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Mental Health and Academic Outcomes Among Adolescents in South Korean Orphanages

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Mental Health and Academic Outcomes Among Adolescents in South Korean Orphanages

by

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Dedicated to my parents,

whose secure base has enabled me to reach my dreams.

ABSTRACT OF THE DISSERTATION

Mental Health and Academic Outcomes Among Adolescents in South Korean Orphanages

by

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Professor Wendy Auslander, Chair

Research conducted over the past 100 years in Western nations support the adverse effects of orphanages on children's emotional, developmental, and social well-being as well as economic costs to society (Save the Children UK, 2009; Bakermans-Kranenburg, Van IJzendoorn & Juffer, 2008; Williams & Greenberg, 2010). Globally, the number of orphaned and abandoned children is conservatively estimated to be around 143 million, of whom the majority reside in Asia, followed by Sub-Saharan Africa (UNICEF, UNAIDS, & USAID, 2004). South Korea (hereafter "Korea") is an exemplary nation for study because it has a well-established child welfare system, including family-based alternatives (domestic and international adoption, foster care); however, the nation continues to rely disproportionately on orphanages to protect children and adolescents in need of parental care. Since 2000 there has been a small but growing number of studies published by Korean scholars on the psychosocial problems of children in orphanages. However, few of these studies focused on adolescents and none measured trauma exposure or extent of PTSD symptoms. Furthermore, few explored risk and protective factors within the school environment and none explored factors specific to being in

alternative care, such as feelings about the loss of birthparents or discrimination for living in an orphanage.

Therefore, utilizing a risk and resilience framework (Garmezy, 1973, 1985; Werner & Smith, 1977; Rutter, 1979) two research questions were posed in this study. The first research question asked: 1) What is the extent of mental health, behavioral, and academic problems among adolescents in Korean orphanages, and what *individual factors* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss coping), *interpersonal factors* (lifetime types of traumas, discrimination because of being in an orphanage, perceived social support, orphanage caregiver school support, birthparent contact) and *school factors* (school bullying, supportive learning climate) are significant predictors of mental health, behavioral, and academic problems? The second research question was exploratory and addressed: 2) Are adolescent's cognitions about birthparent loss significantly associated with mental health, behavior, or academic problems, and if so, does birthparent loss coping style (avoidant or active style), mediate the relationship between birthparent loss appraisal and problems among adolescents in Korean orphanages?

This cross-sectional study involved a quantitative survey involving structured interviews with a convenience sample (N=170) of Korean adolescents. The adolescents were between the ages of 11 to 18 years and resided in 10 orphanages located in the Seoul Capital area and a southern province. Data analysis for the first research question involved descriptive and bivariate analyses. Six multiple regression models were then performed to identify significant risk and protective factors associated with mental health (depression and PTSD symptoms), behavioral (internalizing and externalizing behaviors), and academic (school grades and school engagement) problems. For the exploratory second research question, first bivariate analyses

were conducted to determine whether there were significant correlations among the predictor (birthparent loss appraisal), mediators (active coping and avoidant coping), and each outcome (depression, PTSD, internalizing behavior problems, externalizing behavior problems, school grades, and school engagement). Twelve simple mediation models were performed to calculate the path coefficients and significance test of the indirect effect utilizing bootstrap re-sampling methodology.

Results from the first research question found 29% of adolescents had mild to severe depressive symptoms and 20% met clinical thresholds for likely PTSD diagnosis. Additionally, 15% of youth in the current study met borderline to clinically significant thresholds for internalizing behavior problems and 22% for externalizing behavior problems. Adolescents in the study were found to have moderate levels of school engagement; however, many were underperforming academically, with most reporting below average or poorer grades in Math and English. Youth reported experiencing an average of 2.6 traumatic events in their lifetime. Furthermore, 37% reported they experienced discrimination because of being in an orphanage, and 40% reporting they had been victims of school bullying in the past year.

Results from the multiple regression analyses identified eight significant risk and protective factors across individual, interpersonal, and school levels that predicted mental health, behavioral, and academic problems among adolescents in Korean orphanages. Five risk factors were found to be significantly associated with more internalizing problems: female, more negative affect and preoccupation with birthparent loss, more types of traumas, and experiencing discrimination because of being in an orphanage. More negative affect and preoccupation with birthparent loss and a more insecure attachment style were found to be significant predictors of more depressive symptoms. Greater birthparent loss and more types of trauma were also

significant predictors of more PTSD symptoms. More number of trauma types was also found to be associated with more externalizing behavior problems, as was being a victim of school bullying. Only one risk factor, a more insecure attachment style, was found to be associated with lower school engagement; no risk factors were found to be associated with lower school grades.

Two protective factors were also identified to be significant. More perceived social support was associated with better school grades, more school engagement, less internalizing behavior problems, and lower depressive symptoms. Having a supportive school environment was found to be protective across all outcomes, except for school grades. Finally, results from the exploratory mediation analyses posed by the second research question found out of the 12 models, three were significant. Only active coping was found to be a significant mediator on the relationship between birthparent loss appraisal and three outcomes: depression symptoms, school engagement, and school grades.

This study contributed to knowledge about adolescents in Korean orphanages and their specific mental health, behavioral, and school needs. It was the first study to measure the extent of PTSD symptoms and trauma exposure and to identify significant predictors of PTSD in this population of youth. Furthermore, this study identified two school-related factors, school bullying (risk factor) and a supportive school learning climate (protective factor), to be significant predictors of mental health, behavioral, and school outcomes among youth in Korean orphanages. Finally, this study was the first to measure the extent of discrimination because of being in an orphanage and experiences of birthparent loss among youth in orphanage care in Korea. Study findings have implications for policies, practices, and research to enhance the mental health, behavioral, and school needs of youth in formal systems of child welfare in Korea and globally.

Chapter 1: Introduction

1.1 Statement and Significance of the Problem

Research conducted over the past 100 years in Western nations support the adverse effects of orphanages[1] on children's emotional, developmental, and social well-being as well as economic costs to society (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2008; Save the Children UK, 2009; Williamson & Greenberg, 2010). Children raised in orphanages are at higher risk for emotional problems such as anxiety and depression; behavioral problems such as hyperactivity and aggressiveness; social problems including greater loneliness and lower social competence; and lower school attainment than children reared in families (see meta-analysis Bakermans-Kranenburg, et al., 2008; R. Lee, Seol, Sung, Miller, & MIAPT, 2010). Moreover, adverse early life experiences such as abuse, neglect, and psychosocial deprivation, have been found to have significant long-term consequences into adulthood including elevated psychiatric disorders such as depression, anxiety, and posttraumatic stress disorder (De Bellis & Thomas, 2003; Springer, Sheridan, Kuo, & Carnes, 2007; Teicher, 2000).

The global number of orphaned and abandoned children under the age of 17 is conservatively estimated to be around 143 million, of whom the majority reside in Asia (87.6 million) followed by Sub-Saharan Africa (43.4 million) (United Nations Children's Fund, Joint United Nations Programme on HIV/AIDS, United States Agency for International Development, 2004). Given the knowledge of the detrimental effects of orphanages on children's development,

[1.] The term "orphanage" is somewhat antiquated. Contemporary research on children in orphanages use the terms institutional care (IC), children's institutions, residential care, residential institutions, or facilities, to synonymously refer to "residential facilities in which groups of children are cared for by paid unrelated personnel" (Williamson & Greenberg, 2010, p. 3). This dissertation focuses exclusively on children without developmental disabilities who are residing in facilities because of parental abandonment, inability, or neglect. Such facilities are distinct from institutions serving children with developmental disabilities or other special needs requiring therapeutic services. In the context of the U.S., the term "institution" or "residential facility" refers to a place where children receive therapeutic services. So as to not confuse the reader, this dissertation uses the antiquated but meaningful term "orphanage" throughout.

numerous international treaties, including the *Convention on the Rights of the Child (CRC)*, and the United Nations *Guidelines for the Alternative Care of Children*, explicitly promote family-based care (i.e. adoption and foster care) over orphanage-based care. Most recently, the U.S. government issued a strategic plan for the coordination of assistance to vulnerable children, as mandated by the Assistance for Orphans and Other Vulnerable Children in Developing Countries Act of 2005 (PL 109-95). A core objective in its 2012 strategic plan is to prioritize family-based care with the goal of increasing the number of children living in appropriate, permanent, and protective family care, and reducing the number of children living in orphanages (U.S. Agency for International Development [USAID], 2012).

In the context of Asia, South Korea (hereafter "Korea") is an exemplary nation for study because it has a well-established child welfare system including family-based alternatives (domestic and international adoption, foster care); however, the nation continues to disproportionately rely on orphanages to protect children and adolescents who are without parental care [2]. Data from Korea's Ministry of Health and Welfare (KMHW) estimate that 10,000 children are abandoned annually, of whom nearly half are placed in orphanages (Morrison, 2010); approximately 1,300 children are adopted [3] domestically and 1,200 adopted internationally, with the remaining children cared for in foster homes (R. Lee et al., 2010).

2. "Children without parental care" are defined as "all children who are not living with at least one of their parents for whatever reason and under whatever circumstances." (UNICEF, 2009, p. 19). For the purposes of this paper, the term "orphan" refers to only "true" orphans with one or both deceased parents. The majority of children in Korea's orphanages are "social" orphans who have been abandoned by both or one living parent(s) and fall under the broader term of "children without or in need of parental care".

3 Adoptions by non-relatives.

Currently, approximately 17,000 children (birth to 19) reside in 243 orphanages or other residential facility (e.g. group home), of whom 45% are adolescents (KMHW, 2015).

Korea's orphanages meet the basic health care and nutrition necessary to prevent global developmental failure. However, children growing up in orphanages still suffer as a result of psychosocial deprivation of long-term, stable relationships with consistent caregivers, abandonment by biological parents, and discrimination related to their orphan status; these in turn may impair their long-term ability to form healthy relationships, learn, or work in meaningful ways (R. Lee et al, 2010). Since 2000 there has been a small but growing number of studies published by Korean scholars on the psychosocial problems of children in orphanages. This emerging research has found results similar to other studies of children in orphanages around the world. When compared to youth raised in families, children in Korea's orphanages have more emotional and behavioral problems, including anxiety and depression, loneliness, insecure attachment styles, lower social competence, and lower quality of peer relationship, and communication skills (E. Han, & Choi, 2006; J. Han, & Lee, 2007; Jeong, 2002; 2004; J. Kim & Yoo, 2002).

1.2 Study Purpose

The purpose of this dissertation was to understand the mental health, behavioral, and academic problems of adolescents growing up in orphanages in Korea, and to explore risk and protective factors that were significantly associated with these problems utilizing a risk and resilience framework (Garmezy, 1973, 1985; Werner & Smith, 1977; Rutter, 1979). Consistent with this framework, Brodzinsky's Stress and Coping Model of Adoption Adjustment (Brodzinsky, 1990; Brodzinsky, Smith, & Brodzinsky, 1998) was used to guide the identification

of factors specific to being in alternative care[4] that may potentially influence the mental health, behavioral, and academic problems among adolescents in orphanages.

As noted, research on children in Korea's orphanages have mostly been published in Korean-language journals. Few of these studies have focused on adolescents in care and most have not measured experiences or histories of trauma. Those studies that have looked at individual risk and protective factors associated with psychosocial problems among children in orphanages have largely focused on intrapersonal traits (i.e. self-esteem). Most have not explored risk and protective factors within the school environment, or factors specific to being in alternative care. Children in orphanages and adopted children share the experience of disruption and disconnection from their biological families as a result of being placed in alternative care. Research on adoption related loss, particularly birthparent loss, may be a relevant factor that has not been explored among youth in orphanages.

According to Brodzinksy's Stress and Coping Model of Adoption Adjustment, loss of biological connections and origins is a potential source of stress that can contribute to feelings of rejection and being "different"; these emotions may underlie some adoptees' psychological adjustment by undermining their sense of security and well-being (Brodzinsky, 1990). For example, in a study of a diverse sample of adoptees in the United States, negative cognitive appraisal of birth parent loss (e.g. negative feelings, greater preoccupation about why birth parents gave the child for adoption) and avoidant coping strategies were found to be associated with depressive symptoms, lower global self-worth, and more behavior problems (Smith &

[4] "Alternative care", also known as "out-of-home care" or "substitute care" refers to the formal placement of children without or in need of parental care in protective settings, either temporarily (foster care or orphanage) or permanently (adoption). This study focuses on one type of alternative care, orphanages.

Brodzinsky, 2002). It is possible that for youth in orphanages, who also experience the loss of biological connections, cognitions and coping with birthparent loss may also be salient and may be associated with psychosocial problems.

Furthermore, discrimination associated with being an orphan and growing up in alternative care has not been studied in Korea. For instance, one study of adolescents in orphanages in Turkey found discrimination because youth lived in an orphanage was associated with higher total emotional and behavioral problems based on teacher-reports (Simsek, Erol. Oztop, & Munir, 2007). Evidence suggests adults who grew up in orphanages in Korea face barriers related to their "orphan" status that affect whom they marry and opportunities for work. While existing literature has documented the link between orphanage care and increased social, emotional, and behavioral problems, few studies have explored interpersonal factors, particularly the presence of trauma, school context factors (i.e. school bullying, positive learning environment), and placement specific factors (discrimination, birthparent loss) on mental health, behavioral, or school outcomes among youth in orphanages.

1.3 Research Questions

This cross-sectional dissertation involved a qualitative focus group with orphanage caregivers that was used to inform the appropriateness of variables and interpretation of quantitative data, and a quantitative survey involving face-to-face structured interviews with a convenience sample (N=170) of Korean adolescents (ages 11 to 18) drawn from 10 orphanages located in the Seoul Capital area and a southern province. This study involved two phases with the following aims and two research questions:

Phase 1: Focus Group with Orphanage Caregivers Aim: To explore through qualitative focus group methods with orphanage caregivers, their perceptions of the problems and strengths of adolescents in orphanages, and factors that contribute to mental health, behavioral and academic problems, in order to affirm the appropriateness of variables and interpretation of findings in the quantitative data.

Phase 2: Survey of Adolescents in Orphanages Aim: To describe the extent of mental health, behavioral, and academic problems among adolescents in orphanages, and to identify individual, interpersonal, and school factors that significantly contribute to those problems among these youths. Two research questions were posed in this phase and summarized in Figures 1.1. and 1.2:

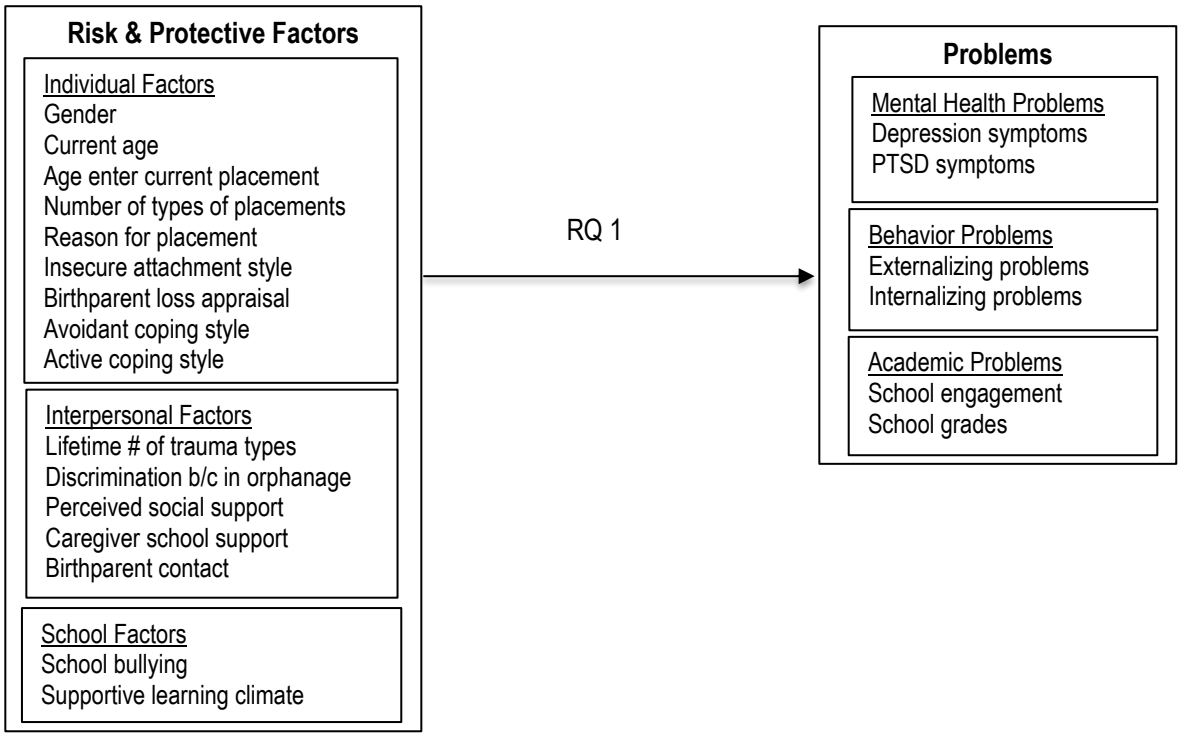


Figure 1.1 Key Variables of Interest in Research Question 1: Significant Risk and Protective Factors

Research Question 1: What is the extent of mental health, behavioral and academic problems among adolescents in orphanages, and what *individual factors* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss coping), *interpersonal factors* (lifetime types of traumas, discrimination because of being in an orphanage, perceived social support, orphanage caregiver school support, birthparent contact) and *school factors* (school bullying, supportive learning climate) are significant predictors of mental health, behavioral, and academic problems (Figure 1.1)? The following hypotheses are proposed based on the literature reviewed in Chapter 2.

Hypothesis 1: Gender: Girls will have more depressive and internalizing behavioral problems than boys, and boys will have more externalizing behavioral problems than girls.

Hypothesis 2: Age enter placement: Adolescents who enter into orphanages at younger ages will have more mental health, behavioral, and academic problems.

Hypothesis 3: Insecure Attachment: Adolescents with more insecure attachment styles will have more mental health, behavioral, and academic problems.

Hypothesis 4: Perceived social support: Youth with low perceived social support will have more mental health, behavioral, and academic problems.

Hypothesis 5: Birthparent contact: Youth with no contact with birthparents will have more mental health, behavioral, and academic problems.

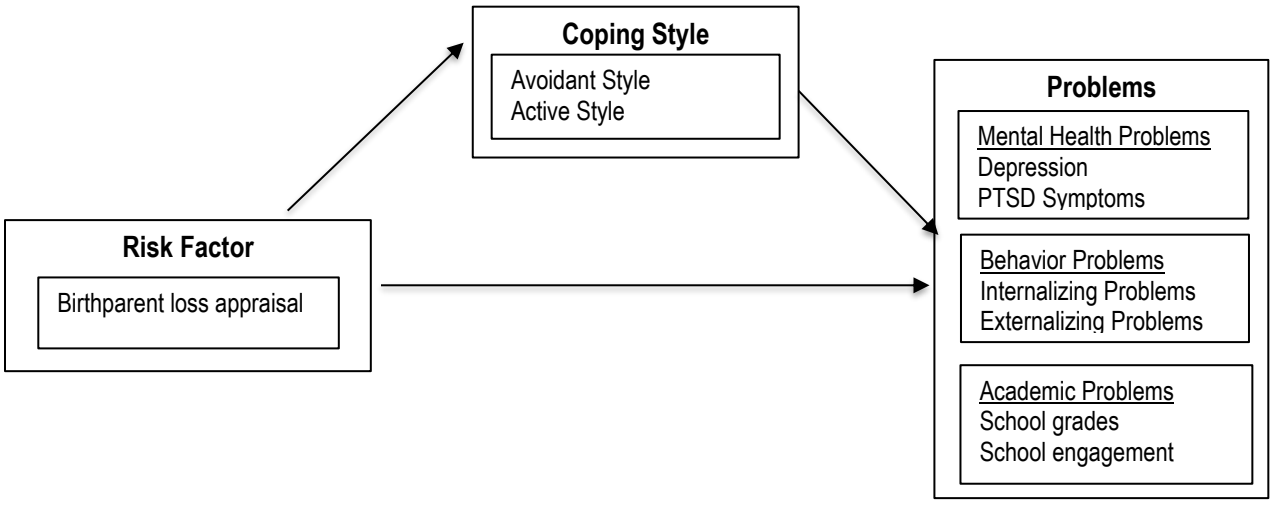


Figure 1.2 Key Variables of Interest in Research Question 2: Birthparent Loss, Coping, and Problems

Research Question 2: Are adolescent's cognitions about birthparent loss significantly associated with mental health, behavior or academic problems, and if so, does birth parent loss coping style (avoidant style or active style), mediate the relationship between birthparent loss appraisal and mental health, behavioral or academic problems (dependent variables) among adolescents in orphanages (Figure 1.2)?

Findings from this dissertation add to the knowledge base on adolescents in orphanages. It contributes to an understanding of the extent of trauma experiences and PTSD symptoms in this population. It also explores the extent to which factors specific to being in alternative care (e.g. discrimination, birthparent loss and coping) and school contexts may be associated with mental health, behavioral, and academic problems. Furthermore, this study explores a potential explanatory pathway to see whether coping processes mediates the relationship between birthparent loss appraisal and mental health, behavioral, or academic problems.

Chapter 2: Background Literature

This chapter begins with a discussion of the development of South Korea's child welfare system and current state of care for orphaned and abandoned children. This is followed by an overview of the risk and resilience perspective and Stress and Coping Model of Adoption Adjustment used in the current study. The empirical literature on the mental health, behavioral, and academic problems among adolescents in orphanage care in Korea is then reviewed. Finally, the literature on risk and protective factors associated with mental health, behavioral, and academic problems are discussed. This final section is organized by: (1) *individual factors*, that include demographics (gender, current age), placement experiences (age entered current orphanage, reason for placement), and intrapersonal factors (insecure attachment style, birthparent loss appraisal and coping); (2) *interpersonal factors*, which include lifetime number of types of trauma, discrimination for living in an orphanage, and social support (perceived social support, caregiver school support, birthparent contact); and (3) *school factors* (school bullying, supportive learning climate).

2.1 Context of Care for Orphaned and Abandoned Children in Korea

2.1.1 Indigenous Child Welfare

Traditionally, orphaned children in Korea were taken care of by extended family, with the first western-style orphanages introduced by missionaries in the late 19th century (Hubinette, 2004). Although the western practice of non-relative adoption through a social service agency was generally not practiced, cultural beliefs rooted in Neo-Confucian doctrine since the 17th century recognized adoption for the purposes of inheritance and continuation of paternal lineage, although adoption was generally viewed unfavorably (E. Kim, 2004). Despite evidence of an indigenous practice of child welfare for orphaned and abandoned children during the Joseon

Dynasty (1392-1897), occupation and colonialization by Japan in the early 19th century largely interfered with its development and opened Korea to a host of foreign social-care interventions; this was further exacerbated by the Korean War (1950-1953) which opened the nation to international development (Kim & Henderson, 2008).

2.1.2 International Adoption

In 1954, one year after the armistice was signed ending the Korean War, a total of 2 million children under the age of 18 had been displaced (Hubinette, 2004). In response to the plight of Korea's children, Western relief organizations set up orphanages and hospitals, evacuated children to safety, and established practices including sponsorship, foster care and adoption. Before the end of the war some of the orphaned children had already been taken in by soldiers on military bases as regimental mascots, houseboys, or interpreters, with some informally adopted (Hubinette, 2004). In addition, thousands of children born to Korean mothers and Western military fathers serving under the United Nations auspices during the war faced an uncertain future in a country obsessed with notions of blood purity. Many of these children, referred to as "Amerasian" or "GI baby" were stigmatized by their mixed-race status and illegitimate births, and consequently abandoned by both parents (Freundlich & Lieberthal, 2000).

The plight of Korea's mixed-race orphans was disseminated through Western media, which raised awareness of their situation. The Christian relief organization, World Vision, created a documentary on the situation of mixed race Korean war orphans that toured America in 1954. The film inspired one farmer and his wife, Harry and Bertha Holt from Oregon, to adopt eight children that was highly publicized (Hubinette, 2004; Holt, 2003). The Holt's efforts inspired others to adopt, and in 1956, Harry and Bertha Holt founded what is today known as Holt International Children's Services, a leading agency in international adoption placements.

The Holts were also instrumental in establishing permanent legislation to permit international adoptions to the U.S.A. (Hubinette, 2006).

In the decades following the Korean War, international adoption of Korean children continued in response to changing social, economic, and political forces, and problems of massive poverty, overpopulation, and child abandonment. Massive internal migration, urbanization (between 1967 and 1976, 6.7 million people migrated from rural areas to cities), and economic instability eroded traditional family structures and supports (Hubinette, 2006). Industrialization led to the abandonment of children born to young unmarried women recruited to work in new factories, and thousands of other children were abandoned because of urban poverty, family break-up, disability, neglect, and prostitution (Hubinette, 2006). Cultural attitudes also contributed to the abandonment of children, including a cultural preference for boys, a belief that abandoning a child would provide a better future, pervasive stigma regarding adoption, nominal government support for single mothers, and limited legal rights for women (Freundlich & Lieberthal, 2000; E. Kim, 2004). For example, under the Family Law of 1960, which codified patriarchal Neo-Confucian beliefs into modern law, children were their father's property and women had no rights to inheritance or custody of a child; the law would not be revised until 1991 (E. Kim, 2004).

In addition, government policies supported the practice of international adoption as a means of addressing the problem of overpopulation, and integrated the practice into national family planning and emigration programs (Hubinette, 2006). The national family planning measures, implemented during the military dictatorships of Park Chung Hee (1961-1979) and Chun Doo Hwan (1981-1987), included a one child policy, sex education, contraception, legalized abortion (in 1973), and economic incentives to reduce family size (Sarri et al., 1998;

Hubinette, 2006). The government also encouraged emigration, which resulted in the migration of one million Koreans overseas for work as cheap laborers, international adoption, and international marriage (Hubinette, 2006).

By the end of the 1960s the majority of children being sent overseas for adoption were no longer mixed-race war orphans, but “full-blooded” Korean children who had been abandoned, the preponderance being girls (Hubinette, 2006). During the years of South Korea's military dictatorships, most of the children relinquished for intercountry adoption were born to young, unmarried, middle class mothers. The decades of the 1970s and 1980s also marked the largest cohorts of orphans to leave the country for international adoption (Hubinette, 2006). Since the 1990s and the establishment of a democratic government, the majority of children sent abroad have been born to young, single mothers who enter homes for unwed mothers and make adoption plans (Hubinette, 2006; Rahn, 2005).

2.1.3 Domestic Adoption

Korea’s development of Western-style non-relative adoption policies and practices have largely been in response to criticism of its reliance on international adoption. The 1970s and 1980s were the decades in which the largest number of Korean children were sent overseas for adoption. During this same period, the South Korean government twice attempted to officially promote domestic adoption and stop overseas adoption practice. In response to North Korea's public accusations of South Korea's "export" of babies for profit, the South Korean government revised its adoption law in 1976 and enacted the Five-Year Plan for Adoption and Foster Care (1976-1981). This law was aimed at increasing domestic adoptions and reducing international adoptions (except for mixed race and disabled children), with the eventual phasing out of international adoptions by 1981 (Sarri et al., 1998). Other changes in the adoption law included

restricting the number of countries able to receive children for adoption to eleven, requiring adoption agencies in South Korea to be run by Koreans, and limiting the number of Korean agencies that could conduct international adoptions to four: Social Welfare Society, Holt Children's Services, Korea Social Services and Eastern Child Welfare Society (Hubinette, 2006).

By the early 1980s this policy was abandoned because of the government's failure to significantly increase the number of domestic adoptions. In 1981 the government reversed its policy and expanded international adoptions by incorporating it as part of an emigration and "good-will ambassador" policy to foster ties with Western allies (Sarri et al., 1998). However, in the face of massive international criticism of Korea's high rate of international adoption during the 1988 Olympic games in Seoul in which the nation was again dubbed a "baby exporter", this policy was overturned. In addition, reports in the late 1980s of trafficking, corruption, and agencies hastily sending children not available for adoption overseas (which ended the practice of sending abandoned children for international adoption), led the government in 1989 to enact a new policy that introduced tax incentives to promote domestic adoption and aimed at terminating international adoptions by 1996, except for mixed-race or disabled children (Hubinette, 2006; Lovelock, 2000; Sarri et al., 1998).

In 1994, with continuing low rates of domestic adoption, this policy was again abandoned. In 1996, the South Korean government revised its adoption law, currently known as the Special Law on Adoption Promotion and Procedure. The new law called for an annual decrease of international adoptions by 3 to 5 percent, with an eventual phasing out by 2015; two small revisions to the law were made in 1999 and 2000 (Hubinette, 2006). Since then the number of children sent overseas for adoption has hovered around 2,000 children annually, except during

the Asian economic crisis (1997-1999) when international adoptions increased to 2,400 because of increased abandonment due to economic hardship (Hubinette, 2006).

The South Korean government has continued to try to promote domestic adoptions despite cultural stigma that continues to pose a barrier to its practice. In 2005 the government designated May 11 as National Adoption Day and in March 2006 the government began to provide financial aid to adoptive parents (Bae, 2005; J. Lee, 2006). Despite these efforts, of the 9,420 children available for adoption in 2005, 1,461 were adopted domestically while 2,001 children were adopted overseas (J. Lee, 2006). At the same time, according to data from the Korean Ministry of Health and Welfare, the number of children entering orphanages has risen, with an additional 800 to 900 18-year-olds aging out of the system annually with little housing, educational, or vocational support (Hankyoreh, 2006; Tran, 2006).

