2 values for each endogenous variable, an alpha level of .05 or lower indicated that, when controlling for covariates, the model explained the proportion of variance in that variable. In the next chapter, the results of the preliminary analyses are presented, followed by the results for each research question.

CHAPTER IV: Results

The results presented in this chapter address the following three research questions:

1. What is the nature of the relationship between family stress and adopted Chinese girls' behavior problems?
2. What is the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems?
3. To what extent does parenting behavior mediate the relationship between family stress and adopted Chinese girls' behavior problems?

First, the results of data screening, descriptive statistics for demographic variables and other key variables, followed by correlations between these variables are presented. Then, results of correlational analyses among the key variables are reported. Finally, the results of path analyses to determine the extent of a possible mediating effect of parenting behavior with six different models between family stress and behavior problems are presented.

Data Screening

Descriptive analyses were conducted to screen the data in order to (a) ensure that the values fell within expected ranges, (b) assess the normality of distributions by examining skewness and kurtosis, and (c) examine outliers.

First, the minimum and maximum values for all variables were examined to ensure that the values fell within expected ranges. No values outside of the expected ranges were obtained.

Next, the normality of distributions was evaluated by examining the skewness and kurtosis values for each variable. To determine the distribution normality of the variables, a criterion of ± 3 was used, which was proposed by Tabachnick and Fidell (2006) as an acceptable range for skewness and kurtosis values in studies with larger sample sizes. Using this criterion, all but three of the variables (i.e., SPQ Housing Problems, Financial Problems, and Difficulties in Coping with Children) were approximately normally distributed. In order to correct the non-normality of the three remaining variables, each variable was first log transformed and then these transformed variables were used when analyses were re-run. Results obtained using the transformed variables did not differ from results obtained when the untransformed variables were used. Thus, the untransformed variables were used in subsequent analyses. Prior studies in the China adoption literature suggest that age at adoption (AAA) does not typically form a normal distribution and that the transformed variable be used in analyses (Tan & Marfo, 2006). The skewness (e.g., 4.78) and kurtosis (e.g., 28.60) values of the untransformed variable fell beyond the criterion of ± 3 . Once transformed, the skewness value (e.g., 1.56) fell within the acceptable range but the kurtosis value (e.g., 4.18) did not. Again, using the log function, analyses were re-run with the transformed variable to address potential non-normality. Although there were also no differences in results between the analyses with the transformed AAA variable and the analyses with the untransformed AAA variable, the transformed variable was used in order to stay consistent with existing literature. In sum,

the untransformed versions of the three non-normal variables (i.e., SPQ Housing Problems, Financial Problems, and Difficulties in Coping with Children) and the transformed version of age at adoption was used in all subsequent analyses.

Additionally, the data were screened to detect univariate and/or multivariate outliers. To detect univariate outliers, z scores were created for each variable and a criterion of ± 3 was used to signify an outlier. Univariate outliers were found for 10 variables (e.g., age at adoption, child's age, recent life changes, internalizing behavior problems, externalizing behavior problems, authoritative parenting, authoritarian parenting, permissive parenting, and non-child related family stress). However, only a small number of cases for each variable were identified as univariate outliers, ranging from one to fifteen cases, with the largest z score being -5.93 for authoritative parenting. Additionally, no data entry errors were detected, as the raw values for each of these cases were within the range of possible scores for each variable. Data analyses were conducted both with and without these outliers and the results did not change. Thus, the univariate outliers were included in subsequent data analyses.

Finally, data were also screened to detect multivariate outliers. Using the "normtest" function in SPSS, which identifies the cases with the largest Mahalanobis distance scores, five cases were identified. None of these cases were detected as a univariate outlier in previous analyses. Because no data entry errors were detected (i.e., the raw data for each of these cases fell within the range of possible scores for each variable), the multivariate outliers were included in subsequent data analyses.

Descriptive Statistics

Data were collected from 782 school-age children from 531 families. After excluding boys, biological children of the adoptive parents, and participants who had missing gender data, 648 school-age girls from 483 families remained. Preliminary data analyses with one child randomly selected from each family yielded similar results. Thus, all data for 648 children were included in the analysis. On the Recent Life Changes form, the percentage of respondents who reported changes ranged from 2.9% (e.g., marital/relationship status) to 24.7% (e.g., other change) with an overall average of 13.1%, which suggests that the home environments of the participants in this sample were relatively stable. Table 2 presents descriptive statistics for the key variables.

Table 2. Cronbach's Alpha, Means, Standard Deviations, Ranges, Skewness, and Kurtosis ($n = 648$)

| Variable | Cronbach's Alpha | M (SD) | Range | Skewness | Kurtosis |
|----------------------------------|------------------|---------------|----------|----------|----------|
| Child's Age at Adoption (months) | -- | 15.42 (13.32) | 3-133 | 4.78 | 28.60 |
| Child's Age (years) | -- | 9.37 (2.72) | 6.0-17.8 | 0.76 | -0.28 |
| Mother's Age (years) | -- | 44.91 (5.79) | 32-64 | 0.11 | -0.18 |
| Mother's Education Level | -- | 3.62 (0.94) | 1-6 | 0.06 | 0.08 |
| Household Income | -- | 9.19 (3.91) | 1-15 | 0.22 | -1.19 |
| Recent Life Changes | -- | 0.79 (0.93) | 0-5 | 1.19 | 1.11 |

Table 2 (cont.)

| | | | | | |
|--|-----|--------------|----------|-------|-------|
| SPQ NCR-Family Stress Composite | .69 | 1.28 (0.27) | 0.61-2.4 | 0.70 | 1.97 |
| SPQ Housing Problems | .69 | 1.13 (0.34) | 1-4 | 3.56 | 19.08 |
| SPQ Employment-Related Difficulties | .81 | 1.22 (0.82) | 0-3 | 1.36 | 0.42 |
| SPQ Financial Problems | .90 | 1.42 (0.59) | 1-4 | 1.71 | 3.12 |
| SPQ Social Difficulties | .46 | 1.34 (0.27) | 0-2.33 | 0.45 | 0.69 |
| SPQ Marital/Relationship Problems | .95 | 0.95 (0.72) | 0-2.5 | -0.01 | -0.91 |
| SPQ Difficulties in Coping with Children | .69 | 1.25 (0.39) | 1-4 | 2.18 | 8.11 |
| PSDQ Authoritative Parenting | .81 | 4.07 (0.44) | 1-5 | -0.78 | 2.03 |
| PSDQ Authoritarian Parenting | .68 | 1.51 (0.28) | 1-3 | 0.62 | 1.09 |
| PSDQ Permissive Parenting | .65 | 1.83 (0.52) | 1-4 | 0.98 | 1.84 |
| CBCL Internalizing Problems (T-score) | .84 | 47.80 (9.35) | 33-80 | 0.35 | -0.21 |

Table 2 (cont.)

| | | | | | |
|---|-----|-----------------|-------|------|-------|
| CBCL Externalizing Problems (T- score) | .88 | 47.26 (9.48) | 34-83 | 0.43 | -0.09 |
|---|-----|-----------------|-------|------|-------|

Note. Household income: 1=US\$19,000 or lower, 15=US\$150,000; Mother's education level: 1=high school or lower, 6=post-doctoral training.

Scale Reliability

All scales used in subsequent analyses (e.g., SPQ composite and scales, PSDQ scales, CBCL scales) were analyzed for internal consistency reliability. Table 2 reports the Cronbach's alphas for each scale. The majority of Cronbach's alpha values on the SPQ ranged from .69 (SPQ Housing Problems & NCR-Family Stress Composite) to .95 (SPQ Marital/Relationship Problems), indicating acceptable levels of internal consistency. The exception was the Cronbach's alpha of the SPQ Social Difficulties scale (i.e., .46). This scale was only used in analyses for Research Question 1 and results involving this scale should be interpreted with caution. Cronbach's alpha values for the remaining scales ranged from .65 to .88, indicating acceptable levels of internal consistency reliability.

