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Adolescent Behavioral Adjustment in Girls Adopted from China: Examining Pre-adoption and Post-adoption Factors

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Adolescent Behavioral Adjustment in Girls Adopted from China:

Examining Pre-adoption and Post-adoption Factors

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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Dedication

To my wife, Stephanie, and my family,

who have given me guidance and support throughout my educational career.

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Abstract

Despite research that indicates that internationally adopted children are at greater risk for poor developmental outcomes than their non-adopted peers (Bimmel, Juffer, IJzendoorn, Bakermans-Kranenburg, 2003; Juffer, & van IJzendoorn, 2005), girls adopted from China into Western culture tend to thrive, exhibiting high self-esteem, low behavior problems (i.e., both externalizing and internalizing), and excelling academically (Rojewski, Shapiro, & Shapiro, 2000; Tan & Jordan-Arthur, 2012). However, few studies have examined whether this trend continues into adolescence, as well as to what factors lead to these positive outcomes. The purpose of this study was to investigate predictors of mental health outcomes among internationally adopted adolescent Chinese girls, particularly factors that predicted levels of internalizing pathology (e.g., depression and anxiety) in adolescence. To fulfill this purpose, a secondary data analysis ($N = 167$) of information collected as part of a longitudinal study of U.S. international adoptions of Chinese children (2005-present) was completed using a hierarchical regression approach. Overall, these variables (e.g., age at adoption, pre-adoption adversity, family stress, parenting style, adolescent self-esteem, and academic competence) predicted 35% of the variance in internalizing behavior outcomes. The positive adjustment that has been seen in childhood continued to adolescence in this study, with 88% of the adolescent girls reporting Total Internalizing T-scores of less than 60 (i.e., in the normal range) on the *Youth Self-Report* form on the *Child Behavior Checklist* (Achenbach & Rescorla, 2001b). Authoritative parenting style and self-esteem showed the strongest relations to internalizing behaviors. Implications of the study for practice and discussion of future research based on these findings are explored.

Chapter I: Introduction

This chapter provides an overview of a research study that examined the relationship between pre-and-post-adoption variables and the post-adoption adjustment among internationally adopted Chinese adolescent girls. Research to date indicates that internationally adopted Chinese children exhibit fewer behavior problems when compared with adopted children from other countries (Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008). The purpose of this study was to examine how girls adopted from China fare in terms of internalizing (i.e., depression and anxiety) behavior problems in their adolescent years, with an emphasis on how various environmental factors are related to these outcomes. This chapter begins with a review of international Chinese adoptions and the characteristics of adopting families. Next, the conceptual framework for the study, the developmental perspective, is described. Subsequently, the factors that were included in the study are discussed, followed by the statement of the problem, the purpose for the study, and the research questions.

Background on International Adoptions from China

According to the United States Census Bureau (2003), 2.1 million of the 84 million U.S. children living in the U.S. are adopted. Among those adopted, roughly 13% are from the international community, with about half of these from Asian countries (e.g., Korea, China Vietnam). International adoptions from China have steadily grown since they were legally allowed in the mid-1980s, to a peak of over 7,000 in 2005 (FCC, 2010). Most children who are adopted from China are girls due to the Chinese preference for boys and the country's "one-child" policy (Johnson, Huang, & Wang, 1998). These children's adoptive parents tend to be

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older and have more resources than the average family in the U.S., including higher incomes, reduced stress, and greater family cohesion (Ceballo, Lansford, Abbey, & Stewart, 2004; Hellerstedt et al., 2008).

Research regarding international adoptions from China is limited. The studies that have observed this population have generally been focused on the young female population of adoptees (e.g., preschool and elementary age), and have found that, despite pre-adoption adversity (e.g., underfunded institutions, abandoned at a young age), these girls often have less behavior problems, and perform better academically than their adopted and non-adopted peers in the same age group. Rojewski, Shapiro, and Shapiro (2000) found that, as a group, internationally adopted Chinese preschool children's behavior scores did not deviate from typical scores on the Parent Rating Scale of the Behavior Assessment Scale for Children (PRS-BASC; Reynolds, & Kamphaus, 1992). Similarly, when examining this population, Tan and Marfo (2006) found that internationally adopted Chinese preschool girls had fewer behavioral problems when compared to the Child Behavior Checklist's (CBCL, Achenbach, & Rescorla, 2001ab) U.S. normative samples. Finally, Cohen, Lojkasek, Zadeh, Pugliese, and Kiefer (2008) found that, although this population was initially behind their non-adopted Canadian peers in multiple domains (i.e., physically, developmentally, and cognitively) at adoption, within six months, these children were functioning in the average range physically and developmentally. By age three, both populations were on level in all domains.

Overall, the extant research suggests that internationally adopted Chinese girls are a resilient group and appear to thrive in their new environments. This study aimed to examine which factors in their environments helped adopted Chinese girls to overcome early negative events and to flourish in adolescence. The study of these successful adoptees may assist in

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increasing the overall understanding of what factors affect internationally adopted childrens'

later mental health development in adolescence.

Framework of the Current Study

This thesis used a developmental perspective when analyzing how environmental factors

affect this unique population's internalizing behavioral outcomes. For the purposes of this

thesis, "development" referred "to patterns of orderly change that unfold over the lifetime as

human beings progress from conception to maturity and then decline and death" (Masten, Faden,

Zucker, & Spear, 2009, p. 9). A majority of the most rapid and growth adjustments occur in the

adolescent years from the age of 8 to 10 until 18 to 20 years old. Some of the major changes that

occur during this time are the beginning of cognitive and physical changes due to puberty,

multiple school transitions (e.g., middle and high school), the preference of their peers over their

families, and their initial self-understanding of how they fit into the larger world (Bee & Boyd,

2002; Masten, Faden, Zucker, & Spear, 2009) Additionally, family factors like the amount of

family stress and the parenting style also affect an adolescent's development (Marcynyszyn,

Evans, & Eckenrode, 2008; Steinberg, Blatt-Eisengart, & Cauffman, 2006). These changes

affect adolescents differently. In adolescent girls, there is an increase in internalizing

symptomology (e.g., anxiety and depression), which can be a result of entering puberty early or

dealing with negative life events that the girls are not psychologically ready to handle (Bee &

Boyd, 2002; Ge, Conger, & Elder, 2001; La Greca & Harrison, 2005; Zahn-Waxler, Shirtcliff, &

Marceau, 2008).

Those children and adolescents who are adopted, both internationally and domestically,

work through these factors of normal development, as well as those that are associated with

being adopted. Being adopted is a unique life experience that can cause mixed emotions for

adolescents (Benson, Sharma, & Roehlkepartain, 1994). Furthermore, adoptees who are of a

different culture or race than their adoptive family also have to cope with differing views of themselves compared to how others view them (Wilkinson, 1995). These ethnic experiences can influence their self-perceptions and their self-esteem (Mohanty & Newhill, 2006).

Factors Included in this Study

The pre-adoption and post-adoption factors in this study were chosen based on previous research examining both adopted and non-adopted children and adolescents. The outcome variable in this study was the level of internalizing behavior problems of internationally adopted Chinese adolescent girls. Meta-analyses on international adoptions in general suggest that adopted children have more behavior problems and are referred at higher rates for mental health concerns compared to their non-adopted peers of the same age (Bimmel, Juffer, van IJzendoorn, & Kakermans-Kranenburg, 2003; Juffer & van IJzendoorn, 2005). Overall, current research on internationally adopted Chinese girls does not reflect this trend, instead portraying them adolescents who are adjusting well to their new environment (Tan & Jordan-Arthur, 2012). However, one study in Australia found that these girls had higher internalizing problems than non adopted Australian normed children (Elliott & McMahon, 2011).

There are several environmental factors (i.e., predictor variables) that were examined in this study. The first two factors, age of adoption and pre-adoption adversity, are environmental stressors that are present before the child is adopted. Research has shown that the age at which an international child is adopted and the care they receive in orphanages has an impact on their later development (O'Conner, Rutter, Beckett, Keaveney, & Kreppner, 2000). However, when specifically looking at international adoptions from China, Tan and Marfo (2006) found that only pre-adoption adversity was significant in predicting later behavior difficulties in young children.

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The current study included both age at adoption and pre-adoption adversity to provide a broader understanding of the pre-adoption experiences of children in this sample.

The next group of factors that were examined was part of the post-adoption family environment (e.g., parenting style and family stress). Parenting style was defined as the extent to which a parent identifies more with one of four parenting styles (e.g., authoritative, authoritarian, permissive, and neglectful) theorized by Baumrind (1971, 1991). Authoritative parenting has been found to be positively linked to better outcomes in adolescent mental health development, while the other three parenting styles have been shown to have more negative outcomes (Steinberg, Blatt-Eisengart, & Cauffman, 2006). In addition to parenting styles, family stress also has an impact on the post-adoption environment, sometimes contributing to an adolescent's behavior problems (Cui, Donnellan, & Conger, 2007).

Self-esteem was also examined as a contributing factor. Self-esteem refers to the personal value people place on themselves and is an "evaluative component of self-knowledge" (Baumeister, Campbell, Krueger, & Vohs, 2003, p. 2). Having low self-esteem is related to both internalizing and externalizing behaviors, while having a high self-esteem is related to an increase in happiness and an insulator against stressful events (Baumeister, Campbell, Krueger, & Vohs, 2003; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Sowislo, & Orth, 2013).

The final factor that was examined was academic competence. Academic competence relates to how well a child is doing in school, and can be both a protective and a risk factor in the development of mental health problems. For example, girls who demonstrate low levels of academic competence have been shown to be more vulnerable to depression and anxiety than

those who show high levels of academic competence (Pomerantz, Altermatt, & Saxon, 2002).

Therefore, performing better in school can make girls less vulnerable to behavior problems.

Statement of the Problem

Despite the fact that several thousand Chinese adoptions have occurred since 1985, much of the research examining this population was completed with a focus on preschool and elementary-aged girls. This research indicates that these children often develop faster and perform better than both their adopted and non-adopted peers of the same age (Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008; Pomerlau et al., 2005; Tan & Marfo, 2006). These findings conflict with much of the international adoption research that has focused on children and adolescents adopted from Russia, as well as other Asian countries. Meta-analyses on these adoptions show that internationally adopted children, in general, are reported to have more behavior problems and are referred for treatment for mental health problems at higher rates compared to their non-adopted peers of the same age (Bimmel, Juffer, van IJzendoorn, & Kakermans-Kranenburg, 2003; Juffer & van IJzendoorn, 2005). What have not been as thoroughly researched are the various pre-adoption and post-adoption factors that influence female Chinese adoptees and why this population as a whole has exhibited fewer behavioral difficulties than both their adopted and non-adopted peers of the same age. Being adopted alone, either internationally or nationally, has proven to be a risk factor that can hinder subsequent development, but this does not seem to be true for the adopted Chinese population. Why does this population of internationally adopted children not only challenge this norm, but in fact perform better than their adopted and non-adopted peers of the same age? Additionally, do these findings of better adjustment also hold true in adolescence?

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Purpose of the Study

The purpose of this study was to expand on the understanding of, and to examine the relationship between, pre-adoption and post-adoption environmental factors and their relation to the internalizing behaviors of internationally adopted Chinese adolescent girls. In essence, this study investigated levels of problem behavior among this population in relationship to several environmental factors. To fulfill this purpose, secondary data collected as part of a longitudinal data analysis of U.S. international adoptions of Chinese children (2005-present) were analyzed. Data were collected via self-report measures from both the mothers and the adolescents themselves at different points (i.e., phases) in time, occurring once every two years throughout the course of the longitudinal study. Phase Four was the primary focus of this study. During this fourth phase of data collection (occurring in 2011), 770 families returned their surveys with 235 Chinese adopted adolescents having filled out self-rating data. Hierarchical regressions were calculated to understand how the variables included in the study have contributed to these girls' behavioral outcomes in adolescence.

Furthermore, this study expanded on the research completed by Gelley (2012), by utilizing the adolescents' self-report on the *Child Behavior Checklist-Youth Self Report Form* (CBCL-YSR; Achenbach, & Rescorla, 2001b) instead of the parent CBCL form when examining how the predictor variables relate to behavior outcomes. Using the adolescent self-report form gave this study a unique perspective of the adolescents' opinions of their behaviors and how they relate and compare to their parents' perceptions.

Research Questions

For the current study, the following research questions were explored and answered:

1. To what degree do each of the following variables predict self-reported *depression* among adolescent girls adopted from China?

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a. Age at adoption

b. Pre-adoption adversity

c. Family stress

d. Parenting style

e. Adolescent self-esteem

f. Adolescent academic competence

2. To what degree do each of the following variables predict self-reported *anxiety* among

adolescent girls adopted from China?

a. Age at adoption

b. Pre-adoption adversity

c. Family stress

d. Parenting style

e. Adolescent self-esteem

f. Adolescent academic competence

3. To what degree do each of the following variables predict self-reported total *internalizing*

behavior problems among adolescent girls adopted from China?

a. Age at adoption

b. Pre-adoption adversity

c. Family stress

d. Parenting style

e. Adolescent self-esteem

f. Adolescent academic competence

Chapter II: Review of the Literature

The literature on adopted children shows overall that these youth are at greater risk for poor developmental outcomes when compared to their non-adopted peers of the same age (Beckett et al., 2006; Bimmel, Juffer, IJzendoorn, & Bakermans-Kranenburg, 2003). Interestingly, girls adopted from China tend to fare much better developmentally than other adopted children (Bagley & Young, 1981; Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008; Rojewski, Shapiro, &Shapiro, 2000; Tan & Marfo, 2006; Tan, 2009). The purpose of this study was to examine predictors of behavioral adjustment outcomes among internationally adopted adolescent Chinese girls. In particular, the study examined those factors that predicted self-reports of internalizing pathology (e.g., depression and anxiety) in adolescence. This chapter begins with a review of the developmental perspective and what internationally adopted adolescents have to cope with throughout this tumultuous time in their development. Next, the background on international Chinese adoptions; the descriptions of the North American families who adopt these girls; and what is generally seen in these girls' outcomes after their adoptions are described. Subsequently, areas that research has shown to be related to positive outcomes among children in general are reviewed with an emphasis on how internationally adopted Chinese girls differ from their non-adopted and adopted peers of the same age. Finally, the chapter concludes with a review of the research on behavior outcomes for girls adopted from China. While most of this literature has focused on younger children, the few studies examining adolescence will be discussed to provide the reader with the information that is currently available on how this population fares beyond childhood and into the adolescent years.

Developmental Perspective on Adolescent Development

There are several different ways to conceptualize how an adoptive adolescent's environment affects his or her growth. One way is through a developmental perspective. For the purposes of the thesis, "development" referred "to patterns of orderly change that unfold over the lifetime as human beings progress from conception to maturity and then decline and death" (Masten, Faden, Zucker, & Spear, 2009, p. 9). Additionally, while there is change and development throughout a person's life, a majority of the most rapid growth adjustments occur in the adolescent years from the age of 8 to 10 until 18 to 20 years old. Some of the major changes that occur during this time are the beginning of cognitive and physical changes due to puberty, multiple school transitions (e.g., middle and high school), the preference of their peers over their families, and the adolescent's initial self-understanding of how they fit into the larger world (Bee & Boyd, 2002; Masten, Faden, Zucker, & Spear, 2009). This combination of biological and social changes generates a progressively more multifaceted environment for which the adolescent has to traverse, which leads to wider array of complex challenges, problems and stressors that adolescents can have a hard time working through.

When specifically examining girls in Western culture during adolescence, one would find that they begin puberty, on average, earlier than boys. Puberty rates for both genders have continued to drop when comparing them to earlier generations of adolescents, but girls still begin earlier than boys (Bee & Boyd, 2002). In addition, research has shown that adolescent girls report more internalizing behaviors (e.g., depression and anxiety) than boys with a ratio of 2:1 (Lewinsohn, Lewinsohn, Gotlib, Seeley, & Allen, 1998). The increase in internalizing issues is particularly seen in girls who begin puberty earlier than their peers because they may not be psychologically ready to deal with these new changes. These rates can also increase due to

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stressful/negative life events and from negative social interactions with their peers. For example, girls use more indirect or relational aggression to their peers, which does more psychological damage than physical damage (Bee & Boyd, 2002; Ge, Conger, & Elder, 2001; La Greca, Harrison, 2005; Zahn-Waxler, Shirtcliff, & Marceau, 2008).