2.1.4 Orphanage Care

According to data from the South Korean Ministry for Health, Welfare, and Family Affairs (MIHWAF), of the children in need of parental protection between 1955 and 2008, 9% (163,705) of children were adopted overseas, 4% (85,000) were adopted domestically, and 87% (2 million) were cared for in orphanages (E. Kim, 2010). Currently, the majority of children in orphanages are not “true orphans”, in which one or both parents are deceased. In fact, most of Korea's children in orphanages are “social orphans” who were placed after the age of 2 because of divorce, remarriage, or economic hardship, whose living parents have not legally relinquished their parental rights (R. Lee et al., 2010). Children placed in orphanages as infants may also have living parents who relinquished the child because of serious medical or health problems affecting the child's development (R. Lee et al., 2010). Finally, according to one news report, two adopted

children are abandoned to orphanages daily by their Korean families because of domestic problems or family circumstances (J. Bae, 2009).

Children in Korean orphanages fare better than children growing up in facilities in other parts of the world. Overall, child welfare facilities in Korea are well maintained, and adequately meet the basic health care, nutrition, and environmental stimulation necessary to prevent global developmental failure (R. Lee et al., 2010). Most orphanages are organized around household units consisting of about seven to ten children of varying ages and one full-time primary caregiver; however, average tenure of full-time caregivers is 3 to 5 years, although some institutions retain workers for longer periods (R. Lee et al., 2010). Thus, the primary deprivation children in Korean orphanages experience, besides separation from their biological parents, is the lack of long-term, stable relationships with consistent caregivers (R. Lee et al., 2010).

2.2 Theoretical Frameworks

2.2.1 Risk and Resilience Perspective

Psychologists Norman Garmezy (1973; 1985), Emmy Werner (Werner & Smith, 1977) and psychiatrist Michael Rutter (1979) were pioneering scholars in risk and resilience theory and human development, establishing the field of developmental psychopathology. Within the context of human development, *risk factors* are "any influence that increases the probability of harm (the onset), contributes to a more serious state, or maintains a problem condition" (Fraser, 2004, p. 4). *Protective factors* are defined as "internal and external resources that promote positive developmental outcomes and help children prevail over adversity" (Fraser, 2004, p.5). This perspective utilizes an ecological perspective (Bronfenbrenner, 1979; 1994; 2004) to specify risk and protective conditions within nested levels of a child's social ecology. These levels include: 1) individual psychosocial and biological characteristics; (2) family factors; and

(3) environmental conditions, including school and neighborhood factors (Fraser, 2004). Thus, this multisystem framework considers a broad range of variables in an effort to identify all factors that may affect a child's life (Fraser, 2004).

This perspective also posits that it is the accumulation of risk (or protective) factors, rather than a single risk factor, that produces heightened vulnerability or resilience (Rutter, 1990). Another important concept in risk and resilience theory is the influence of stressful life events on the development of social and health problems in childhood. Stressful life events can be abrupt transitions that have "turning point effects" that alter developmental trajectories by immediately changing individual capabilities and environmental conditions, such as becoming pregnant, witnessing a disaster, or experiencing a disabling automobile accident (Fraser, 2004). Stressful events may also affect developmental outcomes through the accumulation of stress through repeated annoying events and "daily hassles" (Fraser, 2004).

This perspective is particularly useful for the present study for a few reasons. The framework provides an explanation for variation in outcomes for adolescents in orphanages. Unlike attachment theory, which focuses on early infant-parent relationships, a risk and resilience perspective takes a lifespan developmental approach to understanding the development of psychopathology. This developmental approach is particularly useful when studying adolescence because this is a period in which youth have greater cognitive maturity and opportunities to be agents in shaping the direction of their lives. According to this theory, differences in youth psychosocial outcomes are related to differences in the transactions between a child and his or her risk and protective conditions at the individual, family and community levels. In the present study, these levels of a child's social ecology include individual, interpersonal (including family and orphanage environments), and school factors. This theory is

useful because risk and protective factors within the child and environment can be identified and potentially modified. In addition, the theory provides practical guidance for the selection of testable hypotheses and key variables. Finally, conceptually the perspective fits with the experiences of adolescents in orphanages.

For instance, within the risk and resilience perspective, disruption from a child's birth family and placement in an orphanage can be conceptualized as having a "turning point effect", dramatically changing risk by significantly altering the environmental context (i.e. life in an orphanage versus life in a biological family). At the same time, the theory recognizes that risk and protective factors in the new social environments will also influence the developmental course of the child. For adolescents growing up in an orphanage, some of these may include interrupted attachment because of inconsistent caregivers, and the accumulation of repeated annoying events and "daily hassles" associated with being in alternative care. These hassles may be overt (i.e. peers teasing that a youth in an orphanage is "not wanted" by their biological family) or covert (i.e. not being able to make a family tree for a school assignment because a youth does not have information about his or her biological family). Thus, this theory provides a lifespan perspective and explanation for how risks associated with pre- and post- alternative care environments may accumulate and affect psychosocial and behavioral outcomes at different developmental periods.

2.2.2 Stress and Coping Model of Adoption Adjustment

Consistent with the risk and resilience perspective, Brodzinsky and colleagues (Brodzinsky, 1990; Brodzinsky, Smith, & Brodzinsky, 1998) developed the Stress and Coping Model of Adoption Adjustment. This model integrates the work of Lazarus and his colleagues (Lazarus, 1966; 1991; Lazarus & Folkman, 1984) on stress and coping with Brodzinsky’s work

on cognitive-developmental and psychosocial factors in adoption adjustment. Specifically, this model guided the study's identification of factors specific to being in alternative care that may potentially influence the mental health, behavioral, or school problems of adolescents in orphanages. Consistent with this model, the present study explored the extent to which cognitive appraisal of birthparent loss was associated with mental health, behavioral, or academic problems. It also explored whether coping processes mediated the relationship between birthparent loss and mental health, behavioral, or academic problems.

In Brodzinsky's Stress and Coping Model of Adoption Adjustment, the primary assumption is that loss, specifically of biological connections and origins, is at the core of the adoption experience (Brodzinsky, 1990). In the present study, this model has been extended to children who have been removed from their biological families and placed in another alternative care setting, orphanages. The model posits the loss caused by separation from attachment figures because of placement in alternative care, particularly when the child is removed in the first few months of life, is less traumatic and therefore less likely to lead to psychopathology by itself; however, it does increase vulnerability. The experience of loss of birth connections and origins is posited to occur with adoptee's cognitive development and ability to understand adoption and adoption-related losses, which increase with age and maturity. Hence, adolescents are particularly vulnerable to placement specific losses because their maturity allows them to understand the meaning and implications of placement related differences (i.e. growing up in a biological family vs. adoptive family or orphanage).

At the heart of the stress and coping model is the assumption that adoptee's adjustment to adoption is mediated by a person's cognitive appraisal of the situation, and coping resources to deal with the demands from the environment over the life course (Brodzinsky, 1990). *Cognitive*

appraisal includes both the child's interpretation of the meaning of being adopted, including its potential as a stressor (Brodzinsky, 1990). *Coping efforts* include a variety of strategies that are activated in response to the perceived stress of adoption. These strategies may be *active*, directed at managing or altering the problem causing the distress (e.g. mobilizing support, information seeking), or *avoidant*, directed at regulating emotional response to the problem (e.g. minimization, denial). Clinical observation suggests that coping efforts change with age, with younger aged adoptees utilizing active coping efforts and information seeking from adoptive parents, and a gradual increase in avoidant coping strategies and more inhibition of actions beginning in middle childhood and into adolescence (Brodzinsky, Smith, Brodzinsky, 1998).

The Stress and Coping Model of Adoption Adjustment is useful for this study because it is one of the only empirically tested models for children in alternative care (Smith & Brodzinsky, 1994; Smith & Brodzinsky, 2002). The model is suitable because it recognizes a child's current living situation in alternative care (i.e. being "adopted" or "orphaned") as a psychologically stressful experience and provides a potential pathway for explaining how placement-specific stressors may affect a youth's mental health, behavioral, or academic outcomes.

By applying this model to adolescents in orphanages, it is theorized that mental health, behavioral, or academic problems among this group of youth may be influenced by placement specific cognitive appraisal processes and coping styles. In this study, loss of birthparents is the primary placement stressor to be examined because it is theoretically viewed as the most central to children's adjustment difficulties who are adopted (Brodzinsky, 1990). However, while all adoptees, and by extension adolescents in orphanages, experience loss associated with separation from their biological family because of placement, differences in how adolescents perceive and cope with such losses may account for variation in youth's outcomes.

According to Brodzinsky's Stress and Coping Model, cognitive appraisal of birthparent loss is operationalized as having two components: *negative or distressing affect* about the loss of birthparents, and *curiosity or preoccupation* with what birthparents may be like (Smith & Brodzinsky, 2002). Coping efforts are operationalized as avoidant or active. Avoidant efforts to cope with the problem of thoughts and feelings about birthparent loss include *cognitive avoidance* (e.g. trying not to think about the problem; pretending that nothing was wrong; pretending the problem of birthparent loss is not important or real) and *behavioral avoidance* (e.g. staying away from the problem of birthparent loss; going to sleep so as to not think about birthparent loss). Active efforts include *assistance seeking* (e.g. asking for help from another person; sharing feelings with another person about birthparent loss), and *cognitive/behavioral problem solving* (e.g. trying to figure out what to do about the problem of birthparent loss; making a plan to solve the problem of birthparent loss).

The present study sought to replicate Smith & Brodzinsky's (2002) empirical study, which tested their model on a diverse sample of adopted children ages 8 to 12 years old (42 boys and 40 girls) in the United States. In their study, they found support for an association between birthparent loss appraisal, coping efforts, and mental health outcomes. Birthparent loss appraisal contributed significantly to the prediction of mental health outcomes measured in their study after demographic variables were controlled.

Specifically, they found a direct association between negative affect about birthparent loss and more depression and lower self-worth. In addition, negative affect about birthparent loss was associated with avoidant coping strategies, and curiosity about birthparent loss was associated with active coping strategies based on youth self-reports. These findings provide initial support for an association between birthparent loss appraisal and coping efforts to manage

that loss. After controlling for birthparent loss appraisal, they found in their regression models that avoidant coping was significantly associated with greater anxiety scores. Hence, their findings suggest both a direct association between negative appraisal of birthparent loss and more depression and lower self-worth, as well as an indirect pathway with avoidant coping behavior as a mediator between birthparent loss and anxiety.

2.3 Mental Health, Behavioral, and Academic Problems

This section provides a review of the current literature on mental, behavioral and school problems among adolescents residing in orphanages in Korea. Research published in Korean-language journals on children in orphanages has focused mostly on infants and latency school-aged children; however, published articles have increased since the 2000s. Because there is nominal research published in peer-reviewed English-language journals adolescents in orphanages in Korea, studies published in Korean-language journals were reviewed. In Western nations, research on children in orphanages has been conducted for over 100 years. This research has grown since the 1990s because of the large number of children adopted internationally from orphanages in developing nations. Hence, given the state of the literature, when appropriate, research on international adoption were included in this review.

2.3.1 Mental Health and Behavioral Problems

Depression. Studies of children in Korean orphanages found adolescent girls to be more depressed than boys (Han & Lee, 2007). Ego-identity and reason for entering the orphanage were also found to be significant predictors of depression among adolescents in middle school (Yoo, Min & Kwon, 2001).

PTSD symptoms. No studies of adolescents in Korean orphanages measured PTSD symptoms in this population. Generally, trauma symptoms have not been widely examined in either research on orphanage care or international adoption. Orphanage related privation can be thought of as a form of neglect; furthermore, children may have experienced abuse or neglect prior to entering alternative care. The literature suggests that many international adoptees have experienced traumatic events and in some cases, there have been findings of PTSD symptoms (Churchill, 1984; Brodzinsky et al., 1992). As in other contexts, the prevalence of abuse prior to etnry and while in orphanage care are largely unknown or not measured.

Behavioral problems. Studies of children in Korean orphanages have found a greater risk for behavioral problems, more loneliness, and lower social competence compared to peers raised within intact biological families (R. Lee et al., 2010). Lee and colleagues (2010) compared behavioral outcomes of Korean-born children adopted into American families with children reared in orphanages in Korea (R. Lee et al., 2010). Overall, children who had been adopted internationally as infants had significantly less internalizing (e.g., depression, anxiety) and externalizing (delinquency, aggression) problems compared to most of the children in orphanages. In Juffer & IJzendoorn's (2005) meta-analysis of behavioral outcomes among adopted youth, however, international adoptees presented with more internalizing problems compared to non-adopted controls.

2.3.2 Academic Problems

There have been no studies to date exploring academic problems among adolescents (ages 13 and older) in Korean orphanages. The orphanage studies that have focused on academic outcomes included Korean youth between the ages of 8 and 12. One study found significant differences between youth in orphanages compared to those in families on school life satisfaction

(M. Park & Moon, 2009), while several other studies explored the role of different factors such as social support (H. Lee, Kim, & Kim, 2010; K. Park & Park, 2014) and peer relationships (An, Chol & Chung, 2016) on school adjustment among middle school aged youth in orphanages. One study found youth who were older had worse school adjustment than younger children (Yoo, Min & Kwon, 2001). Among internationally adopted children, global developmental delay is common, especially for those children who experienced orphanage care prior to adoption. Most notably, children adopted internationally have been found to have elevated verbal and cognitive deficits compared to non-adopted children, more academic difficulties, and elevated rates of socio-emotional and behavioral difficulties (see review by Welsh, Viana, Petrill & Mathias, 2007).

2.4 Risk and Protective Factors

Generally, child welfare facilities in Korea meet the basic health care and nutrition necessary to prevent global developmental failure (R. Lee et al., 2010). Adolescents in orphanages in Korea suffer mostly as a result of deprivation of long-term, stable relationships with consistent caregivers, psychological abandonment of their biological parents, and discrimination related to their orphan status (R. Lee et al., 2010). Research on adolescents in Korean orphanages has begun to identify several important risk and protective factors associated with mental health and academic achievement. As noted earlier, because of the emerging nature of research on adolescents in orphanage care in Korea, research on risk and protective factors associated with mental health, behavioral or academic problems were also drawn from studies of international adoption when relevant.

In this section, the literature on risk and protective factors associated with mental health, behavioral, and academic problems are organized by: (1) *individual factors*, which include

demographic (gender, current age), placement experiences (age entered current orphanage, reason for placement), and intrapersonal factors (insecure attachment style, birthparent loss appraisal and coping); (2) *interpersonal factors*, which include lifetime number of types of trauma, discrimination for living in an orphanage, and social support (perceived social support, caregiver school support, birthparent contact); and (3) *school factors* (school bullying, supportive learning climate).

2.4.1 Individual Factors

Gender. Three studies of adolescents in Korean orphanages found gender differences. Boys were found to have more problem behaviors (J. Lee & Han, 2006) and lower communication skills (J. Kim & Yoo, 2002) than girls; however, girls were found to be more depressed than boys (J. Han & Lee, 2007). Several cross sectional and longitudinal studies on international adoptees have also found differences in outcomes by gender with adopted boys more likely to have behavioral problems than girls (Sharma, McGue, & Genson, 1998; Fiegelman, 2000; Gunnar, van Dulmen & IAPT, 2007; Johnston, Swim, Saltzman, Deater-Deckard, & Petrill, 2007).

Current age. Studies of youth in Korean orphanages have found older age to be associated with worse school adjustment (Yoo, Min & Kwon, 2001) and maladaptive coping behavior (Lee & Han, 2006). A number of adoption studies also found as adoptees mature, psychosocial and behavioral problems may increase (Gunnar, van Dulman & IAPT, 2007; Hawk & McCall, 2011; McGuinness & Pallansch, 2007). For example, Gunnar and associates (2007) found that with each additional year in the adoptive home, children were more likely to score in the clinical range on internalizing and externalizing problems. The appearance of problem behaviors in adolescence may be related to the length of time a child spends in orphanage care.

Hawk and McCall (2011) suggested a possible "sleeper effect" for children adopted from Russian orphanages, with youth who spent more than 18 months in a facility manifesting the adverse effects of institutional care in adolescence.

Age enter current placement. One Korean study found children who entered the orphanage at older ages (after age 2) were better adjusted and had fewer behavior problems than children who had been placed in the orphanage as infants (R. Lee, et al., 2010). The researchers speculated that children who entered facilities at older ages (after age 2) might have benefited from at least some time with a primary caregiver within their family of origin, whereas children placed as infants into orphanage care had no such advantage. Children in their study who were placed in the orphanage prior to the age of two had the most externalizing and internalizing problems even after controlling for within-group variations in length of placement. On the other hand, another Korean study found duration in care to be associated with more problems, with adolescents who had been in facilities longer having more externalizing behavior problems (J. Lee & Han, 2006).

Adoption studies have found older age at adoption placement, and length of duration in alternative care, to be a risk factor for behavior problems (Sharma, et al., 1996; Gunnar, van Dulman & IAPT, 2007; Merz & McCall, 2010; Hawk & McCall, 2011). However, across studies the cut-off point for "older age at adoption" have been inconsistent. For instance, some studies have found marked differences between children adopted out of orphanages before the age of 6 months, whereas other studies have found marked differences for adopted children removed from orphanages before 18 months (Hawk & McCall, 2011), or by the age of 2 years (Gunnar, van Dulman & IAPT, 2007). To tease out the risk of psychosocial and behavioral problems associated with orphanage privation and age at adoption, Gunnar and colleagues (2007)

compared international adoptees that experienced orphanage privation to those with no exposure (i.e. cared in a foster family rather than an orphanage prior to adoption) or limited (less than 4 months) time in an orphanage. They found orphanage privation was associated mainly with attention, thought, and social problems, whereas older age at adoption was associated with externalizing and internalizing behavior problems across groups. The authors concluded that older age at adoption and thereby longer time in alternative care was the stronger risk factor than just orphanage privation.

Number of types of placements. No studies were found that measured the number of different types of placements youth in Korean orphanages experienced. Studies of children in the U.S. foster system, however, have established the detrimental effects of placement instability on emotional and behavioral problems, juvenile delinquency, and poorer adult outcomes (i.e. Newton, Litrownik, & Landsverk, 2000; Rubin, O'Reilly, Luan & Localio, 2007; Ryan & Testa, 2005).

Reason for placement. Two studies of children in Korean orphanages looked at the association between reason for orphanage placement and behavior problems. One study found a differential effect, with family marital problems (e.g. parental separation, divorce, remarriage) increasing the risk for internalizing problems only for children who had been placed in the facility before the age of two, but not for children who had been placed at older ages (R. Lee et al., 2010). Another study of adolescents in Korean orphanages measured the number of negative life events that occurred prior to a youth entering care, and found youth who experienced divorce and maltreatment within their biological families had more behavior problems (Jeong, 2002). In another study, reason for entering the orphanage was a significant predictor of depression (Yoo, Min & Kwon, 2001).

Insecure attachment style. Only one study of adolescents in orphanages in Korea examined the relationship between attachment style and psychosocial outcomes. Jeong's (2004) study of a national stratified random sample of 1,115 adolescents in orphanages found attachment style to be significantly associated with psychosocial problems (as measured by the Korean-Youth Self-Report). Youths with an insecure attachment style had the most problems. In their meta-analysis of studies that looked at attachment in adopted children, Van den Dries and colleagues (2009) found adoptees had higher rates of atypical and disorganized attachment compared to non-adopted peers; however, this varied by age of placement. Children adopted before 12 months of age had secure attachments similar to non-adopted comparisons, but those adopted after the age of 12 months had less attachment security.

Birthparent loss appraisal and coping. Cognitive appraisal of birthparent loss has not been explored among youth in Korean orphanages. However, one qualitative study of nine adolescents in orphanages in Korea (mean age 16.5) found that prior to adolescence most of the youth longed to meet or see their parents, but these feelings gave way to anger in early adolescence (Y. Lee, 2000). By late adolescence many no longer yearned for their parents, but still wanted to meet them at least once; however, they were reluctant to re-establish any relationship with them. In addition, many were reluctant to trust others because of their parent's abandonment and feared they may perpetuate the cycle of abandonment with their own children. Two studies examined the relationship between children's general stress coping behaviors and adjustment among middle school youth in orphanages (J. Lee & Han, 2006; J. Han & Lee, 2007). Both studies found active coping strategies were associated with social support seeking, and passive coping strategies were associated with aggressive behavior and more depression.

2.4.2 Interpersonal Factors

Lifetime traumatic events. One study of adolescents in Korean orphanages found on average youth experienced three adverse events; furthermore, these events were associated with depression and anxiety (Kang, Nho, Chun, & Chung, 2012). Another study of adolescents in orphanages measured the number of negative life events that occurred prior to a youth entering care, and found youth who experienced divorce and maltreatment within their biological families had more behavior problems (Jeong, 2002). No studies to date could be found that measured trauma symptoms among children in Korean orphanages. Experiences of traumatic events has not been extensively examined among international adoptees either. A few adoption studies have reported observed scars and burns on children, with estimates that 3 to 12 percent of international adoptee samples experienced some level of abuse (Hoksbergen & Van Dijkum, 2001).

Discrimination for being in alternative care. Discrimination associated with growing up in an orphanage has not been well documented in Korea; however, one study of adolescents in Turkey found negative attitudes toward youth because they lived in an orphanage were associated with higher total emotional and behavioral problems based on teacher-reports (Simsek, et al., 2007). Additionally, evidence suggests adults who grew up in institutionalized care in Korea face social barriers related to their "orphan" status that affect whom they can marry and opportunities for work.

Perceived social support. Three studies of youth in Korean orphanages measured social support, though findings have been mixed. One study found positive social support from school peers to be associated with better social adjustment (Nam, 2008); however, another study found social support from peers was not significantly associated with anxiety or depressive symptoms (Kang, Nho, Chun & Chung, 2012). Another study compared younger adolescents (aged 11 to

14) in Korean orphanages to those in biological families and found youth in orphanages had lower quality peer relationships (J. Kim & Yoo, 2002).

Orphanage caregiver support. Two Korean studies of adolescents in orphanage care measured aspects of the orphanage environment. These studies found youth's positive perception of caregiver monitoring and positive caring environment were associated with lower anxiety and depression (Kang, Nho, Chun & Chung, 2012) and better social adjustment (Nam, 2008). No studies have explored caregiver support specific to school achievement.

Birthparent contact. The role of contact with birth family members has not been extensively studied and findings from studies of children in Korean orphanages have been inconsistent. Two studies found contact was not associated with psychosocial adaptation (Jeong, 2002; R. Lee et al, 2010) while another found maintenance of contact with parents was associated with better social adjustment (Nam, 2008).

2.4.3 School Factors

School bullying. No studies were found that looked at school bullying among adolescents in Korean facilities. One study looked at school bullying among elementary school aged children who used child welfare facilities, including orphanages, group homes, and community child centers (J. Kim, Lee, Lee, Han, Min, Song et al., 2015). This study found rates of bullying by peers were higher compared to incidence rates in the general school population in Korea. Rates of peer bullying in their study were 22% for younger children (ages 6 to 9 years) and 12% for older children (ages 10 to 12). These rates were higher when compared to rates of 10% and 12% in other prevalence studies (Kwon, Park, Park, Yang, Chung, & Chung, 2012).

Supportive learning climate. The role of a supportive school learning climate has not been explored in studies of adolescents in orphanages in Korea. This is not surprising given that research on the relationship between school contexts and adolescent mental health in general have been under examined (Schocet, Dadds, Ham, & Montanue, 2006), despite the recognition of the importance of school environments on adolescent outcomes (for a review, see Whitlock, Wyman & Moore, 2014). Teachers may be particularly important in the context of Korea because of the influence of Confucian traditions which emphasize status hierarchies based on age and social position, with teachers being particularly respected (C. Park & Cho, 1995).

Chapter 3: Research Methods

This chapter begins with an overview of the research design of the current study, followed by a description of the community partner organizations, advisory committee and interviewers who were involved in the recruitment and collection of the data. Next, the data collection procedures are presented including research ethics, study sample, participant recruitment, survey refinement process, and survey measures. Finally, this chapter ends with a description of the data analysis approaches.

3.1 Overview of Research Design

This cross-sectional study involved qualitative data from one focus group with orphanage caregivers that was used to affirm the appropriateness of variables and interpretation of the quantitative data. This was followed with a quantitative survey involving face-to-face structured interviews with a convenience sample (*N*=170) of Korean adolescents (ages 11 to 18) drawn from 10 orphanages located in the Seoul Capital area and a southern province (Gyeongnam). A flowchart of the procedures for this study is presented in Figure 3.3.

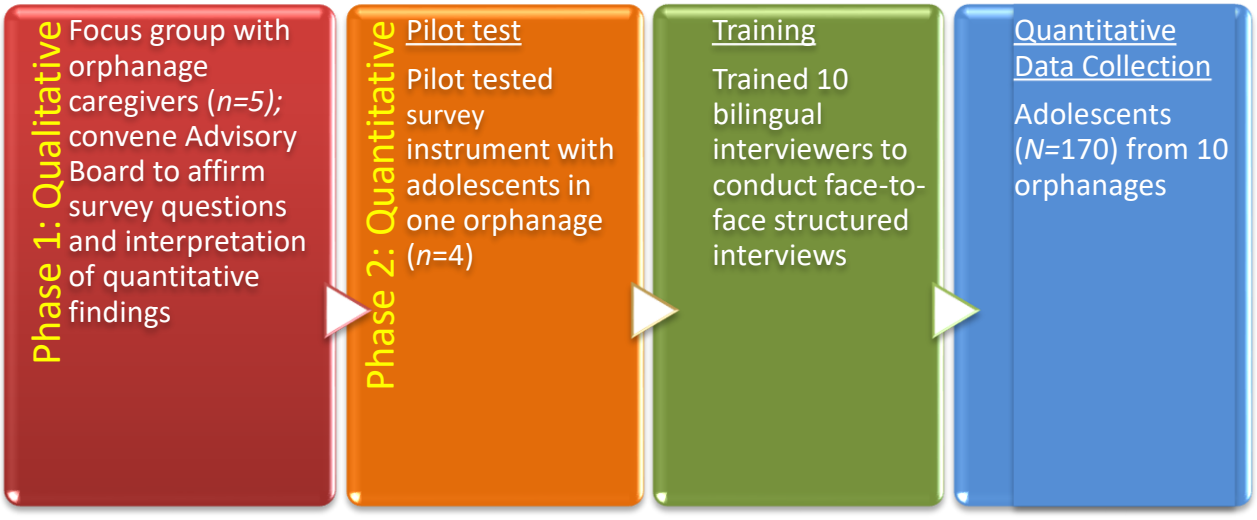


Figure 3.3 Summary Research Design and Study Procedures

Phase 1: Focus group with orphanage caregivers (March 2014)**:** During the first phase of the study, the principal investigator (PI) and bilingual master's level social work research assistant conducted a focus group with orphanage caregivers (*n*=5*)* from one facility. Data from the focus group were used to affirm the appropriateness of questions and concepts asked in the survey, and interpretation of the quantitative survey findings. The focus group explored orphanage caregivers' perceptions about the general problems and strengths adolescents in orphanages faced and factors they perceived contributed to adolescents' mental health, behavioral, and academic problems. The focus group also asked about caregivers' thoughts about birthparent loss and placement related discrimination because these concepts had not been previously studied among adolescents in Korean orphanages (see Appendix C Focus Group Interview Guide). Focus groups were conducted in the Korean language, audiotaped, and transcribed from the original language, and then translated into English for analysis by the PI. After the focus group was conducted and analyzed, the PI, research assistant, and collaborating partner organization members on the study advisory committee reviewed the questions to be included in the survey to determine cultural appropriateness, validity of measures, accuracy of translation, and finalization of procedures for the second phase of the study.

Phase 2: Survey of adolescents in orphanages (May 2014-January 2015)**:** The second phase of the study entailed a quantitative survey involving face-to-face structured interviews administered to a convenience sample (*N*=170) of Korean adolescents (ages 11 to 18) residing in 10 orphanages in the Seoul Capital area and one southern province. Data from the quantitative survey were used to describe the extent of mental health, behavioral, and academic problems among adolescents in orphanages, and to identify individual, interpersonal, and school factors that significantly contributed to those problems among these youths.

Prior to conducting interviews, the survey was refined by pilot testing it with four adolescents referred by community partner Jinhae Hope Children's Home. The following information was gathered from the pilot: clarity of language, comprehension of items, relevance of items to the population, order of questions, appropriateness of response categories, time to complete the survey, and any other problems with completing the survey. Pilot participants were asked to give detailed feedback on the appropriateness of the incentive ($10 gift card), format of the survey (interview or self-administered), and clarity of questions and response items. Two of the pilot test participants (one male, one female, aged 12-15) completed the paper survey independently, reading the questions, and filling responses without assistance. The other two participants (one male, one female, aged 16-18) completed the paper survey in an interview format, with the research assistant reading each question and writing down youths' responses. Pilot participants were not eligible to participate in the final survey and were compensated according to procedures outlined for the main study.

After finalizing the survey, interviews with adolescents were conducted from May 2014 to January 2015 (see Section 3.4.2 Quantitative Survey of Adolescents in Orphanages). Completed paper surveys were inputed into Microsoft Excel and imported into SAS 9.4 for analysis (see Section 3.7 Adolescent Survey Data Analysis Procedures).