Correlational Analyses

Table 3 presents Pearson product-moment correlations between continuous demographic variables and variables of interest used in subsequent analyses. As expected, few demographic variables were significantly correlated with the variables of interest. The significant correlations that were found were small, as defined by Cohen (1988). As expected, household income was negatively correlated with an indicator of family stress (SPQ NCR-Family Stress composite; $r = -.18, p < .001$). Additionally, small and

significant correlations were found between the following variables: mother's education level and authoritative parenting behavior ($r = -.09, p < .05$); mother's age and permissive parenting behavior ($r = .08, p < .05$); child's age and internalizing behavior problems ($r = .09, p < .05$); the number of recent life changes and family stress ($r = .12, p < .01$); the number of recent life changes and internalizing behavior problems ($r = .10, p < .05$); and the number of recent life changes and externalizing behavior problems ($r = .12, p < .01$).

Table 3. Correlations Between Demographic Variables and Family Stress, Parenting Behavior and Children's Behavior Problems ($n = 648$)

| Demographics | Family Stress SPQ NCR-Family Stress Composite | Parenting Behavior | | | Behavior Problems | |
|--------------------------|--|--------------------|--------------------|-----------------|--------------------|--------------------|
| | | PSDQ Authoritative | PSDQ Authoritarian | PSDQ Permissive | CBCL Internalizing | CBCL Externalizing |
| Child's tAAA (months) | -.04 | .01 | -.01 | -.01 | .01 | .06 |
| Child's Age (years) | -.02 | -.04 | -.08 | -.00 | .09* | -.04 |
| Mother's Age (years) | -.00 | -.02 | -.07 | .08* | .07 | .06 |
| Mother's Education Level | -.07 | -.09* | .00 | -.02 | .01 | .02 |
| Household Income | -.18*** | -.00 | -.00 | .07 | -.02 | -.04 |
| Recent Life Changes | .12** | .05 | -.07 | -.02 | .10* | .12** |

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. tAAA = log-transformation of the raw age at adoption variable. Household income: 1 = \$19,000 or lower, 15 = \$150,000 or higher.

Research Questions

Research Question 1

What is the nature of the relationship between family stress and adopted Chinese girls' behavior problems?

To answer this question, Pearson product-moment correlation coefficients were calculated between indicators of family stress and children's internalizing and externalizing behavior problems. As shown in Table 4, moderate, positive, and significant correlations were found between difficulties in coping with children and internalizing ($r = .43, p < .001$) and externalizing ($r = .59, p < .001$) behavior problems. The remaining significant correlations between indicators of family stress and both types of behavior problems (i.e., internalizing and externalizing) were modest and positive, ranging from $r = .14$ to $r = .22$. Although significant correlations were found between social difficulties and indicators of family stress, this relationship should be interpreted with caution, given the weak internal consistency for this scale. The indicators of family stress that were not significantly related with either type of behavior problems include employment-related difficulties and marital/relationship problems.

Table 4. Correlation Coefficients for Relationships Between Family Stress and Children's Behavior Problems ($n = 648$)

| Family Stress | Behavior Problems | |
|---------------------------------|--------------------|--------------------|
| | CBCL Internalizing | CBCL Externalizing |
| SPQ NCR-Family Stress Composite | .18*** | .15*** |
| Housing | .15*** | .16*** |
| Employment | .06 | -.01 |
| Financial | .14** | .17*** |

Table 4 (cont.)

| | | |
|---------------------------------------|--------|--------|
| Social | .22*** | .18*** |
| Marital/Relationship | .07 | .04 |
| SPQ-Difficulties Coping with Children | .43*** | .59*** |

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

Research Question 2

What is the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems?

To answer this question, Pearson product-moment correlation coefficients were calculated between indicators of parenting behavior and children's internalizing and externalizing behavior problems. As reported in Table 5, modest, negative correlations were found between authoritative parenting and both internalizing ($r = -.08, p < .01$) and externalizing ($r = -.15, p < .001$) behavior problems. Authoritarian and permissive parenting behaviors were correlated more strongly with externalizing behavior problems ($r = .39, p < .001$; $r = .34, p < .001$, respectively) than with internalizing behavior problems ($r = .18, p < .001$; $r = .19, p < .001$, respectively). Additionally, authoritarian parenting was negatively correlated with authoritative parenting ($r = -.24, p < .001$) and positive correlated with permissive parenting ($r = .37, p < .001$).

Table 5. Correlation Coefficients for Relationships Between Parenting Behavior and Children's Behavior Problems ($N = 648$)

| Parenting Behavior | Behavior Problems | |
|-----------------------|--------------------|--------------------|
| | CBCL Internalizing | CBCL Externalizing |
| 1. PSDQ Authoritative | -.08* | -.15*** |
| 2. PSDQ Authoritarian | .18*** | .39*** |

Table 5 (cont.)

| | | |
|--------------------|--------|--------|
| 3. PSDQ Permissive | .19*** | .34*** |
|--------------------|--------|--------|

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

Path Analyses

Research Question 3

To what extent does parenting behavior mediate the relationship between family stress and adopted Chinese girls' behavior problems?

To answer this question, path analyses were utilized. Preliminary correlational analyses showed that the mother's age was correlated with both internalizing ($r = .10, p < .05$) and externalizing ($r = .09, p < .05$) behavior problems, recent life changes were correlated with both internalizing ($r = .09, p < .05$) and externalizing ($r = .13, p < .01$) behavior problems, and that the adopted child's age was positively correlated with internalizing ($r = .11, p < .01$) behavior problems. Thus, these three variables were included in path analyses as covariates. Two additional variables, household income and mother's education level, were included as covariates because they are conceptually related to children's behavior problems and the adopted child's age at adoption was included because of a precedent of including this variable in existing literature. Thus, a total of six variables were included as covariates in the analyses for Research Question 3. A total of six path models were under consideration.

The first path model (Model A) included NCR-family stress as the predictor, authoritative parenting as the mediator, and internalizing behavior as the outcome. Table 6 shows the standardized coefficients and standard errors obtained for the first path model, including the covariates and R^2 values. The results of the first path analysis are

depicted as a path diagram in Figure 1 with the standardized coefficients (β) and standard errors (SE). This model was fully saturated ($df = 0$) so the model fit was perfect.

Additionally, the total indirect effect was not significant ($\beta = .01$, $SE = .01$, $p = .15$), while the direct effect remained significant ($\beta = .17$, $SE = .04$, $p < .001$), indicating that authoritative parenting is not a mediator of the relationship between NCR-family stress and internalizing behavior problems.

Table 6. Standardized Coefficients, Standard Errors, and R^2 Values for Path Model A ($n = 637$)

| Predictors | NCR-Family Stress | Authoritative Parenting | Internalizing Problems |
|--------------------------|-------------------|-------------------------|------------------------|
| Mother's Age | .02 (.05) | .01 (.05) | .04 (.05) |
| Household Income | -.17 (.04)*** | -.00 (.04) | .01 (.04) |
| Mother's Education Level | -.03 (.04) | -.09 (.04)* | .01 (.04) |
| Child's Age | -.02 (.05) | -.04 (.05) | .08 (.05) |
| Child tAAA | -.05 (.04) | .00 (.04) | -.00 (.04) |
| Recent Life Changes | .11 (.04)** | .05 (.04) | .09 (.04)* |
| NCR-Family Stress | ----- | -.09 (.04)* | .17 (.00)*** |
| Authoritative Parenting | ----- | ----- | -.07 (.04) |
| <i>F</i> | 2.85** | 1.69 | 3.14** |
| <i>R</i> ² | .05** | .02 | .06** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