Family factors also play a role in the development of internalizing behaviors. The amount of stress a family has and the way parents raise their child can impact an adolescent girl's mental health. Family stress can stem from marital conflicts, family instability, and a lack of family cohesion. For example, Marcynyszyn, Evans, and Eckenrode (2008) found an increase in family instability increases teacher and parent reported externalizing and internalizing disorders for their sample of 141 adolescents, as well as decreases in their academic grades.

Additionally, the ways parent raise their child, or their "parenting style" as coined by Baumrind (1971, 1991) can be another factor related to an adolescent's increases in negative mental health symptoms. For example, the parents who agree with a more "authoritative" parenting approach are more apt to have adolescent children who report less internalizing and externalizing behaviors than parents who are more permissive, strict or neglectful (Steinberg, Blatt-Eisengart, & Cauffman, 2006). Therefore, families play a major role in the development of the adolescent girl's internalizing behavior problems.

Finally, in addition to all of the changes that come with adolescence, those children who are adopted, both internationally and domestically, have to incorporate their adoption into their self-conceptions of themselves. Being adopted is a unique life experience that these adolescents have to work through that often results in mixed feelings (Benson, Sharma, & Roehlkepartain, 1994). A study by Basow, Lilley, Bookwala, and McGillicuddy-DeLisi (2008) investigating Korean adoptees' self-acceptance found that those adoptees who held negative views of their

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adoptions had lower self-acceptance than those adoptees who had more positive views of their adoptions. Furthermore, adoptees who are of a different culture or race than their adoptive family also have to cope with differing views of themselves compared to how others view them (Wilkinson, 1995). These ethnic experiences can influence their self-perceptions and their self-esteem (Mohanty & Newhill, 2006). When it comes to internationally adopted Chinese adolescent girls, Tan and Jordan-Arthur (2012) found that these adopted girls had a positive outlook towards their adoption and ethnic identities. However, the authors report that this was only a snapshot in time and that these issues should be viewed over the course of their development.

Taking a developmental perspective highlights the multiple factors that can influence internationally adopted adolescents' mental and physical health. Not only do these unique individuals have to work through normal developmental milestones and hurdles like puberty, and an increasing reliance on peers over families, but they have to cope with their feelings towards their adoptions and any differences with regards to their ethnicity or culture. These issues are a lot to absorb during this tumultuous time of development, more so than the average adolescent in Western culture. The way in which these adolescents cope can influence their self-esteem, academic competence, and mental health in both positive and negative ways.

Background of Chinese Adoptions

A group of children who may help researchers to better understand the nature of risk and resilience are children adopted from China. The research to date shows that despite the pre-adoption challenges faced by this group of children, they tend to adjust remarkably well to their post-adoption lives (Bagley & Young, 1981; Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008; Rojewski, Shapiro, & Shapiro, 2000; Tan & Marfo, 2006; Tan, 2009). This next part of the

chapter will review the context of adoptions of children from China by North American families and the research on their post-adoption adjustment.

        The context of adoptions from China. Children adopted from China tend to be a unique group among internationally adopted children due to the country's strict "one child policy." The implementation of this rule varies by area. In some regions, the guidelines are strict as they only permit one child per family, whereas in others, parents may have one male child or two children providing that the first is female. This preference for male children lies in the values of Chinese culture. Traditionally, males stay with their family, providing their birthparents security and care as they become older. Chinese girls, on the other hand, care for their husband's family after getting married, providing no security for their birth parents. Those who do not comply with this policy and choose to have multiple children are subject to heavy fines and punishments (i.e., sterilization), leaving healthy infant girls often abandoned to provide the chance for their birth parents to conceive a boy (Johnson, Huang, & Wang, 1998).

        Many parents report regret and guilt over the decision to abandon their child and therefore choose to abandon their children early in the infant girl's life (e.g., less than six months old) to avoid attachments. These girls are often left in crowded public places, to avoid further fines and punishments, and taken to orphanages by the strangers who find them. Within these orphanages, many of which are poorly run or overcrowded, these girls survive until they are adopted internationally or by a domestic childless couple (Johnson, Huang, & Wang, 1998).

        Despite the overcrowding of these orphanages, domestic adoptions in China are relatively low. This is due to the rules and regulations stipulating that only a couple who are childless and over the age of 35 can adopt a child in the country (Johnson, Huang, & Wang, 1998). On the other hand, international adoptions of Chinese girls have steadily risen over the past several

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decades since first being allowed in the United States around the mid 1980's. According to the United States Census Bureau (2003), 2.1 million of the 84 million children living in the United States are adopted. Of these adoptions, roughly 13% are from the international community, half of which originated from Asian countries (e.g., Korea, China, and Vietnam). More specifically, since 1985, over 71,000 Chinese children have been adopted into the United States. Chinese adoptions increased steadily from 1985 to a peak of over 7,000 a year in 2005 but have since decreased to less than 4,000 a year (FCC, 2010). In addition to these adoptions in the United States, Chinese children also are frequently adopted by Canadian and European families (Johnson, Huang, & Wang, 1998).

Families adopting international children. Generally, parents who adopt international children tend to be older, highly educated, and have access to more resources than the average family in the United States (Hellerstedt et al., 2008). They also report having higher incomes, reduced stress, and greater family cohesion (Ceballo, Lansford, Abbey, & Stewart, 2004; Hellerstedt et al., 2008). Hellerstedt et al. (2008) conducted a review of demographic data on international children adopted by approximately 2,000 Minnesota families between the years of 1990 and 1998 as part of the International Adoption Project. The researchers found that the mean age of the adoptive parents was 38 and that nearly half (49.5%) of the families had two parents with college degrees. A majority of these parents (87.2%) also earned an annual income of over $50,000. This trend also has been seen in the United States Census (2003), where parents who adopted international children had an annual median income of approximately $56,000, which is $8,000 higher than parents who only had biologically related children. Furthermore, when comparing the experiences of new parents gaining a new biological, adopted, or step child, Ceballo, Lansford, Abbey, and Stewart (2004) found that adopted parents seem to

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have less marital stress compared to biological parents. This is likely the result of the adoptions being planned and the maturity of the parents. In addition, areas of distress and conflicts (i.e., infertility) are dealt with and resolved during the comprehensive screening process, which can take up to a year. Among couples who adopt due to infertility issues, having a child often increases their marriage satisfaction and family cohesion after a period of deprivation and longing to be parents (Ceballo, Lansford, Abbey, & Stewart, 2004).

   Outcomes for girls adopted from China by North American families. Despite limited research on this population, studies examining the overall development of Chinese girls who are internationally adopted portray them as being on level or performing better than their adopted and non-adopted peers who have a similar age and background (Bagley & Young, 1981; Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008; Rojewski, Shapiro, & Shapiro, 2000; Tan & Marfo, 2006; Tan, 2009). Importantly, at the time of adoption, Chinese girls have been shown to be below their non-adopted peers of the same age physically and cognitively and sometimes identified as having developmental delays. However, they tend to catch up to their non-adopted peers of the same age relatively quickly, improving into the normal range by six months and on the same level with these same peers within a few short years after adoption (Cohen, Lojkasek, Zadeh, Pugliese, & Kiefer, 2008). To date, the majority of research on female Chinese adoptees has mainly focused on the few years immediately after adoption (i.e., preschool and elementary age), and only a small number have examined their development from childhood into adolescence to determine whether these results continue later in life. The few studies that have examined this population in adolescence have shown that the majority are well adjusted teens with a good self-esteem and strong academic competence (Bagley & Young, 1981; Tan & Jordan-Arthur, 2012).

Predictors of Mental Health Outcomes for Adopted Children

There are a wide variety of factors that may relate to mental health outcomes for adopted youth. Many researchers have examined the child's circumstances prior to adoption, including age at adoption and degree of pre-adoption adversity experienced (Dalen & Rygold, 2006; Rojewski, Shapiro, & Shapiro, 2000; Tan & Marfo, 2006). Other researchers have focused on the quality of the adoptive environment, including family stress and parenting style (Gelley, 2012). Additionally, individual factors such as self-esteem (Tan & Jordan-Arthur, 2013) and academic competence have been explored (Dalen & Rygvold, 2006; Tan, 2009). Studies that have investigated these factors among internationally adopted children are examined below.

Pre-Adoption Factors

Age at adoption. When studying children who are adopted internationally, there is a wide variability in the age at which children are adopted. Overall, the literature provides evidence that children who are adopted at older ages tend to experience more negative outcomes than those adopted at younger ages (Beckett et al., 2006; O'Conner, Rutter, Beckett, Keaveney, Kreppner & the English and Romanian Adoptees Study Team, 2000). For example, Beckett et al. (2006) found that Romanian children adopted at an older age (i.e., > 24 months old at adoption) had lower scores on cognitive measures and experienced difficulty in catching up with their internationally and domestically adopted same-aged peers who were younger at adoption (i.e., < 6 months old at adoption). In addition to these lower cognitive scores and developmental delays, these older children also had higher rates of behavior problems, both internalizing and externalizing, and more attention and social problems than their younger adopted counterparts (Gunnar, Van Dulmen, & the International Adoption Project Team, 2007; Juffer & van Ijzendoorn, 2005; Merz & McCall, 2010).

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These findings, however, have not generalized to girls adopted from China. Behaviorally, age of adoption has not shown to be a significant influence on outcomes for internationally adopted Chinese girls. Rojewski, Shapiro, and Shapiro (2000) surveyed the parents of 45 adopted Chinese children in an effort to explore the parents' perceptions of their adopted daughters' behaviors. Using the Parent Rating Scale of the Behavior Assessment System for Children (PRS-BASC; Reynolds & Kamphaus, 1992), they found that a majority of the girls' behaviors were considered in the "normal" ranges. In this case, age of adoption did not have a significant influence on the perceptions that the parents had of their adopted Chinese daughters. Similar results suggesting that problem behaviors are not significantly correlated with age of adoption were found by Dalen and Rygold (2006) in their Norwegian Chinese adopted sample and in Tan and Marfo's (2006) U. S. sample of adopted Chinese girls.

The results related to academic achievement for girls adopted from China are more mixed. Tan's (2009) longitudinal study of internationally adopted school age (e.g., > 6 years old) Chinese girls examined their behavioral adjustment, social skills, and academic competence over two time periods. He found that, despite the fact that behavioral adjustment was not correlated with age of adoption, there was a significant correlation between age of adoption and academic competence. Specifically, the Chinese girls who were adopted at an older age had lower academic scores in areas of reading, math, and social studies, as measured by the CBCL 6-18 Social Competence and Adaptation scales, than girls who were adopted at a younger age. These results are contradictory to Dalen and Rygold's (2006) study of Chinese girls adopted in Norway. These researchers found that age of adoption did not have an effect on the educational performance or language skills of the adopted Chinese girls in their study. Tan (2009) suggested that his results were different from Dalen and Rygold's (2006) because his sample at the time of

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the study was older than the previous researchers' sample. More research in this academic area is needed to understand whether age of adoption has an effect on later academic development.

Pre-adoption adversity. Just as the age at adoption can vary, there is also a wide variation in the conditions in which children who are adopted live prior to the adoption process. These pre-adoption experiences may include prenatal exposure to toxins (e.g., alcohol), malnourishment, and deprived and unstimulating institutions that are abusive and neglectful (Rutter, 2005). Living in an adverse environment at a young age is especially damaging since this time is considered a "critical period" for learning and development. Depending on the length of time children experience these conditions, they are at greater risk for negative outcomes, such as delays in physical and cognitive development (Rutter & the English and Romanian Adoptees Study Team, 1998), problems in academic and social areas (Dalen, 2001; Dalen & Rygvold, 2006; Harwood, Feng, & Yu, 2013; & Tan, 2006), and an increase in overall behavior problems (Verhulst, Althaus, & Versluis-den Bieman, 1992). For example, a study investigating internationally adopted children brought to Sweden between 1970 and 1977 found that the children's difficulties were not the result of the age at which the child was adopted, but rather the conditions that they experienced before being adopted (Cederblad, Hook, & Mercke, 1999).

These results also have been found among girls adopted from China. For example, pre-adoption adversity has been shown to affect the physical development and rate at which youth reach developmental milestones. A study conducted by Cohen, Lojkasek, Zadeh, Pugliese, and Kiefer (2008) on 70 internationally adopted Chinese girls, at the time of adoption and then again at 6, 12, and 24 months, found that the children were initially physically smaller and had more developmental delays than their same-aged, non-adopted Canadian peers. These developmental delays had diminished within two years post adoption, although the authors note that, while

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considered within the normal ranges, the children were still smaller in terms of height, weight, and head circumference. The authors hypothesized that these effects resulted from the malnutrition the girls experienced prior to adoption. This statement seems to be validated by other studies examining this population when adopted from foster homes as opposed to Chinese institutions. One study in particular established that living in a Chinese institution was more detrimental to the physical and cognitive development of youth than living in Chinese foster homes (Dries, Juffer, IJzendoorn, & Bakermans-Kranenburg, 2010).

Pre-adoption adversity also has been shown to affect adopted Chinese girls' behavioral adjustment. Research has shown that for those who have higher scores on the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001ab), it was the pre-adoption adversity, and not age of adoption, that was significantly correlated to externalizing, internalizing, and total behavior scores. However, it should be noted that children adopted from China score significantly lower on this measure than the CBCL US normative sample (Achenbach & Rescorla, 2001ab), showing that behaviors in the clinical range are relatively rare in this population (Tan & Marfo, 2006; Tan, 2009).

Post-Adoption Factors

Family stress. Another key factor that has been investigated when trying to understand differences in internationally adopted children's mental health outcomes is family factors, especially the amount of stress one's family has to handle on a daily basis. Family stress has been connected with several different environmental stressors, including major life events occurring within families (Milan & Pinderhughes, 2006), marital problems (Stadelmann, Perren, von Wyl, & von Klitzing, 2007), reduced support from a spouse (Leve, Kim, & Pears, 2005), and/or socioeconomic problems (Conger & Conger, 2002). The amount of stress a family has to

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manage has shown to be a potential risk if the stress is considered high or not managed well for an adolescent's development. Research has shown that an increase in family stress can lead to later negative outcomes in adolescence, like substance use, academic problems, and internalizing and externalizing symptoms (Cui, Donnellan, & Conger, 2007; Marcynyszyn, Evans, & Eckenrode, 2008; Van Oort, Verhulst, Ormel, & Huizink, 2010; Worrell & Goodheart, 2006).

On the other hand, when a family's stress is low or managed well, this variable might be considered a positive factor. Families high in cohesion and stability have been shown to provide belonging, acceptance, support, and resiliency against later future hardships for their children (Conger & Conger, 2002; Johnson, LaVoie, & Mahoney, 2001). For instance, a family with high marital support can provide a model for their adolescent children to follow and learn from, which can then teach them problem solving skills to protect against stressful events they may experience in the future (Conger & Conger, 2002). Therefore, understanding the amount of stress a family has and how they work through their problems can be an important factor to consider in understanding why an adolescent is behaviorally successful or has behavior problems.

Although there have been many studies examining the relationship between family stress and child outcomes among families with non-adopted children, there is little published research examining how family stress is related to internationally adopted children. One such study by Bagley and Young (1981) examined internationally adopted Chinese girls from Hong Kong who were in their teens to early twenties ($N = 67$). These girls were adopted into the United Kingdom from 1962-1964 at ages ranging from a few months to nine years of age. When researchers interviewed the family members, they found that all families had stable marriages and provided intellectual stimulation and support. While the authors did not specifically examine the direct impact of the family's stress levels on their internationally adopted adolescent children, the

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authors did report that the children were performing well academically, as was ascertained through their interviews, and had high self-esteem, which was measured by using a self-esteem inventory.