3.2 Community Partner Organizations, Advisory Committee, and Interviewers

Two organizations were selected as community partner organizations based on the following criteria: (1) prior working relationship with the PI, (2) access to study participants, (3) expertise in child welfare and orphanage care, and (4) prior advocacy work. The Graduate School of Social Welfare at Hallym University (http://english.hallym.ac.kr/) provided technical support for the study, including use of their facilities for interviews, office space to securely store

data, referrals for survey interviewers, and data management. The second organization, Jinhae Hope Children's Home, an orphanage founded in 1945, assisted with pilot testing of the survey and recruitment of orphanage caregivers for the focus group. Both organizations wrote letters of support for grants that funded the study and referrals to orphanages to recruit adolescent participants for the quantitative survey. In addition, members from each organization participated on the study advisory committee. The study advisory committee consisted of two senior faculty from Hallym University, the director of Jinhae Hope Children's Home, PI, and research assistant. The committee was established to ensure the cultural appropriateness of survey items, refine subject inclusion/exclusion criteria, recruitment procedures, assist with the recruitment of adolescents for the quantitative survey, and dissemination of study findings.

Since the PI was not fluent in the Korean language, and because the focus group and surveys were conducted in Korean, a bilingual research assistant with a master's in social work was hired to coordinate study procedures, and 10 bilingual interviewers were hired and trained to conduct survey interviews. Study interviewers were referred by the research assistant and community partner, Hallym University. All interviewers (n=10, 9 females, 1 male) had college educations, were bilingual (English and Korean), had strong interpersonal skills, and were available to travel. Interviewers were provided a one-day training on standard research-related procedures and protocols for the study, including how to obtain consent and assent, confidentiality, administering the survey interview, ensuring data security, and confirming data quality. The research assistant and interviewers were paid market wages for data collection, and were paid for travel-related expenses and meals.

When possible, standardized measures that had previously been validated and translated into the Korean language were used. Four measures, birthparent loss appraisal, birthparent loss

coping scales, lifetime trauma types, and discrimination for being in an orphanage, had never been used in Korea. These scales were translated and then back-translated. First, two bilingual translators (the research assistant and one professor from Hallym University) translated the measures from English to Korean independently. Then a third translator (a different professor from Hallym University) compared the versions to identify discrepancies or ambiguous wording and then back-translated the new survey into the source language (i.e. English). The advisory committee then met to produce a final form of the two measures that was used in the survey.

3.3 Research Ethics

Data collection began only after final approvals were obtained from both Washington University in St. Louis and Hallym University Institutional Review Boards. Written consents and assents were obtained prior to the administration of the structured, face-to-face survey. As the children's legal guardians, written consents were obtained from the director of the orphanage. Written assents from adolescents were obtained by interviewers. Interviewers read the assent, clarified points on the form or questions, and obtained the youth's written assent before conducting interviews.

Completed paper surveys were transported in a locked suitcase and stored in a locked file cabinet at Hallym University. Signed assent and consent forms were also securely locked in a file cabinet that was separate from the completed surveys. All de-identified paper surveys were scanned digitally and stored on a secured, password-protected network at Washington University in St. Louis Brown School of Social Work. Data from the surveys were entered into a password-protected Microsoft Excel spreadsheet, imported into SAS 9.4, and stored on the same secured, password-protected network.

Strict care was taken to ensure that participants did not feel pressured to partake in the research study. Prior to administering the survey, interviewers informed the participant of their right to not partake in the study and their right to make inquiries or address complaints to the Research Ethics Board at Hallym University. In addition, participants were told all information was confidential and were informed on how confidentiality would be maintained. Participants were also informed of the potential risk of participating in the study including a possible breach of confidentiality, discomfort from recalling painful memories, or emotions elicited by the questions. If a participant appeared distressed during the interview, the interviewer was trained to stop the interview and tell the youth they did not have to continue. If the participant chose to continue the interview, but appeared to still be distressed, or if the participant indicated they felt they may harm themselves or others, then the interviewer was trained to stop the interview and get the principal investigator for assessment.

No interviews were terminated because of emotional distress; however, two interviews were assessed for potential harm. In one interview, the adolescent became emotionally distressed (i.e. tears) after recalling the recent death of his father. The interviewer paused the interview, recommended the youth take a break, and told the youth he did not have to continue. After leaving the interview room for a 20-minute break, the youth returned and expressed comfort with completing the interview. In another situation, a youth reported having suicidal thoughts. The interviewer completed the interview, but had the youth stay in the room. The interviewer then got the principal investigator who assessed the situation following the protocol for suicidal ideation. The youth was determined to not be actively suicidal and not a threat to himself or others. The youth reported he was receiving mental health services for his emotions, which was verified with the director of the orphanage by the principal investigator.

3.4 Study Sample, Recruitment, Data Collection & Analysis Procedures

3.4.1 Qualitative Focus Group with Orphanage Caregivers

Sampling strategy. Focus group participants were eligible if they were currently employed as an orphanage caregiver. A convenience sample of focus group participants were referred by community partner organization, Jinhae Hope Children's Home. Five orphanage caregivers participated in the survey.

Sample size. A general rule of thumb in focus group research is to conduct three to four focus groups per each type or category of individual; however, this is also determined by time and budget constraints of the study (Krueger & Casey, 2009). The ideal size of focus groups is five to eight participants, although "mini-focus groups" with four to six participants are increasingly popular (Krueger & Casey, 2009). Additionally, smaller focus groups are ideal particularly when participants have a lot of experience or expertise and passion about the topic, or the purpose of the focus group is to understand an experience or a complex topic (Krueger & Casey, 2009). For these reasons, including time and resource constraints of the study, one focus group with five orphanage caregivers was conducted.

Data collection procedures. The focus group was conducted in the Korean language and moderated by the PI and bilingual research assistant. The focus group was audio-recorded and facilitated in a private conference room at the orphanage. Coffee was provided to participants. Prior to the start of the focus group, participants were informed of their rights as research participants, and written informed consents were obtained.

Data analysis procedures. Audio transcript of the focus group was transcribed from the original Korean and then translated into English. A second translator verified the quality of the

translation by back translating the English transcripts while listening to the original audio tape in Korean. The PI and research assistant analyzed the focus group transcripts in English. Analysis followed a "key concepts" analytic framework, in which the key task was to "identify a limited number of important ideas, experiences, preferences that illuminate the study" (Krueger & Casey, 2009, p. 125).

First, the PI and research assistant independently read the transcripts from the focus group, identifying and recording emerging concepts. The PI met with the research assistant to discuss the list of concepts. From this discussion, the PI developed a preliminary codebook to define each concept. The PI then hand coded the focus group transcripts. In order to assess the consistency, frequency and extensiveness of concepts within the focus group (Krueger & Casey, 2009), a conceptual cluster matrix was generated (Miles & Huberman, 1994). The matrix contained quotations and text phrases organized by concepts (columns) and participants (rows). Reconfiguring the data in this way allowed the PI to evaluate the saliency of particular concepts among participants within the focus group.

3.4.2 Quantitative Survey of Adolescents in Orphanages

Sampling strategy. Adolescents were eligible to participate in the survey if they met the following criteria: (1) were between the age of 12 and 18 at the time of the interview, (2) had been in their current residence for a minimum of 12 months, (3) had written consent from the director of the orphanage, and (4) signed assent to take the survey. Participants were excluded if they had mental, cognitive, or physical impairments that prevented them from participating in the face-to-face interviews. A convenience sample of 170 Korean adolescents (ages 11 to 18) from 10 orphanages located in the Seoul Capital area and one southern province participated in the survey.

Community partner organizations contacted potential orphanages to participate in the study because of the general reluctance of facilities to participate in research. When an orphanage expressed interest in participating in the study, the partner organization gave the contact information to the PI, and the research assistant set up a meeting with the orphanage director. In the meeting, the PI and research assistant explained the purpose of the study, youth eligibility requirements, time commitment, compensation, recruitment, and consent procedures for the study. Additionally, during the meeting the PI and research assistant would discuss with directors their perceptions of the challenges and strengths of adolescents in their care, and factors they thought were significant to youth's mental health, behavior, and school outcomes. After consultation with the study advisory committee, directors were provided with two options for recruiting adolescents to the study. The first involved scheduling a one-hour information meeting with the PI where adolescents could learn about the study and volunteer to participate. The second option was for the director to distribute flyers about the study to orphanage caregivers to give to adolescents. Youths then told their caregivers if they were interested in participating in the study. All the orphanage directors chose the latter method because of the difficulty of coordinating youths' schedules for an informational meeting.

Figure 3.4 is a map of the orphanages whose adolescents participated in the study. Community partner organizations and the PI met with eleven orphanage directors, of whom ten

Figure 3.4 Map of the Number of Participating Orphanages by Location

consented to allow adolescents in their care to participate in the study. The average number of youth participants per orphanage was 17, with a range of 12 to 23 adolescents participating per orphanage (see Table 3.1). Seven of the orphanages were in the Seoul Capital Area (SCA), a region in the north-west of the country that includes three different administrative districts: the cities Seoul and Incheon, and the province of Gyeonggi-do. The SCA region contains 25.6

million people, accounting for over 48% of the entire population of Korea (Korea National Statistics Office, 2011).

Table 3.1 Number of Adolescents Who Participated per Orphanage (*N*=170)

Orphanage	Location	Number of participants
Facility 1	South Gyeongsang	23
Facility 2	Seoul Capital Area	17
Facility 3	Seoul Capital Area	21
Facility 4	Seoul Capital Area	20
Facility 5	South Gyeongsang	20
Facility 6	Seoul Capital Area	17
Facility 7	South Gyeongsang	12
Facility 8	Seoul Capital Area	15
Facility 9	Seoul Capital Area	12
Facility 10	Seoul Capital Area	13

The SCA region has the largest concentration of orphanages in the country: 32 facilities within the city of Seoul, the largest city in the country and the nation's capital; 9 in the city of Incheon, the second largest city in the country (Korean Ministry of Health and Welfare, 2011); and 27 in Gyeonggi-do province. Of the children in care in orphanages in the SCA region in 2011, 1,896 were adolescents (Korean Ministry of Health and Welfare, 2011). In this study, four orphanages were located within the Seoul capital, and three orphanages were within a two-hour train ride of the capital. Three orphanages were in the southeast region of the country, in South Gyeongsang province. These orphanages were located within the Unified Changwon City, which incorporates the cities of Masan, Changwon, and Jinhae.

Sample size. A power analysis was conducted to determine the sample size needed to detect effects in a multivariable regression model. Preliminary power analyses indicated that a minimum sample size of 156 participants would be necessary to show significance. Power was calculated for two-sided hypothesis tests with a significance level $\alpha = .05$. Not all variables

would be included in the multivariable models since some variables would not be significant at the bivariate level and controls may correlate resulting in problems with multicollinearity. It was anticipated that gender, age entered current orphanage, perceived social support, and negative appraisal of birthparent loss would be significant at the bivariate level based on previous studies on international adoptees and Korean adolescents in orphanages (Fiegelman, 2000; Gunnar, van Dulmen, & IAPT, 2007; J. Han & Lee, 2007; Hawk & McCall, 2010; 2011; Huh & Reid, 2000; Johnston, et al., 2007; Juffer & Van IJzendoorn, 2005; J. Lee & Han, 2006; Merz & McCall, 2010; Nam, 2008; Pearlmutter, et al., 2008; Rutter, Kreppner, & O'Connor, 2001; Sharma et al., 1998; 1996; Smith & Brodzinsky, 2002). The power calculation was done with software (Lenth, 2006-9) based on proposing a multivariable regression model with a maximum of 20 variables. The sample size required for an effect size (EF) of 0.3 and power of 0.8, was determined to be 156 individuals (Lerman, 1996; Lenth, 2001).

Data collection procedures. The research assistant scheduled with the director of the orphanage a day on the weekend to conduct interviews with adolescents. The PI, research assistant, and a minimum of 4 interviewers then traveled to the orphanage to conduct the face-to-face interviews with youth. Surveys were administered in private rooms in the orphanage and conducted in Korean. All consents and assents were administered prior to starting the interview (see Section 3.3. Research Ethics). Trained interviewers then administered the survey by reading each question and recording responses on the paper survey. Participants were provided with cards to assist with response options. The interviews lasted approximately one hour and participants were compensated with a $10 gift card. After each interview was completed, the PI reviewed the paper survey with the interviewer to ensure items were not missed and to confirm data quality.

3.5 Adolescent Survey Measures Refinement Procedures

When possible, standardized measures used in prior studies of adolescents in Korea were included in the survey. The survey was further refined based on findings from the focus group with orphanage caregivers and pilot test with four adolescents in one orphanage.

3.5.1 Focus Group with Orphanage Caregivers

Findings from the focus groups were used to affirm the relevance of survey concepts, especially birthparent loss and discrimination because of being in an orphanage, which had not been studied before among adolescents in Korean orphanages. Findings from the focus group affirmed that caregivers perceived youth in the orphanages had problems with academic achievement, felt complex emotions towards their birthparents, and experienced some discrimination in school. In addition, caregivers identified the growing number of children entering the orphanages because of abuse and neglect and society's perpetuation of negative stereotypes about orphanages and the children who live in them to also be problems.

Low school achievement. One problem the caregivers in the focus group identified among the youth in their care was studying for school. As one participant stated, "In Korea, those with high education, or those who study well, or have talents in various things, get to work in a great environment. Thus, when you study well, you are secured a good job and are able to live independently. But the kids here lack in that aspect. When you look at the kids individually, they are all smart, but as they live in a collectivistic environment, it's difficult to study." Others felt youths' emotions, such as thoughts about the future, and lacking an earlier foundation in good study habits, impeded their ability to study. As one noted, "It has to do with learning, such as being trained to study since they were youth, but they act emotionally. When they have to start studying all of a sudden, their concentration is low."

Emotions towards birthparents. Caregivers reported that 80 to 90% of youth in their care still had contact with their birthparents and longed to see them. One participant described, "Children look forward to holidays, birthdays, or any events in their individual birth family, rather than camps or field trips we plan together at this facility. They especially look forward to funeral services and rituals, since it's a big excuse to see their family." Caregivers also described how youths' feelings towards birthparents changed over time, from one of longing to "anger for feeling abandoned". As one participant explained, "In middle and high school, it's usually anger. In elementary school, longing. They miss their parents." Another described how visits with birthparents during adolescence can be tumultuous and may also impact youths' ability to concentrate on their school work:

> In elementary school, they visit their parents freely, but in high school, they expect to get financial support from their birthparents in exchange for not being raised by them. They often ask for materialistic support. When they actually go pay a visit [to their birthparents], they end up fighting due to differences in thoughts. The relationships worsen and [the youth] come back with such unstable emotions, they wander around instead of focusing at school.

Discrimination for being in an orphanage. Overall, caregivers reported youth did not experience discrimination at school because they lived in a facility, but caregivers also described how they actively contacted school teachers throughout the school year to mitigate discrimination. As one participant noted, "We meet twice a year for a meeting [with the school teachers] and talk about ways to limit discrimination or nurturing ideas. We don't want our kids to get discriminated or discriminate other kids." However, some perceived youth were more sensitive to their living situation. For example, one participant described the following:

> There are some children who disclose to everyone at school that they live at the orphanage. Most try writing the [orphanage] teacher's name at the facility on the parent name on school forms. So, we actually call the school teacher ahead of

> time and ask them to connect to our phone number when they have to contact the student's parents. The children don't get ostracized or shunted aside. However, they [youth] all have a type of victim mentality such as when someone annoys them, these children think, 'They say these things because I live in the facility.' When I look into the situation, it wasn't related to living at the facility. Because they feel disadvantaged, they also feel upset from time to time. Then we listen to what happened and try to comfort them. We encourage them to become powerful and develop skills. I wouldn't say that school violence doesn't exist but it's not easily exposed.

However, despite efforts to prevent discrimination at school, caregivers described subtle ways in which youths in orphanages had different experiences from those who remain in a family at school. One example was the need to obtain receipts for school fees. As one participant described, "For other regular families, they don't need any receipts. But for us, we need the receipts for any future inspection or to attach as evidence when submitting reports. Students get annoyed and sensitive when it comes to getting the receipts. Just because they live in the facility, they have to do another task of getting the receipt." Furthermore, another participant said when there was a conflict with another student, "This is where you see subtle difference between students from a regular family to those from a facility. You don't feel that in other situations. But when something specific happens, you feel this wall blocking the [school] homeroom teacher from the student."

Child abuse and neglect. Participants reported more children were entering orphanage care with histories of neglect, physical, or emotional abuse from their birth families. This was a major shift from previous decades when children entered facilities primarily because of poverty. Furthermore, some participants commented on the difficulty of returning children to their birthparents because of the lack of services for parents. As one participant explained:

> Those who come from abuse and neglect from the parents have parents who are not mentally well. Unfortunately, the government has no administrative or

> practical support or help to recover the relationships between the parents and children. For example, when children come in from abuse and neglect, we take responsibility for providing psychological treatment, but for the parents, there's only one social worker in charge of supporting them in the neighborhood. So, there's no support to really care for the parents. Then, even if we provide the best system for the children to recover, when they return to their birth family, the parents can't wholly take care of them.

Persistence of negative stereotypes. Finally, caregivers in the focus group discussed the challenge of doing their work because of ongoing stereotypes about orphanages and the children who reside in them. One participant described the problem as follows:

> There are older folks who lived through the Korean War. They don't know what facilities that provide child care services are. When I get frustrated, I say, 'the orphanage'. We only used the word orphanage in the past. Even though we are in the 21st century, the word orphanage is more familiar but brings negative connotations. I feel as though the older adults look down on the facilities because it is a community filled with children and they believe these children are 'lousy'…If these stereotypes were changed, I believe the foster care facilities, child care services, and social welfare organizations can get bigger.

Another caregiver revealed how difficult it was for them to counter society's negative stereotype of the orphanage. One person said, "When we are by ourselves, our satisfaction levels are high. But when we actually get out [into society], we try to hide that we come from the facility. So, when we went out for movies and take a photo together, we say we are from the [local] church instead of the facility. Then the children sense it. They are also embarrassed and say, 'let's take a photo when go back to church.'"

Summary. The purpose of the focus group was to affirm the appropriateness of concepts asked in the survey, and interpretation of the quantitative survey findings. The focus group explored orphanage caregivers' perceptions about the general problems and strengths adolescents in orphanages faced and factors they perceived contributed to adolescents' mental health, behavioral, and academic problems. The focus group also asked about caregivers' thoughts about

birthparent loss and placement related discrimination because these concepts had not been previously studied among adolescents in Korean orphanages. Findings from the focus group affirmed caregivers' perception that academic achievement was a problem among the youth in their care, and that birthparent loss and experiences of discrimination because of being in an orphanage were relevant concepts to be explored in the adolescent survey.

3.5.2 Pilot Test with Adolescents

Several decisions and changes were made based on the pilot with adolescents from one orphanage. First, participants reported that the face-to-face interview format was preferable to the self-administered survey. Participants said they appreciated being able to ask the interviewer clarifying questions when necessary; additionally, it resulted in fewer skipped questions and more accurate responses. Second, scales were dropped from the final survey due to length. Although self-administered surveys were completed within the one-hour targeted timeframe, the face-to-face interview format took over an hour to complete in the pilot. Therefore, four scales were dropped from the final survey because they were already incorporated in other scales (Child Manifest Anxiety Scale-Revised was similar to the YSR internalizing scale), or were determined to not be critical to the research questions (Dynamic Family Environment Scale, Future Orientation, and Health items). Third, cards with scale response items were created to assistant participants in answering questions. Finally, words were added to the Birthparent Appraisal Scale ("Which person is most like you, 1 or 2") to clarify item responses.

3.6 Adolescent Survey Measures and Variables

3.6.1 Summary of Survey Measures

Table 3.2 summarizes the measures utilized in this study. When possible, standardized

Table 3.2 Summary of Adolescent Survey Measures

Variable	**Measure**		
Dependent Variables	**Title**	**Range**	**Score Direction**
Depression Symptoms	Child Depression Inventory (CDI short form)	0-54	Higher, more depression symptoms
PTSD Symptoms	Child PTSD Symptom Scale (CPSS)	0-51	Higher, more PTSD symptoms
Internalizing Behavior Problems	Korean-Youth Self-Report (K-YSR)	0-62	Higher, more internal. behavior problems
Externalizing Behavior Problems	Korean-Youth Self-Report (K-YSR)	0-64	Higher, more external. behavior problems
School engagement	National Survey of Adolescents in Schools	0-27	Higher, more school engagement
School grades	National Survey of Adolescents in Schools	1-20	Higher, better school grades
Independent Variables			
Individual Factors	**Title**	**Range**	**Score Direction**
Demographics	Gender	0,1	0 = male; 1 = female
	Current age (years)	continuous	Higher, older age
Placement History	Age enter current placement (years)	continuous	Higher, older age
	Number of types of placements	continuous	Higher, more types of placement
	Reason for placement	0,1	0=parental inability/absence 1=parental marital problems
Insecure Attachment	Attachment Relationship Scale	1-4	Higher, more insecure attachment
Birthparent Loss Appraisal	Birthparent Loss Appraisal Scale (BLAS)	1-40	Higher, more negative affect & preoccupation w/birthparent loss
Avoidant Coping Style	Coping Scale for Children & Youth	17-68	Higher, more avoidant coping
Active Coping Style	Coping Scale for Children & Youth	12-48	Higher, more active coping
Interpersonal Factors	**Title**	**Range**	**Score Direction**
Lifetime # trauma types	UCLA PTSD Index	0-14	Higher, more trauma types
Discrimination b/c in orphanage (lifetime)	Non-standardized 8-item scale	8-40	Higher, more discrimination Multivariable model 0,1=Yes
Perceived social support	Multidimensional Scale of Perceived Social Support	15-90	Higher, more perceived social support
Caregiver school Support	School Success Profile (SSP)	4-12	Higher, more educational support
Birthparent Contact	Ever have contact since placed in care	0,1	0= no; 1 = yes
School Factors	**Title**	**Range**	**Score Direction**
School Bullying (victim)	National Survey of Adolescents in Schools	0-18	Higher, more school bullying Multivariable model 0,1=Yes
Supportive Learning Climate	National Survey of Adolescents in Schools	0-18	Higher, more supportive learning climate

measures that had been translated into Korean and demonstrated reliability and validity with adolescents in Korea were chosen. Measures were also chosen if they had been used in other studies of similar populations in other contexts. See Appendix B for the survey interview.

3.6.2 Description of Dependent Variables

Mental Health Problems

Child Depression Inventory Scale (CDI). The Child Depression Inventory (CDI; Kovacs, 1992) is a widely used 27-item self-report questionnaire that assesses depressive symptoms in children. Each item contains three statements regarding a particular depressive symptom (0 = *no depression*, 1 = *possible depression*, 2 = *depression*) that children respond to by choosing one statement per item that best describes their feelings over the past two weeks. This instrument's test– retest reliability, and internal consistency, as well as concurrent and criterion-related validity, have been established (Kovacs, 1985). Higher scores indicate more depressive symptoms. In the present study, the Korean version of the CDI (Cho & Lee, 1990) was used and treated as a continuous measure (summation of items 1-27). The Cronbach's α value of the CDI was 0.82 in the preset study. Published recommendations for clinical cutoffs among Korean adolescent samples suggest a sum score of 20 be used to screen for depressive symptoms, with sum scores of 15 indicating mild depressive symptoms and scores of 25 and above indicating severe depressive symptoms (Bang, Park & Kim, 2015).

Child PTSD Symptom Scale (CPSS). The Child PTSD Symptom Scale (CPSS; Foa, Johnson, Feeny, & Treadwell, 2001) has been widely used to assess PTSD symptom severity among school-aged children (e.g. Nevo & Manassis, 2011) and adolescents (e.g. Gilboa-Schechtman et al, 2010), in various ethnic and cultural backgrounds such as Nepal, Israel, and

Chile and been translated into Chinese, and Korean as well as other languages (Gillihan, Aderka, Conklin, Capaldi & Foa, 2013). The CPSS measures the frequency of 17 PTSD symptoms (*DSM-IV* criteria) using a 4-point Likert-type response scale (ranging from 0= *not at all*; 1= *once a week or less*; 2 = *two to four times a week*; 3 = *five or more times a week*). The scale also assesses functional impairment using seven yes/no responses. The CPSS can be used as a continuous measure of symptom severity (summation of items 1-17 with possible scores ranging from 0 to 51) with higher scores indicating more PTSD symptom severity. Items can also be scored dichotomously to provide a diagnostic status, with any symptom endorsement included as an affirmative response in this calculation. In this study, CPSS was treated as a continuous measure (summation of items 1-17), with higher scores indicating greater PTSD symptom severity. The CPSS has demonstrated good internal consistency (Foa et al, 2001; Nixon, Sterk & Pearce, 2012). Published evaluation of its psychometric properties on Korean populations could not be found. In the present study, internal consistency reliability Cronbach's α value was 0.91. Published recommendations for clinical cutoffs using this scoring method indicate scores above 11 are reflective of a likely PTSD diagnosis (Foa et al., 2001); however, clinical experiences suggest that a cutoff of 15 is more appropriate for determining diagnosis (International Society for Traumatic Stress Studies, n.d.). In a cross-cultural validity study of CPSS among adolescents in Nepal, however, authors suggested cutoff scores of 20 or above were indicative of need for intervention (Kohrt, Jordans, Tol, Luitel, Maharjan, & Upadhaya, 2011).

Behavior Problems

Internalizing and externalizing problems. Total internalizing and externalizing problems were measured using the Korean Youth Self Report (K-YSR) based on the Korean translation (Oh, Ha, Lee & Hong, 2001) of the 2001 YSR (Achenbach & Rescorla, 2001). Both

the YSR and the K-YSR have been demonstrated to have adequate psychometric properties (Achenbach, 1991; Oh, Hong & Lee, 1997). The K-YSR has been normed for gender and age specific Korean groups and has been widely used for clinical and research purposes (Oh, Hong, & Lee, 1997). The YSR inquires about problem behaviors in the past 6 months to the present. Adolescents were asked to indicate to what extent the listed behavior described them on a 3-point Likert scale (0 = *not true*, 1 = *somewhat or sometimes true*, 2 = *very true or often true*). The total Internalizing Problems score was treated as a continuous measure in the present study and calculated by summing the youths' response from the Anxious/Depressed (12 items), Withdrawn (8 items), and Somatization (10 items) subscales. The Cronbach's alpha for the total Internalizing Problems demonstrated adequate reliability (α= 0.86). The total Externalizing Problems score was also treated as a continuous measure in the current study and calculated by summing responses from the Rule-breaking behavior (14 items) and Aggressive behavior (17 items) subscales. The Cronbach's alpha for the total Externalizing Problems also demonstrated adequate reliability (α= 0.84). Higher scores on both scales indicate more internalizing and externalizing problems. For total Externalizing and Internalizing Problems scales, T-scores less than 60 are considered in the normal range, 60-63 represent borderline scores, and scores greater than 63 are in the clinical range.

Academic Problems

School grades. School grades were assessed based on questions from the National Survey of Korean Adolescents in Schools (Korea Institute for Health and Social Affairs KIHASA, 2012). Subjects used a 5-point Likert scale (1 = *bottom*; 2 = *below average*, 3 = *average*, 4 = *above average*, 5 = *top*) to assess their level of achievement across all subjects and in specific subject areas (Korean language, Math, and English). In the present study, school

grades were treated as a continuous measure. Responses to each of the 4 items (All subjects, Korean, Math, and English) were summed to create a total grade score, with higher scores indicating above average/ top scores. In the present study, Cronbach α was 0.79.

School engagement. School engagement was assessed based on the scale used in the National Survey of Korean Adolescents in Schools (Korean Institute for Health and Social Affairs [KIHASA], 2012). Subjects responded to 9 items regarding school engagement ("school is fun", "I follow my teacher's instructions") based on a 4-point Likert scale indicating the extent to which they agreed with each statement (0=*strongly disagree*, 1=*disagree*, 2=*agree*, 3=*strongly agree*). Three items were reverse coded. The scale was treated as a continuous measure in the present study, with the sum of responses indicating the extent of school engagement. Higher scores indicated more school engagement. In the present study, internal consistency reliability was adequate (α=0.75).

3.6.3 Description of Independent Variables

Individual Factors

Gender, current age. Gender was self-reported by youth and coded for analysis dichotomously (0=*male*, 1=*female*). Current age was calculated by subtracting the date of the interview from youth's reported birth date and treated as a continuous measure in the study.

Age enter current placement. The age when youth entered placement was assessed with the question, "How old were you when you started living at this facility?" The variable was treated as a continuous measure for analysis.

Number of types of placements. Adolescents were asked whether they had lived in their lifetime and responses were coded dichotomously (1 = *yes*, 0 = *no*) to 13 different types of settings (i.e. biological parents, relatives, friend's home, shelter, orphanage, foster family, correctional/juvenile facility) for at least 1 week in their lifetime. The total number of different types of placement settings a youth affirmed having lived was then summed to create a continuous measure, with higher scores indicating more number of types of placements.

Reason for placement. Participants were asked an open-ended question about the main reason they thought they left their birth parents to live in the orphanage. These responses were coded into 10 categories: unmarried, single mother, divorce, parental death, poverty, abuse/neglect, parental sickness, could not take care, trouble with parents and other. This variable was dichotomized for analysis such at that 1= *parental marital problems* (unmarried, single mom, parents divorced), and 0 = *parental absence/inability* (parent died, poverty, abuse/neglect, parents sick, could not take care, trouble with parents, other).