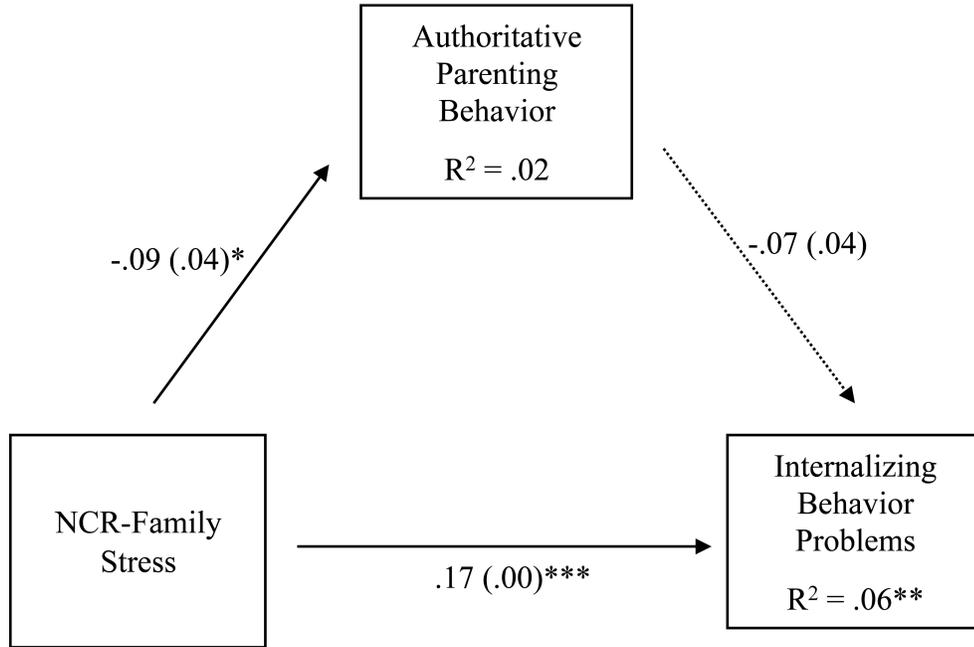


Figure 1. Path Model to Internalizing Behavior with Authoritative Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

The second path model (Model B) included NCR-family stress as the predictor, authoritarian parenting as the mediator, and internalizing behavior as the outcome. Table 7 shows the standardized coefficients and standard errors obtained for the second path model, including the covariates and R^2 values. The results of the path analysis for Model B are depicted as a path diagram in Figure 2 with the standardized coefficients and standard errors. This model was fully saturated ($df = 0$) so the model fit was perfect. Additionally, the total indirect effect was significant ($\beta = .03$, $SE = .01$, $p < .001$) and the direct effect remained significant ($\beta = .15$, $SE = .04$, $p < .001$), indicating that authoritarian parenting behavior is a partial mediator of the relationship between NCR-

family stress and internalizing behavior problems. When controlling for covariates, 4% of the variance in authoritarian parenting is accounted for by family stress ($R^2 = .04, p < .01$) and 8% of the variance in internalizing behavior problems is accounted for by this model ($R^2 = .08, p < .001$).

Table 7. Standardized Coefficients, Standard Errors, and R^2 Values for Path Model B ($n = 637$)

| | NCR-Family Stress | Authoritarian Parenting Behavior | Internalizing Behavior Problems |
|--------------------------|-------------------|----------------------------------|---------------------------------|
| Predictors | | | |
| Mother's Age | .02 (.05) | -.04 (.05) | .05 (.05) |
| Household Income | -.17 (.04)*** | .02 (.04) | .01 (.04) |
| Mother's Education Level | -.03 (.04) | .00 (.04) | .02 (.04) |
| Child's Age | -.02 (.05) | -.06 (.05) | .09 (.05) |
| Child tAAA | -.05 (.04) | .02 (.04) | -.01 (.04) |
| Recent Life Changes | .11 (.04)** | -.10 (.04)* | .10 (.04)** |
| NCR-Family Stress | ----- | .17 (.04)*** | .15 (.04)*** |
| Authoritarian Parenting | ----- | ----- | .18 (.04)*** |
| <i>F</i> | 2.85** | 2.57** | 3.88*** |
| <i>R</i> ² | .05** | .04** | .08*** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

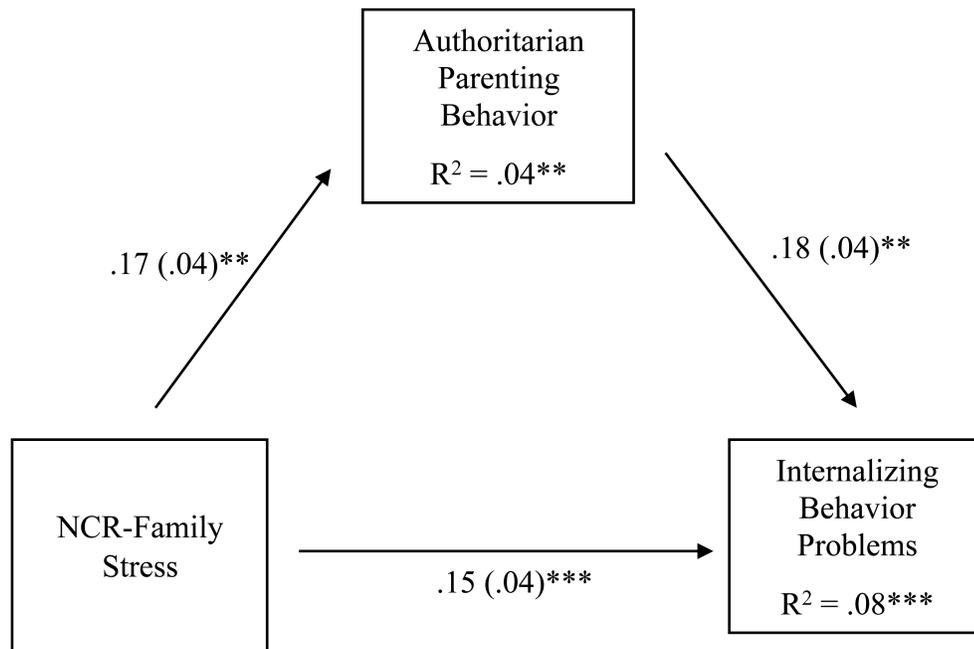


Figure 2. Path Model to Internalizing Behavior with Authoritarian Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

The third path model (Model C) included NCR-family stress as the predictor, permissive parenting as the mediator, and internalizing behavior as the outcome. Table 8 shows the standardized coefficients and standard errors obtained for the third path model, including the covariates and R^2 values. The results of the path analysis for Model C are depicted as a path diagram in Figure 3 with the standardized coefficients and standard errors. This model was fully saturated ($df = 0$) so the model fit was perfect. Additionally, the total indirect effect was significant ($\beta = .02$, $SE = .01$, $p < .05$) and the direct effect remained significant ($\beta = .16$, $SE = .04$, $p < .001$), indicating that permissive parenting behavior is a partial mediator of the relationship between NCR-family stress and

internalizing behavior problems. When controlling for covariates, 3% of the variance in permissive parenting is accounted for by family stress ($R^2 = .03, p < .05$) and 8% of the variance in internalizing behavior problems is accounted for by this model ($R^2 = .08, p < .001$).

Table 8. Standardized Coefficients, Standard Errors, and R^2 Values for Path Model C ($n = 637$)

| | NCR-Family Stress | Permissive Parenting Behavior | Internalizing Behavior Problems |
|--------------------------|-------------------|-------------------------------|---------------------------------|
| Predictors | | | |
| Mother's Age | .02 (.05) | .13 (.05)** | .02 (.05) |
| Household Income | -.17 (.04)*** | .10 (.04)* | -.01 (.04) |
| Mother's Education Level | -.03 (.04) | -.05 (.04) | .03 (.04) |
| Child's Age | -.02 (.05) | -.06 (.05) | .09 (.05) |
| Child tAAA | -.05 (.04) | -.01 (.04) | .00 (.04) |
| Recent Life Changes | .10 (.04)** | -.02 (.04) | .09 (.04) |
| NCR-Family Stress | ----- | .09 (.04)* | .16 (.04)*** |
| Permissive Parenting | ----- | ----- | .18 (.04)*** |
| <i>F</i> | 2.85** | 2.03* | 3.92*** |
| <i>R</i> ² | .05** | .03* | .08*** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