Another study by Tan, Camras, Deng, Zhang, and Lu (2012) specifically examined the effect of family stress on preschool age internationally adopted Chinese girls. In this study, Tan et al. surveyed 605 families in the third phase of his longitudinal study. These researchers used the *Social Problem Questionnaire* (SPQ; Corney & Clare, 1985) to gauge the amount of stress the family was currently experiencing and the *Child Behavior Checklist* (CBCL; Achenbach & Rescorla, 2001a) to understand the behavior problems seen in their adopted children. This study found that while the families mostly reported experiencing mild family related stress events, family stress showed significant correlations with adopted children's internalizing ($r =.38$), externalizing ($r =.28$), and total behavior scores ($r =.38$) on the CBCL.

Finally, Gelley (2012) also examined the impact of family stress on behavior problems among girls adopted from China by North American families using Dr. Tan's longitudinal data. She found a moderate positive relationship between family stress and both internalizing ($r =.43$) and externalizing ($r =.59$) behavior problems when reported by the girls' parents. This thesis expanded on Gelley's (2012) work by investigating the effect of family stress on the girls' internalizing behaviors by using the girls' self-reported ratings on the *Youth Self Report* form of the *Child Behavior Checklist* (CBCL-YSR, Achenbach & Rescorla, 2001b) of their behaviors rather than those of their parents.

Parenting style. Another post-adoption factor that has been examined in relation to mental health outcomes among internationally adopted children is parenting style. Effective parenting is an important component in the successful development of socializing a child from

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infancy to adulthood. Parenting style is defined as a "combination of parent behaviors that occur over a wide range of situations, creating an enduring child rearing climate" (Berk, 2006, p. 563). One of the first researchers to study parenting styles was Diana Baumrind (1971, 1991), who classified parents into four distinct categories: authoritative, authoritarian, permissive, and uninvolved (i.e., neglectful). Each parenting style contains differing levels of warmth and control.

Baumrind (1971, 1991) defined authoritative parenting as having high control but also having high warmth to encourage a child to develop autonomy and independence. Authoritative parents are demanding yet respective and responsive to their child's needs, and their punishment style is supportive rather than punitive. Examples of authoritative parenting include setting clear rules for a child's behavior and explaining to the child why they are being punished if the rules are broken. In contrast, authoritarian parents are considered to have low warmth and high control. These parents are tough and severe in their punishments and are not as nurturing as authoritative parents. Examples of an authoritarian parenting style are those whose rules should be followed without any explanation and who maintain an orderly environment. Permissive parents are the direct opposite of authoritarian in that they are low in control but high in warmth, and are considered more responsive than demanding. Examples of permissive parenting include not setting clear rules, allowing inappropriate behaviors to occur, and not being punitive. The last parenting style is called uninvolved or neglectful. This parenting style has low control and low warmth, with parents not being demanding or responsive to their children's needs and wants or rejecting their parenting responsibilities all together. The extant research indicates that parenting styles in western culture are related to a child's behavior problems. Authoritative parenting has been found to be positively linked to better outcomes in an adolescent's mental health

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development. The other three types of parenting styles are associated more with negative and detrimental effects in adolescent development (Lamborn, Mounts, Steinberg, & Dombusch, 1991; Milevsky, Schlechter, Netter, & Keehn, 2007; Steinberg, Lamborn, Darling, Mounts, & Dombusch, 1994; Williams et al., 2009). The current study will investigate the first three parenting styles (i.e., authoritative, authoritarian, and permissive) as they are consistently the most researched and distinctive parenting styles in the literature.

To date, there is little research examining parenting effects on Chinese adolescents who were internationally adopted as children. The aforementioned longitudinal study by Bagley and Young (1981) found that all parents were warm and supportive, which is typically seen in authoritative parenting. A more recent study of internationally adopted Chinese girls examined the effect of parenting style on a preschool sample's externalizing and internalizing behavior problems. Tan, Camras, Deng, Zhang, and Lu (2012) found in their sample of 605 families who had adopted Chinese girls that all families identified more strongly with authoritative parenting style traits than permissive or authoritarian traits. In addition, the researchers found that the preschool childrens' behavior problems were significantly correlated with their parents' parenting style. Authoritative parenting was negatively correlated with the child's overall (r = -.19) and externalizing behavior problems (r = -.18) but not correlated with internalizing behavior problems (r = -.15). Conversely, authoritarian and permissive parenting qualities had a moderate to strong positive correlation with externalizing ($r's$ =.39 & .35), internalizing (r = .35, & .28), and total behavior problems ($r's$ = .46 & .37). Therefore, similar to findings in western culture, the literature examining parenting behaviors on internationally adopted Chinese girls suggests that the parenting style these families identify with most has an effect on the behaviors

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the girls exhibit as they are developing into adulthood. This may be another key component in understanding why this population adjusts so well in their new environments.

Finally, this thesis will expand on Gelley's (2012) research exploring the effects of parenting styles on behavior problems among girls adopted from China by North American families by using the girls' self-reporting of their behavior problems instead of the parent reports. In her thesis, Gelley (2012) found a moderate inverse relationship between authoritative parenting and both internalizing ($r = -.08$) and externalizing ($r = -.15$) behavior problems. She also found a moderate positive relationship between permissive and authoritarian parenting and behavior problems ($r's = .18$ to $.39$) when reported by the girls' mothers. The current study examined whether this same relationship is seen when examining the adolescents' self-reports instead of their mothers'.

Self-esteem. Another factor that has been considered in attempting to understand differences in internationally adopted children's mental health outcomes is self-esteem. Self-esteem has been defined as "the judgments we make about our own worth and the feelings associated with those judgments" (Berk, 2006, p. 449). Essentially, this concept refers to the personal value people place on themselves and is an "evaluative component of self-knowledge" (Baumeister, Campbell, Krueger, & Vohs, 2003, p. 2). Whereas high self-esteem can be viewed as a favorable assessment of someone's abilities, low self-esteem is the opposite, with a person holding a low opinion of himself or herself. However, self-esteem can be two sided, being either an accurate depiction of one's abilities and talents or pathological. For example, high self-esteem can originate from a balanced opinion of one's successes and strengths, but it can also stem from grandiosity and an inflated sense of self. On that same token, low self-esteem can be

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an understanding of someone's limitations or a distorted sense of inferiority (Baumeister, Campbell, Krueger, & Vohs, 2003).

Additionally, the type of self-esteem one has can lead to different outcomes. Having a high self-esteem can result in increases in happiness and can insulate someone from highly stressful events (Baumeister, Campbell, Krueger, & Vohs, 2003). However, low self-esteem can lead to more negative outcomes. More specifically, low self-esteem is related to an increase in externalizing behaviors (e.g., aggression, delinquency) and internalizing behaviors (e.g., depression and anxiety) (Baumeister, Campbell, Krueger, & Vohs, 2003, Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Sowislo, & Orth, 2013). For example, a meta-analysis of longitudinal studies found a reciprocal relationship between low-self-esteem and internalizing problems such that the effects of low self-esteem can make one vulnerable to internalizing problems and internalizing problems can make one vulnerable to developing a low-self-opinion of oneself (Sowislo & Orth, 2013). Therefore, having a high self-esteem or self-worth is related to better outcomes in one's life.

When investigating self-esteem among internationally adopted children and adolescents, several factors should be considered. These factors include the children's feelings about their adoptions (i.e., why was I given up for adoption, was it because I was worthless?), their ethnic identity (i.e., looking different from their adopted family can be uncomfortable), and academic competence (Juffer & IJzendoorn, 2007; Tan & Jordan-Arthur, 2013). Furthermore, while there is no precise life stage where an adoptee is more vulnerable to developing low-self-esteem, it has been suggested that adolescents may be more apt to developing low self-esteem because of the increased turmoil in the development of their identity (Juffer & IJzendoorn, 2007). However, when Juffer and IJzendoorn (2007) performed a meta-analysis on 88 studies investigating the

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self-esteem of transracial, international, and domestic adoptees, they found no evidence for the argument that adolescents had a lower sense of self-esteem. Furthermore, the authors discovered that international adoptees did not show lower self-esteem levels when compared to other types of adoptions (e.g., transracial, same race, domestic), and that adoptees as a whole had higher self-esteem than their non-adopted same-aged institutionalized peers. This line of thought was found in an earlier study completed by Cederblad, Hook, Irhammar, and Mercke (1999) in which their sample of 211 internationally adopted adolescents reported having a high self-esteem and no mental health issues.

Only one study has examined levels of self-esteem in internationally adopted Chinese girls. Bagley and Young (1981) reported that their sample of Chinese adolescent adoptees indicated having a high self-esteem using a self-esteem measure that was adapted for British children, and low levels of behavior problems gained through interviews, although this was not the primary focus of their study. Tan and Jordan-Arthur (2013) found that their sample of Chinese adolescent girls reported having high self-esteem, which is consistent with results of other research examining internationally adopted children.

Academic competence. Finally, the literature has shown that strong academic competence, or a tendency towards perfectionism in school, tends to be associated with better outcomes in the adolescent population (e.g. higher motivation, increased self-esteem, positive school attitudes, lower risk of depression and anxiety, and lower drug use) (Bryant, Schulenberg, O'Malley, Bachman, & Johnson, 2003; Steoeber, & Rambow, 2007). For this reason, high academic competence and positive school attitudes are considered to be protective factors against negative outcomes (Bryant, Schulenberg, O'Malley, Bachman, & Johnson, 2003). On the contrary, low academic competence has been shown to be linked to a high vulnerability to

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internalizing pathology (e.g., depression and anxiety), especially in adolescent girls. In fact, despite outperforming boys in academic subjects, adolescent girls generally have a higher susceptibility to developing internalizing problems (Pomerantz, Altermatt, & Saxon, 2002). Due to higher vulnerability to these conditions, achieving a strong academic competence and demonstrating a positive school outlook is critical for adolescent girls.

When examining the academic competence of adolescent Chinese girls who were internationally adopted, the research is varied and sparse but shows an overall positive trend (Bagley & Young, 1981; Dalen & Rygvold, 2006; Tan, 2009). Oftentimes, other factors, such as pre-adoption adversity, can negatively impact this population academically (Tan, 2009). A study described earlier (Bagley & Young, 1981) examining a population of internationally adopted Chinese adolescent girls in England in the 1960s found that by the time the girls reached high school, all were performing at a standard level of achievement compared with their non-adopted peers of the same age and gender. Additionally, one third of these girls were even taking advanced level coursework (Bagley & Young, 1981). Similar findings were discovered more recently in a population of internationally adopted elementary age Chinese girls in Norway. These girls were also performing on the same academic level as their non-adopted Norwegian peers of the same age (Dalen & Rygvold, 2006). However, despite the promising performance of this population, the amount and length of pre-adoption adversity and the age at which a child is adopted, as previously discussed, can negatively affect their academic competence. For example, a study of elementary aged internationally adopted Chinese girls completed by Tan (2009) found that girls who had been adopted at an older age with an increase in pre-adoption adversity performed at a lower academic level compared to the girls adopted earlier in life with less pre-adoption adversity. This trend seemed to continue into later adolescence (Tan & Jordan-

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Arthur, 2012). Therefore, although research suggests that many internationally adopted Chinese girls thrive academically in their new environments, it is important to note that certain factors still have the potential to influence their success.

Behavioral Outcomes

It has been noted that the amount and duration of negative or positive factors a youth experiences can influence how they respond to stressful stimulation in their environment (Dekovic, 1999; Masten, 2001). These responses to their stressors can be seen in their behavior and are usually classified as being either externally or internally focused. In 1978, Achenbach and Edelbrock defined internalizing behaviors as those that highlight somatic complaints, anxiety, phobias, depression and withdrawal, and externalizing behaviors as those that indicate delinquency and aggression. In general, prevalence rates of adolescent mental health concerns in western society are between 12% and 20% (Belfer, 2008; Costello, Egger, & Angold, 2005). However, adolescent girls show higher rates of internalizing behaviors, while boys have higher rates of externalizing behaviors, such as Attention Deficit Hyperactivity Disorder (Merikangas et al., 2010). These behaviors are measured by diagnostic interviews/questionnaires and different behavior measures like the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001b). Researchers who study internationally adopted children in western society question whether these rates and gender differences with regard to internalizing and externalizing behaviors are similar in this population (Bimmel, Juffer, IJzendoorn, & Bakermans-Kranenburg, 2003).

Studies that have examined behavior problem rates in international adoptions have found that this population has higher rates of behavior problems when compared to their same age non-adopted peers, but lower rates when compared to their same age domestically-adopted peers. Effect size, however, are small (Bimmel, Juffer, IJzendoorn, & Bakermans-Kranenburg, 2003;

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Juffer, & van IJzendoorn, 2005). More specifically, research has found that differences are seen more in externalizing than internalizing problems and girls have higher rates of total behavior problems than boys when compared to their non-adopted peers of the same age (Bimmel, Juffer, IJzendoorn, & Bakermans-Kranenburg, 2003). Overall, despite being overrepresented in the mental health system, researchers have seen that a majority of internationally adopted children are behaviorally typical and not in need of any mental health treatments.

Internationally adopted Chinese girls, as a whole, do not share this same trend with their internationally adopted peers of the same age. The few studies that have examined this population have investigated their behaviors in preschool and found that the majority are well adjusted and are in the normal ranges of behavioral concerns. In fact, this group of girls actually has lower externalizing, internalizing, and total behavior scores on the CBCL compared to the CBCL US normative sample (Achenbach & Rescorla, 2001ab; Tan, Camras, Deng, Zhang, & Lu, 2012). Furthermore, in Abrines, Barcons, Gorzig, Marre, Brun and Fumado (2012) study comparing parental ratings on behavior measures from a sample of children adopted from Eastern Europe (EE) (n =34) and girls adopted from China (CH) (n = 32), found that the children adopted from EE had higher externalizing problems than the girls adopted from CH, whereas there was no difference for anxiety. Finally, only one child of the 45 girls in Rojewski, Shapiro, and Shapiro's (2000) study deviated outside the normal range of behavior problems. However, while this population shows lower behavior scores on U.S. normative samples, one study in Australia examining 59 internationally adopted Chinese children when compared to the non-adopted Australian normative sample on a behavior measure, found that the girls had higher internalizing problems as reported by their parents (Elliott & McMahon, 2011). These results

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relate to children only and the study did not look at any internationally adopted Chinese adolescent girls, so the results could be different.

To date, most of the literature examining behavior problems among internationally adopted children has relied on parent report. Few studies have investigated parent-child agreement on mental health adjustment of the internationally adopted children and adolescents. One study that reported on parent-child agreement examined 7 year old, international adoptees in Canada, and found that the adoptive children had a moderate correlation with their adoptive mothers on externalizing problems ($r =.35$) but little agreement for the child's internalizing problems ($r =.03$) (Gagnon-Oosterwaal et al., 2012). However, the authors used two different measures when comparing the child and the parent's scores which could be the reason for the difference in their correlations. In another study, Tan and Marn (2014) examined the relationship between the adoptive mothers and their internationally adopted adolescent Chinese girls. Tan improved on the Gagnon-Oosterwaal et al. (2012) study by using the same measures, the CBCL and YSR internalizing scales (Achenbach & Rescorla, 2001b), and found that the mother-daughter correlations on the six internalizing syndrome scales was modest-to-moderate ($r's = .28$ to .51). Furthermore, the adopted adolescent daughters rated themselves more inadequately than their mothers on the anxiety and somatic complaints. No studies have examined behavior outcomes when using adolescent self-report. The current study seeks to expand upon the findings of previous researchers by studying self-reports of internalizing symptoms among adopted Chinese girls in adolescence.