Insecure attachment style. To assess adolescents' attachment relationship style, the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) was used. The RQ is an adaption of the attachment measure developed by Hazan and Shaver (1987). The RQ is a single-item measure where subjects select one of four attachment styles (1=*secure*, 2=*fearful*, 3=*preoccupied*, and 4=*dismissing*) that best applies to them. For example, *secure attachment* is characterized by the following description: "It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me." The description of *dismissing or insecure attachment style* is, "I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others

depend on me." These ratings provide a profile of the individual's attachment style and behavior (Bartholomew & Horowitz, 1991). In this study, the Korean version used in a prior study of adolescents in Korean orphanages (Jeong, 2001) was utilized. The measure was treated as a limited ordinal variable with higher scores indicating more insecure attachment style.

Birthparent Loss Appraisal Scale. Appraisal of birthparent loss was assessed by self-report using the Birthparent Loss Appraisal Scale (BLAS, Smith, 1993; Smith & Brodzinsky, 1992). The BLAS is a 10-item questionnaire which follows the design of the Self-Perception Profile for Children (Harter, 1985). Each item describes two types of children. Participants must first choose which type of child is most like them. In this study, the word "adopted kid" was changed to "kids in facilities". Numbers were added to clarify the need to pick a type of child first, based on pilot testing feedback. For example, the first item asked, "Which kid is most like you, 1 or 2: 1-Some kids in facilities don't wish to know what their birth parents look like, but 2-other kids in facilities wish they knew what their birth parents look like." Youths decide which kind of child they resemble more, and then decide if that type of child is "*really true for me*" or "*sort of true for me*".

Item content reflects conditions and feelings which are hypothesized to relate to adopted children's sense of loss regarding their birthparents. Birthparent loss is operationalized as negative affect, reflecting negative emotions (sadness, upset, confusion) when thinking about being adopted/placed in an orphanage, and preoccupation (wondering about birthparents' appearance, reasons for being placed in alternative care, desire to know more about birthparents). Items are scored from 1 to 4, with higher scores reflecting more negative affect and preoccupation about birthparent loss. Five items were reverse scored. Averaging responses to individual items yields the overall score and was treated as a continuous measure in the present

study. This scale has not been used in Korea, and so it was translated and then back-translated for this study. The Cronbach's alpha in this study for this measure demonstrated adequate reliability (α= 0.76).

Birthparent loss coping. The Coping Scale for Children and Youth (CSCY; Brodzinsky, Elias, Steiger, Simon, Gill, & Hitt, 1992) was designed to measure coping styles in normal samples of children. This study used the modified version (Smith, 1993; Smith & Brodzinsky, 1992) which gives instructions and items to pertain specifically to coping with birthparent loss. The CSCY consists of 29 items, representing one of four coping strategies: cognitive-behavioral problem solving, assistance seeking, cognitive avoidance, and behavioral avoidance. Response are on a four-point Likert scale indicating the frequency with which they have used each strategy to deal with thoughts and feelings about birth parents (1= *never*, 2= *sometimes*, 3=*often*, 4= *very often*). This scale has not been used in Korea, and so it was translated and then back-translated for use in this study. The Cronbach's alpha indicated adequate reliability for the cognitive-behavioral problem solving (8 items, α= 0.82) and cognitive avoidance (11 items, α= 0.82) subscales, but were lower for behavioral avoidance (6 items, α= 0.65) and assistance seeking (4 items, α= 0.54) subscales in this sample. Potential problems with collinearity were found. Cognitive-behavioral problem solving and assistance seeking were highly correlated (r (166) =0.61, p <.0001), as were cognitive and behavioral avoidance (r (165) = 0.68, p <.0001) strategies. Since conceptually these subscales are related, two continuous total scales were created for analysis: *avoidant coping style* (17 items, α= 0.86), which included items from the two avoidant subscales; and *active coping style* (12 items, α= 0.84), which incorporated the cognitive-behavioral problem solving and assistance seeking subscales. Higher scores indicate more avoidant or active coping in response to birthparent loss.

Interpersonal Factors

Lifetime trauma types. To count the number of lifetime trauma experiences, Part I of the UCLA PTSD Reaction Index (Steinberg, Brymer, Decker, & Pynoos, 2004) was used. This scale includes exposure to community violence, natural disaster, medical trauma and abuse. These trauma experiences were coded as present (1= *yes*) or not present (0 = *no*) and summed for a total score and was treated as a continuous measure for analysis in the preset study. Higher scores indicated more trauma exposure. No Korean version of the UCLA PTSD Reaction Index was found so the English version was translated and then back-translated for this study.

Discrimination for being in an orphanage. This discrimination scale was adapted from a scale used to assess the frequency of discrimination related to being adopted (McGinnis, Smith, Howard, & Ryan, 2009). The scale asked, "Throughout your life, how often did you feel you were discriminated against by the following people because you lived in a facility?" followed by 8 items (childhood friends, parents of childhood friends, classmates, teachers, romantic partner, extended family, strangers, other). Participants rated the frequency (1= *never*, 2= *almost never*, 3= *fairly often*, 4=*very often*), they felt those individuals had been discriminatory. The Cronbach's alpha for this measure in the present study demonstrated adequate reliability (α= 0.83). Because of the high skew in the distribution, in the bivariate and multivariate analyses this variable was collapsed dichotomously and dummy coded (1=*yes*, 0=*never*) (see Section 4.2.2).

Perceived social support. To measure youth's perceived social support, the Multidimensional Scale of Perceived Social Support [MSPSS] (Zimet, Dahlem, Zimet, & Farley, 1988) was used. The MSPSS consists of 15 items that cover four dimensions of social support: family, friends, significant others, and community. Each item is rated on a 6-point Likert scale

from 1=*strongly disagree* to 5 = *very strongly agree*. In the present study, the variable was treated as a continuous measure using the total score, which was calculated by summing the 15 items. Higher scores indicated more perceived social support. In this study, the Korean version of MSPSS was used (Park, Nguyen, & Park, 2012). The Cronbach's alpha for this measure demonstrated adequate reliability (α= 0.79).

Caregiver school support. Measures of orphanage caregiver support were adapted from the parent support subscale in the School Success Profile [SSP] (Bowen & Richman, 1997). The parent school support scale contains 4 items (i.e. "Encouraged you to do well in school", "Helped you to get books or supplies you needed to do your school work", "Praised or rewarded you for working hard on school work.") to which participants respond on a 3-point Likert scale the frequency to which the statement had occurred in the past month (1= *never*, 2= *once or twice*, 3= *more than twice*). In the current study, the variable was treated as a continuous measure based on summing the 4 items, with higher scores indicting more support. Prior studies report Cronbach's alpha was 0.79 (Bowen, Wooley, Richman, & Bowen, 2001). In the present study, Cronbach alpha was 0.83.

Birthparent Contact. Birthparent contact was a single item with a dichotomous response (1= *yes*, 0= *no*) to the question, "Since being separated have you had contact with birth parents or biological family?"

<u>School Factors</u>

School bullying. School bullying victimization was assessed using the 6-item school bullying scale used in the National Survey of Korean Adolescents in Schools (KIHASA, 2012). Participants responded to the frequency with which each statement (i.e. "Other children teased or

taunted me", "Other kids have hit me with their hands and feet") that occurred in the past year based on a 4-point Likert scale (1= *never* to 4= *4 or more times*). Summation of the 6 items provides a total scale score. In the present study, the distribution of the variable was highly skewed. Therefore, the variable was dichotomized (1=*yes*, 0=*never bullied*) for the bivariate and multivariate analyses (see Section 4.2.2). The Cronbach's alpha for this measure demonstrated adequate reliability (α= 0.85).

Supportive school learning climate. School learning climate was assessed using the 6-item Learning Climate scale from the National Survey of Korean Adolescents in Schools (KIHASA, 2012). Scale items included statements about teachers' behavior (i.e. "Teachers in my school treat all students fairly", "Teachers scold students for making mistakes"), school safety, (i.e. "I feel safe at school."), and overall perception of the school climate, (i.e. "Overall, our school teachers and students are friendly and fair."). Responses indicate the extent to which they agree with each item (0= *strongly disagree*, 1= *disagree*, 2= *agree*, 3= *strongly agree*). In the present study, the six items in the scale were summed for a total scale score, with higher scores indicating a more supportive learning climate at school. The Cronbach's alpha for this measure demonstrated adequate reliability (α= 0.75).

3.7 Adolescent Survey Data Analysis Procedures

Data entry. Data from the paper surveys were entered into a Microsoft Excel spreadsheet, first by a master's level social work researcher in Korea and then by the PI. The spreadsheets were imported into SAS 9.4 to identify any discrepancies between the two datasets. Total scale scores were created in SAS for appropriate measures, followed by evaluation of the internal reliability of each scale. Non-standardized and created measures were analyzed for reliability and refined if necessary, with items dropped to improve alpha coefficients if needed.

The alpha coefficients for all measures were determined to be sufficient and no items were dropped from any of the measures used in this study.

Data cleaning. Data cleaning procedures were performed to examine the range of all variables and scales. If values fell outside the preset minimum and maximum range for the scale, SAS code was inspected for coding errors and corrected. Value labels were created for all variables and scales.

3.7.1 Data Analysis for Research Question 1: Significant Risk & Protective Factors

Summary. Preliminary analysis of the raw data (*N*=170) were conducted to evaluate problems with missing data and clustering effect at the level of the ten orphanages. Overall the number of missing data on key independent and dependent variables were low and clustering effect was determined to not likely be problematic, based on calculations of the intraclass correlations and design effect. Therefore, the raw data with list-wise deletion of missing data without controlling for clustering effects were run for the descriptive and bivariate analyses. For the multivariable analyses, a more conservative approach was taken to reduce missing data bias by utilizing multiple imputation (MI) for missing data using the Markov Chain Monte Carlo (MCMS) simulation method via PROC MI in SAS version 9.4 (Schafer, 1997; van Buuren, 2012; Rose & Fraser, 2008). Ten imputed datasets were generated using the MCMS procedure and then combined for analysis using PROC MIANALYZE to obtain a single parameter estimate and standard error for each multiple regression model (Rubin, 1987). A total of 12 regression models were conducted, two for each 6 dependent variables (depression, PTSD symptoms, externalizing behavior problems, internalizing behavior problems, school grades, school engagement): one without controlling for clustering and the other controlling for clustering effect using sandwich estimation technique via PROC SURVEYREG in SAS 9.4. The following

paragraphs describe in detail the procedures for the univariate and bivariate analyses. A description of the multivariable analyses follows, including missing data evaluation, clustering effect, and multiple regression models with multiple imputed datasets.

Univariate and Bivariate Analyses

First, univariate statistics on the raw data using list-wise deletion for missing data were conducted on all the variables. Descriptive statistics for categorical variables included frequencies and percentages, and for continuous variables measures of central tendency and dispersion (i.e. means, medians, modes, skewness) were examined. Investigation then proceeded to the bivariate analysis using the raw data and pair-wise deletion for missing data. Pearson correlations between continuous and dummy coded dichotomous independent and dependent variables were conducted for the bivariate analyses. Independent variables that were not significantly correlated with any dependent variables in the correlation were excluded from the multiple regression models.

Multivariable Analyses

Missing data. Missing data were examined and it was determined that the assumption of missing at random (MAR) was reasonable. Overall there were relatively few missing in the raw data for each measure. For the dependent variables, missing data were low, ranging from 0.0 % to 8.2% of participants (Table 3.3). More data were missing on independent variables, ranging

Table 3.3 Missing Data and Multiple Imputation of Dependent Variables

Variable	Missing Data: *N* (%)	Raw Dataset: % or Mean	Imputed Dataset: % or Mean
Depression symptoms	14 (8.2)	11.56	11.66
PTDS symptoms	4 (2.4)	5.99	5.93
Internalizing problems	0 (0.0)	11.29	11.29
Externalizing problems	0 (0.0)	9.99	9.99
School grades	2 (1.2)	9.67	9.69
School engagement	4 (2.4)	18.27	18.24

from 0.0% to 20.6 % (Table 3.4). The Birthparent Loss Appraisal measure had the most missing data and was further evaluated. Reasons for missing data included participant refusal because items were not relevant to their experience (i.e. knew what birth parents looked like), or response choices did not reflect their feelings towards birthparents, or youth did not have knowledge about

Table 3.4 Missing Data and Multiple Imputation of Independent Variables

Variable	Missing Data: *N* (%)	Raw Dataset: % or Mean	Imputed Dataset: % or Mean
Interpersonal Factors			
Gender (1=female)	0 (0.0)	55.0%	55.0%
Current Age	0 (0.0)	14.73	14.73
Age entered current facility	2 (1.2)	8.18	8.17
Insecure attachment style	2 (1.2)	1.83	1.83
Birthparent loss appraisal	18 (10.6)	22.34	22.17
Birthparent loss coping style			
Active coping	7 (4.2)	22.13	22.14
Avoidant coping	8 (4.7)	30.83	30.86
Interpersonal Factors			
Lifetime trauma types	3 (1.8)	2.69	2.69
Discrimination b/c in orphanage	11 (6.5)	9.33	9.35
Perceived social support	3 (1.8)	69.14	69.13
Caregiver school support	2 (1.2)	9.33	9.34
Birthparent contact (1=Yes)	1 (0.6)	0.79	0.79
School Factors			
School bullying	0 (0.0)	1.30	1.30
Supportive learning climate	1 (0.6)	12.75	12.74

an item. Since it was thought the nonresponses on the Birthparent Loss Appraisal scale may be conditioned on whether the youth had contact with birthparents (*1*=yes), a likelihood ratio chi-square test was conducted between birthparent contact and Birthparent Loss Appraisal responses (1=*responded*, 0=*missing*). Since no significant association was found, it was determined the assumption of missing not at random (MNAR), which would mean missingness data followed a pattern, was not likely; therefore, the assumption of missing at random (MAR) was reasonable (Allison, 2002; Schafer & Graham, 2002).

Clustering effect. It was assumed that there would not be much variation among orphanages since facility care in South Korea is standardized. However, because adolescents were drawn from 10 orphanages and the purpose of the study was to understand the extent of problems among youth in care, and not differences between orphanages, it was necessary to evaluate whether there was a significant clustering effect at the facility level. A significant clustering effect would mean the effective sample size (*n*/ design effect) was less, which would result in an increase in the Type I error rate.

Intraclass correlations (ICC) and design effects were calculated to assess whether there was a potential clustering effect at the orphanage level as shown in Table 3.5. The ICC were calculated using a null model via PROC MIXED in SAS 9.4 The null model estimates the variance explained by the potential clustering effect (reported as ICC0). The design effects were estimated using the ICC and the average cluster size (Kish, 1965). Analyses of the 6 dependent variables indicated the ICC (range = 0 to 0.05) was not significant and the design effects (range= 1.00 to 1.83) was relatively small. However, some authors have argued that a small ICC can still result in a meaningful design effect, with some arguing a design effect close to 2 being important (Hox, 2002; Hayes, 2006).

Table 3.5 Intraclass Correlations and Design Effects Calculations

Dependent Variable	Intraclass Correlation (ICC)	Design Effect
Depression symptoms	0.03	1.46
PTDS symptoms	0.05	1.83
Internalizing problems	0.03	1.46
Externalizing problems	0.00	1.00
School engagement	0.00	1.05
School grades	0.00	1.00

Since the ICC and design effects were small, controlling for any minor clustering effect was deemed unnecessary at the bivariate level, which at most would contribute to the correlation

significance tests being slightly biased downward. However, since the design effect results approached 2 in some instances (i.e. PTSD symptoms), the final multivariable models were run twice: first without taking clustering effect into account and a second time controlling for it. Results of the clustered and non-clustered regression models are reported in Appendix A. PROC SURVEYREG in SAS 9.4 was used to control for clustering effect because it provides robust standard errors that correct for the downward bias in standard errors when clustering is ignored, resulting in a reduced Type I error rate.

Multiple regression. More complex multivariable models were conducted to identify unique variables that were significant predictors of mental health, behavior, and academic problems among adolescents in Korean orphanages. All necessary diagnostic techniques to assess whether the assumptions for multiple regression were first met were conducted on the raw data using list-wise deletion for missing data. For the multivariable analyses, a more conservative approach was taken to reduce missing data bias. Prior to conducting the multiple regression analyses, multiple imputation (MI) for missing data using the Markov Chain Monte Carlo (MCMS) simulation method via PROC MI in SAS version 9.4 was conducted (Schafer, 1997; van Buuren, 2012; Rose & Fraser, 2008). This method reduces the possible increase in Type I error by inflating the standard errors to account for the uncertainty of the simulated values (Allison, 2000, 2002; Rubin, 1987). Ten imputed datasets were generated using the MCMS procedure and then combined for analysis using PROC MIANALYZE to obtain a single parameter estimate and standard error for each multiple regression model (Schafer, 1997; Rubin, 1987). A total of 12 regression models were conducted, two for each 6 dependent variables (depression, PTSD symptoms, externalizing behavior problems, internalizing behavior problems, school grades, school engagement): one without controlling for clustering and the other

controlling for clustering effect using sandwich estimation technique via PROC SURVEYREG in SAS 9.4.

3.7.2 Data Analysis for Research Question 2: Birthparent Loss, Coping & Problems

The second research question was exploratory because only one empirical study, on a sample of adopted children in the U.S., had been conducted that looked at the relationship between birthparent loss, coping, and outcomes (Smith & Brodzinsky, 2002). Based on Brodzinsky's Stress and Coping Model of Adoption Adjustment (Brodzinsky, 1990), this study explored the relationships between these variables among adolescents in Korean orphanages.

First, missing data was assessed. Overall there were relatively few missing in the raw data (ranging from 0% to 10%) for the variables included in the mediation models. Based on the analysis of missing data (see Section 3.7.1) the assumption of MAR was reasonable. List-wise deletion is relatively robust and will yield approximately unbiased estimates of regression coefficients; therefore, it is considered acceptable to use the raw data in analyses with less than 10% of missing data (Allison, 2002). Given the exploratory nature of this analysis and less than 10% missing data, it was determined the raw data using list-wise deletion of missing data was appropriate for the bivariate and mediation analyses.

Prior to conducting the mediation analyses, bivariate analysis was conducted to determine whether there were significant correlations among the predictor (birthparent loss appraisal), mediators (active coping and avoidant coping), and outcome variables (mental health, behavioral, academic problems). In order to explore whether coping style (avoidant versus active style) mediated the relationship between birthparent loss appraisal and mental health, behavioral, or school outcomes, steps established by Baron and Kenny (1986), followed by bootstrapping

technique to test the significance of the indirect effects as developed by Preacher and Hayes (2004). Simple mediation models using the Hayes (2013) PROCESS SAS macro were conducted for each of the two coping styles and the six dependent variables for a total of 12 models. The Hayes (2013) PROCESS SAS macro calculated the standard a, b, c and c' path coefficients, and used a bootstrap re-sampling methodology (set to 1,000 resamples) to enable a significance test of the indirect effect.

Chapter 4: Results

This chapter presents findings from the survey of adolescents in Korean orphanages (*N*=170). First, a description of the adolescents who participated in the study is presented (Section 4.1). Second, descriptive and univariate statistics of the dependent and independent variables, including the extent of mental health, behavioral, and academic problems are described (Section 4.2). Third, results from the multiple regression analyses addressing the first research question are shown. Research question one sought to identify which *individual factors* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss coping styles), *interpersonal factors* (lifetime types of traumas, discrimination because of being in an orphanage, perceived social support, orphanage caregiver school support, birthparent contact), and *school factors* (school bullying, supportive learning climate), are significant predictors of mental health, behavioral, and academic problems (Section 4.3). In the last section (4.4) of this chapter, results from the second research question that explored whether birthparent loss coping styles (avoidant coping or active coping), mediates the relationship between birthparent loss appraisal and mental health, behavioral, or academic problems (dependent variables) among adolescents in orphanages are presented.

4.1 Description of Adolescent Survey Sample

Characteristics of the youth who participated in the survey are summarized in Table 4.6. A total of 170 adolescents participated in the survey of whom 68% were boys and 32% were girls. The mean age of youth was 14.73 years (*SD*= 1.90) with slightly more than half between the ages of 13 and 15 years old. Nearly 60% of adolescents entered their current orphanage between the ages of 4 and 10; the mean age at entry being 8.18 years of age (*SD* = 4.12). Half of the youth reported having had two different types of placements (i.e. lived with birth parents and

lived in an orphanage), while 21% reported having 3 or more different types of placements (i.e. lived with birth parents, orphanage, birth relative, shelter). Sixty-seven percent (*n*=114) reported having lived in only orphanage, whereas 28.8% (*n*= 49) said they had lived in two orphanages; only seven youth reported living in three or more orphanages in their lifetime.

Table 4.6 Adolescent Survey Sample Characteristics

Characteristic	*N*	Percent
Gender *(female=1)*		
Female	55	32.0
Male	115	68.0
Current Age		
Ages 10-12	19	11.1
Ages 13-15	89	52.4
Ages 16-18	62	36.5
Age entered current placement		
Ages 3 and under	21	12.5
Ages 4-10	97	57.7
Ages 11-18	50	29.8
Number of types of placements		
1 placement	23	13.5
2 placements	86	50.6
3 placements	39	22.9
4 placements	18	10.6
5 placements	3	1.8
6 placements	1	0.6
Reason for Placement		
Marital problems	40	30.53
Parental absence or inability	91	69.5
Marital problems=1		
Divorced	21	15.6
Single mom / Not married	19	14.1
Parental absence or inability=0		
Parent could not take care	38	28.1
Poverty	37	27.4
Parent abused/ neglected	7	5.2
Parent sick	6	4.4
Other	4	3.0
Parent died	3	2.2
Birthparent contact (*yes=1*)		
Yes	133	78.7
No	36	21.3
Grade in School		
Middle School (grades 5-9)	103	60.9
High School (grades 10-12)	66	39.1
Type of High School		
Vocational high school	47	69.1
Regular high school	21	30.9

Note: Variations in sample size due to missing data.

As for the main reason for being placed in the orphanage, the top reasons were because their birthparents could not take care of them (28.1%), followed by poverty (27.4%), parental divorce (15.6%), and being a single mother (11.9%). Almost 80% of youth also reported they had contact with a birthparent since being separated and placed in alternative care. Sixty percent of youth were in middle school, which is equivalent to the U.S. school systems grades 5 to 9; 40% were attending high school, which is equivalent to the U.S. school system grades 10 through 12. Of those attending high school, 70% were in a vocational high school with the intent of preparing them for a technical skill, and 30% were attending a regular high school that would prepare them to attend a university.

4.2 Description of Dependent and Independent Variables

4.2.1 Dependent Variables: Mental Health, Behavior, and Academic Problems

The univariate statistics and distributions of the six dependent variables explored in this study are summarized in Table 4.7. Mental health problems included depressive symptoms (*M*=11.56, *SD*= 6.37) and PTSD symptoms (*M*= 5.99, *SD*=8.25). Depressive symptom scores ranged from zero to 31 and approximated a normal distribution. PTSD symptom scores ranged from zero to a maximum of 37 and were positively skewed (1.94); however, given the robustness of multiple regression to violations of normalcy, this variable was not transformed in the multiple regression analysis. Behavior problems were based on the Youth Self-Report total externalizing (*M*=11.29, *SD*=7.36) and internalizing (*M*=9.99, *SD*=8.46) subscales; both variables approximated normal distributions, with scores ranging from zero to a maximum of 37 and 40 respectively. Finally, academic problems included school engagement, with the average score being 18.27 (*SD* = 4.26) out of a possible maximum score of 26. The mean score on school

grades was 9.67 (*SD*= 3.78) out a maximum possible score of 20; both variables had distributions that approximated normalcy.

Table 4.7 Univariate Statistics of Dependent Variables

	N	Mean	SD	Median	Min	Max	Kurtosis	Skew
Mental Health Problems								
Depression symptoms	156	11.56	6.37	11.00	0.00	31.00	-0.07	0.57
PTSD symptoms	166	5.99	8.25	2.50	0.00	37.00	3.79	1.94
Behavior Problems								
Externalizing problems	170	11.29	7.36	10.00	0.00	37.00	0.85	0.85
Internalizing problems	170	9.99	8.46	7.50	0.00	40.00	1.04	1.21
Academic Problems								
School engagement	166	18.27	4.26	19.00	7.00	26.00	-0.43	-0.40
School grades	168	9.67	3.78	10.00	4.00	20.00	-0.34	0.40

Note: Variations in sample size due to missing data.

Extent of Mental Health Problems

Table 4.8 is a summary of the clinical severity of depression and PTSD symptoms among adolescents in the study. The majority of youth did not reach clinical thresholds for depression (71.1%) or PTSD symptoms (80.2%). However, 28.8% (*n*=45) of adolescents had mild to severe depressive symptoms of whom 12.1% (*n*=19) met the threshold for intervention (cut-off score 20; Bang, Park & Kim, 2015). Furthermore 19.9% (*n*=33*)* of adolescents met the clinical threshold for likely PTSD diagnosis (cut-off score 11; Foa, et al, 2001).

Table 4.8 Description of Clinical Thresholds for Mental Health Problems

Dependent Variables	N	Percent
Depression symptoms		
Non-clinical *(<15)*	111	71.1
Mild symptoms	26	16.7
Moderate symptoms	16	10.3
Severe symptoms	3	1.9
PTSD Symptoms		
Non-clinical *(<11)*	133	80.2
Mild symptoms	12	7.2
Moderate symptoms	8	4.8
Severe symptoms	13	7.8

Note: Variations in sample size due to missing data.

Extent of Behavior Problems

The clinical thresholds for total internalizing and externalizing behavior problems among adolescents in the study are shown in Table 4.9. The majority of adolescents did not reach clinical thresholds for total internalizing problems (84.7%) or externalizing problems (78.2%); however, 15.3% (*n*=26) of youth were in the borderline to clinical range for internalizing problems and 21.8% (*n*=37) met borderline to clinical thresholds for externalizing problems.

Table 4.9 Description of Clinical Thresholds for Behavioral Problems

Dependent Variables	N	Frequency (%)
Internalizing Problems		
Non-clinical *(T-scores <60)*	144	84.7
Borderline *(T-scores 60-63)*	11	6.5
Clinical *(T-scores >63)*	15	8.8
Externalizing Problems		
Non-clinical *(T-scores <60)*	133	78.2
Borderline *(T-scores 60-63)*	18	10.6
Clinical *(T-scores >63)*	19	11.2

Note: Variations in sample size due to missing data.

Extent of Academic Problems

The average scores on school engagement and school grades were reported in Table 4.7. A summary of the frequencies of youths' self-reported grades by subject areas are presented in Table 4.10. Youth were evenly split on their grades across All Subjects and in Korean, with approximately half reporting grades were average and above, and half reporting grades were below average and lower in these areas. In contrast, the majority of youth reported their grades were below average/bottom in Math (68.6%) and English (63.3%).

Table 4.10 Description of School Grades

School grades *(missing=1)*	All Subjects *n* (%)	Korean *n* (%)	Math *n* (%)	English *n* (%)
Bottom	41 (24.26)	29 (17.16)	72 (42.60)	64 (37.87)
Below average	44 (26.04)	39 (23.08)	44 (26.04)	43 (25.44)
Average	47 (27.81)	41 (24.26)	25 (14.79)	34 (20.12)
Above average	31 (18.34)	44 (26.04)	21 (12.43)	21 (12.43)

Note: Variations in sample size due to missing data.

4.2.2 Independent Variables: Individual, Interpersonal, and School Factors

Individual Risk and Protective Factors

Univariate statistics of individual factors that were continuous variables are summarized in Table 4.11. Demographic and placement factors (gender, current age, age entered current placement, number of types of placements, reason for placement) were described previously with the adolescent sample (Section 4.1). The mean score on the insecure attachment style was 1.83 (*SD*=1.08), with scores ranging from 1 to 4. The distribution approximated normalcy. Fifty-eight percent of youth (*n*= 98) had secure attachment styles. Of the insecure attachment styles, 24% (*n*=40) had a preoccupied style of attachment, and equal numbers had dismissing (9%, *n*=15) and fearful (9%, *n*=15) attachment styles. Birthparent loss appraisal (*M* =22.34, *SD* = 5.82), avoidant coping style (*M*=30.62, *SD* = 8.78), and active coping style (*M*=30.62, *SD* = 8.78) all had approximately normal distributions.

Table 4.11 Univariate Statistics of Individual Risk and Protective Factors

	N	Mean	SD	Median	Min	Max	Kurtosis	Skew
Current age	170	14.73	1.90	15.00	10.00	19.00	-0.65	-0.16
Age entered current placement	168	8.18	4.12	8.00	0.00	18.00	-0.61	0.31
Total # types of placements	170	2.38	0.95	2.00	1.00	6.00	0.93	0.85
Insecure attachment style	168	1.83	1.08	1.00	1.00	4.00	-0.96	0.78
Birthparent loss appraisal	152	22.34	5.82	22.00	11.00	40.00	0.13	0.47
Avoidant coping style	165	30.62	8.78	29.00	17.00	65.00	1.02	0.86
Active coping style	166	22.08	6.56	21.00	12.00	42.00	0.33	0.61

Note: Variations in sample size due to missing data.

Frequencies of responses to items in the Birthparent Loss Appraisal scale indicated most youth had thoughts and curiosity about their birthparents. Sixty percent of youth wished they knew what their birthparents looked like, 53% wished they knew more about their birthparents, and 50% wondered why their birthparents placed them in the orphanage. Fifty-four percent said they did not care what their birthparents were like and 53% reported they hardly ever thought

about their birthparents. Most of the adolescents did not express negative emotions toward birthparents or for being placed in an orphanage. Seventy-seven percent said they could still be happy if they never met their birthparents and 70% felt okay when they thought about their birthparents (were not sad or upset). In terms of placement, 73% did not feel angry when they thought about being placed in an orphanage and 65% did not feel upset when they thought about being placed in an orphanage.