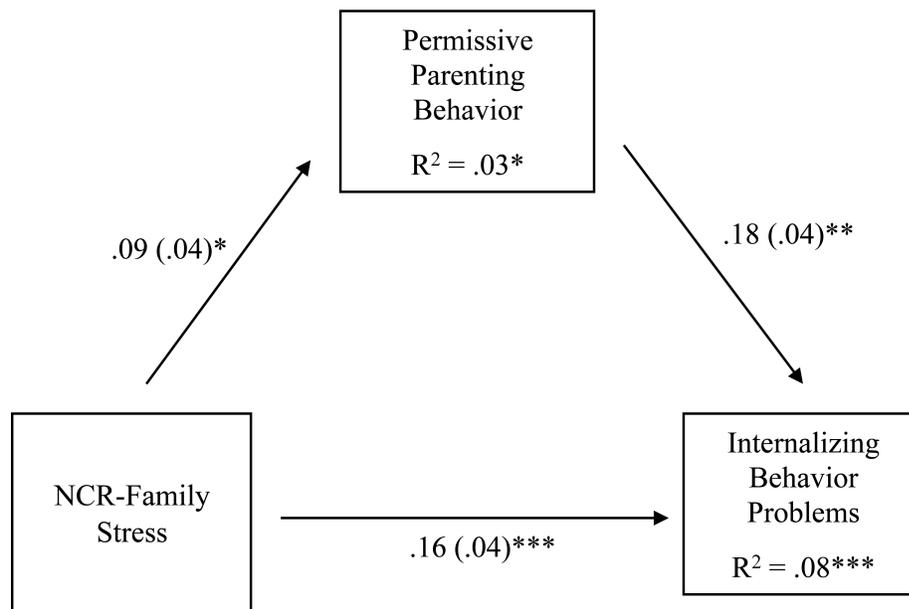


Figure 3. Path Model to Internalizing Behavior with Permissive Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

The fourth path model (Model D) included NCR-family stress as the predictor, authoritative parenting as the mediator, and externalizing behavior as the outcome. Table 9 shows the standardized coefficients and standard errors obtained for the fourth path model, including the covariates and R^2 values. The results of the path analysis for Model D are depicted as a path diagram in Figure 4 with the standardized coefficients and standard errors. This model was fully saturated ($df = 0$) so the model fit was perfect. Additionally, the total indirect effect was not significant ($\beta = .01$, $SE = .01$, $p = .06$), while the direct effect remained significant ($\beta = .13$, $SE = .04$, $p < .001$), indicating that authoritative parenting is not a mediator of the relationship between NCR-family stress and externalizing behavior problems.

Table 9. Standardized Coefficients, Standard Errors, and R² Values for Path Model D (n = 637)

| Predictors | NCR-Family Stress | Authoritative Parenting Behavior | Externalizing Behavior Problems |
|--------------------------|-------------------|----------------------------------|---------------------------------|
| Mother's Age | .02 (.05) | .01 (.05) | .10 (.05)* |
| Household Income | -.17 (.04)*** | -.00 (.04) | -.01 (.04) |
| Mother's Education Level | -.03 (.04) | -.09 (.04)* | .02 (.04) |
| Child's Age | -.02 (.05) | -.04 (.05) | -.11 (.05)* |
| Child tAAA | -.05 (.04) | .00 (.04) | .06 (.04) |
| Recent Life Changes | .11 (.04)** | .05 (.04) | .11 (.04)** |
| NCR-Family Stress | ----- | -.09 (.04)* | .13 (.04)*** |
| Authoritative Parenting | ----- | ----- | -.14 (.04)*** |
| <i>F</i> | 2.85** | 1.68 | 3.56*** |
| <i>R</i> ² | .05** | .02 | .07*** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

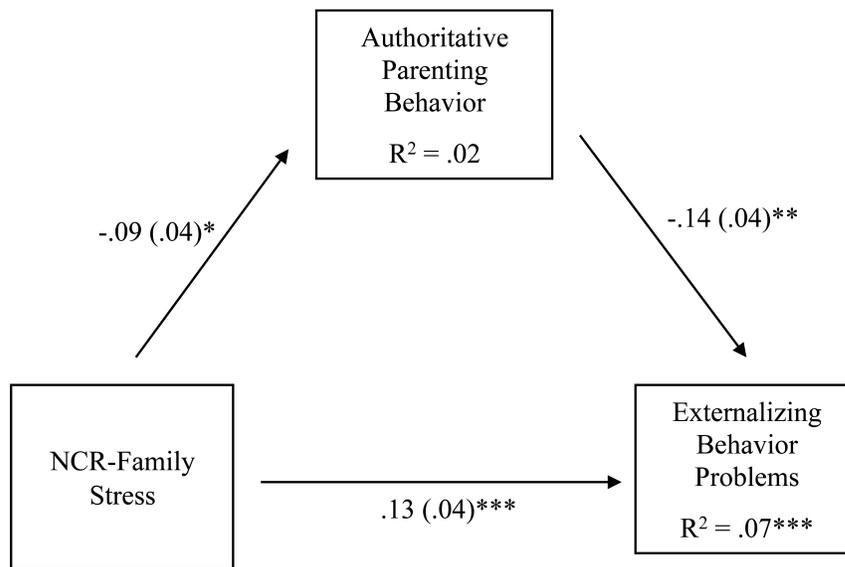


Figure 4. Path Model to Externalizing Behavior with Authoritative Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

The fifth path model (Model E) included NCR-family stress as the predictor, authoritarian parenting as the mediator, and externalizing behavior as the outcome. Table 10 shows the standardized coefficients and standard errors obtained for the fifth path model, including the covariates and R^2 values. The results of the path analysis for Model E are depicted as a path diagram in Figure 5 with the standardized coefficients and standard errors. This model was fully saturated ($df = 0$) so the model fit was perfect. Additionally, the total indirect effect was significant ($\beta = .07$, $SE = .02$, $p < .001$) and the direct effect remained significant ($\beta = .08$, $SE = .04$, $p < .05$), indicating that authoritarian parenting behavior is a partial mediator of the relationship between NCR-family stress and externalizing behavior problems. When controlling for covariates, 4% of the variance

in authoritarian parenting is accounted for by family stress ($R^2 = .04, p < .01$) and 20% of the variance in externalizing behavior problems is accounted for by this model ($R^2 = .20, p < .001$).

Table 10. Standardized Coefficients, Standard Errors, and R^2 Values for Path Model E ($n = 637$)

| Predictors | NCR-Family Stress | Authoritarian Parenting Behavior | Externalizing Behavior Problems |
|--------------------------|-------------------|----------------------------------|---------------------------------|
| Mother's Age | .02 (.05) | -.04 (.05) | .12 (.04)** |
| Household Income | -.17 (.04)*** | .02 (.04) | -.02 (.04) |
| Mother's Education Level | -.03 (.04) | .00 (.04) | .03 (.04) |
| Child's Age | -.02 (.05) | -.06 (.05) | -.08 (.04) |
| Child tAAA | -.05 (.04) | .02 (.04) | .05 (.04) |
| Recent Life Changes | .11 (.04)** | -.10 (.04)* | .14 (.04)*** |
| NCR-Family Stress | ----- | .17 (.04)*** | .08 (.04)* |
| Authoritarian Parenting | ----- | ----- | .40 (.04)*** |
| <i>F</i> | 2.85** | 2.56* | 7.03*** |
| <i>R</i> ² | .05** | .04* | .20*** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

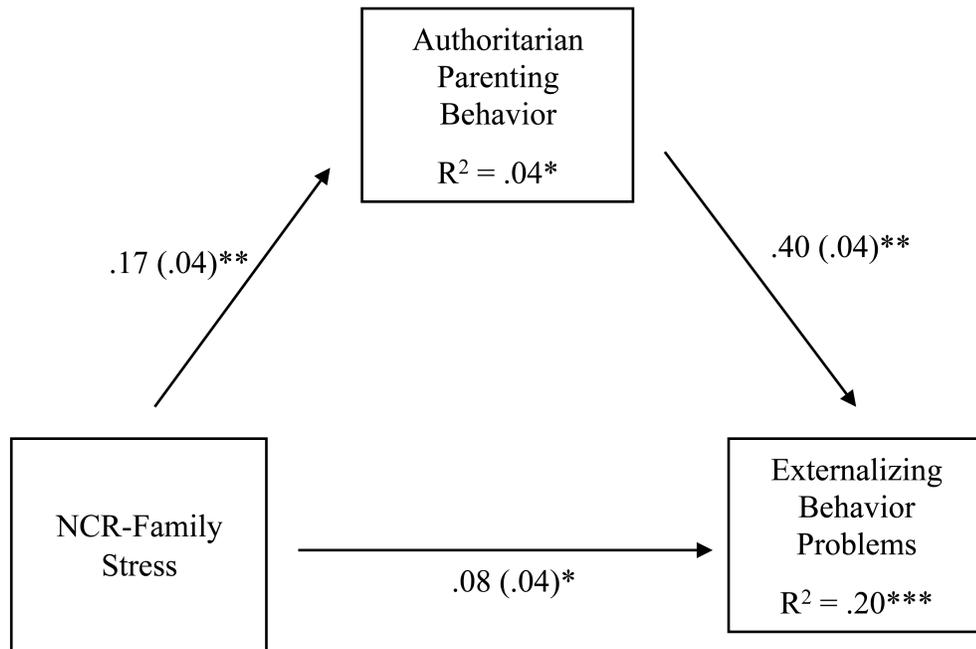


Figure 5. Path Model to Externalizing Behavior with Authoritarian Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