Summary

Girls who are internationally adopted from China have been shown to be resilient to many negative experiences they encounter as they develop into adulthood. Many of these girls

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are abandoned early in life by their birth parents and initially experience hardships and adversities within dilapidated institutions prior to becoming adopted. This results in these girls sometimes having physical, cognitive, and developmental delays compared to their internationally and domestically adopted and non-adopted peers of the same age, but research shows that they catch up to these peers relatively quickly. Additionally, the majority of these girls are well adjusted behaviorally compared to the other internationally adopted children. North American parents adopting these girls tend to create a nurturing and supportive post-adoption environment. These environments generally consist of higher SES status, low to mild family stress, and parents who are well educated and exhibit an authoritative parenting style. These influences may promote greater social and academic success in this population of internationally adopted children early in life. However, little research has been conducted to determine the extent of these effects into adolescence and early adulthood. Therefore, this study focused on how various factors are related to later behavioral outcomes among adolescent girls who were adopted from China at a young age. Additionally, this investigation expanded on Gelley's (2012) study by examining how these factors predict behavior outcomes as rated by the girls themselves, rather than their parents. The resulting data from this study should increase our understanding of predictors of internalizing behavioral adjustment among adolescent girls who were adopted from China.

Chapter III: Methods

This chapter provides an explanation of how this study was conducted. To begin, since this investigation was a secondary data analysis of a longitudinal research study, the method and background of the original study will be explained. Next, the participants selected from this larger longitudinal data set for the current study will be described. Then, the measures and study procedures that were used to examine the various predictors used in the study, as well as the behavior outcomes, will be explored. Finally, the research questions and their subsequent statistical analyses will be listed and discussed.

Overview of Study

The purpose of this study was to expand on the understanding of pre- and post-adoption factors and their relation to internationally adopted Chinese adolescent girls' behavioral outcomes. To achieve this goal, archival data from a larger longitudinal data set examining the developmental trajectory of Chinese girls adopted at a young age were analyzed. The archival data consisted of several hundred surveys and different standardized measures completed by the parents, and sometimes the girls themselves, at various time points (i.e., phases) that focused on several different aspects of their pre-adoption and post-adoption development.

History of Longitudinal Study

The longitudinal study that was used for the secondary data analysis began in 2005, when participants were recruited from internet discussion groups for families who had adopted one or more children from China. To recruit families from these sites, a letter with an introduction to the research project was posted to members of different Chinese adoption groups. At the same time,

an identical recruitment letter and introduction was sent to the directors of 10 adoption agencies in the U.S. (e.g., Chinese Children's Adoption International, China Adoption with Love, Inc., Alliance for Children). This recruitment yielded participation from 120 internet discussion groups and six adoption agencies. Additionally, families who were not recruited but wanted to be involved contacted the research team directly to enroll in the study (Tan, 2006; Tan, Camras, Deng, Zhang, & Lu, 2012).

For the first phase of the longitudinal study, 1001 families from the United States and 91 families from other countries (e.g., Canada, Australia, and the U.K.) received surveys. The families in the United States represented 49 states. The surveys were mailed to the participants, the delivery of which was confirmed by email. When the survey was returned, a thank you email was sent to the family. However, if the survey was not promptly returned, a reminder email was sent out three weeks later. At every phase of this study, survey data were completed by the adoptive mothers; no fathers completed the survey (Tan, 2006; Tan, Camras, Deng, Zhang & Lu, 2012).

Of those who had received surveys in Phase One, 852 families (78.1%) returned the surveys, which included a total number of 1,193 children. Subsequent phases had similarly high rates of return and used the same procedures for contacting families and data collection. In Phase Two, which occurred in 2007, 780 families of the original sample were contacted, and surveys were gathered on 882 children from 675 families (86.5%). Then, in 2009, 605 of 662 families (91.4%), who had 848 children adopted from China, returned study materials for Phase Three. Additionally, 15 families who did not participate in Phase Two due to communication issues rejoined the study in Phase Three. Phase Four, occurring in 2011, consisted of 770 families, including approximately 235 adolescents who also completed surveys. Phase Four is

unique as previous phases had only collected data from the parents. The study is in the process of conducting one last phase of data collection before it concludes (Tan, 2006; Tan, Camras, Deng, Zhang, & Lu, 2012; Tan & Jordan-Arthur, 2012).

Participants

The sample for this study consisted of adolescents and their families who participated in Phase Four of Tan's longitudinal study. In Phase Four, parents were asked to inform Dr. Tan of the ages and number of adopted children in their household. Then, families who had Chinese children ages 11 and older were asked for permission to allow their children to participate in the study. Roughly 420 of these families, 92% ($n = 385$), responded affirmatively. These families were given a link to a separate child survey with instructions on how their child should complete the survey. From the families who received the link, 235 adoptees returned the survey (61% response rate). The children were adopted from 109 different orphanages within 19 Chinese Provinces and municipalities (Tan & Jordan-Arthur, 2012).

Upon receiving the data set from Dr. Tan, some of the data were automatically excluded from further data analysis. More specifically, 3.4% of the dataset ($n = 8$) had been identified as male. To control for gender and to stay consistent with the literature, these males were excluded from any data analysis for this study. Additionally, 7.23% ($n = 17$) of the dataset did not identify their gender. Therefore, to be safe and only analyze the participants who clearly identified as females, these participants were also excluded from any further data analysis. After these 25 participants were excluded, 210 participants were initially entered for analysis. However, 43 more participants had missing data that were not included in the hierarchical multiple regression. Therefore, only 167 (71.1%) participants were analyzed for this study with 28.9% of the dataset ($n = 68$) being excluded. Demographic statistics describing the adolescent

participants and their families are provided in Table 1. An example of the demographic forms can be seen in Appendix A and B.

When looking more closely at the population of the 167 adolescent Chinese girls analyzed in the study, their mean age was 13.5 years old ($SD = 2.05$). These adolescents were between 3 and 133 months ($M = 16.18$, $SD = 15.21$) at the time of their adoption, with a majority adopted at 24 months of age or younger (87.4%). At the time of Phase Four, the mean age of the adoptive mothers was 47.7 years old ($SD = 4.82$), with a majority of them married (63.5%). Also, a majority of the mothers held an advanced degree (e.g., roughly 92.2% held a college degree or higher) and 51% of mothers reported an annual income of $80,000 to greater than $150,000.

Measures

The following measures were completed at different times throughout the different phases of the study. Some measures and information were only administered once, while others were administered during multiple phases. Please refer to Table 2 to see when certain measures/questionnaires were administered and Appendices A and B for demographic questions.

Age of adoption. The child's age at adoption in months and chronological years was calculated using the date of birth, date of adoption, and the date the survey was completed during Phase 1 of the longitudinal study. The "age of adoption" variable was entered into a multiple regression as a predictor variable.

Pre-adoption adversity. Pre-adoption adversity also was measured in Phase 1 of Tan's longitudinal study. To measure this variable, parents reported whether they observed one or more of the 11 easily observable signs and symptoms of neglect upon first adopting the child: bad

Table 1

Descriptive Statistics

Variable	*n*	%
Adolescent Age at Phase IV (in years)		
10	11	6.6
11	40	24.0
12	28	16.8
13	25	15.0
14	22	13.2
15	23	13.8
16	8	4.8
17	4	2.4
18	4	2.4
19	2	1.2
Age at Adoption (in months)		
3-12	96	57.6
13-24	50	30.0
25-36	12	7.2
37-48	2	1.2
49-60	3	1.8
61-133	4	2.4
Mother's Age at Phase I (2005)		
35-40	10	6.0
41-45	46	27.6
46-50	65	39.0
51-55	37	22.2
56-60	9	5.4
Marrital Status at Phase I (2005)		
Married	106	63.5
Never married	47	28.1
Divorced	13	7.8
Widowed (spouse passed away before adoption)	1	.6

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Table 1 (Continued)

Mother's Highest Earned Degree at Phase I (2005)		
High School	2	1.2
Some College	11	6.6
College Degree	62	37.1
Masters/Specialist or equivalent	68	40.7
Doctorate	21	12.6
Post-Doctoral	3	1.8
Family Income per year at Phase I (2005)		
<19,999	2	1.2
20,000 – 29,999	2	1.2
30,000 – 39,999	5	3.0
40,000 – 49,999	15	9.0
50,000 – 59,999	24	14.4
60,000 – 69,999	13	7.8
70,000 – 79,999	20	12.0
80,000 – 89,999	11	6.6
90,000 – 99,999	12	7.2
100,000 – 109,999	14	8.4
110,000 – 119,999	7	4.2
120,000 – 129,999	4	2.4
130,000 – 139,999	4	2.4
140,000 – 149,999	3	1.8
>150,000	30	18.0
Missing (from income)	1	.6

hygiene, lice/fleas, lack of individual care, scratch(es), lack of medical treatment, scabies, scar(s), rashes, lack of responsiveness to others, bruise(s), and strap marks. Tan, Marfo, and Dedrick (2007) generated this list from an earlier study, consisting of 750 adopted Chinese adopted children and in-depth interviews of 11 adoptive families. Each sign and symptom was scored ''1'' if the item was marked, and ''0'' if not marked. Then, a summary score was calculated

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by adding the 11 signs and symptoms with higher scores being viewed as an indicator of greater pre-adoption adversity. Tan, Marfo, and Dedrick (2007) then calculated the internal consistency of these scores, as measured by KR-20, and found that they were .68 and .51 for the school-age (>6 years old) and preschool (<6 years old) samples. Although many of the items are known to be valid indicators of the quality of care children received, few from the sample reported many items, limiting the variability and reducing the reliability estimates. For example, less than 5% of the children were observed with lice/fleas and bruises. However, 21% of the sample reported observable signs of rashes. Therefore, Tan, Marfo, and Dedrick (2007) recoded the signs and symptoms summary score to 0 to 5, with 5 representing 5 or more signs and symptoms (Tan, Marfo, & Dedrick, 2007). Because the measure was conceptualized as a formative measure, calculating internal consistency reliability was not computed. Two participants had missing data from this variable. The "pre-adoption adversity" scores were entered into a multiple regression as a predictor variable.

     Social Problem Questionnaire. *The Social Problem Questionnaire* (SPQ; Corney & Clare, 1985) is a 33 item validated measure that was used in Phase Three of Tan's longitudinal study to measure the amount of family stress the adoptive mothers reported in their homes. The SPQ used in the study was a revised version that only included 26 items and excluded seven items inquiring about a family's legal trouble and living alone, since these items did not apply to the mothers in the study (see appendix C for the form used for two school-aged children). The SPQ is divided into several subsections and asks about information on housing problems (e.g., whether the housing conditions were adequate for the family's needs), financial problems (e.g., difficulty paying bills and other financial commitments), employment-related difficulties (e.g., difficulty finding employment or finding enjoyment in one's field), social difficulties (e.g., friend

and relative issues), martial/relationship problems (spouse/partner issues), and difficulties in coping with children (e.g., inappropriate behavior or learning difficulties). The SPQ is scored on a four-point Likert scale (i.e., from 1 to 4) where parents rate the extent of their difficulties from satisfied to severely dissatisfied in the areas described above. This questionnaire has been validated in comparison to other clinical assessments and spouse-respondent ratings (Corney & Claire, 1985).

Several changes to the measure were made to adjust for the mother's personal and work life. For example, mothers who chose to be a stay at home parent were considered to have no employment-related difficulties, and only filled out one item pertaining to being a housewife who had no employment and then went to the next section. Additionally, parents who were single and not dating were not assessed for marital/relationship difficulties, but filled out an item pertaining to their stress about being single. All other items in these sections were coded as "not applicable" in these instances and were excluded when calculating the mother's total stress scores.

The SPQ yields two composite scores. One is the "Total Stress" score which calculates a family stress score for each family by averaging all of their applicable items ratings. A second score is a non-child related stress (NCR-stress) score, which is calculated by averaging all items except those from the difficulties coping with children subsection. For this study, the NCR-stress score was calculated for each participant. The inclusion criteria was that the mothers had to answer at least 12 of the 23 applicable items, which is around the minimum number of items needing to be answered, to be included in the analysis . The NCR-stress score was used in this study to avoid confounding family stress scores and the child behavior outcome measures. The internal consistency score for all items on the SPQ in this sample was considered adequate with a

Cronbach alpha level of .73. 31 participants had missing data from this measure. The SPQ scores were entered into a multiple regression as a predictor.

Parenting Styles and Dimensions Questionnaire. The *Parenting Styles and Dimensions Questionnaire-Short Version* (PSDQ-Short Form version) (Robinson, Mandleco, Olsen, & Hart, 2001) was also administered during Phase Three of Tan's longitudinal study. Examples of the form and scoring can be seen in Appendices D and E. The PSDQ-short form is a 32-item measure in which respondents rate the applicability, for themselves as well as any spouses, of statements describing parenting behaviors (e.g. "I am responsive to my child's feelings and needs.") on a 5- point Likert scale *(1 = Never, 2 = Once in a While, 3 = About Half of the Time, 4 = Very Often, 5 = Always)*. The PSDQ produces three parenting style scales, all of which have good internal consistency in this sample, including the Authoritative Parenting scale (15 items) (Cronbach's alpha =.87), Authoritarian Parenting scale (12 items) (Cronbach's alpha =.67) and the Permissive Parenting scale (5 items) (Cronbach's alpha =.69). Higher scores on any one scale means that the informant's parenting behaviors are more attuned to that parenting style. While normally all items should be answered to get the parenting scores across all three styles, the inclusion criteria for this study was that mothers needed to only answer 80% of the items for any one parenting style scale to be in the final analysis. Therefore, they had to answer 12 of the 15 items for the authoritative parenting items, 10 of the 12 authoritarian style items, and 4 of the 5 permissive parenting items on this measure. This was done to gain the most amount of mothers and to include those who may have skipped an item.

Additionally, each parenting style is broken up into different subscales. The Authoritative Parenting scale is comprised of three subscales: connection, regulation, and autonomy granting. The Authoritarian Parenting scale has three subscales as well: physical

coercion, verbal hostility, and punitive/non-reasoning. The Permissive Parenting scale includes only one subscale: indulgent parenting. For the purpose of this study, only the total parenting scales were calculated. 35 participants had missing data from the authoritative scale, 37 had missing data from the authoritarian scale, and 34 had missing data from the permissive scales. The PSDQ scores were entered into a multiple regression as predictor variables.

Rosenberg Self-Esteem Scale. The level of self-esteem the adopted girls reported having was collected during Phase Four of the longitudinal study. The *Rosenberg Self-Esteem Scale* (RES; Rosenberg, 1965) was utilized to measure the global self-esteem of the adopted adolescents. Examples of the form and scoring can be seen in Appendices F. The RES is a self-report measure that represents the global self-esteem of children and adolescents, and yields a unidimensional score. The measure is a 10-item questionnaire on a 4-point Likert scale (0 = Strongly Disagree, 3 = Strongly Agree). Different research studies score this measure differently. Some studies use the summed score (i.e. 0-30); whereas for this study, the summed score was divided by the number they answered (e.g. 10). Possible scores ranged from 0 to 3. Higher scores signify higher self-esteem. The internal consistency score for this measure on the adolescent sample was considered "excellent" with a Cronbach's alpha level at .93. For this study, the mean score was used and inclusion criteria used in the analysis was for the adolescent to fill out 7 out of the 10 self-esteem items (7 out of 10 items). No one had missing data from this measure. RES scores were entered into a hierarchical linear regression as a predictor variable.

Social Skills Rating System. Five items from the *Social Skills Rating System teacher report* academic subscale were used (SSRS; Gresham & Elliott, 1990) to measure the adolescent's self-rating of their overall academic competence, performance in English/reading and math, achievement motivation, and intellectual ability in comparison to their classmates

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were collected during Phase Four of Tan's longitudinal study. These items were taken from the teacher's version of the scale and the wording adapted to be used with the adolescents in the study. The academic functioning subscale is a 5-item Likert scale (1 = Lower than most classmates, 5 = Higher than most classmates). The overall academic score was obtained by averaging all 5 item scores. The adolescent's adoptive parent was also asked to independently rate the child's performance in the same five areas, as well as to discuss the basis for their ratings. This was used to corroborate the adoptees' self-reports, and the ratings between the mothers and the adolescents were strongly correlated (r = .74, p<.001) (Tan and Jordan-Arthur, 2012). For this study, however, only the adolescent data were used. For this measure, the internal consistency was considered "good" with an alpha level of .86 with this population. Two participants were missing data from this measure and were not included in the analysis. The scores were used in the multiple hierarchical linear regression calculations as a predictor variable.