Interpersonal Risk and Protective Factors

Univariate statistics of interpersonal factors were evaluated and shown in Table 4.12. The distributions of lifetime number of trauma types (M = 2.69, SD= 2.21), perceived social support (M = 69.14, SD= 10.31), and caregiver school support (M = 9.33, SD= 2.37) were close to normal. Discrimination because of being in an orphanage (M = 2.69, SD= 2.21) had a high positive skew (4.58) and was further analyzed to determine whether there were problematic outliers that would over influence the regression line (Fox, 1991). Cook's D was calculated using the conventional cut-off point of 4/n (Bollen & Jackman, 1990) and it was determined to be problematic. Because the majority of youths responded they had never experienced discrimination, the variable was collapsed dichotomously and dummy coded. If youth responded "never" it was coded zero for "no" (62.9%, n= 100), and if they endorsed any of the items in the scale it was coded one for "yes" (37.1%, n=59) in the bivariate and multivariable analyses.

Table 4.12 Univariate Statistics of Interpersonal Risk and Protective Factors

	N	Mean	SD	Median	Min	Max	Kurtosis	Skew
Lifetime # of trauma types	167	2.69	2.21	3.00	0.00	9.00	-0.13	0.64
Discrimination b/c in orphanage	159	9.33	3.07	8.00	8.00	32.00	26.93	4.58
Perceived social support	167	69.14	10.31	71.00	39.00	87.00	-0.30	-0.46
Caregiver school support	168	9.33	2.37	10.00	4.00	12.00	-0.52	-0.62

Note: Variations in sample size due to missing data.

The frequencies of the types of lifetimes traumatic events youth experienced are summarized in Table 4.13. Nearly half (47.1%) reported experiencing someone close to them being seriously sick, followed by someone close to them being ill or hurt (43.5%), someone close to them dying (29.4%), being separated from their parents (27.7%), being hit or punched (25.3%) or seeing a family member get hit (24.7%) at home. Eight youth (4.7%) reported they had been sexually abused. No youth endorsed any traumatic events in their neighborhoods, such as being attacked or witnessing an attack in their neighborhood.

Table 4.13 Description of Lifetime Types of Traumas

Types of Traumas	N	Yes *n* (%)
Someone close sick	170	80 (47.1)
Seriously ill/hurt	170	74 (43.5)
Someone close died	170	50 (29.4)
Separated parent	170	47 (27.7)
Hit, punched at home	170	43 (25.3)
Seen family hit home	170	42 (24.7)
Attacked by animal	169	34 (20.0)
Disaster (fire, flood etc.)	169	19 (11.2)
Other experiences	169	12 (7.1)
Sexual abuse	170	8 (4.7)
War	170	1 (0.6)
Attacked in neighborhood	170	0 (0.0)
Seen attack in neighborhood	170	0 (0.0)

Note: Variations in sample size due to missing data.
Types of trauma categories are not mutually exclusive.

School Risk and Protective Factors

In Table 4.14, the univariate statistics of school factors are presented. School bullying was relatively low, with a mean score of 1.30 (*SD* = 2.55) out of a possible range of 0 to17. School bullying had a high positive skew (3.53) and was further analyzed to determine whether there were problematic outliers that would over influence the regression line (Fox, 1991). Cook's D was calculated and it was determined that this variable was problematic. Because almost 60% of adolescents responded they had never experienced being the victim of school bullying in the

past year, the variable was collapsed dichotomously and dummy-coded. If a response was "never" it was coded zero for "no" (59.4%, *n*=101) and if any item was endorsed it was coded one for "yes" (40.6%, *n*=69). In terms of the school context, the mean score on the supportive learning climate was 12.75 (*SD*=3.16) out a possible range of 0 to 18.

Table 4.14 Univariate Statistics of School Risk and Protective Factors

	N	Mean	SD	Median	Min	Max	Kurtosis	Skew
School bullying	170	1.30	2.55	0.00	0.00	17.00	16.02	3.53
Supportive learning climate	169	12.75	3.16	13.00	2.00	18.00	0.33	-0.58

Note: Variations in sample size due to missing data.

4.3.3 Summary

A review of the univariate statistics indicated the six dependent variables and most of the independent variables had distributions that approximated normalcy. Two independent variables (discrimination because of being in an orphanage and school bullying) had distributions with high positive skews. Therefore, these variables were dichotomized and dummy coded for the bivariate and multiple regression analyses, with *one* indicating the presence of the construct and *zero* indicating its absence.

Most adolescents in the present study did not reach clinical thresholds for depression, PTSD symptoms, externalizing or internalizing behavior problems. However, there was a portion ranging between 15.3% to 28.8% of the sample who did meet borderline to clinical thresholds for these problems and needed intervention. With regards to school problems, adolescents' self-reported school grades were generally split, with half indicating grades that were average or above, and the other indicating below-average grades in All subjects and in Korean; however, the majority of students reported below-average grades in Math and English. Generally, youth

reported a moderate level of school engagement, with the average score being 18.27 (*SD*=4.26) out of a possible score range between 0 to 27 on the scale.

Descriptive statistics of risk and protective factors indicated a few important findings. First, slightly more than half of youth (58%) reported having secure attachment styles. Second, in terms of lifetime types of traumas experienced, nearly half had experienced someone close to them being sick, hurt, or dying; while a little over a quarter had experienced familial traumas such as being separated from their parents, being hit or punched, or witnessing someone being hit or punched, in their home. Thirty-seven percent reported experiencing discrimination because of being in an orphanage in their lifetime. Additionally, approximately 40% said they had been victims of school bullying in the past year.

4.3 Research Question 1: Significant Risk and Protective Factors

This section focuses on results of the multiple regression analyses which sought to identify what *individual factors* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss coping style), *interpersonal factors* (lifetime types of traumas, discrimination because of being in an orphanage, perceived social support, orphanage caregiver school support, birthparent contact), and *school factors* (school bullying, supportive learning climate) were significant predictors of mental health, behavioral, and academic problems. Findings from the bivariate analyses, which used the raw data and list-wise deletion of missing data, are first presented. Then results from the multiple regression analyses using multiple imputation of missing data are shown. Independent and dependent variables were coded such that higher values represent more of the variable construct in both the bivariate and multiple regression analyses. Dichotomous variables included gender (1=*female*, 0=*male*), reason for placement (1= *parental marital problems*, 0=*parental absence/inability*), birthparent contact

(1=*yes*, 0=*no*), discrimination because of being in an orphanage (1=*yes*, 0=*never*), and school bullying (1=*yes*, 0=*never*). All dichotomous variables were dummy-coded for the bivariate and multivariable analyses.

4.3.1 Bivariate Analyses: Associations between Independent and Dependent Variables

Individual Risk and Protective Factors

A summary of the Pearson's correlations between individual risk and protective factors and dependent variables are presented in Table 4.15. It was hypothesized that girls would have more depressive and internalizing behavior problems than boys (Hypothesis 1). At the bivariate level, there was a statistically significant correlation with girls having more internalizing behavior problems (r (170) = 0.25, p<.001) than boys, but not depression symptoms. Youth who entered the current orphanage at younger ages were also hypothesized to have more mental

Table 4.15 Pearson Correlations between Individual Factors and Dependent Variables

Independent Variables	Depress. Symp.	PTSD Symp.	External. Prob.	Internal. Prob.	School Engage.	School Grades
Individual Factors						
Gender (*female=1*)	0.06	0.14	-0.03	0.25***	0.10	-0.06
Current age	0.03	-0.09	-0.00	0.13	-0.12	-0.13
Age enter current placement	0.00	0.12	-0.04	0.02	0.12	0.18*
Number of types of placements	0.05	0.22**	0.12	0.16 *	-0.00	0.06
Reason for placement (*marital problems=1*)	-0.18 *	-0.02	-0.01	-0.09	0.05	0.00
Insecure attachment style	0.35***	0.28 ***	0.17 *	0.34***	-0.30***	0.01
Birthparent loss appraisal	0.14	0.21 **	0.11	0.19 *	0.07	0.05
Avoidant coping style	0.09	0.28***	0.28***	0.27***	-0.10	0.01
Active coping style	-0.21**	0.05	0.02	-0.09	0.22**	0.21**

Note: * p < .05, **p < .01, *** p < .001; Sample size for bivariate correlations ranged from 142 to 170.

health, behavioral, and academic problems than youth who entered care at older ages (Hypothesis 2). In the bivariate correlation, older age when entering care was significantly associated with better school grades (r (166) = 0.18, p <.05). It was also hypothesized that youth with more insecure attachment styles would have more mental health, behavioral, and academic

problems (Hypothesis 3). In the bivariate analysis, a more insecure attachment style was significantly associated with all the dependent variables except for school grades. An attachment style that was more insecure was associated more depressive symptoms (r (154) = 0.35, p <.001), PTSD symptoms (r (164) = 0.28, p <.001), externalizing behavior problems (r (168) = 0.17, p <.05), internalizing behavior problems (r (168) = 0.34, p <.001), and lower school engagement (r (165) = - 0.30, p <.001).

There were no hypotheses for the other individual risk and protective factors. More negative affect and preoccupation with birthparent loss appraisal had a significant correlation with more PTSD symptoms (r (149) = 0.21, p <.01) and more internalizing behavior problems (r (152) = 0.19, p <.05); however, it was not significantly associated with any other dependent variables. Finally, more use of avoidant coping style in response to birthparent loss was significantly associated with more PTSD symptoms (r (161) = 0.28, p <.001), externalizing (r (165) = 0.28, p<.001), and internalizing (r (165) = 0.27, p <.001) behavior problems. More use of active coping style was significantly associated with less depressive symptoms (r (153) = - 0.21, p<.01), more school engagement (r (162) = 0.22, p<.01), and better school grades (r (164)= 0.21, p <.01). Current age was not correlated with any of the dependent variables and was dropped from the multiple regression models; all other individual factors were retained.

Interpersonal Risk and Protective Factors

Table 4.16 shows the Pearson correlations between interpersonal risk and protective factors and the dependent variables. Two variables, low perceived social support and having no birthparent contact, were hypothesized to be associated with more mental health, behavioral, and academic problems (Hypotheses 4 and 5). At the bivariate level, more perceived social support was found to be significantly associated with all the dependent variables as hypothesized. More

perceived social support was significantly associated with less depression (*r* (153) = - 0.57, *p*<.001), PTSD symptoms (*r* (163) = - 0.26, *p*<.001), externalizing (*r* (167) = - 0.26, *p*<.001), and internalizing problems (*r* (167) = - 0.49, p <.001), as well as more school engagement (*r* (165) = 0.44, *p*<.001) and better school grades (*r* (165) = 0.27, *p*<.001). A significant association was found among youth who had contact with birthparents and lower depression symptoms (*r*(155) = - 0.19, *p* <.05), than those who did not have contact.

Table 4.16 Pearson Correlations between Interpersonal Factors and Dependent Variables

Independent Variables	Depress. Symp.	PTSD Symp.	External. Prob.	Internal. Prob.	School Engage.	School Grades
Interpersonal Factors						
Lifetime # of trauma types	0.14	0.48***	0.36***	0.33***	-0.11	0.09
Discrimination *(yes=1)*	0.30***	0.24**	0.31***	0.40***	-0.16*	0.13
Perceived social support	-0.57 ***	-0.26***	-0.26***	-0.49***	0.44***	0.27***
Caregiver school support	-0.19*	-0.16*	-0.08	-0.31***	0.19 *	0.05
Birthparent contact (*yes=1*)	-0.19 *	-0.07	-0.07	-0.05	0.05	-0.05

Note: * *p* < .05, ***p* < .01, *** *p* < .001; Sample size for bivariate correlations ranged from 153 to 169.

No other interpersonal factors had hypothesized relationships with outcomes. More orphanage caregiver school support was significantly correlated with less depression symptoms (*r* (155) = - 0.19, *p* <.05), PTSD symptoms (*r* (164) = - 0.16, <.05), and internalizing problems (*r* (168) = - 0.31, *p* <.001), and more school engagement (*r* (164) = 0.19, *p* <.05). More lifetime trauma types were significantly correlated with more PTSD symptoms (*r* (163) = 0.48, *p* <.001), and more externalizing (*r* (167) = 0.36, *p* <.001) and internalizing problems (*r* (167) = 0.33, *p* <.001). Lifetime experiences of discrimination because of being in an orphanage was found to be significantly associated with all dependent variables except for school grades. More experiences of discrimination were associated with more depression (*r* (145) = 0.30, *p*<.001) and PTSD symptoms (*r* (155) = 0.24, *p*<.01), more externalizing (*r* (159) = 0.31, *p*<.001) and internalizing (*r* (159) = 0.40, *p*<.001) behavior problems, and lower school engagement (*r* (155)

= -0.16, p <.05). All interpersonal risk and protective factors were retained in the multiple regression models.

School Risk and Protective Factors

Results of the Pearson correlations between school risk and protective factors and dependent variables are summarized in Table 4.17. School bullying was significantly associated with all mental health and behavioral problem variables, but not with school engagement or school grades. More school bullying in the past year were significantly associated with more depression (r (156) = 0.17, p<.05) and PTSD symptoms (r (166) = 0.24, p<.01), and more externalizing (r (170) = 0.27, p<.001) and internalizing (r (170) = 0.27, p<.001) behavior problems. A more supportive learning climate at school was significantly associated with less depression (r (155) = -0.40, p<.001), PTSD symptoms (r (165) = -0.42, p<.001), externalizing (r(169) = -0.36, p<.001), and internalizing (r (169) = -0.39, p<.001) behavior problems. It also was associated with more school engagement (r (165) = 0.47, p<.001). All school risk and protective factors were retained in the final multiple regression models.

Table 4.17 Pearson Correlations between School Factors and Dependent Variables

Independent Variables	Depress. Symp.	PTSD Symp.	External. Prob.	Internal. Prob.	School Engage.	School Grades
School Factors						
School bullying (*yes=1)*	0.17*	0.24**	0.27***	0.27***	-0.02	0.07
Supportive learning climate	-0.40 ***	-0.42***	-0.36***	-0.39***	0.47***	0.10

Note: * p < .05, **p < .01, *** p < .001; Sample size for bivariate correlations ranged from 155 to 170.

4.3.2 Multivariable Analyses: Predictors of Mental Health, Behavior, & School Problems

To determine the *individual* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss coping styles), *interpersonal* (demographics, placement experiences, insecure attachment style, birthparent loss appraisal, birthparent loss

coping styles), and *school* factors (school bullying, supportive learning climate) that may significantly account for mental health, behavior, and academic problems, multivariable analyses were performed. Independent variables that were significantly associated with outcomes at the bivariate level were retained. Because current age was not associated with any of the outcomes, which could have been due to low variation, it was the only variable to be excluded from the final multiple regression models.

Furthermore, regression diagnostics on the raw data were run to check for the assumption of linearity between independent and dependent variables, homoscedasticity, and normal distribution of residuals; all were not found to be problematic. Multicollinearity between independent variables were also evaluated by examining for variance inflation factors (VIF) above 2.0, and was also determined not to be a problem.

For each of the six dependent variables, the same set of independent variables were included in each multivariable regression model to explore how individual, interpersonal, and school factors may vary depending on different problems. In addition, for each dependent variable two multiple regression models using multiple imputation of missing data were executed, one without controlling for clustering effects at the orphanage level and one controlling for clustering. There was not much differences in the clustered and non-clustered models (see Appendix A for comparison between the clustered and non-clustered models). Furthermore, because the intraclass correlations were not significant and design effect calculations were below two (see Chapter 3, Table 3.5), it was determined that the cluster effect was minimal and for parsimony the results of the non-clustered multiple regression analyses are reported. Additionally, there were no *R*-square for the pooled imputed datasets, therefore the minimum and maximum model *R*-square from the 10 imputed datasets were reported.

Significant Predictors of Mental Health Problems

Results of the multiple regression analyses indicated the models for depression and PTSD symptoms were both statistically significant (p<.0001). As shown in Table 4.18, significant predictors of depression symptoms were insecure attachment style (b =0.97, p <.05), birthparent loss appraisal (b =0.15, p<.05), perceived social support (b =-0.24, p <.001), and a supportive

Table 4.18 Multiple Regression: Predictors of Depression

Independent Variables	b[a]	SE of b	t
Intercept	31.04	4.23	7.33***
Individual Factors			
Gender *(female=1)*	0.60	0.93	0.65
Age enter current placement	0.05	0.11	0.44
Number of types of placements	-0.06	0.51	-0.11
Insecure attachment style	0.97	0.39	2.47*
Birthparent loss appraisal	0.15	0.08	2.00*
Coping avoidant style	-0.02	0.06	-0.40
Coping active style	-0.12	0.08	-1.56
Interpersonal Factors			
Lifetime # of trauma types	0.12	0.21	0.54
Discrimination b/c in orphanage *(yes=1)*	0.16	1.02	0.16
Perceived social support	-0.24	0.05	-5.06 ***
Caregiver school support	0.29	0.19	1.53
Birthparent contact *(yes=1)*	-1.79	1.12	-1.59
School Factors			
School bullying *(yes=1)*	0.41	0.89	0.46
Supportive learning climate	-0.51	0.15	-3.34 ***
R-squared min (F value, p-value)	0.42 (F=7.87, p< .0001)		
R-squared max (F value, p-value)	0.46 (F=9.35, p< .0001)		

Note: N=170; * p < .05; **p < .01; *** p < .001; [a] b is unstandardized coefficient

school learning climate (b = -0.51, p <.001), while controlling for all other variables in the model. More insecure attachment style and more negative appraisal of birthparent loss was significantly associated with more depression symptoms, controlling for other variables in the model. As perceived social support and supportive school learning increased, depression symptoms decreased, while holding other variables in the model constant.

A summary of significant predictors of PTSD symptoms are shown in Table 4.19. Three independent variables were statistically significant predictors of PTSD symptoms in this model: birthparent loss appraisal (b = 0.29, p <.01), lifetime number of trauma types (b = 1.28, p<.001), and supportive school learning climate (b = -0.69, p <.001). As negative affect and preoccupation with birthparent loss and number of trauma types increased, PTSD symptoms increased; whereas, a more supportive school learning climate was associated with lower PTSD symptoms, while controlling for all other variables in the model.

Table 4.19 Multiple Regression: Predictors of PTSD Symptoms

Independent Variables	b[a]	SE of b	t
Intercept	4.94	5.37	0.92
Individual Factors			
Gender *(female=1)*	2.01	1.14	1.77
Age enter current placement	0.05	0.14	0.36
Number of types of placements	0.81	0.65	1.24
Insecure attachment style	0.78	0.51	1.52
Birthparent loss appraisal	0.29	0.09	3.10**
Coping avoidant style	0.08	0.07	1.18
Coping active style	-0.08	0.10	-0.87
Interpersonal Factors			
Lifetime # of trauma types	1.28	0.27	4.72 ***
Discrimination b/c in orphanage *(yes=1)*	-0.12	1.26	-0.09
Perceived social support	-0.05	0.06	-0.80
Caregiver school support	-0.06	0.24	-0.25
Birthparent contact *(yes=1)*	-1.83	1.41	-1.29
School Factors			
School bullying *(yes=1)*	0.53	1.12	0.47
Supportive learning climate	-0.69	0.20	-3.45 ***
R-squared min (F value, p-value)	0.42 (F=7.87, p< .0001)		
R-squared max (F value, p-value)	0.45 (F=9.01, p< .0001)		

Note: N=170; * p < .05; **p < .01; *** p < .001; [a] b is unstandardized coefficient

Significant Predictors of Behavior Problems

The regression models for externalizing and internalizing behavior problems were both statistically significant (p<.0001). As shown in Table 4.20, three independent variables were

statistically significant predictors of externalizing behavior problems, while controlling for other variables in the model: lifetime number of trauma types (b = 0.72 p <.01), school bullying (b = 2.16, p <.05), and supportive school learning climate (b = -0.45, p <.05). As the number of types of traumas and school bullying increased, externalizing behavior problems increased. A more supportive school learning climate was associated with less externalizing behavior problems, holding other variables in the model constant.

Table 4.20 Multiple Regression: Predictors of Externalizing Problems

Independent Variables	*b*[a]	SE of b	*t*
Intercept	12.99	5.42	2.4 *
Individual Factors			
Gender *(female=1)*	-1.27	1.09	-1.16
Age enter current placement	-0.19	0.14	-1.39
Number of types of placements	0.52	0.63	0.83
Insecure attachment style	0.09	0.50	0.17
Birthparent loss appraisal	0.13	0.10	1.24
Coping avoidant style	0.11	0.07	1.59
Coping active style	-0.07	0.10	-0.68
Interpersonal Factors			
Lifetime # of trauma types	0.72	0.25	2.85 **
Discrimination b/c in orphanage *(yes=1)*	1.85	1.22	1.52
Perceived social support	-0.07	0.06	-1.08
Caregiver school support	0.14	0.24	0.59
Birthparent contact *(yes=1)*	-0.59	1.41	-0.42
School Factors			
School bullying *(yes=1)*	2.16	1.09	1.97 *
Supportive learning climate	-0.45	0.20	-2.27 *
R-squared min (F value, p-value)	0.30 (*F*= 4.78, p< .0001*)*		
R-squared max (F value, p-value)	0.35 (*F*= 5.91, p< .0001*)*		

Note: *N*=170; * p < .05; **p < .01; *** p < .001; [a] b is unstandardized coefficient

There were several independent variables that were statistically significant predictors of internalizing problem behaviors, which are summarized in Table 4.21. These included gender (b=3.31, p<.01), with girls being associated with more internalizing problems. Additionally, more negative birthparent loss appraisal (b =0.25, p <.01), more lifetime number of trauma types (b =0.69, p <.01), and having experienced discrimination because of being in an orphanage (b

=2.33, p <.05) were all significantly associated with more internalizing problems. In contrast, more perceived social support (b 0.19, p <.01) and supportive school learning climate (b=-0.41, p<.05) were associated with less internalizing problems, controlling for all other variables in the model.

Table 4.21 Multiple Regression: Predictors of Internalizing Problems

Independent Variables	b[a]	SE of b	t
Intercept	19.19	5.20	3.69***
Individual Factors			
Gender *(female=1)*	3.31	1.06	3.12 **
Age enter current placement	-0.04	0.13	-0.28
Number of types of placements	0.65	0.62	1.05
Insecure attachment style	0.79	0.49	1.63
Birthparent loss appraisal	0.25	0.09	2.71 **
Coping avoidant style	0.11	0.07	1.64
Coping active style	-0.13	0.09	-1.36
Interpersonal Factors			
Lifetime # of trauma types	0.69	0.25	2.77 **
Discrimination b/c in orphanage *(yes=1)*	2.33	1.17	1.99 *
Perceived social support	-0.19	0.06	-3.25 **
Caregiver school support	-0.41	0.23	-1.76
Birthparent contact *(yes=1)*	-0.06	1.32	-0.05
School Factors			
School bullying *(yes=1)*	1.28	1.06	1.2
Supportive learning climate	-0.41	0.19	-2.2 *
R-squared min (F value, p-value)	0.50 (F= 10.97, p< .0001*)*		
R-squared max (F value, p-value)	0.52 (F= 12.19, p< .0001*)*		

Note: N=170; * p < .05; **p < .01; *** p < .001; [a] b is unstandardized coefficient

Significant Predictors of Academic Problems

The overall regression model for school engagement was statistically significant (p<.0001). Statistically significant predictors of school engagement shown in Table 4.22 included: insecure attachment style, perceived social support, and supportive school learning climate. Having a more insecure attachment style (b=-0.79, p <.01) was associated with lower school engagement. In contrast, more perceived social support (b= 0.10, p<.01) was associated with more school engagement. In addition, controlling for other variables in the model, a more

supportive school learning climate (*b*=0.50, *p*<.001) was associated with more school engagement.

Table 4.22 Multiple Regression: Predictors of School Engagement

Independent Variables	*b*[a]	SE of b	*t*
Intercept	4.80	2.94	1.63
Individual Factors			
Gender *(female=1)*	1.02	0.60	1.7
Age enter current placement	0.13	0.08	1.74
Number of types of placements	0.01	0.35	0.03
Insecure attachment style	-0.79	0.28	-2.88 **
Birthparent loss appraisal	-0.01	0.05	-0.19
Coping avoidant style	-0.03	0.04	-0.7
Coping active style	0.10	0.05	1.86
Interpersonal Factors			
Lifetime # of trauma types	-0.12	0.14	-0.82
Discrimination b/c in orphanage *(yes=1)*	0.59	0.67	0.88
Perceived social support	0.10	0.03	3.02 **
Caregiver school support	-0.11	0.13	-0.81
Birthparent contact *(yes=1)*	-0.73	0.76	-0.95
School Factors			
School bullying *(yes=1)*	0.97	0.61	1.59
Supportive learning climate	0.50	0.11	4.66 ***
R-squared min (F value, p-value)	0.35 (*F= 5.85*, p< .0001*)*		
R-squared max (F value, p-value)	0.40 (*F= 7.45*, p< .0001*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Statistically significant factors associated with school grades are summarized in Table 4.23. The model was statistically significant (range *p*< .05 to .005). Only two variables were significant predictors of school grades: discrimination because of being in an orphanage (*b*=1.85, *p*<.01) and perceived social support (*b* = 0.10, *p*<.01). Experiencing more discrimination because of being an orphanage was associated with better school grades. School grades also improved with more perceived social support, controlling for other variables in the model.

Table 4.23 Multiple Regression: Predictors of School Grades

Independent Variables	*b*[a]	SE of b	*t*
Intercept	0.48	3.04	0.16
Individual Factors			
Gender *(female=1)*	-0.45	0.62	-0.71
Age enter current placement	0.14	0.08	1.79
Number of types of placements	0.08	0.36	0.22
Insecure attachment style	0.06	0.28	0.22
Birthparent loss appraisal	-0.04	0.06	-0.79
Coping avoidant style	-0.02	0.04	-0.62
Coping active style	0.08	0.05	1.58
Interpersonal Factors			
Lifetime # of trauma types	0.04	0.14	0.28
Discrimination b/c in orphanage *(yes=1)*	1.85	0.68	2.74 **
Perceived social support	0.10	0.04	2.91 **
Caregiver school support	-0.13	0.13	-0.97
Birthparent contact *(yes=1)*	-1.14	0.77	-1.47
School Factors			
School bullying *(yes=1)*	0.61	0.62	0.98
Supportive learning climate	0.13	0.12	1.1
R-squared min (F value, p-value)	0.15 (*F= 1.95* , p=.03*)*		
R-squared max (F value, p-value)	0.21 (*F=2.97* , p = .0005*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

4.3.5 Summary

Results of the multivariable analyses identified eight risk and protective factors across individual, interpersonal, and school levels that predicted mental health, behavioral, and academic problems among adolescents in Korean orphanages, as shown in Figure 4.5.

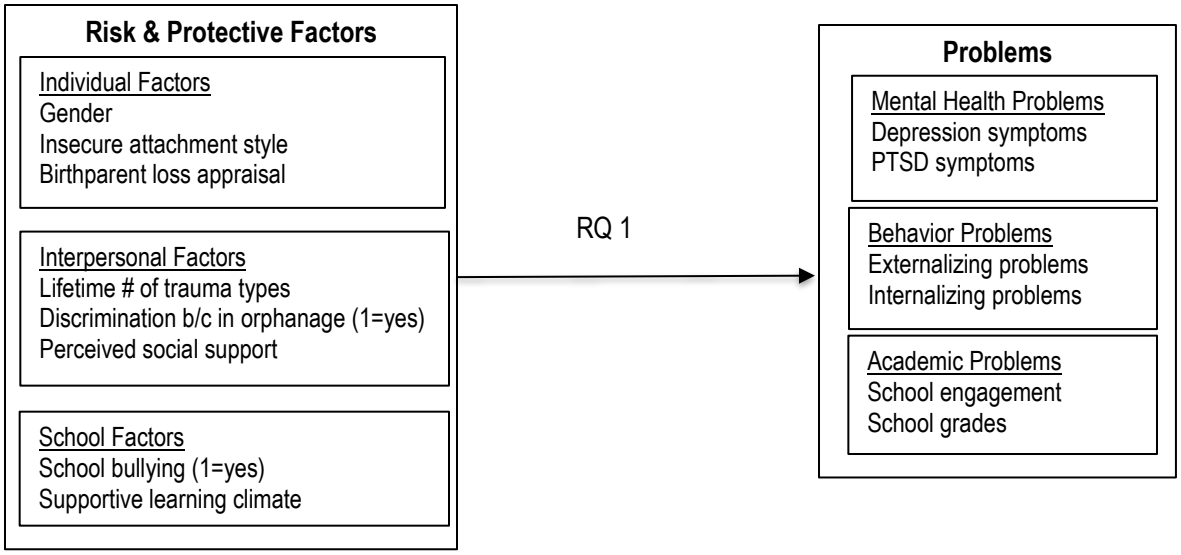


Figure 4.5 Statistically Significant Risk and Protective Factors Associated with Mental Health, Behavior, and Academic Problems

In the separate multiple regression models analyzed for each of six dependent variables, different risk and protective factors were identified to be significantly associated with different problems, as summarized in Table 4.24. The multiple regression model for internalizing

Table 4.24 Summary of Significant Predictors Associated with Each Dependent Variables

Independent Variables	Dependent Variables [a]					
	Depress. Symp. *t*-value	PTSD Symp. *t*-value	External. Prob. *t*-value	Internal. Prob. *t*-value	School *Engage*. *t*-value	School Grades *t*-value
Individual Factors						
Gender (*female=1)*				3.12 **		
Insecure attachment style	2.47 *				-2.88**	
Birthparent loss appraisal	2.00 *	3.10**		2.71**		
Interpersonal Factors						
Lifetime # of trauma types		4.72***	2.85**	2.77**		
Discrimination b/c in orphanage (*yes=1*)				1.99*		2.74**
Perceived social support	-5.06***			-3.25**	3.02**	2.91**
School Factors						
School bullying (*yes=1*)			1.97*			
Supportive learning climate	-3.34***	-3.45***	-2.27*	-2.20*	4.66***	
R-squared min	0.42 ***	0.42 ***	0.30***	0.50***	0.35***	0.15*
R-squared max	0.46 ***	0.4 ***	0.35***	0.52***	0.40***	0.21***

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$;

[a] Multiple regression models analyzed separately for each dependent variable.

behavior problems explained 50% of the variance in this outcome. Five risk factors were found to be significantly associated with more internalizing problems: being a girl, more negative affect and preoccupation with birthparent loss, more types of traumas, and experiencing discrimination because of being in an orphanage. Two factors were found to be protective: more perceived social support and a supportive school learning climate. The variance in the models for depression and PTSD symptoms were equally explained (42%). Birthparent loss was a significant risk factor for more depression and PTSD symptoms. In addition, insecure attachment style was a significant predictor of more depression; greater number of trauma types was a significant predictor of more PTSD. A supportive school learning climate was a protective factor for both lower depression and PTSD; more social support was also a protective factor for lower depressive symptoms.