The last path model (Model F) included NCR-family stress as the predictor, permissive parenting as the mediator, and externalizing behavior as the outcome. Table 11 shows the standardized coefficients and standard errors obtained for the last path model, including the covariates and R^2 values. The results of the path analysis for Model F are depicted as a path diagram in Figure 6 with the standardized coefficients and standard errors. This model was fully saturated ($df = 0$) so the model fit was perfect. Additionally, the total indirect effect was significant ($\beta = .03$, $SE = .01$, $p = .03$) and the direct effect remained significant ($\beta = .11$, $SE = .04$, $p < .001$), indicating that permissive parenting behavior is a partial mediator of the relationship between NCR-family stress

and externalizing behavior problems. When controlling for covariates, 3% of the variance in permissive parenting is accounted for by family stress ($R^2 = .03, p < .05$) and 16% of the variance in externalizing behavior problems is accounted for by this model ($R^2 = .16, p < .001$).

Table 11. Standardized Coefficients, Standard Errors, and R^2 Values for Path Model F ($n = 637$)

| | NCR-Family Stress | Permissive Parenting Behavior | Externalizing Behavior Problems |
|--------------------------|-------------------|-------------------------------|---------------------------------|
| Predictors | | | |
| Mother's Age | .02 (.05) | .13 (.05)** | .06 (.04) |
| Household Income | -.17 (.04)*** | .10 (.04)* | -.04 (.04) |
| Mother's Education Level | -.03 (.04) | -.05 (.04) | .05 (.04) |
| Child's Age | -.02 (.05) | -.06 (.05) | -.08 (.04) |
| Child tAAA | -.05 (.04) | -.01 (.04) | .06 (.04) |
| Recent Life Changes | .10 (.04)** | -.02 (.04) | .11 (.04)** |
| NCR-Family Stress | ----- | .09 (.04)* | .11 (.04)** |
| Permissive Parenting | ----- | ----- | .33 (.04)*** |
| <i>F</i> | 2.85** | 2.05* | 5.89*** |
| <i>R</i> ² | .05** | .03* | .16*** |

Note. tAAA = log-transformation of the raw age at adoption variable. Numbers represented for each predictor include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

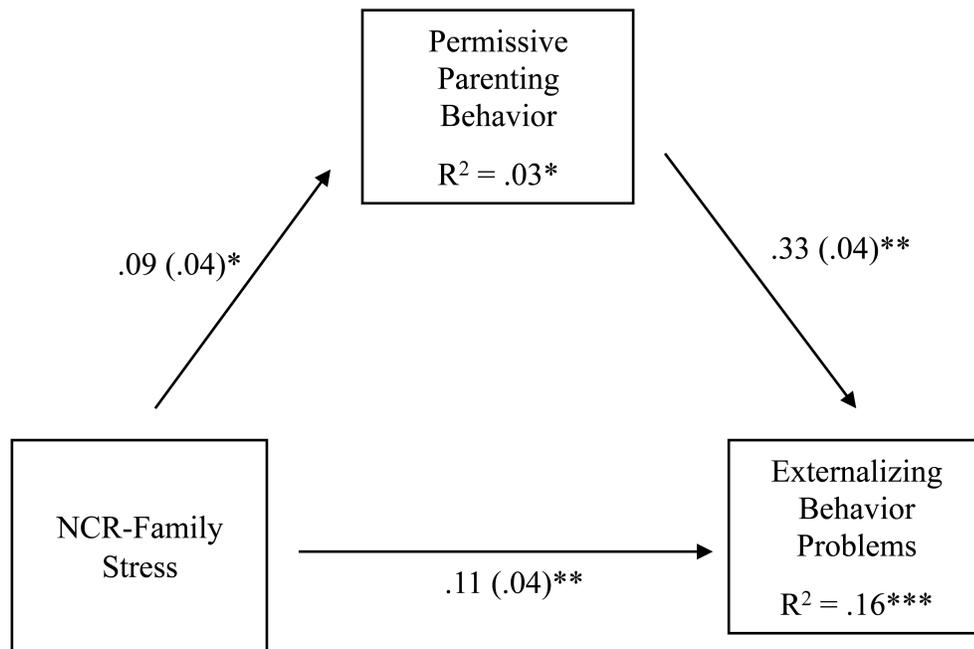


Figure 6. Path Model to Externalizing Behavior with Permissive Parenting as a Mediator ($n = 637$)

Note. Numbers represented on each path include the standardized coefficient (β), followed by the standard error (SE) in parentheses.

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

In sum, the path analyses revealed a significant mediating effect for Models B, C, E, and F, suggesting that authoritarian and permissive parenting partially mediate the relationship between family stress and both types of behavior problems, while authoritative parenting behavior was not a mediator.

CHAPTER V: Discussion

The purpose of the current study was to examine the interrelationships among family stress, parenting behavior, and behavior problems among school-aged adopted Chinese girls. Guided by the conceptualization that parenting behaviors have a mediating effect on the relationship between a stressful family environment and children's behavior problems, the present study aimed to (1) investigate the nature of the relationship between family stress and adopted Chinese girls' behavior problems, (2) investigate the nature of the relationship between parenting behavior and adopted Chinese girls' behavior problems, and (3) determine the extent to which parenting behavior mediated the relationship between family stress and adopted Chinese girls' behavior problems.

Family Stress and Behavior Problems

The results of the current study suggest that overall non-child-related family stress (NCR-family stress) and adopted Chinese girls' behavior problems are positively correlated. NCR-family stress refers to family stress from a variety of sources (i.e., housing, employment, financial, parents' social relationships, parents' relationship with each other) but unrelated to the difficulties that parents experienced with their children. Specific types of family stress were related to behavior problems differently. Specifically, stress associated with housing, finances, and social relationships was positively related to both internalizing and externalizing behavior problems. The size of the relationships with indicators of family stress did not differ markedly by type of behavior problem (i.e.,

internalizing, externalizing). With the exception of social relationships, these areas of stress could have a direct impact on the child's daily life, which may explain why they were related to internalizing and externalizing behavior problems.

In the current study, stress regarding employment and marital/romantic relationships was not related to either internalizing or externalizing behavior problems. Although the international adoption literature rarely addresses the relationship between family stress from other sources (e.g., problems with housing, finances, and/or social relationships) and behavior problems among adopted school-age children, this finding was surprising given the studies in the non-adoption literature. These studies (e.g., Vandewater & Lansford, 2005) suggest that relationships within the family have a greater impact on family stress than the social relationships that the parents form outside of the family. However, these differing results may have occurred for several reasons. For one, these studies were conducted among families with non-adopted children so perhaps problems with friendships matter more than marital/relationship problems among adoptive parents. Additionally, the internal consistency of the subscale measuring social difficulties was poor, which suggests that this subscale may not be the best indicator of this construct. In the current study, parents' dissatisfaction with employment may not have been related to children's internalizing and externalizing behavior problems because they do not directly impact children's everyday functioning, but indirectly impacts them through other areas of family stress such as financial problems. Finally, significant effects may not have been found between marital/relationship problems and children's behavior problems because the mean stress levels were so low in the current study.

These results obtained in the current study are consistent with Bronfenbrenner's (1979) ecological systems theory of human development, which proposes that children's development is directly or indirectly impacted by environmental factors such as their family, school/community, and culture. This theory suggests that all children, even those who are in families with mild levels of family stress (e.g., the current sample of families), are impacted by their environment in that higher levels of behavior problems co-occurred with higher levels of family stress unrelated to parents' difficulties in managing their children. The findings from the current study provide a rationale for investigating the impact of family stress on the social-emotional outcomes of internationally adopted children. Additionally, significant, positive correlations were found between the number of recent life changes, which is an indicator of the stability of the home environment, and both internalizing and externalizing behavior problems. Thus, it may also be worthwhile to investigate the impact of home environment stability. Because family stress related to parenting was such a popular topic in the literature, the relationship between parenting behavior and behavior problems was explored.