Child Behavior Checklist. One form of the *Child Behavior Checklist* (CBCL; Achenbach, & Rescorla, 2001b) was used in this study. Parents completed the CBCL for ages 6-18 at every phase, while the CBCL Youth Self-Report form (YSR 11-18) was completed by the adolescent children in phase four. The CBCL 6-18 is a normed-referenced behavior scale that consists of 118 items asking for parents to rate their childrens' behavioral and emotional problems within the last six months on a three point scale (e.g., 0 = not true, 1 = somewhat or sometimes true, and 2 = very true). The amount or lack of endorsement on specific items relates to whether the individual shows a behavioral problems and the degree of the severity thereof. The CBCL yields three summary scales, including internalizing problems, externalizing

problems, and total problems. The CBCL has a high test-retest reliabilities means of .90 and has internal reliabilities scores between .63 and .79, which is considered high.

The Youth Self-Report (YSR) 11-18. The YSR is similar to the parent CBCL form, however, this questionnaire can be read orally, being worded in the first person, or completed by a student with a 5th grade reading level. The major difference between the YSR and the CBCL is that 14 CBCL problem items that were considered inappropriate for adolescents were removed and replaced with socially desirable items, and the open-ended question number 113 has been omitted. Therefore, in addition to the 105 problem items, there are 14 socially desirable items. Also, two questions have been replaced from the previous version. Similar to the CBCL, the YSR test-retest reliability and internal consistency are both considered high (mean test-retest rs above .80 and internal reliabilities scores between .71 - .95). The YSR validity findings are similar to the CBCL findings and the YSR is considered a valid measure to use to quantify the youth's understanding of their problem behaviors. From this sample, subscales anxiety and depression had internal reliabilities scores that were considered good, with scores being .84 and .72, respectively. The total internalizing scale reliability score was considered "good" with an Cronbach's alpha level of .86. Three participants had missing data from this measure and were excluded from the analysis. The YSR (i.e., anxiety, depression, and total internalizing) T-scores were entered into the hierarchical linear regression equations as outcome variables.

Procedure and Analysis Plan

Despite the current study being completed using secondary archival data to answer the research questions, an IRB form was completed to ensure that no harm was done to the dataset or the participants who filled out the surveys in this questionnaire. There was a previous IRB approval when the study began in 2005. The IRB committee decided that this study was deemed

Table 2

Timeline of Measure Administration

Measures	Phase 1	Phase 2	Phase 3	Phase 4
			Phases	
Age at Adoption	X			
Pre-Adoption Adversity	X			
Social Problem Questionnaire (SPQ)			X	
Parenting Styles/Dimensions Questionnaire (PSDQ)			X	
Rosenberg Self-Esteem Scale (RSE)				X
Social Skills Rating Systems (SSRS)				
Teacher and parent		X		
Adolescent Girls				X
Child Behavior Checklist (CBCL)				
Parent Form	X	X	X	X
Youth Self-Report From (YSR)				X

exempt from full committee discussion and was granted approval. Data were given to the

primary researcher with all names de-identified by numbers and entered into two separate excel

file databases (i.e., teen data and parent data) after the study had been approved by the IRB. No

access to original completed measures or emails was given to hinder identification of participants

with their answers in the excel file. The primary researcher was at no time able to identify

participants by their answers on the excel files.

The study plan was to analyze how various factors (i.e., pre-adoption factors, family factors, academic competence, and self-esteem) were related to behavior problems among Chinese girls adopted into Western society. There were missing data in the original dataset, which is a natural occurrence of any study. Chi-square and independent *T*-tests were performed on the data to compare those participants with missing data to those who did not have any missing data to see if there were any significant differences between the two. The missing data analyses will be discussed in more depth in chapter 4.

Descriptive analyses. The first analysis that was completed focused on basic demographic data of the adolescent girls and their parents, and other descriptive analyses for all of the measures used in the study. In this initial step, descriptive statistics were calculated to determine the means, standard deviations, and other data (i.e., skewness and kurtosis) for the key measures, predictors, and outcome variables. These calculations provided the primary investigator with information including the age at which the girls were adopted, indication of pre-adoption adversity, family stress level, and parenting style, as well as the girls' self-esteem, academic achievement, and amount of internalizing problems.

Correlational analyses. A second preliminary analysis that was completed calculated the pearson product moment correlations between all the predictor variables and outcome variables in the dataset. This "correlational matrix" helped to determine if there was a relationship between the predictor variables, between the outcome variables, and between the predictor variables and outcome variables, and if so to determine the direction and strength of the initial relationships.

Reliability. A final preliminary analysis completed calculated the reliability of the measures used to gather data on the different variables. Calculating the reliability of the

measures ensures that the measures used were reliable and justifiable instruments to understand the relationships between the predictor and outcome variables. These data provided the contexts for later calculations and analyses.

Hierarchical linear regression analyses. For the current study, the following research questions were explored and answered:

1. To what degree do each of the following variables predict self-reported *depression* among adolescent girls adopted from China?

    a. Age at adoption

    b. Pre-adoption adversity

    c. Family stress

    d. Parenting style

    e. Adolescent self-esteem

    f. Adolescent academic competence

2. To what degree do each of the following variables predict self-reported *anxiety* among adolescent girls adopted from China?

    a. Age at adoption

    b. Pre-adoption adversity

    c. Family stress

    d. Parenting style

    e. Adolescent self-esteem

    f. Adolescent academic competence

3. To what degree do each of the following variables predict self-reported total *internalizing behavior* problems among adolescent girls adopted from China?

a. Age at adoption

b. Pre-adoption adversity

c. Family stress

d. Parenting style

e. Adolescent self-esteem

f. Adolescent academic competence

To establish the association among the predictor and outcome variables for each research question, the researcher used hierarchical linear regression. This is a statistical method that determined the strength of the relationship between a criterion variable and several predictor variables. This type of regression means that the predictor variables are not entered into the regression analysis simultaneously, but in steps. Therefore, in this study, to examine the relationship with each outcome variable, three separate hierarchical regressions were calculated. The YSR internalizing problems (e.g., depression, anxiety, total problems) were the dependent variables, and then the predictor variables that were added first were the pre-adoption factors, because they have the earliest impact on the adolescents' development. Then the family factors were added, followed by self-esteem, and academic competence data. This calculation method allowed the study to analyze how each factor, when added individually, affects the behavior outcomes by themselves, as well as their impact when combined with the other factors.

Finally, this study built upon Gelley's (2012) investigation by utilizing the adolescent's self-report data from the YSR to measure how much the predictor variables correlated to their reported behavior outcomes. This is a departure from Gelley's (2012) study, because she used the parent CBCL behavior outcome data instead of the adolescent self-report data. From these analyses, the data gathered provided information about how each factor played a role in the

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varying outcomes of this population.

Chapter IV: Results

Treatment of the Data

All adolescent and family information that was pertinent to the study was given to the researcher by Dr. Tan in two Excel files during the winter of 2013-2014. The data were provided in two separate Excel files, because some variables were taken directly from the adolescents themselves, while other variables were collected from their mothers. Upon receiving the data, both files were merged into one SPSS worksheet. The parent dataset contained data from those who had teenagers and those who had younger children. Therefore, the mother's data and teen data were matched and combined. Before the analysis began, 25 entries were deleted because they were coded as males or the gender variable was not entered leaving the *N* at 210. An Additional 43 more participants were excluded during the analyses, because they had missing data for variables pertinent to the study. Of the 235 adolescents and mothers in the sample, 167 were considered for further analyses.

When examining the missing data of those participants included in the analyses, 20.5% of participants had missing data of some kind. According to Peng, Harwell, Liou, and Ehman (2006), when 20% of data are missing, statistical analyses are likely to be biased. However, upon further analysis comparing the 167 participants who had no missing data and the 43 who had missing data using Chi-square and independent T-tests, only two variables were found to have significant differences between groups: Marital status of the mothers ($X^2 = 28.73$, $p < .001$) and the adolescent girl's self-esteem ($F = 8.43$, $p < .01$). Other variables examined in this study showed no significant differences between participants who had missing data and those who did

not. Furthermore, when examining the percentages of missing data per measure, which can be

seen in Table 3, no measure had more than 18% missing, which indicates the findings of this

study are not likely to be biased.

Table 3

Number and Percent of Missing Variables Per Measure

N = 210

Measure	Number Missing	Percent (%) Missing
Age at Adoption	1	.004%
Pre-Adoption Adversity	2	.009%
Social Skills Rating System (SSRS)	31	14.76%
Parenting Styles and Dimensions Questionnaire- (PSDQ)	Authoritative = 35 Authoritarian = 37 Permissive = 34	16.67% 17.6% 16.19%
Rosenberg Self-Esteem Scale (RES)	0	0
Social Skills Rating System (SSRS)	2	.009%
Child Behavior Checklist: Youth Self-Report Form (CBCL-YSR)	Depression T-score = 3 Anxiety T-Score = 1 Total Internalizing T-score = 0	.01% .004% 0

Descriptive Analyses

Descriptive statistics were calculated for the sample ($N = 167$) on pre-adoption factors

(i.e., age at adoption, pre-adoption adversity), post-adoption factors (i.e., family stress, parenting

style, self-esteem), and academic competence. The results from these descriptive statistics are

described in the following sections and presented in Table 3.

Pre-adoption factors. Adolescents in this study were between 3 and 133 months ($M =$

16.18, SD=15.21) at the time of their adoption, with a majority (87.4%) adopted at 24 months of

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age or younger. Additionally, 43.1% of the girls' mothers reported no signs of pre-adoption adversity, with an additional 30.5% reporting one sign of pre-adoption adversity ($M = 1.14$, $SD = 1.41$). For the remaining 26.4% of adoptive mothers, 9% reported two signs, 8.4% reported three signs, 4.2% reported four signs and 4.8% reported five or more signs of pre-adoption adversity in their adopted daughters. To assess univariate normality, the skewness and kurtosis of the variables were computed. The adolescent's age at adoption variable was positively skewed and was leptokurtic (skew = 4.41, kurtosis = 25.24), which indicates the data make a higher, sharper peak at the mean. This shows that the girls were around the same early age at the time of adoption with few girls adopted earlier or later than the mean age. The pre-adoption adversity variable demonstrated more acceptable levels of skewness, but was slightly leptokurtic (skew = 1.33, kurtosis = 0.93), which indicates that most of the girls' mothers reported the same amount of pre-adoption adversity and few mothers reported their girls showing multiple signs of abuse.

Post-adoption factors. Descriptive statistics for post-adoption factors showed that mothers reported having low family stress ($M = 1.35$, $SD = 0.27$). This NCR family stress score is similar to Tan, Camras, Deng, Zhang, and Lu's (2012) earlier study on parents with adopted Chinese preschool girls with their score mean being 1.3 ($SD = 0.2$). The mothers also reported a higher mean authoritative parenting score ($M = 4.11$, $SD = 0.44$) than they did for authoritarian parenting ($M = 1.52$, $SD = 0.27$) and permissive parenting ($M = 1.81$, $SD = 0.51$). These scores are similar to other research on western culture parenting using this measure. For example, Rinaldi and Howe (2012), who studied parenting styles and their correlations with externalizing, internalizing, and adaptive behaviors in toddlers (both male and female), found that mothers in their sample had a mean authoritative score of 4.02 ($SD = .43$). In contrast, the mean authoritarian score were 1.51 ($SD = .33$), and the mean permissive score was 2.03 ($SD = .51$).

Furthermore, the girls' average self-esteem scores were moderately high with the mean score being closer to 2 (*M* = 2.28, *SD* = 0.50 on a scale of 0-3). While there are many ways to score the RES, these scores are similar to female adult norms across several different demographic groups; however, these researchers did not divide the score by 10, but simply summed all items. They found that on a scale from 0-30 (or 0-3 in the current study) that the women had a mean score of 22.29 (*SD* = 5.41) (Sinclair, Blais, Gansler, Sandberg, Bistis, & LoCicerio, 2010). Finally, the girls reported themselves to be highly academically competent when compared to their peers (*M* = 4.0, *SD* =.78 on a scale of 1-5).

To further assess the univariate normality of these variables, the skew and kurtosis of each were calculated. All variables were between -1.0 and +1.0, except family stress and authoritative parenting style. Family stress had a small positive skew, and was slightly leptokurtic (skew = 1.33, kurtosis = 2.87), which indicates that most mothers' scores describing their family stress were around the mean, showing low family stress, while few mothers having outlying scores indicating higher family stress. Authoritative parenting style had a small negative skew and was slightly leptokurtic (skew = -70, kurtosis = 1.17), which indicates that most mothers' authoritative parenting behaviors reported were around the mean, reporting high levels of authoritative parenting behaviors, while few mothers having outlying scores indicating lower authoritative parenting.

Outcome variables. Overall, the majority (88.%) of the girls reported normal levels of anxiety, depression on the total internalizing *T*-scores index scale, meaning all scores were below the clinical cutoff point of 60 or higher. The total internalizing mean score was in the normal range (*M* = 48.08, *SD* = 9.90), while anxiety (*M* = 54.46, *SD* =6.88) and depression (*M*=52.92, *SD* = 4.99) were considered normal. Upon further assessment of their univariate normality, the

total internalizing *T*-scores were between -1.0 and +1.0, and demonstrated a normal distribution (skew = -0.04, kurtosis = .23). However, the total anxiety *T*-scores (skew = 2.46, kurtosis = 9.07) and Total Depression *T*-scores (skew = 2.87, kurtosis = 10.75) were both positively skewed and leptokurtic. This indicates that most depression and total internalizing scores were close to the mean with very few outliers.

Correlational Analyses

Pearson product-moment correlations for all the predictor variables included in the analysis are presented in Table 4 as a correlational matrix.