The models for externalizing behavior problems and school engagement explained 30% and 35% of the variance in those outcomes respectively. Two significant risk factors were identified to be associated with more externalizing behavior problems: more trauma types and experiencing school bullying. Only one significant risk factor, a more insecure attachment style, was found to be associated with lower school engagement in this model. More social support and a more supportive school learning climate were significant protective factors associated with more school engagement; but only a supportive school learning climate was significantly associated with lower externalizing behavior problems. Only 15% of the variance for school grades was explained in the multivariable models in the present study; therefore, interpretation of this model must be done with caution. Two variables were found to be significantly associated with better school grades: more discrimination because of being in an orphanage and more social support.

As noted above, two factors were found to be protective and six risk factors were identified. One protective factor was a more supportive learning climate which was significantly associated with five outcomes: lower depression, PTSD symptoms, less externalizing and internalizing behavior problems, and more school engagement. The other significant protective factor was social support. More perceived social support was associated with lower depressive symptoms, less internalizing behavioral problems, more school engagement, and better grades (Hypothesis 4). Six risk factors were identified. More lifetime number of trauma types and more negative affect and preoccupation with birthparent loss were significantly associated with more PTSD symptoms and internalizing behavior problems. More number of trauma types was also significantly associated with more externalizing problems. Whereas, more negative affect/preoccupation with birthparent loss was significantly associated with more depressive symptoms. Having a more insecure attachment was a predictor of more depression symptoms and lower school engagement (Hypothesis 3); experiencing more school bullying was associated with more externalizing behavior problems. Finally, gender was a significant predictor of internalizing behavior problems, with girls at higher risk for more internalizing behavior problems than boys (Hypothesis 1). Experiencing discrimination because of being in an orphanage was a risk factor for more internalizing behavior problems, but was also a significant predictor of better school grades. Neither age when entered the current orphanage (Hypothesis 2) and birthparent contact (Hypothesis 5) were significant predictors in the final regression models.

4.4 Research Question 2: Birthparent Loss, Coping, and Problems

The second research question was exploratory because this was the first time the relationship between birthparent loss, coping, and outcomes were studied among adolescents in

Korean orphanages. This question sought to explore whether the relationship between birthparent loss appraisal and each of the six dependent variables (depression, PTSD symptoms, externalizing behavior problems, internalizing behavior problems, school engagement, and school grades) were mediated by avoidant or active coping styles. According to Brodzinksy's Stress and Coping Model of Adoption Adjustment, being in alternative care (i.e. adoption or an orphanage) and experiencing the loss of birthparents can be experienced as stressful to many youth; this in turn leads to a series of coping efforts that mediate patterns of adjustment (Smith & Brodzinsky, 2002). To explore coping styles as a mediator, first bivariate analyses were conducted to determine the associations between the predictor (birthparent loss appraisal), mediators (avoidant or active coping), and dependent variables. Then simple mediation models testing the relationship between birthparent loss appraisal and each of the six dependent variables for the two mediators (avoidant and active coping) were conducted for a total of 12 models.

According to the traditional Barron and Kenny (1986) the following conditions are needed to establish mediation using on statistically significant tests: (1) independent variable is significantly associated with the mediator (path *a*); (2) mediator variable is significantly associated with the dependent variable (path *b*); and (3) when paths *a* and *b* are controlled (indirect effect *ab* path), a previously significant relation between the independent and dependent variable is no longer significant. More recent discussion on establishing mediation effects indicate the most important steps are 1 and 2; furthermore, these steps are to be determined by zero and nonzero coefficients and not in terms of statistical significance, which are influenced by sample size (Kenny, 2016). Contemporary analysts have also argued there is no need to show a significant correlation between the independent and dependent variable to establish mediation. For instance, in the case of *inconsistent mediation* (MacKinnon, Fairchild, & Fritz, 2007), where

the signs of at least one mediated effect may be a different sign than other mediated or direct paths (*c'* path), the independent variable may not be correlated with the dependent variable but mediation may exist (Kenny, 2016). Because of other limitations of the traditional Barron and Kenny (1986) approach (see Preacher & Hayes, 2004; MacKinnon, Fairchild & Fritz, 2007), a formal significance test of the indirect effect using bootstrapping techniques to determine if the indirect effect was different from zero were conducted (Preacher & Hayes, 2004). Although a statistically significant indirect effect provides support for a mediation effect, it cannot prove a pattern of causation; hence, the conclusions from a mediation analysis can only be valid if the causal assumptions are valid (Judd & Kenny, 2010).

4.4.1 Bivariate Analyses: Birthparent Loss, Coping Styles, and Problems

As shown in Table 4.25, bivariate correlations using the raw data and list wise deletion of missing items showed having a more negative affect and preoccupation with birthparent loss was significantly associated with one of the mediators, active coping style (r (149) = 0.26, p<.01).

Table 4.25 Correlations between Birthparent Loss, Coping Styles & Dependent Variables

Independent Variables	1	2	3	4	5	6	7	8
1. Birthparent loss appraisal	--							
2. Avoidant coping style	0.08	--						
3. Active coping style	0.26 **	0.38***	--					
4. Depression Symptoms	0.14	0.09	-0.21**	--				
5. PTSD Symptoms	0.21**	0.28***	0.05	0.49 ***	--			
6. Externalizing Behavior	0.11	0.28***	0.02	0.47 ***	0.54 ***	--		
7. Internalizing Behavior	0.19 *	0.27***	-0.09	0.62 ***	0.61 ***	0.54 ***	--	
8. School Engagement	0.07	-0.10	0.22**	-0.61***	-0.40***	-0.40***	-0.34***	--
9. School grades	0.05	0.01	0.21**	-0.28***	-0.01	-0.03	-0.05	0.40***

Note: * p < .05, **p < .01, *** p < .001; Sample size for bivariate correlations ranged from 142 to 170.

More negative affect and preoccupation with birthparent loss was also significantly associated with the following outcomes: more PTSD symptoms (r (149) = 0.21, p<.01) and more internalizing behavior problems (r (152) = 0.19, p<.05). As for the mediators, more avoidant

coping was significantly associated with more PTSD symptoms (r (161) = 0.28, p<.001), externalizing behavior (r (165) = 0.28, p<.001), and internalizing behavior problems (r (165) = 0.27, p<.001). More active coping, on the other hand, was significantly related to less depression symptoms (r (153) = -0.21, p<.01), more school engagement (r (162) = 0.22, p<.01), and better school grades (r (164) = 0.21, p<.01). The direction of the significant correlations of the mediators was consistent with the theoretical model, with avoidant coping strategies being associated with poorer mental health, behavior and academic problems, and active coping being associated with more positive adjustment.

4.4.2 Mediation Analyses: Relationship between Birthparent Loss, Coping, and Problems

Based on stress and coping theory, it was expected that the relationship between more negative affect and preoccupation with birthparent loss and worse problems (i.e. more depression, PTSD symptoms) would be mediated through avoidant coping styles. Likewise, the relationship between negative affect and preoccupation with birthparent loss and positive outcomes would be mediated through active coping styles. The six mediation models testing avoidant coping as a mediator of the relationship between birthparent loss appraisal and each of the six dependent variables (depression symptoms, PTSD symptoms, externalizing behavior problems, internalizing behavior problems, school engagement, school grades) failed to support the pathway with avoidant coping as a mediator. As shown in Table 4.26, birthparent loss appraisal did not have a statistically significant direct effect (*a* path*)* on avoidant coping on any of the six simple mediation models. Avoidant coping had a significant direct effect (*b* path) on PTSD symptoms (b=0.27, p<0.001), externalizing behavior (b=0.28, p<. 0.001), and internalizing behavior problems (b=0.28, p<0.001) with the direction of the effect being associated with more PTSD symptoms and more behavior problems.

Table 4.26 Avoidant Coping Mediation Models: Total Effect and Direct Effects of Birthparent Loss Appraisal, Avoidant Coping, and Dependent Variables

Pathways	Coefficent *b*	SE	*t*	p-value
Depression Symptoms (*N*=140)				
Total Effects ^{c} (unmediated model): (BLA → Depression)	0.14	0.09	1.55	0.12
Direct effect (a path): (BLA → Avoidant Coping style)	0.14	0.12	1.15	0.25
Direct effect (b paths): (Avoidant Coping style → Depression)	0.07	0.06	1.09	0.28
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → Depression)	0.13	0.09	1.44	0.15
PTSD Symptoms (*N* =145)				
Total Effects ^{c} (unmediated model): (BLA → PTSD)	0.33	0.12	2.78	0.001 ***
Direct effect (a path): (BLA → Avoidant Coping style)	0.12	0.12	1.00	0.32
Direct effect (b path): (Avoidant Coping style → PTSD)	0.27	0.08	3.49	0.001 ***
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → PTSD)	0.29	0.11	2.59	0.01 **
Externalizing Behavior Problems (*N* = 148)				
Total Effects ^{c} (unmediated model): (BLA → External.)	0.18	0.10	1.73	0.09
Direct effect (a path): (BLA → Avoidant Coping style)	0.11	0.12	0.91	0.36
Direct effect (b path): (Avoidant Coping style → External.)	0.28	0.07	4.27	0.00 ***
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → External.)	0.15	0.10	1.50	0.14
Internalizing Behavior Problems (*N* = 148)				
Total Effects ^{c} (unmediated model): (BLA → Internal.)	0.30	0.12	2.44	0.02 *
Direct effect (a paths): (BLA → Avoidant Coping style)	0.11	0.12	0.91	0.36
Direct effect (b paths): (Avoidant Coping style → Internal.)	0.28	0.08	3.62	0.0004 ***
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → Internal.)	0.26	0.11	2.26	0.03 *
School Engagement (*N* = 144)				
Total Effects ^{c} (unmediated model): BLA → Engagement)	0.04	0.06	0.70	0.48
Direct effect (a paths) :(BLA → Avoidant Coping style)	0.11	0.12	0.87	0.38
Direct effect (b paths) :(Avoidant Coping style → Engagement)	-0.06	0.04	-1.40	0.16
Direct effect (c' path) $^{c'}$ (mediated model):(BLA → Engagement)	0.05	0.06	0.80	0.42
School Grades (*N* = 146)				
Total Effects ^{c} (unmediated model) : (BLA → Grades)	0.03	0.05	0.61	0.54
Direct effects (a paths) : (BLA → Avoidant Coping style)	0.10	0.12	0.84	0.40
Direct effects (b paths) :(Avoidant Coping style → Grades)	0.02	0.04	0.66	0.51
Direct effect (c' path) $^{c'}$ (mediated model) :(BLA → Grades)	0.03	0.05	0.56	0.57

Note: * $p < .05$; ** $p < .01$; *** $p < .001$
^{c}= the total effect of BPL (independent variable) on dependent variable in an unmediated model
$^{c'}$= the direct effect of the independent variable (BPL) on dependent variable (mediated model)
BLA = birthparent loss appraisal

Results of the test of significant indirect effects using bootstrapping techniques (Hayes, 2013), summarized in Table 4.27, for the six models also showed avoidant coping style was not significant. The indirect effect of active coping style, however, was significant on the relationship between birthparent loss appraisal and depression symptoms [*ab* = -0.07, boot 95%

CI (-0.15, -0.02)], school engagement [*ab* =0.04, boot 95% CI (0.01, 0.10)], and school grades [*ab* = 0.05, boot 95% CI (0.01, 0.08)].

Table 4.27 Indirect Effects Birthparent Loss Appraisal and Dependent Variables Through Proposed Mediators of Avoidant and Active Coping (*ab* paths) *

Mediator	Effect	Boot SE	Boot 95% CI
Depression Symptoms			
Avoidant Coping Style (*N* =140)	0.0094	0.0164	-0.0053, 0.0777
Active Coping Style (*N* =140)	-0.0692	0.0301	-0.1464, -0.0209
PTSD Symptoms			
Avoidant Coping Style (*N* =145)	0.0329	0.0398	-0.0285, 0.1335
Active Coping Style (*N* =146)	-0.0019	0.0295	-0.0553, 0.0659
Externalizing Behavior Problems			
Avoidant Coping Style (*N* =148)	0.0314	0.0415	-0.0252, 0.1475
Active Coping Style (*N* = 149)	0.0036	0.0280	-0.0565, 0.0589
Internalizing Behavior Problems			
Avoidant Coping Style (*N* =148)	0.0317	0.0467	-0.0243, 0.1752
Active Coping Style (*N* = 149)	-0.0527	0.0341	-0.1457, -0.0023
School Engagement			
Avoidant Coping Style (*N* =144)	-0.0060	0.0116	-0.0448, 0.0064
Active Coping Style (*N* =145)	0.0429	0.0209	0.0094, 0.0955
School Grades			
Avoidant Coping Style (*N* =146)	0.0025	0.0064	-0.0043, 0.0261
Active Coping Style (*N* =147)	0.0405	0.0185	0.0101, 0.0829

Note: *1,000 resamples

In the analyses testing active coping as a mediator between birthparent loss and the six dependent variables summarized in Table 4.28, birthparent loss appraisal had significant and positive direct effects (*a* path*)* on active coping in each of the six models. Active coping also had a significant direct effect (*b* path) on lower depression symptoms (*b*= -0.24, *p* = 0.002), more school engagement (*b*=0.15, *p* = 0.007), and better school grades (*b*=0.14, *p* = 0.003). The direction of these effects was consistent with the theoretical model, with more active coping being associated with positive outcomes. Adolescents with more negative affect and

preoccupation with birthparent loss were associated with more depression, more school engagement and better grades, and this was partially mediated by active coping.

Table 4.28 Active Coping Mediation Models: Total Effect and Direct Effects of Birthparent Loss Appraisal, Active Coping, and Dependent Variables

Pathways	Coefficent *b*	SE	*t*	*p*-value
Depression Symptoms (*N* =140)				
Total Effects ^{c} (unmediated model): (BLA → Depression)	0.16	0.09	1.77	0.08
Direct effect (a path): (BLA → Active Coping style)	0.29	0.10	2.97	0.004 ***
Direct effect (b path): (Active Coping style → Depression)	-0.24	0.08	-3.15	0.002 ***
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → Depression)	0.23	0.09	2.54	0.01 **
PTSD Symptoms (*N* = 146)				
Total Effects ^{c} (unmediated model): (BLA → PTSD)	0.33	0.12	2.71	0.01 **
Direct effect (a path): (BLA → Active Coping style)	0.29	0.09	3.14	0.002 **
Direct effect (b path): (Active Coping style → PTSD)	-0.006	0.11	-0.06	0.95
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → PTSD)	0.33	0.13	2.63	0.01 **
Externalizing Behavior Problems (*N* =149)				
Total Effects ^{c} (unmediated model): (BLA → External.)	0.17	0.11	1.57	0.12
Direct effect (a path): (BLA → Active Coping style)	0.30	0.09	3.21	0.002 **
Direct effect (b path): (Active Coping style → External.)	0.01	0.09	0.13	0.90
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → External.)	0.16	0.11	1.48	0.14
Internalizing Behavior Problems (*N* = 149)				
Total Effects ^{c} (unmediated model): (BLA → Internal.)	0.32	0.12	2.67	0.008 **
Direct effect (a path): (BLA → Active Coping style)	0.30	0.09	3.21	0.002 **
Direct effect (b path): (Active Coping style → Internal.)	-0.18	0.11	-1.65	0.101
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → Internal.)	0.38	0.13	3.02	0.003 **
School Engagement (*N* = 145)				
Total Effects ^{c} (unmediated model) :(BLA → Engagement)	0.05	0.06	0.87	0.38
Direct effect (a path): (BLA → Active Coping style)	0.29	0.09	3.13	0.002 **
Direct effect (b paths): (Active Coping style → Engagement)	0.15	0.05	2.75	0.007 **
Direct effect (c' path) $^{c'}$ (mediated model): (BLA → Engagement)	0.01	0.06	0.17	0.87
School Grades (*N* =147)				
Total Effects ^{c} (unmediated model): (BLA → Grades)	0.03	0.05	0.59	0.55
Direct effect (a path): (BLA → Active Coping style)	0.29	0.09	3.09	0.002 **
Direct effect (b path): (Active Coping style → Grades)	0.14	0.05	2.98	0.003 **
Direct effect.(c' path) $^{c'}$ (mediated model) : (BLA → Grades)	-0.01	0.05	-0.16	0.87

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

^{c}= the total effect of BPL (independent variable) on dependent variable in an unmediated model

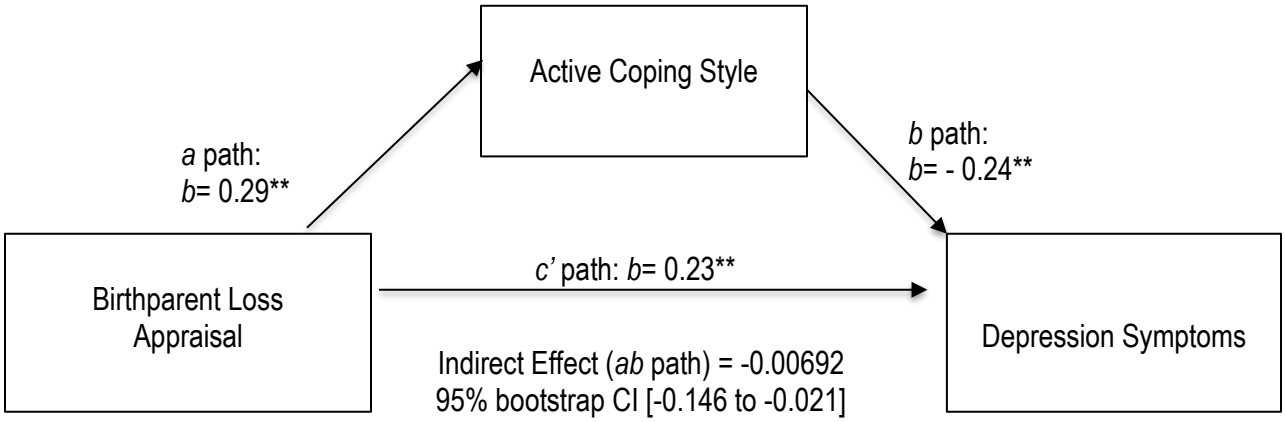
$^{c'}$= the direct effect of the independent variable (BPL) on dependent variable (mediated model)

BLA = birthparent loss appraisal

4.4.3 Summary

Based on the results of these exploratory analyses, out of the 12 simple mediation models, only three were significant. Adolescents with more negative affect and preoccupation with birthparent loss were more depressed, but also more engaged in school and had better school grades. Active coping partially mediated this relationship. The simple mediation models for avoidant coping on the relationship between birthparent loss and the six dependent variables was not supported in this study.

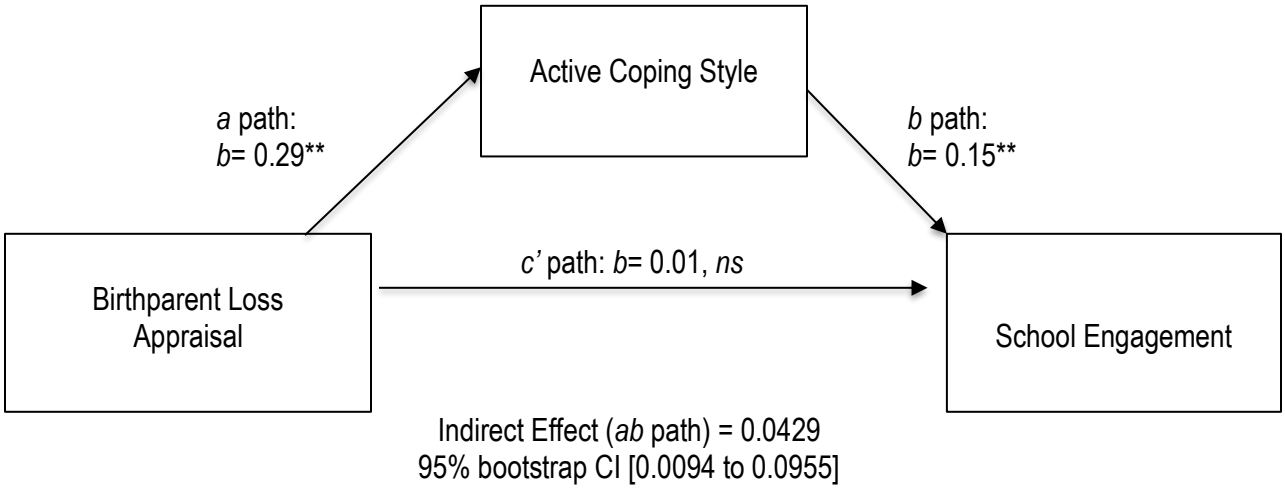
The following figures summarize the three significant models mediated by active coping. Figure 4.6 shows the mediating relationship between birthparent loss appraisal, active coping style, and depression symptoms. Results showed that the *a* path from birthparent loss and active coping was significant, and so was the *b* path from active coping to depressive symptoms. The indirect effect of birthparent loss on depression symptoms via active coping was also significant, with the mediating effect of active coping style associated with lower depression symptoms.



Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 4.6 Simple Mediation Analysis of the Relationship between Birthparent Loss Appraisal and Depressive Symptoms Mediated by Active Coping (*N*=140)

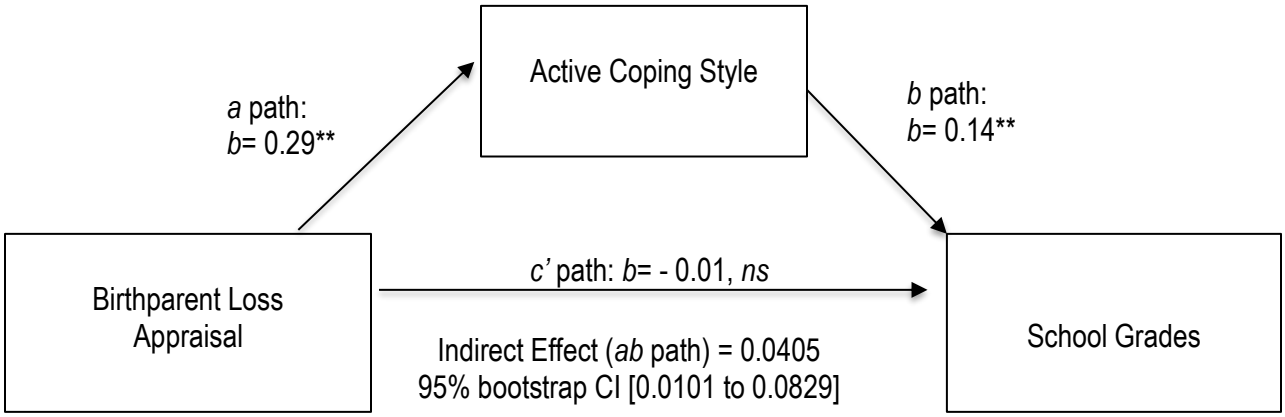
The mediating role of active coping on the relationship between birthparent loss appraisal and school engagement is shown in Figure 4.7. Here both the path between birthparent loss and active coping (*a* path), and between active coping and school engagement (*b* path) were significant. The indirect effect of birthparent loss and school engagement via active coping was also significant and associated with more school engagement.



Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 4.7 Simple Mediation Analysis of the Relationship between Birthparent Loss Appraisal and School Engagement Mediated by Active Coping (*N* = 145)

As shown in Figure 4.8, the simple mediation model for active coping was also supported for the relationship between birthparent loss and school grades. Both *a* path from birthparent loss and active coping, and *b* path between active coping and school grades were significant; so too was the indirect effect of birthparent loss on grades significant (i.e. confidence interval did not contain zero).



Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 4.8 Simple Mediation Analysis of the Relationship between Birthparent Loss Appraisal and School Grades Mediated by Active Coping (*N*=147)

It is important to emphasize that these mediation analyses were exploratory and more work is necessary to establish these findings. Future analyses with complex models that include covariates, such as attachment style, need to be tested to establish the pathways between birthparent loss, coping, and depression, school engagement, and school grades.

Chapter 5: Discussion and Implications

This study examined the extent of mental health, behavioral, and academic problems among adolescents growing up in orphanages in Korea and to explore risk and protective factors that significantly contributed to these problems utilizing a risk and resilience framework. Contributions of this study include knowledge about the trauma experiences and extent of PTSD symptoms among this population of vulnerable youth. Additionally, this study added to the identification of risk and protective factors by including variables in the school environment and specific to being in alternative care (i.e. birthparent loss and discrimination) on outcomes. Furthermore, this study explored how one aspect of being in alternative care, that is thoughts and emotions related to birthparent loss, may be mediated by active coping processes (i.e. assistance seeking, problem solving). In this chapter, key study findings and implications for social work practice, policy, and research are discussed. Methodological limitations are then addressed, followed by the study contributions and conclusion.

5.1 Overview of Key Findings

5.1.1 Extent and Predictors of Mental Health and Behavioral Problems

To date, no studies were found on the prevalence of mental health, behavior, or academic problems among adolescents being cared for in Korea's orphanages. Thus, one contribution of the current study was a better understanding of the extent of these problems among these youths. Furthermore, the multivariable models in this study identified significant risk and protective factors associated with depression, PTSD symptoms, internalizing, and externalizing behavior problems, school engagement, and grades that may provide important points for future intervention. The following highlights some of the key findings garnered from the research

questions posed in this study. Implications of these key findings for social work practice, policy, and research are then discussed in Section 5.2.

Adolescents in Orphanages Have Mental Health and Behavioral Needs

One important finding from the current study was that almost one-third of youth met borderline to clinical thresholds for depression, PTSD symptoms, internalizing, or externalizing behavior problems. Twenty-nine percent of adolescents had mild to severe depressive symptoms and 20% met the clinical threshold for likely PTSD diagnosis (Chapter 4, Table 4.8). Additionally, 15% of youth in this study met borderline to clinically significant thresholds for internalizing behavior problems and 22% for externalizing behavior problems (Chapter 4, Table 4.9). The prevalence of depressive symptoms among adolescents in this study was slightly higher than a 2015 nationally representative study of Korean adolescents, which found 24% had depressive symptom (Korea Center for Disease Control & Prevention, 2015). Furthermore, the mean scores on the Korean Youth Self Report for externalizing and internalizing behavior problems were higher when compared to normative samples of Korean youth (Oh et al., 1997). Because no national studies in the general Korean youth population could be found, it was not possible to compare the current data. However, compared to rates of PTSD among older adolescents in the U.S. child welfare system, youth in the present study had higher rates of PTSD symptoms. In the present study, 20% meeting clinical thresholds for PTSD symptoms versus 14 to 16% in a U.S. sample (McMillan, Zima, Scott, Auslander, Munson, Ollie, et al, 2005).

The rates of mental health and behavior problems in the current study, however, are lower than rates reported in other studies. For example, estimates of the prevalence of some type of behavioral, emotional, or development problem among children in the U.S. foster care system range from 50% to 80% (Child Welfare League of America, 2006; Landsverk & Garland, 1999;

Leslie, Gordon, Meneken et al, 2005; Pilowsky, 1995). One possible explanation for the differences in the prevalence of mental health and behavior problems among adolescents in Korean orphanages in this study, compared to the U.S. foster care system, is because children who enter the U.S. foster care system are usually involuntarily removed from their biological family because of substantiated abuse or neglect. In Korea, however, 57% of children entered care voluntarily because of family poverty, unemployment, or child abuse, and 30% entered care because their parent was a single mother (Korean Ministry of Health and Welfare, 2011). These reasons reflect the historical use of orphanages in Korea as a social security "safety net" for poor families, rather than for the purpose of child protection. In the present study, one-third of youth reported the main reason they were placed in the orphanage was because their parents "could not take care of them", followed by poverty, parental divorce, and having a single mom (Chapter 4, Table 4.6). Five percent of youth reported parental abuse/neglect was the main reason for being placed in the orphanage.