Parenting and Behavior Problems

The results of the current study suggest that parenting behavior is related to adopted Chinese girls' behavior problems. More specifically, authoritarian and permissive parenting were correlated with more behavior problems while authoritative parenting was correlated with fewer behavior problems. These results are not surprising, given the way that these different parenting behaviors are described in the literature. Baumrind (1991) described authoritarian parenting as being more demanding and less responsive and permissive parenting as less demanding and more responsive.

Authoritative parenting is characterized as being both more demanding and more responsive. So, perhaps authoritarian and permissive parenting behaviors were positively related to behavior problems because they are each low on at least one continuum of parenting (i.e., demanding, responsive), while authoritative parenting behavior is high on both continua. Engaging in parenting behaviors that are high on both continua may be more desirable and relate to better outcomes for children. Only one study (Juffer et al., 2005) in the existing international adoption literature investigated the impact of parenting practices among school-age children; this study's findings are consistent with the results of the current study. Specifically, among internationally adopted children from Sri Lanka, South Korea, and Colombia, more sensitive and cooperative parenting practices were related to better outcomes (e.g., attachment).

Other parent characteristics (e.g., mental health problems) may also contribute to the relationship between parenting behavior and children's behavior problems. Smith (2004) reported that children of parents who were depressed were two to five times more likely to develop behavior problems (e.g., conduct problems, depressive symptoms and disorders) than children whose parents were not depressed. The relationship between parent and child mental illness was strongest when parents' symptoms directly impacted the child (e.g., neglect, target of hostile and/or delusional behavior; Rutter, 1967).

However, parents' mental health problems also indirectly impacted children's mental health issues. Parental mental illness was linked to poor parenting practices (i.e., parental negativity, harsh or ineffective discipline; Berg-Nielsen, Vikan, & Dahl, 2002). Nobes and Smith (1997) found that mothers with poor mental health were more likely to use physical and non-physical methods of punishment with their children on a more frequent

basis than mothers with better mental health. Thus, parenting behaviors, as well as children's behavior problems, may be influenced by parents' mental health.

Additionally, the current study found the strongest relationships between authoritarian and permissive parenting behavior and externalizing behavior problems, separately. Some researchers (e.g., Steinberg et al., 1994) studying non-adopted children have found that internalizing behavior problems are more stable across time than externalizing behavior problems, which suggests that perhaps stronger relationships were found with externalizing than internalizing behavior problems because environmental factors such as parenting are not as influential with internalizing behavior problems as externalizing behavior problems. Ecological systems theory (Bronfenbrenner, 1979) suggests that children can also play an active role in shaping their own environment and that the relationship between parents' and their children's behavior is bidirectional. Thus, another possible explanation may be that externalizing behavior problems are more likely to elicit changes in parenting behavior since they are more disruptive to others than internalizing behavior problems. Lastly, greater effects may have been found with externalizing behavior problems because the domains of both authoritarian and permissive parenting behaviors on the Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001) are characterized by parenting behaviors that are used more to manage externalizing (e.g., items on the permissive scale refer to tolerating behaviors that are more externalizing in nature) than internalizing behavior problems.

While the current study used a dimensional approach to analyze parenting behaviors, there are some studies in the existing literature (e.g., Steinberg et al., 1994)

that used a typological approach (i.e., categorizing parents into a distinct parenting style), which assumes that parenting styles are distinct from each other. Additional comparisons of the results of the current study with the studies conducted among non-adopted children are reported in the next section. These results support the use of parenting that is characterized by monitoring, allowing opportunities for independent decision-making, and warmth (i.e., authoritative).

Parenting as a Mediator Between Family Stress and Behavior Problems

Path analysis results suggest that authoritarian and permissive parenting behaviors are partial mediators of the relationship between NCR-family stress and both types of behavior problems (i.e., internalizing and externalizing), while authoritative parenting is not a mediator. Because the current study examined negative outcomes (e.g., internalizing and externalizing behavior problems), these less desirable parenting behaviors may be mediators to more negative outcomes while authoritative parenting behavior is a mediator to more optimal outcomes (e.g., life satisfaction). The findings from a study (Juffer et al., 2005) described earlier that was conducted among internationally adopted children support this hypothesis, as parenting behavior that is more sensitive and cooperative is linked with better outcomes for children in regards to attachment. Authoritarian and permissive parenting may have only partially mediated, and not completely mediated, the relationship between NCR-family stress and both types of behavior problems because there are other environmental variables that were not investigated in this study (e.g., children's supportive relationships with individuals outside of the family) that also explain this relationship.

While there are currently no studies investigating parenting behavior as a mediator in the relationship between family stress and internationally adopted school-age children's behavior problems, there is one study (Tan et al., 2012) investigating these relationships among preschool-aged children adopted from China. Similarly to the current study, these researchers found that authoritarian parenting partially mediated the relationship between family stress and internalizing behavior problems and that authoritative parenting was not a mediator for either internalizing or externalizing behavior problems. However, in contrast to the current study, these researchers did not find authoritarian parenting as a mediator for externalizing behavior problems or permissive parenting as a mediator for either internalizing or externalizing behavior problems. Additionally, the present study found that, when authoritarian and permissive parenting separately served as mediators, they made greater contributions to the variability in externalizing than internalizing behavior problems. These differing results may be due to the fact that these researchers investigated the relationships among preschool-aged children, as opposed to school-age children.

Even in the literature on non-adopted school-age children, few recent studies (Cui & Conger, 2008; Smith & Hancock, 2010) have investigated parenting as a mediator for the effect of family stress on children's behavior problems. Both of these studies conceptualized family stress as marital distress and found that parenting behavior mediated the relationship between marital distress and children's internalizing and externalizing behavior problems. More specifically, higher levels of marital distress were related to greater levels of dysfunctional (e.g., hostility and harshness; Cui & Conger, 2008) and negative (e.g., ineffective discipline, low nurturance; Smith & Hancock, 2010)

parenting behaviors and lower levels of positive parenting behaviors (e.g., warmth, support, effective child management; Cui & Conger, 2008).

The findings from the studies in the literature on both internationally adopted and non-adopted children suggest that parenting behavior perceived as less desirable (e.g., authoritarian, permissive) has a greater impact on negative outcomes (e.g., behavior problems) than parenting behavior that is perceived as more desirable (e.g., authoritative). The present study also found that authoritarian and permissive parenting contributed more to the variability in externalizing than internalizing behavior problems. When situating that finding within the existing literature that suggests that adopted children experience greater externalizing than internalizing behavior problems, there may be an even greater need for adoptive parents to engage in parenting behaviors that are inconsistent with authoritarian and permissive parenting behaviors.

Limitations of the Present Study

The present study also had a few limitations. First, the levels of behavior problems in the sample used in data analyses were low. More specifically, only 34 (5.2%) children were rated as having at least sub-clinical levels (i.e., T score > 63) of internalizing behavior problems and only 39 (6.0%) children were rated as having at least sub-clinical levels (i.e., T score > 63) of externalizing behavior problems. Thus, although authoritarian and permissive parenting behaviors were mediators to greater levels of internalizing and externalizing behavior problems, these levels of behavior problems were low relative to the general population (e.g., 12% to 20%; Belfer, 2008; Costello, Egger, & Angold, 2005; Merikangas et al., 2010; Roberts, Attkisson, & Rosenblatt, 1998). Secondly, the current study analyzed data from an archival dataset. Thus, this researcher

did not participate in data collection or choose the measures used to collect data on the key variables. However, most measures that were used in the present study have been widely used and have adequate reliability and validity. An additional limitation is that the participants were a volunteer, convenience sample. Unfortunately, there is not a national database of adoptive families from which to randomly select participants and it would have been difficult to recruit participants otherwise. Another limitation is that this study was exploratory in nature as opposed to experimental (i.e., no variables were manipulated), which is a threat to internal validity. But this type of design (i.e., non-experimental) is consistent with the extant adoption literature. Finally, the current study is a quantitative study based solely on parent-report. However, the use of parent-reported data is also consistent with the majority of studies in the literature. While parents are a logical choice when determining an informant for children's behavior problems, additional data sources (e.g., observational data or child interviews) can help corroborate the results of the study. Despite these limitations, the findings from the current study are aligned with the existing literature, suggesting that the limitations likely did not bias the results.