Patterns of relationships within predictors. The correlational matrix indicated that several predictor factors were highly correlated to each other. Furthermore, all significant correlations were in the expected direction, as was found in previous research. Specifically, authoritative parenting style showed significant moderate positive correlations with self-esteem (*r* = .30, *p*<.001) and a small correlation with academic competence (*r* = .17, *p*<.05), which indicates that authoritative parenting with high control and high warmth may relate to higher self-esteem and academic performance for these adolescents. Authoritative parenting style was also positively related to signs of pre-adoption adversity (*r* =.14, *p*<.05) indicating that those children whose mothers reported higher amounts of pre-adoption stressors may relate to their authoritative parenting behaviors. Additionally, a significant relationship was found between academic competence and self-esteem, which had a moderate positive correlation (*r* = .41, *p*<.001). Another small positive correlation was found between permissive parenting and family stress (*r* = .17, *p*<.05), which indicates that this parenting style, which is associated with low control and high warmth, may be seen more in families who have higher family stress. Finally, several of the parenting total scores were correlated with each other with authoritative parenting

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Table 4

Means, Standard Deviations, and Ranges of Predictor and Outcome Variables

Variable	*M*	*SD*	Range
Age at Adoption (in Months)	16.18	15.21	3 – 133
Pre-Adoption Adversity[a]	1.14	1.41	0 – 5
Family Stress[b]	1.35	.27	1 – 2.57
Parenting Styles[c]			
Authoritative	4.11	.44	2.40 – 5.0
Authoritarian	1.52	.27	1 – 2.42
Permissive	1.82	.51	1 – 3.6
Global Self-Esteem Average[d]	2.28	.57	.11 – 3
Total Academic Competence[e]	3.99	.77	1.6 – 5
CBCL-YSR T-Scores[f]			
Total Depression	52.92	4.99	50 – 84
Total Anxiety	54.46	6.88	50 – 97
Total Internalizing Behavior	48.08	9.90	17 – 80

Note. [a] Pre-adoption Adversity ranged from "0" indicating that the child had no signs of abuse prior to being adopted to "5" indicating five or more signs of abuse prior to being adopted.
[b] Amount of family stress" was measured by the Social Problem Questionnaire (SPQ; Corney & Clare, 1985) "Total Stress" scores. This score average the items answered on a four point item scale with "1" indicating no stress in a particular area, to "4" indicating a lot of stress in a particular area.
[c] parenting styles were measured from the Parenting Styles and Dimensions Questionnaire (PSDQ, Robinson, Mandleco, Olsen, & Hart, 2001). This measure gave three indexes (i.e. authoritative, authoritarian, and permissive.) The three index items are based on a 5 point item scale with "1" indicating that they do not exhibit these parenting behavior and "5" indicating always exhibiting that parental behavior.
[d] Global self-esteem was measured from Rosenberg Self-Esteem Scale (RES; Rosenberg, 1965), with scores from 10 items were averaged on a three point scale with "0" indicating low self-esteem and "3" indicating high self-esteem.
[e] Total Academic competence was measured from the Overall Academic Achievement on the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). This index was an average of scores from items answered on a five point scale with "1" indicating lower Academic competence than most classmates and "5" indicating higher Academic competence than most classmates.
[f] Outcome variables were measured using the Youth Self-Report form of the Child Behavior Checklist (CBCL; Achenbach, & Rescorla, 2001b). Total Anxiety and Total Depression T-scores were tallied by summing and converting the total raw score of those items to a T-score. The Total Internalizing T-Score was calculated by summing the anxiety, depression and somatic complaint total raw scores and converting the total raw score to a T-score.

style having a small negative correlation to authoritarian parenting style ($r = -.21$, $p<.01$) and authoritarian parenting style having a small positive relationship to permissive parenting ($r = .29$, $p<.001$).

Patterns of relationships between predictors and outcome variables. Additionally, the correlational matrix illustrates that several predictor variables were positively or negatively correlated with the outcome variables (e.g., anxiety, depression, total internalizing scores). For example, age at adoption had a small positive correlation with depression ($r =.17$, $p<.05$). This indicates that girls who were adopted at an older age had higher rates of depression. Furthermore, authoritative parenting style ($r = -.29$, $p<.001$), self-esteem ($r = -.53$, $p<.001$), and academic competence ($r = -.28$, $p<.001$) had small to moderate negative correlations with depression. This indicates that the girls who had higher self-esteem, higher academic competence, or whose mothers reported more authoritative parenting had lower depression scores than girls who had lower self-esteem and academic competence, and whose mothers were less authoritative.

Next, considering the anxiety T-scores outcome variable, several predictor variables had small-to-moderate negative correlations with the outcome variable. For instance, authoritative parenting style ($r = -.28$, $p<.001$), self-esteem ($r = -.58$, $p<.001$), and academic competence ($r = -.26$, $p<.001$) had small to moderate negative correlations with depression. These relationships indicate that the girls who had higher self-esteem, better academic competence, or whose mothers reported more authoritative parenting had lower anxiety rates than girls who had lower self-esteem and academic competence, and whose mothers were less authoritative.

Finally, the total internalizing problems T-scores were correlated with several variables. This outcome variable had a small positive correlation with age at adoption ($r =.14$, $p<.05$)

which indicates that the age of the girl when adopted from China may relate to their later internalizing problems reported in adolescence. Furthermore, total internalizing problems were correlated with authoritative parenting style ($r = -.27$, $p<.001$), self-esteem ($r = -.58$, $p<.001$), and academic competence ($r = -.29$, $p<.001$). This indicates that the girls who had higher self-esteem, better academic competence, or whose mothers reported more authoritative parenting had lower rates of total internalizing problems than girls who had lower self-esteem and academic competence, and whose mothers were less authoritative.

Patterns of relationships between outcome variables. When examining the three outcome variables, depression *T*-score, anxiety *T*-score, and total internalizing behaviors *T*-scores on the *Youth Self-Report* form all are positively correlated to each other. The anxiety *T*-score and the depression *T*-score have a moderate positive correlation ($r = .56$, $p<.001$), and depression and anxiety *T*-score variables have a moderate to large correlation to total internalizing behaviors *T*-score variable ($r = .59$, $p<.001$; $r =.76$, $p<.001$) respectfully. These relationships indicate the similar behaviors that are shared and seen between these disorders. Additionally, since total internalizing behaviors *T*-score is the sum of anxiety and depression indexes on the *Youth Self-Report* form, this variable should be correlated together with the other outcome variables.

Regression Analyses

To understand the extent to which the pre-adoption (i.e., age at adoption, pre-adoption adversity) and post-adoption variables (i.e., family stress, parenting style, self-esteem, academic competence) were predictive of internalizing behaviors in internationally adopted Chinese girls, a series of hierarchical multiple regressions was run for each of the following outcome variables: depression, anxiety, and total internalizing *T*-scores. An alpha level of .05 was used to determine

statistical significance with pre-adoption factors (e.g., age at adoption and pre-adoption adversity) being the first two variables entered into the stepwise hierarchal regression. These were then followed by the post-adoption factors (e.g., family stress, parenting styles, self-esteem, and Academic competence). The actual steps by which each variable was entered into the equation, along with their correlations (r), unstandardized regression coefficient weights (*b*) and standard error (SE *b*), and standardized Beta (β) scores for each variable in each hierarchical regression can be seen in Tables 5 through 7.

  Depression. To understand the extent to which pre-adoption and post-adoption variables predicted depression in internationally adopted Chinese adolescent girls, all of the pre-and post-adoption variables were entered stepwise into a hierarchical multiple regression equation. Pre- and post-adoption factors predicted 32% (R^2=.32) of the variance in the amount of depression the adolescent girls reported. However, when controlling for shared variance among the eight factors, two variables (self-esteem and authoritative parenting) were the strongest predictors for depression rates, and both factors had inverse relationships with the outcome variable. More specifically, self-esteem was the strongest predictor for the rates of depression reported by the adolescent girls (β = -.38, *p*<001), and authoritative parenting was also a strong predictor for depression rates (β = -.16, *p*<.05). It is interesting to note that age at adoption had a small significant positive relationship with predicting rates of depression in adolescence (β = .17, *p*<.05) in the early models, but was not significant when all variables were added to the model, especially self-esteem. No other pre-adoption or post-adoption factors independently predicted total internalizing rates. This suggests that while the age at which the girls were adopted were predictive of internalizing behavior reports, the shared variance with families identified as having an authoritative parenting style or girls who reported a higher self-esteem score were

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Table 5

Correlational Matrix for Predictor and Outcome Factors

Var.[a]	1.	2	3.	4	5	6	7	8	9	10	11
					Total Sample ($N = 167$)						
1.	1										
2.	.02	1									
3.	.01	.06	1								
4.	-.03	.14*	-.09	1							
5.	-.02	.05	.11	-.21**	1						
6.	.09	.11	-.17*	-.03	.29***	1					
7.	-.09	-.04	-.02	.30***	-.10	.02	1				
8.	-.01	-.12	-.11	.17*	-.02	.04	.41***	1			
9.	.17*	.01	-.01	-.29***	.05	-.01	-.53***	-.28***	1		
10.	.07	.07	.03	-.28***	.09	.05	-.58***	-.26***	.56***	1	
11.	.14*	-.02	.05	-.27***	.09	.03	-.57***	-.29***	.59***	.76***	1

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

[a]1=Age at adoption; 2=Pre-adoption Adversity; 3=Family Stress; 4=Authoritative Parenting Style; 5=Authoritarian Parenting Style; 6=Permissive Parenting Style; 7 Self-Esteem; 8=Academic competence; 9=Depression T-score; 10= Anxiety T-Score; 11=Total Internalizing Problems T-score.

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more predictive of having low depression scores than the age at which these girls were adopted.

Anxiety. To understand the extent to which pre-adoption and post-adoption variables predicted anxiety in internationally adopted Chinese adolescent girls, all of the pre-and post-adoption variables were entered stepwise into a hierarchical multiple regression equation. Pre-and post-adoption factors predicted 36% (R^2=.36) of the variance in the amount of anxiety the adolescent girls reported. When controlling for shared variance among the eight factors, only self-esteem was the strongest predictor (β = -.54, p<.001) for anxiety rates with the factor having an inverse relationship with the outcome variable. However, when authoritative parenting style was added to the model, prior to self-esteem, this factor also had a significant inverse relationship with rates of anxiety (β = -.29, p<.001). But, when the shared variance between self-esteem and authoritative parenting styles were combined, this factor was no longer predictive of anxiety rates. No other pre-adoption or post-adoption factors independently predicted anxiety scores. This suggests that although families who identified as having an authoritative parenting style may be predictive of having low anxiety rates on the CBCL-YSR, self-esteem is a stronger predictor of this outcome.

Total internalizing problems. To understand the extent to which pre- and post-adoption variables predicted total internalizing problems in internationally adopted Chinese adolescent girls, pre-and post-adoption variables were entered stepwise into a hierarchical multiple regression equation. Pre-and post-adoption factors predicted 35% (R^2=.35) of the variance in the amount of total internalizing problems the adolescent girls reported. When controlling for shared variance among the eight factors, only one variable (self-esteem) was a strong predictor for total internalizing scores on the CBCL-YSR. Self-esteem had an inverse relationship with this outcome variable with a standardized beta weight of (β = -.51, p<.001). Only one other variable

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was predictive of rates of total internalizing problems on the CBCL-YSR: authoritative parenting styles. This factor, when added to the model prior to self-esteem, had an inverse relationship with the outcome variable ($\beta = -.26$, $p<.001$). However, when self-esteem was added to the model, the shared variance between the two factors nullified authoritative parenting styles' significance to the outcome variable. No other pre-adoption or post-adoption factors independently predicted total internalizing rates. This indicates that girls who reported a higher self-esteem score were more predictive of having low total internalizing scores on the CBCL-YSR.

Table 6

Summary of Hierarchical Multiple Regression Analyses Predicting Depression from Pre-Adoption and Post-Adoption Environmental Factors

N=167	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
Var.[a]	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β
1.	.05	.03	.17*	.05	.03	.17*	.05	.03	.17*	.05	.03	.16*	.04	.02	.12	.04	.02	.12
2.				.04	.27	.01	.04	.27	.01	.21	.27	.06	.06	.24	.02	.03	.24	.01
3.							-.19	1.43	-.01	-.89	1.43	-.05	-.67	1.26	-.04	-.79	1.26	-.04
4.										-3.33	.88	-.29***	-1.72	.81	-.15*	-1.65	.81	-.15*
5.										.18	1.50	.01	-.29	1.32	-.02	-.23	1.33	.-.01
6.										-.44	.79	-.05	-.15	.70	-.02	-.13	.70	-.01
7.													-4.16	.61	-.48***	-3.91	.66	-.45***
8.																-.48	.47	-.07
R^2		.03			.03			.03			.11			.32			.32	
ΔR^2		.03			.00			.00			.08			.21			.00	
F R^2 Δ		4.64			.02			.02			5.11			46.86			1.04	

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

[a] 1=Age at adoption; 2=Pre-adoption Adversity; 3=Family Stress; 4=Authoritative Parenting Style; 5=Authoritarian Parenting Style; 6=Permissive Parenting Style; 7 Self-Esteem; 8=Academic competence.

Table 7

Summary of Hierarchical Multiple Regression Analyses Predicting Anxiety from Pre-Adoption and Post-Adoption Environmental Factors

N=167	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
Var.[a]	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β
1.	.03	.04	.07	.03	.04	.07	.03	.04	.07	.03	.03	.06	.01	.03	.01	.01	.03	.01
2.				.33	.38	.07	.32	.38	.07	.51	.38	.10	.28	.32	.06	.27	.32	.06
3.							.60	1.99	.02	-.11	1.98	-.00	.24	1.67	.01	.21	1.69	.01
4.										-4.44	1.22	-.29***	-1.90	1.08	-.12	-1.88	1.08	-.12
5.										.68	2.09	.03	-.05	1.76	-.00	-.04	1.77	-.00
6.										.20	1.10	.02	.67	.93	.05	.68	.93	.05
7.													-6.57	.81	-.55***	-6.50	.88	-.54***
8.																-.13	.63	-.02
R^2		.01			.01			.01			.09			.36			.36	
ΔR^2		.01			.01			.00			.09			.27			.00	
F $R^2\Delta$		.84			.75			.09			4.90			65.84			.04	

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

[a]1=Age at adoption; 2=Pre-adoption Adversity; 3=Family Stress; 4=Authoritative Parenting Style; 5=Authoritarian Parenting Style; 6=Permissive Parenting Style; 7 Self-Esteem; 8=Academic competence.

Table 8

Summary of Hierarchical Multiple Regression Analyses Predicting Total Internalizing Behaviors from Pre-Adoption and Post-Adoption Environmental Factors

N=167	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
Var.[a]	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β	b	SE b	β
1.	.09	.05	.14	.09	.05	.14	.09	.05	.14	.08	.05	.13	.05	.04	.08	.06	.04	.09
2.				-.18	.54	-.03	-.20	.55	-.03	.05	.54	.01	-.27	.46	-.04	-.32	.47	-.05
3.							1.74	2.85	.05	.70	2.86	.05	1.20	2.44	.03	.99	2.45	.03
4.										-5.72	1.76	-.26***	-2.14	1.57	-.10	-2.03	1.57	-.09
5.										1.22	3.01	.03	.19	2.57	.01	.28	2.57	.01
6.										.04	1.58	.00	.70	1.35	.04	.72	1.35	.04
7.													-9.27	1.18	-.53***	-8.84.	1.27	-.51***
8.																-.82	.91	-.07
R^2		.02			.02			.02			.09			.34			.35	
ΔR^2		.02			.00			.00			.07			.26			.00	
F $R^2 \Delta$		3.13			.11			.37			3.96			61.88			.82	

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

[a] 1=Age at adoption; 2=Pre-adoption Adversity; 3=Family Stress; 4=Authoritative Parenting Style; 5=Authoritarian Parenting Style; 6=Permissive Parenting Style; 7 Self-Esteem; 8=Academic competence.

Chapter V: Discussion

The purpose of this chapter is to summarize the findings of this study and to integrate them with previous literature. Subsequently, implications for research and practice will be discussed, limitations of the study will be identified, and future directions for this line of research will be described.

Internalizing Disorders Among Internationally Adopted Chinese Adolescent Girls

The first aim of this study was to extend the research on the mental health of adolescent girls adopted from China by North American families. Previous research had focused primarily on preschool and elementary-aged girls' behavior problem rates. The findings of this study are consistent with research on younger girls in that internalizing disorders (i.e., depression, anxiety) were relatively rare with 88% of the sample having a total internalizing behavior *T*-score of less than 60. The *T*-score of 60 is important, because it is the cutoff point between "normal" levels of internalizing problems and "clinical" levels of internalizing behaviors according to the CBCL forms (Achenbach, & Rescorla, 2001b). This suggests that the better mental health findings found among elementary-aged girls adopted from China seem to extend into the adolescent years. Furthermore, the mean *T*-scores from these Chinese adolescent girls on depression (*M* = 52.92, *SD* = 4.99), anxiety (*M* = 54.46, *SD* = 6.88), and total internalizing behaviors (*M* = 48.08, *SD* = 9.90) closely match what the authors of the CBCL found in their normative non-referred sample *T*-score means on the same measures (e.g., anxiety *M* = 54.2, *SD* = 6.0; depression *M* = 54.4, *SD* = 5.9; total internalizing behaviors *M* = 50.0, *SD* = 10.1) (Achenbach, & Rescorla, 2001b). Finally, these findings also corroborate the previous research completed by Gelley

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(2012) and Tan, Camras, Deng, Zhang, and Lu (2012) which found that the girls' parents reported low behavior problems, both internally and externally, in these girls as toddlers and elementary age students. The findings of this study extend their research as well, because while the study did use the same population, the behavior data were derived directly from the adolescent girls themselves and not from their mothers. To compare Gelley's (2012) study to this study, please see Table 8.