Adolescents in Orphanages have Histories of Trauma Exposure

Youth in this study reported experiencing an average of 2.6 traumatic events in their lifetime. This finding was consistent with one other study of children in Korean orphanages that found an average experience of three "adverse events" (Kang, Nho, Chun, & Chung, 2012). In the U.S., it has been estimated that children in the child welfare system experience trauma at twice the rate compared to the general population (Salazar, Keller, Gowen, & Courtney, 2013). Studies indicate the average number of types of trauma experienced by youth in the U.S. child welfare system was four (Collin-Vézina, Coleman, Milne, Sell, & Daigneault, 2011; Dorsey, Burns, Southerland, Cox, Wagner & Farmer, 2012; Greeson, Briggs, Kisiel, Layne, Ake, Ko, et al., 2011). However, youth in the present study had fewer trauma exposures compared to

children in the U.S. child welfare system. One reason, already described, may be because of differences in the reason for entering into care. In addition, adolescents in Korean orphanages in the present study had more placement stability than youth in the U.S. child welfare system. Sixty-seven reported living in only one orphanage in the current study compared to an average of 3.2 placement changes for youth in the U.S. foster care system (Casey Family Programs, 2010).

Although the average number of types of traumas experienced by adolescents in Korean orphanages was lower compared to children involved in the U.S. child welfare system, there were similarities in the most frequent type of trauma youth reported experiencing. For instance, in one U.S. study of youth in residential care, the most frequently reported trauma type was loss (i.e. traumatic loss, separation from caregiver, or bereavement) and the least frequent type of trauma was community violence (Briggs, Fairbank, Greeson, Steinberg, Amaya-Jackson, Ostrowski et al., 2012). Similarly, the most frequent traumas adolescents in Korean orphanages endorsed were related to someone close to them being sick/ injured or dying; being separated from one's parents or someone they depended upon; and being physically hurt or seeing someone be physically hurt at home. The least frequent trauma was community violence (Chapter 4, Table 4.13).

Histories of Trauma Exposure are a Risk Factor for PTSD and Behavior Problems

This was the first study to examine the relationship between trauma exposure and outcomes among Korean adolescents in orphanages. More lifetime number of trauma types was found to be a significant predictor in the separate multivariable models for PTSD symptoms, externalizing problems, and internalizing behavior problems in the present study. These findings were consistent with the broad literature on trauma. For instance, research on children in the U.S.

child welfare system have found higher rates of trauma exposure to be associated with clinically significant levels of posttraumatic stress, anger, and dissociation (Colin-Vézina, Coleman, Milne, Sell, et al., 2011; Greeson, Briggs, Kiesiel, Layne, et al., 2011). However, in the present study, more lifetime number of trauma types was not a significant predictor of depression, school engagement, or school grades. This was not consistent with some studies of children in the U.S. child welfare system that found higher rates of trauma exposure to be associated with more depression (i.e. Greeson, Briggs, Kiesiel, Layne, et al., 2011; Colin-Vézina, Coleman, Milne, Sell, et al, 2011). One possible explanation may be that in prior studies the severity and type of trauma, and not just the number of trauma exposures, have been found to be associated with depression. For instance, studies have found more emotional abuse to be associated with higher risk for mood disorders, such as major depression (Auslander, Sterzing, Threlfall, Gerke, & Edmond, 2016; Huang, Schwandt, Ramchandani, George, & Heilig, 2012). In the present study, adolescents reported being physically hurt or seeing someone be physically hurt at home more often than emotional abuse.

Furthermore, no studies have explored the association between number of types of trauma and school engagement or school grades among adolescents in Korean orphanages. In one study of child welfare involved adolescent girls in the U.S., higher levels of depression and PTSD were significantly associated with more school functioning problems; furthermore, these relationships were fully mediated by school engagement (Threlfall, Auslander, Gerke, McGinnis, & Tlapek, 2017). Other studies have found the relationship between trauma and school dropout to be mediated by substance use and conduct disorder (i.e. Porche, Fortuna, Lin, & Alegria, 2011). Future analyses with the present data could explore these possible mediating pathways to explain the relationships among trauma, mental health, and school outcomes.

Insecure Attachment is a Risk Factor for Depression and Lower School Engagement

Developing a secure attachment relationship or close bond with a parent or primary caregiver is critical for healthy child development. Children in orphanages generally lack the presence of a consistent caregiver that is necessary for forming healthy attachments. In the current study, youth with a more insecure attachment were more depressed and had lower school engagement in those models. These findings are consistent with Bowlby's (1973; 1988) and Ainsworth's (1982) attachment theory, and models of attachment in adulthood (e.g. Main, Kaplan, & Cassidy, 1985; Hazan & Shaver, 1987; Bartholomew, 1990). Attachment theory proposes that the quality of infant-caregiver interactions early in life shape the way in which children process information about themselves, their attachment figures, and the social world. Early interaction patterns are believed to crystallize into more general styles or "working models" of thinking about and relating to attachment figures. These early "working models" are believed to guide cognition, affect, and behavior in attachment relationships in adulthood.

People who have experienced loss or other trauma may be more likely to develop an insecure style of attachment (i.e. Liem & Boudewyn, 1999). An insecure attachment style has been found to be associated with the development of externalizing behavior and subsequent child psychopathology (for a meta-analysis see Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). Furthermore, there is evidence that adolescents with different attachment styles differ in their ability to regulate emotions. In one study, adolescents with insecure attachment styles were more likely to be depressed and do poorly at school (Cooper, Shaver & Collins, 1998). Shaw and Dallos (2005) have suggested that understanding depression through the lens of attachment theory may be particularly helpful to understanding the development of

"depressotypic self-schema". Research on school engagement also suggest attachment theory is useful for explaining the affective connection youth may feel to school.

5.1.2 Extent and Predictors of Academic Problems

Adolescents in Orphanages Are Moderately Engaged in School, Underachieving Academically

Another contribution of the present study was a better understanding of the extent of academic problems adolescents in orphanages in Korea experience. Although some research has looked at academic outcomes for younger children in Korean orphanages (see Chapter 2, Section 2.3.2), few studies could be found that focused on school outcomes among adolescents in Korean orphanages. This is important because school performance in middle and high school determine admission to higher education and future employment opportunities. In the current study, adolescents appeared to have moderate levels of school engagement. School engagement is considered a meta-construct that incorporates affective, behavioral, and cognitive dimensions (Appleton, Christenson, & Furlong, 2008; Fredricks, Blumenfeld, & Paris, 2004; Jimerson, Campos, & Greif, 2003). Evidence supports the importance of school engagement on developmental and educational outcomes. Many studies have found high student engagement to be a protective factor associated with better grades and school conduct, higher self-esteem, and positive behavioral outcomes (Appleton, Christenson, & Furlong, 2008; Fredricks, Blumenfeld, & Paris, 2004; Shernoff & Schmidt, 2008).

However, youth in the present study appeared to be underperforming academically compared to their Korean peers. Compared to a nationally representative sample of almost 300,000 Korean students in 7th through 12th grade fewer adolescents in the current study reported above average or top grades across all subjects: 22% compared to 36% in the nationally representative sample (S. Kim, Kim, Park, Kim, & Choi, 2017). In addition, more adolescents in

the orphanages in the current study rated their grades to be at the bottom compared to their peers (24% in the present study compared to 12% in the nationally representative sample). Most adolescents in this study also reported below average or lower grades in Math (68%) and English (63%), which suggest these are two areas where youth struggle most and may need assistance (Chapter 4, Table 4.10). Furthermore, caregivers in the focus group also perceived youths had difficulty studying. These findings are similar to research on child welfare involved youth in the U.S. that also found higher levels of school functioning problems and lower academic achievement than youth in the general population (McMillen, Auslander, Elze, White, Thompson, 2003; Perfect, Turley, Carlson, Yohanna, & Saint Gilles, 2016).

There are some possible explanations for lower school achievement found in the current study. Research on orphaned children have found cognitive development to be delayed because of institutional factors (see met-analysis by Van IJzendoorn, Juffer, & Klein Poelhuis, 2005). Cognitive factors such as working memory (ability to retain information temporarily necessary for executive functioning), intelligence, and motivation have all been found to be predictors of school achievement, and may partially explain why adolescents in the current study were underachieving academically (Grzegorz, Krejtz, Rydzewska, Kaczan, & Rycielski, 2016; Weber, Lu, Shi, & Spinah, 2013). Furthermore, adolescents in orphanages may lack consistent supervision of an adult to motivate them to achieve better school grades. In a qualitative study of adolescents in a Korean orphanage and school achievement, youth reported caregivers did not provide individualized attention to their school work; however, attention they received from caregivers when they did get good grades motivated them to continue to do well (Chung, Kim, & Yang, 2015).

Moreover, Korea's cultural values rooted in Confucianism for over 2000 years emphasizes relationships, especially respect for one's parents, and not individual achievement. Youth in the present study may be underachieving in part because of a lack of a relationship with their birthparents. For example, empirical studies of school achievement among Korean students in the general population have found relational factors to be associated better self-efficacy and school achievement (U. Kim & Park, 2006). These relational factors included respect for parents and a sense of indebtedness to parents, which are related to the Confucian ideal of filial piety. It is possible that youth in orphanages who feel their parents had abandoned them, feel less respect and indebtedness to their parents, which may affect their self-efficacy and academic achievement.

Adolescents in Orphanages Experience School Bullying and Discrimination

Another important contribution of this study was that it was the first to identify the extent to which adolescents in Korean orphanages experienced school bullying and discrimination because of being in an orphanage. Adolescents in Korean orphanages attend schools in the community. Specifically, this study found higher rates of school bullying victimization among adolescents growing up in orphanages compared to rates in the general school population in Korea. Forty percent of youth in the current study reported they had been victims of school bullying in the past year, compared to 18.3% among adolescents in the general school population (Korea Ministry of Education, 2011). This rate was also higher when compared to one study that measured school bullying rates among a sample of children residing in orphanages, group homes, and community child centers (J. Kim, Lee, Lee, Han, Min, Song, et al., 2014). In that

study, 22% of children between 6 to 9 years of age and 12% of children between the ages of 10 to 12 years reported being victims of bullying.

This finding is particularly important given the wide recognition that school bullying is an urgent societal problem among middle and high school students in Korea generally (You, Kim, & Kim, 2014). It is possible that adolescents in orphanages are more vulnerable to being victims of school bullying because they do not have a parent to advocate or protect them in the same way as children who remain with their families. Furthermore, adolescents may be targets of bullying because of their status of living in an orphanage. In the current study, some of the orphanage directors said that the youth in their care were scapegoats when problems arose at school. There is also a word in Korean for those who are targeted for bullying, *wang-dda*. In one qualitative study of adolescents in Korean orphanages, youth reported they struggled to reveal to their peers about their status of living in an orphanage out of fear of being ridiculed and becoming a *wang-dda*, a target of bullying (Chung, Kim, & Yang, 2015).

School bullying perpetration has also been identified as a problem among youth involved in the U.S. child welfare system. One recent study of adolescent girls with histories of child welfare involvement in the U.S. found girls who experienced more emotional abuse engaged in significantly higher frequencies of aggressive behavior; this relationship was fully mediated by both PTSD and depression (Auslander, Sterzing, Threlfall, Gerke & Edmond, 2016). Another study of adolescent girls involved in the child welfare system in the U.S. found higher rates of youth who had been victims of bullying becoming perpetrators of bullying (Sterzing, Auslander, Ratliff, Gerke, Edmond, & Jonson-Reid, 2017). Hence, more research is necessary to understand the relationships and pathways between trauma, mental health, and school bullying victimization and perpetration among child welfare involved youth.

Another contribution from the present study to the literature on Korean adolescents in orphanages was that 37% of them reported experiencing discrimination due to their status of living in an orphanage. In the multivariable models, discrimination was a significant predictor for more internalizing behavior problems. This was similar to another study conducted in Turkey that found discrimination due to living in an orphanage was associated with more emotional and behavioral problems (Simsek, et al., 2007).

Interestingly, a different pattern emerged related to school bullying in the present study. More school bullying was found to be a significant predictor for externalizing behavior problems. This suggests that discrimination may be different from experiences of school bullying and may lead to different behavioral problems. However, this may be partially explained by how school bullying and discrimination were measured in the present study. The school bullying measure consisted of items that asked youth to report how often they experienced specific verbal, physical, and relational bullying acts in the past year. The discrimination measure was more general, asking adolescents how often they were discriminated against by different people (i.e. childhood friends, classmates) in their lifetime. If the measures had been more similar (i.e. both measured frequency of discrimination/bullying by different people) findings may have been more consistent.

More discrimination was found to also be a significant predictor of better school grades in the multiple regression analysis. The amount of variance explained in the multivariable model for school grades was low so interpretation of this finding must be considered with caution. However, it is possible that more experiences of discrimination because of being in an orphanage may motivate some adolescents to do better in school. One qualitative study Korean adolescents in orphanages found that when youth felt inferior because of their "orphan" status, it motivated

them to get better grades (Chung, Kim, & Yang, 2015). Markus and Kitayama (1991) have also described how many Asian cultures endorse collectivism and insist on the fundamental relatedness of individuals to each other. While this collectivist mindset may make it more difficult for some adolescents to fit in or to be different –contributing to discrimination -- it may also motivate some youth to be more like their peers, particularly if they do well in school.

Supportive School Climate and Social Support Are Significant Protective Factors

In addition to identifying significant risk factors at the *individual* (gender, insecure attachment, birthparent loss appraisal), *interpersonal* (lifetime number of trauma types, discrimination) and *school* levels (school bullying), the present study identified two significant protective factors: perceived social support and a supportive school learning climate. A supportive learning climate was found to be a significant predictor in all the multiple regression models, except for the model for school grades. This finding was in line with the general literature that has shown the importance of a positive school climate on adolescent outcomes (Whitlock, Wyman, & Moore, 2014; Kim, 2015). In the multivariable analyses, more perceived social support (Hypothesis 4) remained a significant predictor of lower depression symptoms, less internalizing behavior problems, more school engagement, and better school grades. These findings were also similar with the broad literature on the protective nature of positive social support for children and adolescents, as well as studies that looked at social support among children in Korean orphanages (Lee, Kim, & Kim, 2010; Park & Park, 2014; Murray, 2009). Although a positive school climate and social support have been found to be protective for all youth, for adolescents in orphanages who may lack the attention of a consistent adult in their

lives at home, school climate and social support may have an even stronger protective effect on mental health, behavior, and school outcomes.

Although research has shown that parental support contributes to student academic performance (Fantuzzo, McWayne, Perry, & Childs, 2004; Waanders, Mendez & Downer, 2007), orphanage caregiver support of school (i.e. encouraging youth to do well in school, obtaining supplies, offering to help with homework) did not have a statistically significant impact on school engagement or school grades in the present study. However, in a qualitive study of youth in Korean orphanages, adolescents reported that orphanage caregiver's attention to youth's academic achievement helped improve their grades (Chung, Kim, & Yang, 2015). It is possible that other attributes of the relationship between caregivers and youth, such as greater monitoring, which was not measured in the present study, may be associated with school engagement or school grades. It is also possible that biological parental support of school achievement and feelings of filial piety, which were not measured in this study, may be an important influence on school grades. This may be particularly important in future research on adolescents in Korean orphanages because many youth reported to have contact with birthparents (and in the present study 80% of youth had contact).

Non-Significant Risk Factors: Age Enter Placement and Birthparent Contact

Two factors, younger age upon entry into the orphanage (Hypothesis 2) and having no contact with birthparents (Hypothesis 5) were anticipated to be predictors of more mental health, behavioral, and school problems, but this was not supported in the present study. Older age upon entry into the orphanage had a weak association with better school grades in the bivariate correlations, but was not statistically significant in any of the multiple regression models. Results

from the current study did not support prior research that found younger age upon entry into the orphanage to be associated with more depression, PTSD, and internalizing behavior problems because of longer exposure to detrimental institutional factors, such as inconsistent caregiving, at an earlier age (Lee et al, 2010; Lee & Han, 2006).

Although younger age upon entry into the orphanage may increase risk by exposing children to the detrimental effects of institutional care, it is also possible that older age upon entry into an orphanage may be protective. For instance, one Korean study found children who had entered the orphanage after the age of two were better adjusted than those placed as infants (Lee, et al., 2010). The authors speculated that those who entered at older ages may have benefited from some time in their biological families and attention of a primary caregiver. However, it is also possible that older age of entry into an orphanage may be detrimental if a youth had experienced a lot of adversity, such as familial abuse, prior to placement. In the present study, nearly 60% of adolescents entered their present orphanage between the ages of 4 and 10, with the mean age being 8.18 years. Half also reported they had lived with their birthparents. Hence, some of the youth in the current study could have benefited from experiences within their birth families. More research is necessary to understand the relationship between age, adversity, and timing of placement into alternative care on the outcomes of youth in Korean orphanages.

In the current study, having contact with birthparents was significantly correlated with lower depression symptoms in the bivariate analysis, but became non-significant in the separate multiple regression models. Previous studies of birthparent contact were mixed. This study's results support other research that found contact with birth family members to be unrelated to psychosocial outcomes (Jeong, 2002; R. Lee et al., 2010). However, another study of children in

Korean orphanages found birthparent contact to be associated with better social adjustment (Nam, 2008). It is possible that other factors, such as consistency and satisfaction with contact, may be associated with youth outcomes. For example, research on "open adoption" arrangements in the U.S., in which contact between birth and adoptive parents are maintained, found adolescent adoptees with *long-term* direct contact had significantly lower levels of externalizing problems than adoptees without contact, and that *satisfaction* with contact predicted more optimal adjustment (Grotevant, McRoy, Wrobel, & Ayers-Lopez, 2013; Von Korff, Grotevant, & McRoy, 2006). More research is needed to understand the quality and nature of contact between youth in Korean orphanages and their biological family.

5.1.3 Birthparent Loss, Problems, & the Mediating Role of Coping

Thoughts about Birthparent Loss & Relation to Mental Health and Behavior Problems

Birthparent loss was explored for the first time in a sample of adolescents in Korean orphanages. To date, birthparent loss has only been studied in a U.S. sample of adopted children (Smith & Brodzinsky, 2002). Total scale mean for the U.S. sample was not published and cannot be compared to the current data. In examining items in the birthparent loss scale, most youth appeared to have thoughts about their birthparents, such as what birthparents looked like, knowing more about their birthparents, and why their birthparents placed them in the orphanage (Chapter 4, Section 4.2.2). However, most of the adolescents did not express negative emotions toward birthparents or for being placed in an orphanage.

Adoption scholars have argued it is not only the psychological stress of losing connections with biological parents, but also the lack of or limited information about their past that make the consolidation of identity more challenging, especially for those adopted

individuals involved in confidential or "closed" adoptions where no contact is maintained (Brodzinsky, et al., 1998; Hartmand & Laird, 1990; LeVine & Sallee, 1990; Schechter & Bertocci, 1990). The term *genealogical bewilderment* was coined by Sants (1964) to describe the ambivalence and unique difficulty adoptees can face in forming identity because of limited or unknown information about birth family and genealogical roots. Partridge (1991) described the desire by some adoptees to see someone who physically resembled them as "mirror hunger." Findings from the present study suggest adolescents in orphanage share with adoptees a hunger for information about their birthparents, but did not have negative feelings toward their birthparents or toward being in care.

Although many of adolescents in the present study had a desire for information about their birthparents and were less emotional, those who had more negative affect and preoccupation with birthparent loss had more depressive symptoms, PTSD symptoms, and internalizing behavior problems in the separate multivariable models. The association between birthparent loss appraisal and more depressive symptoms and more internalizing behavior problems was in line with findings from Smith & Brodzinsky's (2002) study of adopted children in the U.S. The current study extended those findings by showing birthparent loss appraisal was also a significant predictor of PTSD symptoms among adolescents in orphanages in Korea.

The finding that birthparent loss was associated with PTSD was new and should be further studied. It is possible that youth with more negative emotions and preoccupation with birthparent loss may have a trauma reaction to the separation from their caregiver. It is also possible that PTSD symptoms may contribute to youth's negative emotions and preoccupation with being separated from birthparents. The complicated emotions associated with birthparent loss for youth in alternative care align with the theory of ambiguous loss (Boss, 2000).

Ambiguous loss includes physical loss, in which a loved one is no longer physically present but is remembered psychologically due to the chance of return (i.e. missing person case or birthparent coming to the orphanage to bring the child home). Ambiguous loss complicates the grieving process because the loss remains unresolved. This unresolved loss can contribute to mental health problems.

Mediating Role of Active Coping on the Relationship between Birthparent Loss and Problems

This study was also the first to explore among adolescents in Korean orphanages whether birthparent loss was mediated by coping behaviors. According to Brodzinsky's Stress and Coping Model of Adoption Adjustment, a child's adjustment to alternative care (i.e. adopted or placed in an orphanage) is mediated by their cognitive appraisal of the situation of being in alternative care as threatening, stigmatizing, or involving loss, which in turn active coping efforts to deal with those emotions or thoughts (Brodzinsky, 1990). This cognitive appraisal develops as children mature, becoming salient during adolescence.

Exploratory findings from the present study indicated that of the 12 simple mediation models, three were significant. Active coping was found to significantly mediate the relationship between birthparent loss appraisal and lower depression symptoms, more school engagement, and better school grades. The finding that active coping mediated the relationship between birthparent loss and depression was consistent with Smith and Brodzinsky's (2002) study of U.S. adoptees. However, in the present study avoidant coping did not mediate any of the relationships between birthparent loss appraisal and any of the dependent variables. This finding diverged from the one U.S. study of adopted children which found avoidant coping was associated with more anxiety (Smith & Brodzinksy, 2002). Because of its exploratory nature, results from the

mediation analyses in this study should be interpreted with caution. As noted previously, the raw data using listwise deletion of missing data was used in the analyses because of the small number of missing data. Future mediation analyses using the present data should use multiple imputation for missing data, which would reduce the chance of a Type I error. Findings from the present study, however, suggest future research is necessary to understand the pathways between birthparent loss and mental health and school outcomes.

5.2 Implications for Practice, Policy, and Research

In the past decade, the Korean government has enacted several policies to enhance child welfare for orphaned and abandoned children. These have included efforts to promote domestic adoption and kinship foster care, limiting international adoptions, and Child Development Accounts (CDAs) to promote economic independence for youth who leave care (Kim & Henderson, 2008; Nam & Han, 2010). Less attention has been placed on identifying and meeting the mental health and academic needs of this vulnerable population who remain in orphanages, particularly during adolescence. This study provides some evidence that can be used to inform future child welfare practices, policies, and research affecting adolescences in orphanages in Korea and in other contexts.

Attention to Mental Health, Behavioral Needs and a Trauma-Informed System of Care

The awareness of mental health in Korea and mental health services in the country have been developing, although a national mental health system is lacking (Roh, Lee, Soh, Ryu, Kim, Jang, et al, 2016). Much attention has been given to the problem of suicide because Korea's suicide rate among adults has remained the highest among the Organization for Economic Cooperation and Development (OECD) nations for 10 consecutive years (OECD, 2013). Suicide

is also the second leading cause of death among teenagers in the nation (You, Kim, & Kim, 2014). In informal conversations during the recruitment phase with directors of the orphanages who participated in the present study, many were aware of the growing mental health needs of the children in their care. Two of the orphanages located in Seoul had developed community-based mental health services for the local community and some of the youth were receiving services there. However, the development of mental health services in Korea has been hindered by social stigma about mental illness and limited access to service providers who specialize in child and adolescent mental health (Roh, Lee, Soh, Ryu, Kim, Jang, et al, 2016).

Although the extent of mental health and behavioral problems among adolescents in the present study were not as high as those found in the U.S. child welfare system, findings underscore the general need for child welfare systems globally to address the mental health and behavioral needs of youth in formal systems of care. Future research to comprehensively understand the extent of mental health problems among adolescents in orphanage care in Korea and globally are warranted. Orphanages in Korea are required to provide annual reports to the government, but these reports do not require the reporting of data on the psychosocial well-being of children in care. Hence, a national prevalence study to understand the extent of mental health problems among youth in Korean orphanages would further aid in the development of appropriate prevention and intervention measures.

Currently, trauma exposure among children and adolescents has not been well-studied in Korea. The present study found that the more types of trauma experienced by adolescents in orphanages were associated with more PTSD symptoms, externalizing problems, and internalizing behavior problems. Likewise, there are similarities in the types of trauma youths in formal child welfare systems experience globally, particularly complex trauma relating to

relational losses. Hence, there needs to be a push to develop trauma-informed systems of child welfare globally.

In the past decade, the U.S. child welfare system has developed a system of care that is trauma-informed. This initiative in the U.S. has been spearheaded through the National Child Traumatic Stress Network (NCTSN) with financial support from government entities. It has focused on effective screening and assessment practices for trauma exposure, building of skills, and increasing knowledge about childhood trauma for child welfare administrators, frontline staff, and caseworkers. The present study suggests that an initiative to create a trauma-informed child welfare system in Korea is warranted. Educational resources and training kits developed by NCTSN could be translated into the Korean language and adapted to address the specific context of youth in care in Korea. This information could be disseminated through such national organizations in Korea as the National Association of Orphanage Directors.

Research on Interventions for Trauma Exposure & Secure Attachment

Future research in Korea could then identify and test interventions to treat trauma for the portion of children in orphanage care with clinically significant symptoms. It is vital that such intervention research consider the limited resources of facilities. For instance, in Korea the mental health system is underdeveloped, and children's mental health services is extremely limited. Hence, the need to explore interventions that can be delivered by para professionals, orphanage caregivers, or by teachers in school settings may be more feasible given the resource constraints in different nations. For instance, one evidence-based intervention, Cognitive-Behavioral Intervention for Trauma in Schools (CBITS), a school-based group intervention to treat trauma symptoms, has been adapted to allow teachers and school counselors with no mental

health training to deliver the intervention (called Support for Students Exposed to Trauma, SSET).

Furthermore, children who have experienced loss or other trauma may be more likely to develop an insecure attachment style, and children in orphanages generally are at higher risk of insecure attachment because of institutional factors. In the current study, youth with more insecure attachments had more depressive symptoms and lower school engagement. Most of the evidence-based interventions to promote healthy attachments focus on infants and their parents (see meta-analysis of attachment interventions by Van IJzendoorn & Juffer, 2003). Hence, it is necessary for orphanages to ensure that care, especially for infants and young children, promote healthy attachment formations.

For instance, three intervention studies targeted changes in caregiver behavior in orphanages in Central America (McCall, Groark, Fish, Harkins, Serrano, & Gordon, 2010), Russia (St. Petersburgh-USA Orphanage Research Team, 2008), and Romania (Sparling, Dragomir, Ramey, & Florescu, 2005). The intervention in these three studies included training caregivers to provide more attuned and enriched care, structural changes to improve the physical environment (i.e. new furniture, toys, etc.), and caregiver work schedules (addition of staff to reduce caregiver-child ratios, decrease staff turn-over). These interventions produced statistically significant improvements in overall child development outcomes across these studies. Korea's orphanages generally have low ratio of caregiver-child ratios, but staff turn-over continues to be a problem. In the focus group with caregivers, staff also expressed conflicted feelings between their role as a professional versus their role as a "parent" toward the children in their care. Future research to understand the experiences and needs of orphanage caregivers in Korea would be a first step to ensuring that the quality of caregiving in orphanages will promote youth healthy

attachment and global development. Moreover, research to better understand the quality of caregiving needed to promote healthy attachment in adolescence are warranted.

Address Academic Achievement, Bullying and Discrimination

Findings from this study also indicate adolescents in orphanages are not achieving as well academically as their peers, which directly impacts their opportunity for higher education and future employment. Policies could be enacted that help support youth in orphanages so they can access and afford higher education. For example, the Korean government provides educational support for orphans that include tuition assistance to attend college (R. Lee et al., 2010); however, residential costs are not included. This may restrict options for youth who can only afford to attend colleges that are located near their orphanages. Additionally, policies that target younger youth before they enter high school may be beneficial. Most of the adolescents in the present study were attending a vocational high school which prepares them for employment, but not higher education. Policies and interventions targeting middle school youth may increase their likelihood of entering a regular high school and preparation for college.

Adolescents in this study also appeared to be victims of school bullying that exceeded national rates. However, because the current study was one of the first to measure school bullying among adolescents in Korean orphanages, further research needs to be conducted to substantiate whether youth in orphanages may be at higher risk for school bullying than Korean peers. Considerable research has been conducted demonstrating the detrimental effects of bullying on victims, including higher risk for suicidal ideation and attempts (S. Kim, Koh, & Leventhal, 2005), school dropout (Sharp, 1995), and psychosocial problems (i.e. see meta-analysis by Hawker & Boulton, 2000). Furthermore, the present study findings suggest schools

must also be educated about experiences of discrimination because of being in an orphanage, which was found to be distinct from school bullying. Specifically, more experiences of discrimination were associated with more internalizing problem behaviors. Therefore, comprehensive school-based interventions and policies to lower school bullying and discrimination, and promote a supportive learning climate would contribute to better mental health, behavioral and academic outcomes for all students, but particularly adolescents who are in alternative care.