Contributions to the Literature

The current study contributes to the existing literature in many ways. First, the current study contributes to the understanding of the influence of the post-adoption environment on children's development. To date, the majority of research examining environmental variables has investigated the impact of international adoptees' pre-adoption environment. As the first study to date investigating parenting as a mediator between family stress and behavior problems among internationally adopted school-age

children, the current expands a recent investigation (Tan et al., 2012) on similar relationships among preschool adopted children. Additionally, the alignment of the findings from the current study with the findings from the few studies investigating these relationships among non-adopted school-age children suggest that adopted children and their families are similar to non-adopted children and their families. Thus, the relationship between parenting and children's development may be universal, regardless of whether children are biologically related or not.

Implications for School Psychologists

The findings from this study are relevant for school psychologists who are either working with or consulting with other school professionals (e.g., teacher, student services) who have concerns with students because they were adopted from a country outside of the U.S. Since the results from the current study suggest that internationally adopted children have comparable or lower levels of behavior problems than their non-adopted counterparts, internationally adopted children likely do not need additional support for behavior problems beyond what is provided for non-adopted children with comparable levels of behavior problems. Additionally, the findings show that there were some differences in internationally adopted children's post-adoption development. Thus, internationally adopted children are a heterogeneous group and should be treated as unique individuals just as non-adopted children. The findings may also be useful when consulting with parents who have adopted children from countries outside of the U.S. Adoptive parents may feel overwhelmed with the transition to adoptive parenthood because of a lack of information about or experiences with children (McKay & Ross,

2010). Educating these parents and providing them with training geared towards their parenting practices may help them feel more adequately prepared.

Future Directions

Additional research is needed investigating the interrelationships among family stress, parenting behavior, and behavior problems among internationally adopted school-age children. Because the current study was the first study to examine parenting behavior as a mediator in the relationship between family stress and behavior problems among internationally adopted school-age children, it needs to be replicated before additional conclusions can be drawn. Additionally, even though authoritative parenting behavior did not function fully as a mediator in the present study, the role of parenting behavior should be investigated as a mediator to more optimal outcomes, such as life satisfaction. Additionally, future studies should investigate whether the low levels of behavior problems observed in this sample are consistent with the levels of behavior problems in the overall population of internationally adopted school-age girls. Because the levels of behavior problems in this sample were low, future research may want to measure outcomes (e.g., ethnic self-concept, self-esteem) that are tailored to the unique characteristics of this population. Future research may also want to examine how these relationships may differ by age group (e.g., elementary, middle, high) or if they change over time. The findings also suggest that behavior problems are related to some areas of family stress (e.g., financial, housing, social) but not others (e.g., marital/relationship, employment). Thus, additional research is needed to determine which types of family stress are driving the effect of family stress on children's behavior problems and parenting behavior. Additionally, the current study only investigated the influence of

family stress and parenting but there are many other ecological variables (e.g., teacher support) in adoptees' post-adoption environment that may be worthwhile to research. Lastly, the present study also relied solely on mother's ratings of family stress, parenting, and children's behavior problems. Thus, future studies may want to investigate if there are any differences between mother's and father's ratings.

Conclusions

In sum, the results of the current study suggest that family stress, authoritarian parenting and permissive parenting are related to elevated risk for behavior problems in internationally adopted children, while authoritative parenting was related to fewer behavior problems. Authoritarian and permissive parenting behaviors both functioned as partial mediators between family stress and school-aged international adoptees' behavior problems. Because these findings are consistent with findings in studies conducted with non-adopted children, parent trainings focusing on developing skills that are consistent with authoritative parenting may be worthwhile to use with all parents. The present study contributes to researchers' understanding of the impact of post-adoption environmental variables and it is the first study to examine parenting as a mediator between family stress and behavior problems among internationally adopted school-age children. Additionally, it is one of few studies to examine the effect of variables in the post-adoption environment.

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Appendix A
Revised Version of Social Problem Questionnaire (SPQ; Corney & Clare, 1985)

Adoptive Parents of Chinese Children (Two School-age)

Family Social Experience

Please select the most appropriate answer for each question

1. Are your housing conditions adequate for you and your family's needs?

Adequate

Slightly inadequate

Markedly inadequate

Severely inadequate

2. How satisfied are you with your present accommodation?

Satisfied

Slightly dissatisfied

Markedly dissatisfied

Severely dissatisfied

3. How satisfied are you with your present job?

Not applicable-I am currently not working

Satisfied

Slightly dissatisfied

Markedly dissatisfied

Severely dissatisfied

4. Do you have problems getting along with any of the people at your work?

Not applicable-I am not working right now.

No problems

Slight problems

Marked problems

Severe problems

I am not currently working

I work alone (no interactions with others)

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Adoptive Parents of Chinese Children (Two School-age)

5. How satisfied are you with being a stay-at-home parent?

- Not applicable-I am not a stay-at-home parent (I work outside home)
- Satisfied
- Slightly dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

6. If you have a full-time or part-time job outside home, how satisfied are you with working and running a household?

- Not applicable-I am a stay-at-home parent
- Satisfied
- Slightly dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

7. If you are currently not working (e.g., unemployed, retired, or off sick), how satisfied are you with this situation?

- Not applicable-I am currently working
- Satisfied
- Slight dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

8. Is the money coming in adequate for you and your family's needs?

- Adequate
- Slightly inadequate
- Markedly inadequate
- Severely inadequate

Adoptive Parents of Chinese Children (Two School-age)

9. Do you have any difficulties in meeting bills and other financial commitments?

- No difficulties
- Slight difficulties
- Marked difficulties
- Severe difficulties

10. How satisfied are you with your financial situation?

- Satisfied
- Slightly dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

11. How satisfied are you with the amount of time you are able to go out?

- Satisfied
- Slightly dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

12. Do you have any problems with your neighbors?

- No problems
- Slight problems
- Marked problems
- Severe problems

13. Do you have any problem getting along with your friends?

- No problems
- Slight problems
- Marked problems
- Severe problems

Adoptive Parents of Chinese Children (Two School-age)

14. How satisfied are you with the amount of time you see your friends?

- Satisfied
- Slight dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

15. Do you have any problems getting along with any close relative (include parents, in-laws, or grow-up children)?

- No problems
- Slight problems
- Marked problems
- Severe problems

16. How satisfied are you with the amount of time you see your relatives?

- Satisfied
- Slightly dissatisfied
- Markedly dissatisfied
- Severely dissatisfied

17. What is your current marital/relationship status?

- Single (never married) (If single, skip to Question 23)
- Married/Cohabiting
- Widowed
- Separated
- Divorced
- Other

Other (please specify)

Adoptive Parents of Chinese Children (Two School-age)

18. If you are married or have a steady relationship, do you have difficulty confiding in your partner?

- Not applicable-I am not married or in a steady relationship
- No difficulty
- Slight difficulty
- Marked difficulty
- Severe difficulty

19. Are there any problems with intimacy in your relationship?

- Not applicable. I am not in a relationship
- No problems
- Slight problems
- Marked problems
- Severe problems

20. Do you have any other problems getting along together?

- Not applicable-I am not in a relationship
- No problems
- Slight problems
- Marked problems
- Severe problems

21. How satisfied in general are you with your relationship?

- Not applicable. I am not in a relationship
- No problems
- Slight problems
- Marked problems
- Severe problems

Adoptive Parents of Chinese Children (Two School-age)

22. Have you recently been so dissatisfied that you have considered separating from your partner?

- Not applicable-I am not in relationship
 NO
 Sometimes
 Often
 Yes, planned or recently separated

23. If you are single, how satisfied are you with this situation?

- Not applicable-I am not single
 Satisfied
 Slightly dissatisfied
 Markedly dissatisfied
 Severely dissatisfied

24. Do you have any difficulties coping with your children?

| | No difficulties | Slight difficulties | Marked difficulties | Severe difficulties |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Younger child | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Older child | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comment | <input type="text"/> | | | |

25. How satisfied do you feel with your relationship with the children?

| | Satisfied | Slightly dissatisfied | Markedly dissatisfied | Severely dissatisfied |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Younger child | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Older child | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Comment | <input type="text"/> | | | |

26. Are there any problems involving your children at school?

| | No problems | Slight problems | Marked problems | Severe problems | N/A (child not in school) |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| Younger child | <input type="checkbox"/> |
| Older child | <input type="checkbox"/> |
| Comment | <input type="text"/> | | | | |

Appendix B
Parenting Styles and Dimensions Questionnaire (PSDQ-short version; Robinson, Mandleco, Olsen, & Hart, 2001)

Adoptive Parents of Chinese Children (Two School-age)

Parenting Styles and Parenting Experience (dual parents)

For each of the follow items, please make two ratings: (1) rate how often your spouse exhibits this behavior with your younger and older child (based on your observations) and (2) how often you exhibit this behavior with your younger child and older child.