Additionally, when comparing the behavior data provided by the girls and by their mothers in this sample, Tan and Marn (2014) found that there was a modest to moderate agreement ($r's$ = .28 to .51) on internalizing problems (e.g., anxiety, depression, somatic complaints, social problems, thought problems and attention problems). More specifically, the mother-daughter agreement was r = .51, p <.001 for anxiety (considered moderate) and r = .41, p<.001 for depression (also considered moderate). Furthermore, Tan and Marn (2014) found that the adopted girls rated themselves significantly higher on anxiety than their mothers (t = 3.68, p <.001). One variable that impacted this agreement was the quality of the relationship between mother and daughter. "Mother and daughter closeness," as it was called in the study, was negatively associated with depression and anxiety for both mother and daughters. This means that a better relationship between the two was associated with lower internalizing behavior scores on the CBCL.

Overall, the findings from this study suggest that, as a whole, the internalizing problem behaviors are in the normal range in this sample, with only 12% of the girls meeting criteria for any internalizing problems, according to the total internalizing T-score. When looking at the T-scores for only anxiety or depression, 18% reported meeting criteria for an anxiety disorder (i.e., T-score above 60) and just 9.6 % met criteria for depression (i.e., T-score above 60).

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Furthermore, the predictor factors examined in this study (e.g., pre-adoption, family, self-esteem, & academic competence) predicted a little over a quarter of the variance in the amount of internalizing behaviors these girls self-reported ($R^2 = .35$) More specifically in this sample, self-esteem and the girls' mothers parenting style were the two variables that accounted for most of the variance in internalizing disorders with some regression models suggesting that those girls who were adopted at an older age reported more depression than the adolescent girls who were adopted at a younger age. However, the significance in this variable was reduced upon when

Table 9

Comparisons between Gelley (2012) and this Study

Elements of Study	Gelley (2012)	Current Study
Participants Used	Parent Reports/Measures	Parent Reports and Adolescent Report/Measures
Total N	648	167
Age Range of Girls	6-18	10-19
Variables Studied	Family Stress	Age at Adoption
	Parenting Styles	Pre-Adoption Adversity
	Externalizing Behaviors on	Family Stress
	CBCL	Parenting Styles
	Internalizing Behaviors on	Self-Report Self-Esteem
	CBCL	Academic Competence
		Internalizing behaviors on
		CBCL-YSR

self-esteem and authoritative parenting style were entered into the model.

Predictors of Internalizing Problems

    Pre-adoption variables. The girls in this study were adopted between the ages of 3 to 133 months, with an average age of adoption of 16 months. The average pre-adoption adversity score was one sign of abuse, with a range from 0 to 5. Overall, the pre-adoption factors (i.e, age and pre-adoption adversity) examined in this study were not predictive of either the adolescent Chinese girls' self-reported anxiety or total internalizing problems. However, age at adoption had a small positive correlation between it and the adolescent girls' self-reported depression(r =.17, p < .05), and in some regression models there was a small, but statistically significant, relationship between these two variables (β =.17, p<.05). Despite there being a significant relationship in some regression models, when other predictor variables were added to the regression analysis, age at adoption was not predictive of any future internalizing problems. This indicates a shared variance with the other factors, which weakens the relationship between age at adoption and depression. However, these findings do indicate that those girls who were older at adoption showed a slight tendency to have higher self-reported depression scores. Additionally, this finding is in line with the hypothesis that the girls who stayed longer in deprived orphanages would have higher levels of mental health concerns. This also fits with earlier literature showing that children and adolescents adopted from other countries (i.e., Romania) had higher internalizing problems when adopted at a later age at or around 24 months (Gunnar, Van Dulmen, & the International Adoption Project Team, 2007). However, the shared variability with other predictor factors should be considered when discussing any long term effects of being adopted at an older age.

Family variables. When examining the family variables in this study, several areas stand out. First, the mothers in the sample reported very low family stress scores on the Social Problems Questionnaire (SPQ, Corney & Clare, 1985) with the average family stress score around 1.35 (SD =0.27) with a range from 1 to 2.57, in spite of the measure having a higher range (e.g., the measure is on a four point Likert scale from 1 to 4). Secondly, according to the *Parenting Styles and Dimensions Questionnaire-Short Version* (PSDQ-Short Form version) (Robinson, Mandleco, Olsen, & Hart, 2001), more mothers of adopted Chinese adolescent girls identified as having more authoritative parenting qualities, with the average mean score for these parenting behaviors ($M = 4.11$, $SD = 0.44$) being higher than those for authoritarian parenting ($M = 1.52$, $SD = 0.27$) and permissive parenting ($M = 1.82$, $SD = 0.51$). Therefore, in this sample, the relatively low stress levels in these families and tendency toward authoritative parenting suggest a positive family environment overall. This follows similar trends in what Gelley (2012) and Tan, Camras, Deng, Zhang, and Lu (2012) found in their earlier studies examining these girls at a younger age. In Tan, Camras, Deng, Zhang, and Lu (2012), who examined this population in preschool, the family stress non-child mean score was 1.3 ($SD = 0.2$), and their parenting style scores were authoritative ($M = 4.0$, $SD = 0.5$), authoritarian ($M = 1.5$, $SD = 0.3$), and permissive ($M = 1.9$, $SD = 0.4$). In her studies, Gelley (2012) who looked at the adoptive parents of Chinese girls aged 6-17, their mean family stress non-child score was a mean score of 1.28 ($SD = .27$) and her parenting styles scores were authoritative mean = 4.07 ($SD = .44$), authoritarian mean = 1.51 ($SD = .28$) and permissive mean was 1.83 ($SD = .52$). These similar findings suggest that these positive family conditions continue from preschool through adolescence in this sample of Chinese adopted adolescent girls.

Furthermore, authoritative parenting was a significant predictor of internalizing problems in some regression models, with those mothers who reported higher levels of authoritative parenting having adopted daughters who self-reported lower levels of internalizing distress. The average authoritative score for the mothers in this sample was 4.1, which was high compared to 1.52 and 1.82 for authoritarian and permissive parenting respectfully, but are similar to other research using the PSDQ (Rinaldi, & Howe, 2012). However, the shared variance between all the other variables, especially self-esteem, reduced its significance. In only one final regression model was authoritative parenting style a significant predictor of depression in these adolescent girls (β = -.15, p<.05). None of the other parenting styles were significantly predictive or significantly correlated with any of the internalizing problem behaviors.

It is surprising that parenting style as a whole did not predict anxiety or depression, nor did permissive or authoritarian styles predict higher rates of depression or anxiety. One reason for this may have been the restriction of the range. Restriction of range means that the circumstances surrounding the study may have abbreviated the values of one or more of the variables being correlated (Weber, 2001). This sample had a higher number of mothers who espoused more authoritative parenting traits than either authoritarian or permissive. This trend could be due to the education levels of parents in this study. Results from the current study may have been different if the sample had equal numbers of all three parenting style traits or higher numbers of more permissive or authoritarian parenting.

This finding means the girls had a positive and warm post-adoption environment in which to develop into early childhood, which in turn may lead to better mental health outcomes in adolescence. This line of research is consistent with parenting studies that have found an authoritative parenting style to be positively linked to better mental health outcomes (e.g.,

Milevsky, Schlechter, Netter, & Keehn, 2007; Steinberg, Lamborn, Darling, Mounts, & Dombusch, 1994; Williams et al., 2009). However, this finding could also mean that these girls who have less mental health issues are easier to parent by allowing their adoptive parents to use the more effective parenting behaviors, which in turn may help these girls' overall mental health.

Finally, authoritative parenting style also had small, but significantly positive, correlation with self-esteem ($r = .23$, $p < .001$), both of which were highly predictive of the amount of internalizing problems that the girls reported. These findings follow other studies examining parenting style and self-esteem and show that these two variables were more related to later positive psychological outcomes than the other parenting styles (Milevsky, Schlechter, Netter, & Keehn, 2006) in adolescents. These findings highlight several key areas that played a positive role in the girls' development to their better mental health outcomes.

Self-esteem. A majority of the adolescent girls in this study had high self-worth, with just under 75% of the girls reporting favorable self-esteem ratings (e.g., between 2 and 3 on the Rosenberg Self-Esteem Scale (RES; Rosenberg, 1965). Self-esteem was a significant predictor of reported internalizing problems. In other words, higher levels of positive self-regard predicted lower internalizing mental health problems. This finding is similar to other works regarding self-esteem and mental health rates, demonstrating that the amount of self-worth is inversely related to the reported amount of behavior problems (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; Sowislo & Orth, 2013). It also relates to similar findings on self-esteem among internationally adopted adolescents (e.g., Bagley & Young, 1981; Cederblad, Hook, Irhammar, & Mercke, 1999; Juffer & IJzendoorn, 2007). Of all the variables in this study, self-esteem was the most strongly related to lower internalizing problems. However, because of the shared variance of all the factors, self-esteem can be dependent on other variables. As was discussed

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earlier, this sample was largely from positive, low stress, high SES households with mothers who were relatively older (89% of them were between the ages of 41 and 55). Therefore, while the relationship between self-esteem and internalizing problems is strong, other factors in the study have proven to play a key role in both high rates of self-esteem and low rates of internalizing behaviors in this sample of adopted Chinese adolescent girls. Additionally, this finding could also mean that better mental health leads to higher self-worth, and not necessarily that high self-worth leads to better health outcomes.

Academic competence. Overall, the Chinese adolescent girls in this study self-reported that they had high academic competence scores compared to their peers on the academic functioning subscales in the *Social Skills Rating System* measure, with a mean score of 4 (*SD* = .77) with a range from 1 to 5. However, despite high academic competence ratings and a significant, small negative correlation with internalizing problems (*r's* = -.28 to .-.29, *p* <.001), this variable was not predictive of internalizing problems when controlling for the other pre- and post-adoption environmental variables. This suggests a relationship between higher academic competence and lower internalizing problems. However it could mean that lower internalizing problems may lead to better academic competence or that doing well in school could leads to better health outcomes. The latter is consistent with the current literature on this topic that has found that having high academic competence leads to better mental health outcomes (Bryant, Schulenberg, O'Malley, Bachman, & Johnson, 2003; Steoeber, & Rambow, 2007).

Additionally, while parent child agreement regarding the girls' academic performance was not studied in this thesis, it is interesting to note that previous research by Tan and Marn (2014) found high agreement on academic performance (*r* = .73, *p* <.001) between the mothers and adoptive daughters in this sample. *T*-tests revealed that adoptees rated themselves as lower in

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academic performance when compared with their mothers' ratings ($t = 4.85$, $p < .001$). Furthermore, the strength of the relationship between the mother and their daughter was significantly positively correlated with academic performance on both the mother's report ($r = 0.26$, $p < .001$) and the daughter's report ($r = .14$, $p < .05$). This suggests that having a positive relationship with one's mother is associated with perceived higher academic performance.

Other Notable Findings

In this study, family stress and permissive and authoritarian parenting styles were not predictive of higher internalizing behavior problems, which contradicts previous literature (Lamborn, Mounts, Steinberg, & Dombusch, 1991; Worrell & Goodheart, 2006). However, this conclusion may also be skewed because of the large number of high SES families (e.g., 51% adoptive families had an annual income of $80,000 to over $150,000). Previous literature has found that higher SES of a child's parents is related to a prevalence of authoritative behaviors (Hoff, Laursen, & Tardiff, 2002). Therefore, these findings may have been different if more families were from a lower income population as opposed to a high income population.

Implications for Research and Practice

This study was one of the first to examine internationally adopted Chinese girls' self-reported internalizing mental health concerns in adolescence. While not all variables were collected from self-report data provided by the girls themselves, a majority of the data analyzed was from self-report measures. One of the primary implications of this study was that girls adopted from China remain mentally healthy into adolescence. This is important, because many girls tend to experience a drop in self-esteem in adolescence, whereas these girls continued to feel good about themselves and have low levels of internalizing concerns. Furthermore, this

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extends the studies that have examined adopted Chinese girls in childhood in that many of the positive benefits seen in early childhood continue as these girls grow into their adolescent years.

Secondly, this study has shown the importance of authoritative parenting behaviors with regard to the overall mental health of these adopted Chinese adolescent girls. Not only do these mothers who reported higher authoritative parenting behaviors have girls who reported having low internalizing behaviors, but these mothers also stated that they had lower family stress levels and an overall positive family environment. This study continues to support previous research showing a relationship between this type of parenting behaviors and their adolescent children reporting higher self-esteem rates, as, in this study, self-esteem was the biggest predictor in those girls who had low internalizing behaviors. However, the findings could also suggest that the fact that the majority of these adolescent girls who report low levels of internalizing behaviors may influence the positive family environment they have at home, thus increasing their self-esteem due to their positive outlook on their continuing development.

Limitations

Population validity. Population validity is defined as the degree to which the results from a study can be generalized from its participants to the general public or a larger portion of a certain population. Gall, Gall, and Borg (2007) discuss that researchers should randomly select from the population they wish to study, and have a "sufficient size" to control for any group differences. The type of sampling that was used to gather data from the internationally adopted Chinese adolescent girls was convenience sampling. Therefore, our interpretations of the study's results is limited, because the adolescent girls and their adopted mothers who agreed to participate in this study may be different from those who did not participate in the study.

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Additionally, the sample of adolescent girls who participated was relatively small compared to the total number of participants that were part of the original longitudinal study.

Temporal validity. Temporal validity is a term that refers to how well a study's results can be generalized across time. While the original longitudinal study had several phases of data collection, the data collected from the adolescents in this study was only attempted during one of the phases. Therefore, any generalizations about the results from the adolescent internalizing behaviors were interpreted with caution, because we cannot measure these data across the phases to see if there were any changes from childhood to adolescence. Despite this shortcoming, these results are similar to what other literature has found in this population.

Future Directions

This study was one of the first to examine the mental and emotional health of internationally adopted Chinese adolescent girls using a majority of self-report measures. It is recommended that this study be replicated to determine if similar results are found with a larger population before broader generalizations can be made on pre-and post-adoption variables on the larger population of adopted Chinese girls. Furthermore, the design of this study, which only surveyed the adolescents at one time point, limits the generalizability of the data. It is suggested that a longitudinal design approach for the adolescent girls themselves, and not just their mothers, would be a more effective method of determining if these results are consistent over time. Future research should also address what underlies the mental health in this population of girls, with emphasis on the source of their resiliency.

Finally, this study was limited by the fact that the adolescents completed only a few of the many measures that this study analyzed. Therefore, the remainder of the measures examining the adolescent's family life (i.e., family stress, parenting style) was completed by their mothers.

In the future, researchers should administer more measures to the adolescents themselves, such as a family stress measure, to gain a better perspective of their total post-adoption environmental life.

Final Thoughts

This study was one of the first to examine the mental and emotional health of internationally adopted Chinese adolescent girls using a majority of self-report measures and extend the research literature that mainly focused on the early childhood years in this population. Most importantly, the study revealed that girls adopted from China generally remain mentally healthy into adolescence, which supports previous literature findings about the overall healthy development of this population in childhood. The study also suggests that the benefits seen earlier in childhood continue into adolescence. Furthermore, the research in this study has shown the importance of a positive family environment in that authoritative parenting was related to lower levels of internalizing concerns. Finally, this study showed that those parenting behaviors may have had an effect on this sample's self-esteem and academic competence in a positive way. Future studies should continue to expand on this research using a larger sample size, as well as studying the resiliency factors which underlie the mental health in this population of girls.

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Appendix A

Demographics Form 1 (Tan, T. X., 2005).

SURVEY OF PRE- AND POST-ADOPTION CHILD AND FAMILY EXPERIENCE

FORM 1: PARENT AND FAMILY INFORMATION

INSTRUCTIONS: Please circle a number corresponding to a response of your choice or write in a response.