1. Being responsive to our children's feelings and needs.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. Using physical punishment as a way of disciplining our children.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. Taking our children's desires into account before asking them to do something.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. When our children ask why they have to conform, they are told: because I said so, or I am your parent and I want you to.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

5. Explaining to our children how we feel about their good and bad behavior

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. Spanking when our children are disobedient

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

7. Encouraging our children to talk about their troubles.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

8. It is difficult to discipline our children.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

9. Encouraging our children to freely express themselves even when disagreeing with parent.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

10. Punishing by taking privileges away from our children with little if any explanations.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

11. Emphasizing the reasons for rules.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

12. Giving comfort and understanding when our children are upset.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

13. Yelling or shouting when our children misbehave.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

14. Giving praise when our children are good.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

15. Giving into our children when they cause a commotion about something.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

16. Exploding in anger towards our children.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17. Threatening our children with punishment more often than actually giving it.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

18. Taking into account our children's preferences in making plans for the family.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

19. Grabbing our children when they are disobedient.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

20. Stating punishments to our children and does not actually do them.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

21. Showing respect for our children's opinions by encouraging them to express them.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

22. Allowing our children to give input into family rules.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

23. Scolding and criticizing to make our children improve.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

24. Spoiling our children.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

25. Giving our children reasons why rules should be obeyed.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

26. Using threats as punishment with little or no justification.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

27. Having warm and intimate times together with our children.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

28. Punishing by putting our children off somewhere alone with little if any explanations.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Adoptive Parents of Chinese Children (Two School-age)

29. Helping our children to understand the impact of behavior by encouraging them to talk about the consequences of their own actions.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

30. Scolding or criticizing when our children's behavior doesn't meet our expectations.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

31. Explaining the consequences of our children's behavior.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

32. Slapping our children when they misbehave.

| | Never | Once in a While | About Half of the Time | Very Often | Always | N/A |
|----------------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Spouse (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Spouse (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for younger child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Me (for older child) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Appendix C
PSDQ-short version (Robinson, Mandleco, Olsen, & Hart, 2001): Items by Factor

| AUTHORITATIVE PARENTING STYLE (FACTOR 1) | |
|---|--|
| Subfactor 1 - Connection Dimension (Warmth & Support) | <ul style="list-style-type: none"> 1. Being responsive to our children's feelings and needs. 7. Encouraging our children to talk about their troubles. 12. Giving comfort and understanding when our children are upset. 14. Giving praise when our children are good. 27. Having warm and intimate times together with our children. |
| Subfactor 2 - Regulation Dimension (Reasoning/ Induction) | <ul style="list-style-type: none"> 5. Explaining to our children how we feel about their good and bad behavior. 11. Emphasizing the reasons for rules. 25. Giving our children reasons why rules should be obeyed. 29. Helping our children to understand the impact of behavior by encouraging them to talk about the consequences of their own actions. 31. Explaining the consequences of our children's behavior. |
| Subfactor 3 – Autonomy Granting Dimension (Democratic Participation) | <ul style="list-style-type: none"> 3. Taking our children's desires into account before asking them to do something. 9. Encouraging our children to freely express themselves even when disagreeing with parent. 18. Taking into account our children's preferences in making plans for the family. 21. Showing respect for our children's opinions by encouraging them to express them. 22. Allowing our children to give input into family rules. |

| AUTHORITARIAN PARENTING STYLE (FACTOR 2) | |
|---|---|
| Subfactor 1 - Physical Coercion Dimension | 2. Using physical punishment as a way of disciplining our children. 6. Spanking when our children are disobedient. 19. Grabbing our children when they are disobedient. 32. Slapping our children when they misbehave. |
| Subfactor 2 - Verbal Hostility Dimension | 13. Yelling or shouting when our children misbehave. 16. Exploding in anger towards our children. 23. Scolding and criticizing to make our children improve. 30. Scolding or criticizing when our children's behavior doesn't meet our expectations. |
| Subfactor 3 - Punitive/Non-Reasoning Dimension | 4. When our children ask why they have to conform, they are told: because I said so, or I am your parent and I want you to. 10. Punishing by taking privileges away from our children with little if any explanations. 26. Using threats as punishment with little or no justification. 28. Punishing by putting our children off somewhere alone with little if any explanations. |

| PERMISSIVE PARENTING STYLE (FACTOR 3) | |
|--|---|
| Indulgent Dimension | 8. It is difficult to discipline our children. 15. Giving into our children when they cause a commotion about something. 17. Threatening our children with punishment more often than actually giving it. 20. Stating punishments to our children and does not actually do them. 24. Spoiling our children. |

Appendix D
Recent Life Changes Form

Adoptive Parents of Chinese Children (Two School-age)

Parent Background Information

Today's date

YOUR USUAL TYPE OF WORK, even if not working now. Please be specific- for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.

Your type of work:

Your spouse/partner's type of work (if applicable):

This form is filled out by (Please enter your name):

Your relationship to child:

- Mother
 Father
 Other (specify)

Other (please specify)

Since the summer of 2007, have you experienced any changes in the following areas?

| | No | Yes |
|-----------------------------|--------------------------|--------------------------|
| Employment | <input type="checkbox"/> | <input type="checkbox"/> |
| Residence | <input type="checkbox"/> | <input type="checkbox"/> |
| Marital/relationship status | <input type="checkbox"/> | <input type="checkbox"/> |
| Health conditions | <input type="checkbox"/> | <input type="checkbox"/> |

Please describe the changes

Since the summer of 2007, have you adopted any more children?

- No
 Yes

If Yes, please describe

Page 2

Adoptive Parents of Chinese Children (Two School-age)

Since the summer of 2007, are there any other changes in your family that you think are worth mentioning?

- No
 Yes

Yes, please describe

*** To help direct you to the correct page about parenting experience, please indicate how many parents are currently in your household.**

- Single Parent Household
 Two-parent Household

Appendix E Permission Approval

University of South Florida Mail - Permission Approval Letter

2/20/12 11:45 AM



Cheryl Duong <cherylduong@mail.usf.edu>

Permission Approval Letter

2 messages

Cheryl Duong Gelley <cherylduong@mail.usf.edu>
To: Xing Tan <tan@usf.edu>

Mon, Feb 20, 2012 at 9:56 AM

Hi Tony,

In submitting my thesis to ETD, they said I need approval from you to use the forms in Appendices A and B of my thesis since you created them. They said an email would suffice so could you please reply to this email granting me to use those forms in my thesis? Thank you!

Take care,
Cheryl

--

Cheryl D. Gelley, M.A.
School Psychology Trainee
University of South Florida
cherylduong@mail.usf.edu

Tan, Tony <Tan@usf.edu>
To: "Duong, Cheryl" <cherylduong@mail.usf.edu>

Mon, Feb 20, 2012 at 11:05 AM

Hi Cheryl,

I am confirming that I am aware that you have used the forms that I have created for my research on children adopted from China for your thesis. You have my permission to do so.

Tony Tan

From: Cheryl Duong Gelley [cherylduong@mail.usf.edu]
Sent: Monday, February 20, 2012 9:56 AM
To: Tan, Tony
Subject: Permission Approval Letter

[Quoted text hidden]

<https://mail.google.com/mail/u/0/?ui=2&ik=ef46695caa&view=pt&search=inbox&th=1359b434a83db5fc>

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