1.   Did you participate in the 2002 study?   1 No   2 Yes   3 Unsure

2.   Your age in years: _____

3.   Your ethnic background: _____; Your spouse/partner's ethnic background:_____

4.   Your religious affiliation: _____

5.   What is your current marital status?

1 Married (spouse's age: _____)
2 Never married
3 Separated
4 Divorced
5 Living with same-sex partner (partner's age: _____)
6 Living with opposite-sex partner (partner's age: _____)
7 Widowed--spouse passed away before adoption
8. Widowed--spouse passed away after adoption

6.   Are you currently employed?

1   No   2 Yes— full time   3 Yes— part time (for how many hours a week?___)

7.   Is your spouse/partner currently employed?

0   NA   1 No   2 Yes — full time   3   Yes— part time (for how many hours a week?___)

8.   What is your highest educational attainment?

1 High School
2 Some college
3 College (Degree in _____)
4 Master's (Degree in _____)
5 Doctorate: e.g., Ph.D., Ed.D., M.D, J.D. (Degree in _____)
6   Post-doctoral (in _____)

9.   What is your spouse's highest educational attainment?

0 NA
1 High School
2 Some college
3 College (Degree in _____)
4 Master's (Degree in _____)
5 Doctorate/Ph.D./Ed.D./M.D./J.D.(Degree in _____)
6 Post-doctoral (in _____)

10.   Do you have biological children?   1 No   2 Yes (If yes, please fill out the following table):

Biological children	Age (write in)	Gender (circle one)		Currently living with you? (circle appropriate response)	
1st biological child		1 F	2 M	1 No	2 Yes
2nd biological child		1 F	2 M	1 No	2 Yes
3rd biological child		1 F	2 M	1 No	2 Yes

11.   Do you have children adopted from countries other than China?

1 No   2 Yes (If yes, please specify the age and gender of your adopted non-Chinese children):

Children adopted elsewhere	Age (write in)	Gender (circle one)		Currently living with you? (circle appropriate response)	
1st adopted child		1 F	2 M	1 No	2 Yes
2nd adopted child		1 F	2 M	1 No	2 Yes
3rd adopted child		1 F	2 M	1 No	2 Yes

12.   In 2004, what was your approximate combined household income in US dollars?

1 Under $19,999	6 $60,000 - $69,999	11 $110,000 - $119,999
2 $20,000 -$29,999	7 $70,000 - $79,999	12 $120,000 - $129,999
3 $30,000 - $39,999	8 $80,000 - $89,999	13 $130,000 - $139,999
4 $40,000 - $49,999	9 $90,000 - $99,999	14 $140,000 - $149,999
5 $50,000 - $59,999	10 $100,000 - $109,999	15 Over $150,000

13.   If you have to give any advice to other individuals/couples thinking about adopting from China, what would that advice be? You may list only up to three pieces of advice:

a) _____

_____

b) _____

_____

c) _____

_____

14.   From which organization or parent support network/group did you first learn about the study?

_____

15.	What other adoption organizations or support networks/groups do you belong to? (List up to five).

1. _____	2. _____

3. _____	4. _____

5. _____

Please go to the next white form (Form 2)

Appendix B

Demographics Form 2 (Tan, T. X., 2005)

SURVEY OF PRE- AND POST-ADOPTION CHILD AND FAMILY EXPERIENCE

FORM 2: CHILD-SPECIFIC INFORMATION

> **INSTRUCTIONS:** This survey asks for information that is specifically related to an adopted child from China in your family.
> Please **complete a separate form for each child in your family who was adopted from China**.

1. Child's name: _____. Child's date of birth: Month: _____ Day: _____Year: _____

2. Your marital status at the time you adopted this child:

   1 Never married
   2 Married
   3 Separated
   4 Divorced
   5 Living with same-sex partner
   6 Living with opposite sex partner

3. For this child, how difficult was the adoption decision process for you?

1 Not difficult at all	2 Somewhat difficult	3 Difficult	4 Very difficult	5 Extremely difficult

4. For this child, how difficult was the adoption decision process for your spouse/partner?

0 NA	1 Not difficult at all	2 Somewhat difficult	3 Difficult	4 Very difficult	5 Extremely difficult

5. How did your extended family feel about your decision?

   1 Not supportive   2 Somewhat supportive   3 Very supportive

6. How did your spouse's/partner's extended family feel about your decision?

   0 NA   1 Not supportive   2 Somewhat supportive   3 Very supportive

7. When did you first contact adoption agencies? Month: _____ Year: _____

8. Which agency did you finally choose? _____

9. When was the home study completed? Month: _____Year:_____

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10. In your application, did you specify a preferable age range for the child?

     1 No   2 Yes (Please specify the preferred age range that you requested _____)

11. When did you receive the referral? Month: _____ Year:_____

12. When was your child adopted? Month: _____ Day: _____ Year: _____

13. Was this adoption a special-needs adoption? 1 No   2 Yes (please specify: _____)

14. Did you travel to China to adopt your child?   1 No   2 Yes

15. From which child welfare institute was your child adopted?

     Name of Institute: _____ City & Province: _____

16. Your child's age at the time of adoption: _____year(s) and _____ month(s).

17. Was your child placed in foster care before you adopted her/him?

     1 No   2 Not Sure   3 Yes (for about _____months)

18. Overall, what was your level of satisfaction with the procedures leading to the handing of your child to you?

0 NA: spouse/ Relative traveled	1 Not satisfied at all	2 Somewhat satisfied	3 Satisfied	4 Very satisfied	5 Extremely satisfied

19. How stressful was the period in China (between receiving the child and coming back home) for you?

0 NA: spouse/ Relative traveled	1 Not stressful at all	2 Somewhat stressful	3 Stressful	4 Very Stressful	5 Extremely stressful

20. Based on your observation, when your child was first adopted, did s/he show signs of any of the following? (Please check all applicable conditions)

□ Lice/Fleas	□ Scabies	□ Rashes
□ Bad hygiene	□ Lack of medical treatment	□ Lack of responsiveness to others
□ Lack of individual care	□ Scar(s)	□ Bruise(s)
□ Scratch(es)	□ Broken bone(s)	□ Strap mark(s)
□ **Other:**	□ **Other:**	□ **Other:**

21. During the first week of meeting your child (in China if you traveled to adopt her/him; at home if you did not go to China to adopt the child), how difficult was it for your child to adjust to you?

1 Not difficult at all	2 Somewhat difficult	3 Difficult	4 Very difficult	5 Extremely difficult

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22. During the first week that your spouse/partner met your child (in China if s/he traveled to adopt her/him; at home if s/he did not go to China to adopt the child), how difficult was it for your child to adjust to your spouse/partner?

0 NA	1 Not difficult at all	2 Somewhat difficult	3 Difficult	4 Very difficult	5 Extremely difficult

23. During the first week after your adopted child's sibling/s met her/him (in China if they traveled there for the adoption; at home if they did not), how difficult was it for your adopted child to adjust to her/him/them?

0 NA	1 Not difficult at all	2 Somewhat difficult	3 Difficult	4 Very difficult	5 Extremely difficult

24. Has your child received any of the interventions listed below since adoption?

a. Physical therapy:	1 No	2 Yes, for _____ months
b. Speech/language therapy:	1 No	2 Yes, for _____ months
c. Counseling/psychotherapy:	1 No	2 Yes, for _____ months
d. Occupational therapy	1 No	2 Yes, for _____ months)
e. Major medical treatment:	1 No	2 Yes, (Specify type of treatment _____)

25. If your child has not started grade school, does s/he attend daycare or preschool?

0 NA   1 No   2 Yes — for _____ hours a day.

26. If your child has started grade school, does s/he attend public or private school?

0 NA   1 Public   2 Private

27. Does your family discuss your child's adoption background with him/her?

1 No, even though s/he is old enough to understand   2 No, because s/he is too young   3 Yes

28. Did your child exhibit any of the following behaviors during your **first week** with her/him? (in China if you traveled to adopt her; at home if you did not go to China to adopt her/him).

Behavior	No	Yes	If "Yes," for how long did this last?		
			<1 week	1 – 2 weeks	>2 weeks
a. Appeared to be afraid of you	□	□	1	2	3
b. Avoided your affection	□	□	1	2	3
c. Avoided eye contact with you	□	□	1	2	3
d. Cried for no particular reasons	□	□	1	2	3
e. Cried in sleep at night	□	□	1	2	3
f. Ate non-stop	□	□	1	2	3
g. Had diarrhea	□	□	1	2	3
h. Protested when left to nap	□	□	1	2	3
i. Protested during diaper change	□	□	1	2	3
j. Protested during bath	□	□	1	2	3

k. Preferred to be held by others	□	□	1	2	3
l. Preferred to be held facing away	□	□	1	2	3
m. Refused to be held by you	□	□	1	2	3
n. Refused to be fed by you	□	□	1	2	3
o. Threw up after eating	□	□	1	2	3
p. Was clingy	□	□	1	2	3
q. Would not allow you off sight	□	□	1	2	3
r. Other adjustment difficulty *1. specify:* _____	□	□	1	2	3
s. Other adjustment difficulty *1. specify:* _____	□	□	1	2	3
t. Other adjustment difficulty *1. specify:* _____	□	□	1	2	3

29. For each of the attributes listed in the Table below, place a check mark in the appropriate columns to indicate who the word describes: you; your child, or your spouse/partner. If the word does not describe any of you, leave the spaces next to the word blank. Only place a check mark for the person the word describes.

EXAMPLE: The example below shows that you consider your child, yourself, and your spouse or partner similar because you are all *loving*. On the other hand, you and your child are similar on the attribute *gentle* while you and your child differ from your husband who is considered *flat affect*.

Behavioral Characteristic	Your Child	You	Spouse/ partner	*Behavioral Characteristic*	Your Child	You	Spouse/ partner
a. Loving	√	√	√	c. Flat affect			√
b. Intense				d. Gentle	√	√	

Below is a Table with 40 descriptive words. Using the above example, please complete the Table to help us determine some of the similarities and differences you perceive within your family.

Behavioral Characteristic	Your child	You	Spouse/ partner	*Behavioral Characteristic*	Your child	You	Spouse/ partner	*Behavioral Characteristic*	Your child	You	Spouse/ partner
1. Active				15. Calm				29. Outgoing			
2. Adaptable				16. Anxious				30. Organized			
3. Adventurous				17. Creative				31. Persistent			
4. Affectionate				18. Diligent				32. Respectful			
5. Agreeable				19. Bossy				33. Sensitive			

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6. Cooperative				20. Easygoing				34. Serious			
7. Athletic				21. Emotional				35. Shy			
8. Articulate				22. Generous				36. Social			
9. Dependable				23. Friendly				37. Stubborn			
10. Competitive				24. Funny				38. Tense			
11. Caring				25. Kind				39. Talkative			
12. Charismatic				26. Helpful				40. Thoughtful			
13. Cheerful				27. Impulsive				41.			
14. Considerate				28. Intelligent				42.			

30. After your child was brought home, did s/he receive any medical evaluation?

□ No   [If your answer to this question is "No," you have reached the end of form 2.
Please now seal the white forms in the envelope(s) provided and proceed to complete the blue form (child behavior checklist).

□ Yes   [If your answer to this question is "Yes," please complete the remaining 5 items]

31. How many weeks after your child was brought home was the medical evaluation done? ____ weeks.

32. The child's weight was _____ (please provide weight in pounds), which was considered:

    1 Below normal range   2 Within normal range   3 Above normal range

33. How was your child assessed in the following areas? (Please circle in the appropriate columns)

Developmental Area	Too Young to Tell	No Delay	Moderate Delay	Severe Delay
Gross motor skills	0	1	2	3
Fine motor skills	0	1	2	3
Language skills	0	1	2	3
Social skills	0	1	2	3
Emotional maturity	0	1	2	3
Cognitive/Intellectual skills	0	1	2	3

34. What were the test results for the following conditions? (Please circle the appropriate columns)

Medical Condition	Not Tested	Tested Negative	Tested Positive
Hepatitis A	0	1	2
Hepatitis B	0	1	2
Hepatitis C	0	1	2
Intestinal parasites	0	1	2
Tuberculosis (TB)	0	1	2

35. Did the doctor report other problems about this child?

      1 No   2 Yes (Please specify:
_____

Please make sure that you have filled out all questions. Now please seal the white forms in the envelope provided and proceed to complete the blue form (child behavior checklist).

Revised Version of Social Problem Questionnaire (SPQ; Tan, T. X., 2005, as adapted from 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

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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

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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)

[   ]

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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

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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	☐	☐	☐	☐
Older child	☐	☐	☐	☐

Comment

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

	Satisfied	Slightly dissatisfied	Markedly dissatisfied	Severely dissatisfied
Younger child	☐	☐	☐	☐
Older child	☐	☐	☐	☐

Comment

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	☐	☐	☐	☐	☐
Older child	☐	☐	☐	☐	☐

Comment

Appendix D

PSDQ-short version (Tan, T. X., 2005 as adapted from 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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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24. Spoiling our children.

	Never	Once in a While	About Half of the Time	Very Often	Always	N/A
Spouse (for younger child)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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)	○	○	○	○	○	○
Spouse (for older child)	○	○	○	○	○	○
Me (for younger child)	○	○	○	○	○	○
Me (for older child)	○	○	○	○	○	○

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Appendix E

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

AUTHORITATIVE PARENTING STYLE (FACTOR 1)	
Subfactor 1 - Connection Dimension (Warmth & Support)	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)	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)	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.

Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Below is a list of statements concerning your general feelings about yourself. If you strongly agree with the statement, circle SA. If you agree, circle A. If you disagree, circle D. If you strongly disagree, circle SD.

		1. STRONGLY AGREE	2 AGREE	3. DISAGREE	4. STRONGLY DISAGREE
1.	**I feel that I'm a person of worth, at least on an equal plane with others.**	SA	A	D	SD
2.	**I feel that I have a number of good qualities.**	SA	A	D	SD
3.	**All in all, I am inclined to feel that I am a failure.**	SA	A	D	SD
4.	**I am able to do things as well as most other people.**	SA	A	D	SD
5.	**I feel I do not have much to be proud of.**	SA	A	D	SD
6.	**I take a positive attitude toward myself.**	SA	A	D	SD
7.	**On the whole, I am satisfied with myself.**	SA	A	D	SD
8.	**I wish I could have more respect for myself.**	SA	A	D	SD
9.	**I certainly feel useless at times.**	SA	A	D	SD
10.	**At times I think I am no good at all.**	SA	A	D	SD

Score as follows:

- For items 1, 2, 4, 6, 7: Strongly Agree = 3, Agree = 2, Disagree = 1, and Strongly Disagree = 0.

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- For items 3, 5, 8, 9, 10: Strongly Agree = 0, Agree = 1, Disagree = 2, and Strongly Disagree = 3.

The highest possible total is 30. Although the average varies in different samples, it is usually close to 20.

Adapted from
http://www.health.harvard.edu/newsletters/Harvard_Mental_Health_Letter/2007/June/Rosenberg-Self-Esteem-Scale

The Rosenberg SES may be used without explicit permission. The author's family, however, would like to be kept informed of its use (University of Maryland, 2014).

Appendix G

Dr. Tan Approving of Putting Questionnaire Sections into Thesis Appendices

OK you have my permission.

From: Derek Powers [mailto:dpowers1@mail.usf.edu]
Sent: Sunday, September 28, 2014 10:15 AM
To: Tan, Tony
Subject: permission to put surveys in thesis

Good morning,

    I am emailing you to gain permission to put sections of your parent and child surveys in my thesis. I know that I have not submitted my thesis yet to the graduate school but I saw in Cheryl Gelley's thesis she needed your written permission (to be put in her appendices) to put your surveys in her appendices and the graduate school would not accept her thesis with these surveys in it without it. I will put your reply as one of my appendices. Thanks!

Derek
--
Derek J. Powers, M.A.
Graduate Student, School Psychology Program
Department of Psychological and Social Foundations
University of South Florida