The importance of helping youth in orphanages achieve academically and address discrimination based on one's living status take particular resonance within the cultural context of Korea. It has been argued that Korea's rapid modernization from the 1960s to the 1980s reinforced and strengthened traditional primary social ties, such as blood, school, and region (Ha, 2008). This "neofamilism", has contributed to growing social inequities in Korean society because a person's social mobility is determined not by ability, but by their social ties to (biological) family, school, and region. Furthermore, scholarship has shown that in government and business, promotions and opportunities are also based largely on blood, school, and regional ties (Ha, 2008). Educational attainment is not only important because of the skills that are developed, but in the context of Korean society, education and where a person goes to school determines access to social networks critical for future success. Orphanage caregivers in the present study described how youth experienced also experienced discrimination once they left the orphanages because of their "orphan" status. Some described how some youth had difficulty getting a job if they did not have a family registry, or *hojok*, which is a document of a person's family lineage and often required for employment.

Promote Supportive Learning Environments and Social Support

Finally, this study found a supportive school learning climate was a significant predictor of better mental health, lower behavioral problems, and more school engagement. More perceived social support (friends, community, family) was also associated with lower depressive symptoms, less internalizing behavior problems, and greater school engagement, and better grades. These findings have implications for the improvement of the quality of caregiving provided by orphanage workers, teachers, and other adults who touch the lives of adolescents who are living in orphanages. Orphanages can also consider how social supports can be strengthened by identifying opportunities for adolescents to make meaningful connections with caring adults, such as through formal and informal mentorship programs. For example, future research could parallel work that has been conducted on non-kin natural mentoring relationships among U.S. older youth in foster care (i.e. Munson & McMillan, 2008). Since little is known about the social networks of adolescents in Korean orphanages, future studies could explore non-kin natural mentoring and formal mentoring programs for Korean adolescents in orphanages. Furthermore, future research needs to explore other protective factors, such as intrapersonal resiliency characteristics like perseverance and self-reliance, that has been found to moderate adverse experiences and allow an individual to adapt to adversity (Myers Tlapek, Auslander, Edmond, Gerke, Voth Schrag, & Threlfall, 2016).

Address Adolescents Thoughts Relating to Birthparents and Loss

Finally, this study provides preliminary evidence that appraisal of birthparent loss is a significant factor associated with more depression, PTSD, and internalizing behavior problems among adolescents in Korean orphanages. This suggests attention to how children think about

and feel about being in alternative care, especially their thoughts relating to being separated and abandoned by birthparents, may be warranted. Exploratory findings from the present study suggest that active coping, such as encouraging youth to ask questions about their birthparents and discuss their feelings about their abandonment, may be a point for intervention.

For example, in the U.S., the development of "open adoption" practices in which contact between birthparents and adoptive parents are maintained, grew out of the advocacy work of adopted adults who argued for the importance of having information about their biological and genetic histories. Systems of child welfare around the world, in their focus to protect children, have often also created barriers for children to know all of who they are by not maintaining or preserving information about their families of origin. In the context of Korea, resources to help orphanages maintain contact, or at least contact information, about birthparents would be one step to preserving the link between children and their birth families. Furthermore, orphanage caregivers can be encouraged to share information about birthparents in an age-appropriate way to youth in their care if such information is available. Finally, future research could identify interventions to assist youth in Korean orphanages with the complicated grieving process related to the unresolved loss of information about their birthparents.

5.3 Methodological Limitations

This study has several methodological limitations that must be considered when interpreting the findings. This study used a cross-sectional design and relied on youth self-report. It is possible that adolescents' responses reflected socially desirable answers rather than their experiences. Sampling is critical in quantitative research to be able to generalize study findings to the larger population of interest. In the current study, a convenience sample was used because the orphanages were chosen based on referrals from community partners. Convenience sampling

may introduce bias since it includes only those orphanages who wanted to participate, and in fact one orphanage chose not to participate. Furthermore, recruitment of adolescents within the orphanages was limited to those who were available; some orphanage directors had indicated some youth were interested in participating but had other commitments (i.e. job, extracurricular activity). Therefore, it is possible that the current study's sample may not be representative of the population of youth in orphanages in South Korea.

Finally, while standardized measures with demonstrated reliability and validity were utilized to the extent possible, some measures in the survey had never been used in Korea or had not been widely tested among adolescents in orphanages. For example, the Birthparent Loss Appraisal scale had never been used in Korea or among adolescents in orphanage care. This measure was translated, back-translated into Korean, and pilot tested. However, a future rigorous testing of its validity is warranted in this population. For instance, one of the items in the scale states, "Some kids in facilities don't wish to know what their birth parents look like, but other kids in facilities wish they knew what their birthparents look like." Because many adolescents reported that they had contact with their birthparent, some having contact only once and others having daily contact, the item may not have been appropriate for this population.

5.4 Contributions and Conclusion

This study makes several scientific contributions to the knowledge of children and adolescents in orphanage care. First, the study documented and deepened our knowledge of adolescent experiences related to mental health, behavioral, and academic problems. The study found nearly one-third of youth had borderline to clinically-significant depressive symptoms, internalizing behavior problems, and externalizing behavior problems. This studied also identified 20% who met criteria for PTSD diagnosis, which to date has not been explored

extensively in the literature. It also highlighted the importance of school bullying and a supportive school learning climate on mental health, behavioral, and academic problems for adolescents in orphanages. This study found novel risk factors specific to the experience of being in alternative care. More negative affect and preoccupation with birthparent loss was found to be a significant risk factor for more depression, PTSD symptoms, and internalizing behavior problems for adolescents in Korean orphanages. In addition, this study explored a potential pathway to explain how emotions and cognitions related to birthparent loss may be mediated by active coping to effect outcomes.

Much yet needs to be done to fully understand the experiences of children and adolescents involved in child welfare systems globally. For over 60 years Korea has had family-based care options including international and domestic adoption; however, because of social stigma about domestic adoption and policies restricting international adoption, these family based options are limited. Thus, orphanage care has remained the dominate means of protecting children in need of parental care. Most of the estimated global number of orphaned children in the world are in Asia; yet, research on children in Asian nations is limited and not widely published in English, therefore inaccessible to the international scientific community. Orphanages in Korea are already providing a vital service for children without parental care. The present study suggests Korean orphanages are taking diligent care of youth because many of the adolescents did not have clinically significant mental health or behavior problems. This study demonstrates that community-research partnerships are feasible and that more work is needed to build knowledge to strengthen the well-being of children and adolescents in orphanage care.

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Appendix A: Multiple Regression Results: Clustered and Non-Clustered Models

Table A.1 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of Depression

	Model: No Clustering Effect			**Model 2: Clustering Effect**		
Independent Variables	*b*[a]	SE of *b*	*t*	*b*[a]	SE of *b*	*t*
Intercept	31.04	4.23	7.33***	31.04	4.28	7.25***
Individual Factors						
Gender (1=female)	0.60	0.93	0.65	0.60	1.15	0.52
Age enter current placement	0.05	0.11	0.44	0.05	0.09	0.56
Number of types of placements	-0.06	0.51	-0.11	-0.06	0.62	-0.09
Insecure attachment style	0.97	0.39	2.47*	0.97	0.59	1.65
Birthparent loss appraisal	0.15	0.08	2.00*	0.15	0.09	1.68
Coping avoidant style	-0.02	0.06	-0.40	-0.02	0.07	-0.33
Coping active style	-0.12	0.08	-1.56	-0.12	0.06	-1.97 *
Interpersonal Factors						
Lifetime # of trauma types	0.12	0.21	0.54	0.12	0.17	0.68
Discrimination b/c in orphanage	0.16	1.02	0.16	0.16	0.82	0.20
Perceived social support	-0.24	0.05	-5.06 ***	-0.24	0.04	-6.77 ***
Caregiver school support	0.29	0.19	1.53	0.29	0.18	1.56
Birthparent contact (1=yes)	-1.79	1.12	-1.59	-1.79	0.61	-2.96 **
School Factors						
School bullying	0.41	0.89	0.46	0.41	0.61	0.67
Supportive learning climate	-0.51	0.15	-3.34 ***	-0.51	0.11	-4.63 ***
R-squared min (F value, p-value)	0.42 (*F*=7.87, p< .0001*)*			0.42 (*F*=35.25, p< .0001*)*		
R-squared max (F value, p-value)	0.46 (*F*=9.35, p< .0001*)*			0.44 (*F*=90.36, p< .0001*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Table A.2 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of PTSD symptoms

	Model: No Clustering Effect			**Model 2: Clustering Effect**		
Independent Variables	*b*[a]	SE of b	*t*	*b*[a]	SE of b	*t*
Intercept	4.94	5.37	0.92	4.94	4.95	1.00
Individual Factors						
Gender (1=female)	2.01	1.14	1.77	2.01	0.77	2.62 **
Age enter current placement	0.05	0.14	0.36	0.05	0.12	0.43
Number of types of placements	0.81	0.65	1.24	0.81	0.89	0.90
Insecure attachment style	0.78	0.51	1.52	0.78	0.57	1.37
Birthparent loss appraisal	0.29	0.09	3.1**	0.29	0.17	1.70
Coping avoidant style	0.08	0.07	1.18	0.08	0.05	1.67
Coping active style	-0.08	0.10	-0.87	-0.08	0.09	-0.96
Interpersonal Factors						
Lifetime # of trauma types	1.28	0.27	4.72 ***	1.28	0.26	4.9 ***
Discrimination b/c in orphanage	-0.12	1.26	-0.09	-0.12	1.07	-0.11
Perceived social support	-0.05	0.06	-0.80	-0.05	0.09	-0.57
Caregiver school support	-0.06	0.24	-0.25	-0.06	0.28	-0.22
Birthparent contact (1=yes)	-1.83	1.41	-1.29	-1.83	1.40	-1.31
School Factors						
School bullying	0.53	1.12	0.47	0.53	1.12	0.48
Supportive learning climate	-0.69	0.20	-3.45 ***	-0.69	0.23	-2.95 **
R-squared min (F value, p-value)	0.42 (*F*=7.87, p< .0001*)*			0.42 (*F*=142.11, p< .0001*)*		
R-squared max (F value, p-value)	0.45 (*F*=9.01, p< .0001*)*			0.45 (*F*=21.59, p< .0001*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Table A.3 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of Externalizing Problems

	Model: No Clustering Effect			**Model 2: Clustering Effect**		
Independent Variables	*b*[a]	SE of b	*t*	*b*[a]	SE of b	*t*
Intercept	12.99	5.42	2.4 *	12.99	6.81	1.91
Individual Factors						
Gender (1=female)	-1.27	1.09	-1.16	-1.27	1.29	-0.98
Age enter current placement	-0.19	0.14	-1.39	-0.19	0.12	-1.59
Number of types of placements	0.52	0.63	0.83	0.52	0.73	0.72
Insecure attachment style	0.09	0.50	0.17	0.09	0.61	0.14
Birthparent loss appraisal	0.13	0.10	1.24	0.13	0.09	1.42
Coping avoidant style	0.11	0.07	1.59	0.11	0.05	2.22 *
Coping active style	-0.07	0.10	-0.68	-0.07	0.07	-1.00
Interpersonal Factors						
Lifetime # of trauma types	0.72	0.25	2.85 **	0.72	0.26	2.82 **
Discrimination b/c in orphanage	1.85	1.22	1.52	1.85	1.01	1.83
Perceived social support	-0.07	0.06	-1.08	-0.07	0.07	-0.98
Caregiver school support	0.14	0.24	0.59	0.14	0.20	0.69
Birthparent contact (1=yes)	-0.59	1.41	-0.42	-0.59	1.02	-0.58
School Factors						
School bullying	2.16	1.09	1.97 *	2.16	0.86	2.5 *
Supportive learning climate	-0.45	0.20	-2.27 *	-0.45	0.12	-3.68 ***
R-squared min (F value, p-value)	0.30 (*F*= 4.78, p< .0001*)*			0.30 (*F*= 16.06, p< .0001*)*		
R-squared max (F value, p-value)	0.35 (*F*= 5.91, p< .0001*)*			0.35 (*F*=8.01, p= .0024*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Table A.4 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of Internalizing Problems

Independent Variables	Model: No Clustering Effect			Model 2: Clustering Effect		
	b[a]	SE of b	*t*	*b*[a]	SE of b	*t*
Intercept	19.19	5.20	3.69***	19.19	7.55	2.54 *
Individual Factors						
Gender (1=female)	3.31	1.06	3.12 **	3.31	1.20	2.75 **
Age enter current placement	-0.04	0.13	-0.28	-0.04	0.17	-0.21
Number of types of placements	0.65	0.62	1.05	0.65	0.99	0.66
Insecure attachment style	0.79	0.49	1.63	0.79	0.68	1.16
Birthparent loss appraisal	0.25	0.09	2.71 **	0.25	0.15	1.68
Coping avoidant style	0.11	0.07	1.64	0.11	0.08	1.41
Coping active style	-0.13	0.09	-1.36	-0.13	0.08	-1.68
Interpersonal Factors						
Lifetime # of trauma types	0.69	0.25	2.77 **	0.69	0.14	5.01 ***
Discrimination b/c in orphanage	2.33	1.17	1.99 *	2.33	1.45	1.61
Perceived social support	-0.19	0.06	-3.25 **	-0.19	0.07	-2.71 **
Caregiver school support	-0.41	0.23	-1.76	-0.41	0.23	-1.74
Birthparent contact (1=yes)	-0.06	1.32	-0.05	-0.06	1.27	-0.05
School Factors						
School bullying	1.28	1.06	1.20	1.28	1.44	0.88
Supportive learning climate	-0.41	0.19	-2.2 *	-0.41	0.23	-1.76
R-squared min (F value, p-value)	0. 50 (*F*= 10.97, p< .0001*)*			0. 50 (*F*= 52.9, p< .0001*)*		
R-squared max (F value, p-value)	0.52 (*F*= 12.19, p< .0001*)*			0.52 (*F*= 150.31, p< .0001*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Table A.5 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of School Engagement

	Model: No Clustering Effect			Model 2: Clustering Effect		
Independent Variables	*b*[a]	SE of b	*t*	*b*[a]	SE of b	*t*
Intercept	4.80	2.94	1.63	4.80	3.28	1.46
Individual Factors						
Gender (1=female)	1.02	0.60	1.70	1.02	0.65	1.57
Age enter current placement	0.13	0.08	1.74	0.13	0.04	3.10 **
Number of types of placements	0.01	0.35	0.03	0.01	0.41	0.02
Insecure attachment style	-0.79	0.28	-2.88 **	-0.79	0.30	-2.68 **
Birthparent loss appraisal	-0.01	0.05	-0.19	-0.01	0.05	-0.19
Coping avoidant style	-0.03	0.04	-0.70	-0.03	0.04	-0.65
Coping active style	0.10	0.05	1.86	0.10	0.04	2.41 *
Interpersonal Factors						
Lifetime # of trauma types	-0.12	0.14	-0.82	-0.12	0.13	-0.87
Discrimination b/c in orphanage	0.59	0.67	0.88	0.59	0.53	1.13
Perceived social support	0.10	0.03	3.02 **	0.10	0.03	3.50 ***
Caregiver school support	-0.11	0.133175	-0.81	-0.11	0.10	-1.04
Birthparent contact (1=yes)	-0.73	0.76	-0.95	-0.73	0.69	-1.05
School Factors						
School bullying	0.97	0.61	1.59	0.97	0.58	1.69
Supportive learning climate	0.50	0.11	4.66 ***	0.50	0.09	5.27 ***
R-squared min (F value, p-value)	0.35 (*F= 5.85,* p< .0001*)*			0.35 (*F= 32.51,* p< .0001*)*		
R-squared max (F value, p-value)	0.40 (*F= 7.45,* p< .0001*)*			0.40 (*F= 51.14,* p< .0001*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Table A.6 Summary of Multiple Regression Clustered and Non-Clustered: Predictors of School Grades

	Model: No Clustering Effect			Model 2: Clustering Effect		
Independent Variables	*b*[a]	SE of b	*t*	*b*[a]	SE of b	*t*
Intercept	0.48	3.04	0.16	0.48	3.35	0.14
Individual Factors						
Gender (1=female)	-0.45	0.62	-0.71	-0.45	0.46	-0.97
Age enter current placement	0.14	0.08	1.79	0.14	0.08	1.85
Number of types of placements	0.08	0.36	0.22	0.08	0.41	0.19
Insecure attachment style	0.06	0.28	0.22	0.06	0.47	0.13
Birthparent loss appraisal	-0.04	0.06	-0.79	-0.04	0.05	-0.82
Coping avoidant style	-0.02	0.04	-0.62	-0.02	0.03	-0.70
Coping active style	0.08	0.05	1.58	0.08	0.04	2.12 *
Interpersonal Factors						
Lifetime # of trauma types	0.04	0.14	0.28	0.04	0.15	0.27
Discrimination b/c in orphanage	1.85	0.68	2.74 **	1.85	0.65	2.87 **
Perceived social support	0.10	0.04	2.91 **	0.10	0.04	2.54 *
Caregiver school support	-0.13	0.13	-0.97	-0.13	0.19	-0.69
Birthparent contact (1=yes)	-1.14	0.77	-1.47	-1.14	0.94	-1.21
School Factors						
School bullying	0.61	0.62	0.98	0.61	0.36	1.67
Supportive learning climate	0.13	0.12	1.10	0.13	0.13	1.01
R-squared min (F value, p-value)	0.15 (*F= 1.95* , p=.03*)*			0.15 (*F= 18.26* , p=.03*)*		
R-squared max (F value, p-value)	0.21 (*F=2.97* , p = .0005*)*			0.21 (*F= 12.72* , p = .0004*)*		

Note: *N*=170; * $p < .05$; ** $p < .01$; *** $p < .001$; [a] *b* is unstandardized coefficient

Appendix B: Adolescent Survey (English)

MENTAL HEALTH AND ACADEMIC ACHIEVEMENT OF ADOLESCENTS IN SOUTH KOREAN ORPHANAGES AND ADOPTIVE FAMILIES

Hollee McGinnis, MSW, Principal Investigator
George Warren Brown School of Social Work

ID # ___ Date: ___ ___ MO ___ ___ DAY ___ ___ ___ ___ YEAR

INTERVIEW BEGAN: ___ ___ : ___ ___ AM/PM

INTERVIEW ENDED: ___ ___ : ___ ___ AM/PM

Interviewer:_____ ___ ___ CODER

Site of Interview: 1=Youth's residence

2=Child welfare facility: _____ ___ ___ CODER

3=Other: _____ ___ ___ CODER

Reviewed by:_____ ___ ___ CODER Date:_____

DEMOGRAPHICS

I am going to start by asking you a few questions about yourself and your background. Some of this information we already know but want to confirm with you.

1. How old are you? — AGE _____ — D1

2. When is your birth date? (**RECORD LUNAR**) — MO ___ / DAY ___ / YR ___ — D2

3. What is your gender? — D3
   - Female 1
   - Male 2
   - Other **(SPECIFY):** 3 _____

4. What is your nationality? — D4
   - Korean National 1
   - Dual Nationality 2 **(SPECIFY):** _____ CODER
   - Other **(SPECIFY):** 3 _____ CODER
   - Don't Know 998

5. Where do you live currently **(READ LIST)** — D5
   - Adoptive family 1
   - Child welfare facility 2
   - Other **(SPECIFY):** 3 _____ CODER

6. How old were you when you started living at/with **(ADOPTIVE FAMILY/FACILITY)** — AGE _____ — D6

7. In your *lifetime*, have you ever lived in any of these settings for at least one week? If you have lived in a setting, please tell me how old you were when you lived there. **(READ LIST)**

		Y	N	Age(s) Lived	
a.	Biological Parent	1	0		D7a
b.	Relative's home	1	0		D7b
c.	By yourself in a house	1	0		D7c
d.	Friend's home	1	0		D7d
e.	Shelter- homeless	1	0		D7e
f.	Child welfare facility	1	0		D7f
g.	Foster Family	1	0		D7g
h.	Adoptive family	1	0		D7h
i.	Homelessness	1	0		D7i
j.	Correctional or juvenile facility	1	0		D7j
k.	Group Home	1	0		D7k
l.	Home of romantic partner (i.e. boyfriend or girlfriend)	1	0		D7l
m.	Anywhere else **(SPECIFY):** _____	1	0		D7m

8. **(CODE 0 WITHOUT ASKING IF YOUTH HAS NOT LIVED WITH FOSTER FAMILIES)**
How many different foster families have you lived with? D8

FOSTER FAMILIES

9. **(CODE 0, WITHOUT ASKING, IF YOUTH HAS NOT LIVED IN CHILD WELFARE FACILITY OR SHELTER)**
Including where you currently live, how many child welfare facilities have you lived in? D9

FACILITIES

10. **(CODE 0 WITHOUT ASKING IF YOUTH HAS NOT LIVED IN AN ADOPTIVE FAMILY)**
Including where you currently live, how many adoptive families have you lived with? D10

ADOPTIVE FAMILIES

WORK & FINANCES

Now I am going to ask some questions about your work experience and saving money.

1. Have you ever worked for pay? — YES 1; NO **(SKIP TO 5)** 0 — WF1

2. Do you currently work for pay? — YES 1; NO **(SKIP TO 5)** 0 — WF2

3. Do you work full-time or part-time? — Full-time 1; Part-time 2 — WF3

4. Please list all the jobs you have done for pay, starting with your current job(s) that you hold, and tell me how much you make per hour. — WF4

a. Job #1 _____ $ ☐☐ . ☐☐ — WF4a

b. Job #2 _____ $ ☐☐ . ☐☐ — WF4b

5. Do you know what a Child Development Account is? **(Explain briefly)** — YES 1; NO **(SKIP TO NEXT SECTION)** 0 — WF5

6. Do you save in the Child Development Account (Didim Account) — YES 1; NO (**SKIP TO NEXT SECTION)** 0 — WF6

7. On average, how much do you save a month in this Account? **(READ LIST):** — WF7

Zero	1
Less than 10,000 W	2
More than 10,000 and less than 20,000	3
More than 20,000 and less than 30,000	4
More than 30,000 W	5
Don't Know	998

8. What is the primary purpose of your saving in the Child Development account? **(READ LIST):** — WF8

College tuition and related costs	1
Post-secondary job training (other than college education)	2
Small business start-up	3
Housing	4
Medical expenses	5
Marriage costs	6
Other **(SPECIFY):**_____	7

YOUTH SELF REPORT FOR AGES 11-18 (YSR)

Now I'm to ask you some questions about your feelings and behaviors. I will now read a list of items that describe teenagers. For each item that describes you ***now or within the past 6 months,*** please answer if the item is "**Very True or Often True"** of you or **"Somewhat or Sometimes True"** of you. If the item is ***not true*** of you, please respond **"Not True"**. **HAND RESPONSE CARD.**

		Not true	Somewhat true or sometimes true	Very true or often true	
1.	I act too young for my age.	0	1	2	YSR1
2.	I drink alcohol without my ~~parents'~~ CAREGIVER Approval.	0	1	2	YSR2
3.	I argue a lot.	0	1	2	YSR3
4.	I fail to finish things I start.	0	1	2	YSR4
5.	There is very little that I enjoy.	0	1	2	YSR5
6.	I like animals.	0	1	2	YSR6
7.	I brag.	0	1	2	YSR7
8.	I have trouble concentrating or paying attention.	0	1	2	YSR8
9.	I can't get my mind off certain thoughts.	0	1	2	YSR9
10.	I have trouble sitting still.	0	1	2	YSR10
11.	I'm too dependent on adults.	0	1	2	YSR11
12.	I feel lonely.	0	1	2	YSR12
13.	I feel confused or in a fog.	0	1	2	YSR13
14.	I cry a lot.	0	1	2	YSR14
15.	I am pretty honest.	0	1	2	YSR15

		Not true	Somewhat true or sometimes true	Very true or often true	
16.	I am mean to others.	0	1	2	YSR16
17.	I daydream a lot.	0	1	2	YSR17
18.	**I deliberately try to hurt or kill myself.**	0	1	2	YSR18
19.	I try to get a lot of attention.	0	1	2	YSR19
20.	I destroy my own things.	0	1	2	YSR20
21.	I destroy things belonging to others.	0	1	2	YSR21
22.	I disobey my ~~parents~~ CAREGIVER.	0	1	2	YSR22
23.	I disobey at school.	0	1	2	YSR23
24.	I don't eat as well as I should.	0	1	2	YSR24
25.	I don't get along with other kids.	0	1	2	YSR25
26.	I don't feel guilty after doing something I shouldn't.	0	1	2	YSR26
27.	I am jealous of others.	0	1	2	YSR27
28.	I break rules at home, school, or elsewhere.	0	1	2	YSR28
29.	I am afraid of certain animals, situations, or places other than school.	0	1	2	YSR29
30.	I am afraid of going to school.	0	1	2	YSR30
31.	I am afraid I might think or do something bad.	0	1	2	YSR31
32.	I feel that I have to be perfect.	0	1	2	YSR32
33.	I feel that no one loves me.	0	1	2	YSR33

	Remember, pick how true the sentence is for you based on your feelings in the past 6 months to now.	**Not true**	**Somewhat true or sometimes true**	**Very true or often true**	
34.	I feel that others are out to get me.	0	1	2	YSR34
35.	I feel worthless or inferior.	0	1	2	YSR35
36.	I accidentally get hurt a lot.	0	1	2	YSR36
37.	I get in many fights.	0	1	2	YSR37
38.	I get teased a lot.	0	1	2	YSR38
39.	I hang around with kids who get in trouble.	0	1	2	YSR39
40.	I hear sounds or voices that other people think aren't there.	0	1	2	YSR40
41.	I act without stopping to think.	0	1	2	YSR41
42.	I would rather be alone than with others.	0	1	2	YSR42
43.	I lie or cheat.	0	1	2	YSR43
44.	I bite my fingernails.	0	1	2	YSR44
45.	I am nervous or tense.	0	1	2	YSR45
46.	Parts of my body twitch or make nervous movements.	0	1	2	YSR46
47.	I have nightmares.	0	1	2	YSR47
48.	I am not liked by other kids.	0	1	2	YSR48
49.	I can do certain things better than most kids.	0	1	2	YSR49
50.	I am too fearful or anxious.	0	1	2	YSR50
51.	I feel dizzy or lightheaded.	0	1	2	YSR51
52.	I feel too guilty.	0	1	2	YSR52

	Not true	Somewhat true or sometimes true	Very true or often true	
53. I eat too much.	0	1	2	YSR53
54. I feel overtired without good reason.	0	1	2	YSR54
55. I am overweight.	0	1	2	YSR55
56. Do you experience any of the following physical problems w/o known medical cause:				
56a. Aches or pains (not stomach or headaches)	0	1	2	YSR56A
56b. Headaches	0	1	2	YSR56B
56c. Nausea, feel sick	0	1	2	YSR56C
56d. Problems with eyes (not if corrected by glasses)	0	1	2	YSR56D
56e. Rashes or other skin problems	0	1	2	YSR56E
56f. Stomachaches	0	1	2	YSR56F
56g. Vomiting, throwing up	0	1	2	YSR56G
56h. Other (Specify:_____)	0	1	2	YSR56H
57. I physically attack people.	0	1	2	YSR57
58. I pick my skin or other parts of my body.	0	1	2	YSR58
59. I can be pretty friendly.	0	1	2	YSR59
60. I like to try new things.	0	1	2	YSR60
61. My school work is poor.	0	1	2	YSR61
62. I am poorly coordinated or clumsy.	0	1	2	YSR62
63. I would rather be with older kids than kids my own age.	0	1	2	YSR63
64. I would rather be with younger kids than kids my own age.	0	1	2	YSR64

	Remember to think of your feelings now and in the past 6 months	**Not true**	**Somewhat true or sometimes true**	**Very true or often true**	
65.	I refuse to talk.	0	1	2	YSR65
66.	I repeat certain acts over and over.	0	1	2	YSR66
67.	I run away from home.	0	1	2	YSR67
68.	I scream a lot.	0	1	2	YSR68
69.	I am secretive or keep things to myself.	0	1	2	YSR69
70.	I see things that other people think aren't there.	0	1	2	YSR70
71.	I am self-conscious or easily embarrassed.	0	1	2	YSR71
72.	I set fires.	0	1	2	YSR72
73.	I can work well with my hands.	0	1	2	YSR73
74.	I show off or clown.	0	1	2	YSR74
75.	I am too shy or timid.	0	1	2	YSR75
76.	I sleep less than most kids.	0	1	2	YSR76
77.	I sleep more than most kids during day and/or night.	0	1	2	YSR77
78.	I am inattentive or easily distracted.	0	1	2	YSR78
79.	I have a speech problem.	0	1	2	YSR79
80.	I stand up for my rights.	0	1	2	YSR80
81.	I steal at home.	0	1	2	YSR81
82.	I steal from places other than home.	0	1	2	YSR82
83.	I store up too many things I don’t need.	0	1	2	YSR83
84.	I do things other people think are strange.	0	1	2	YSR84

		Not true	Somewhat true or sometimes true	Very true or often true	
85.	I have thoughts that other people would think are strange.	0	1	2	YSR85
86.	I am stubborn.	0	1	2	YSR86
87.	My moods or feelings change suddenly.	0	1	2	YSR87
88.	I enjoy being with people.	0	1	2	YSR88
89.	I am suspicious.	0	1	2	YSR89
90.	I swear or use dirty language.	0	1	2	YSR90
91.	**I think about killing myself.**	0	1	2	YSR91
92.	I like to make others laugh.	0	1	2	YSR92
93.	I talk too much.	0	1	2	YSR93
94.	I tease others a lot.	0	1	2	YSR94
95.	I have a hot temper.	0	1	2	YSR95
96.	I think about sex too much.	0	1	2	YSR96
97.	I threaten to hurt people.	0	1	2	YSR97
98.	I like to help others.	0	1	2	YSR98
99.	I smoke, chew, or sniff tobacco.	0	1	2	YSR99
100.	I have trouble sleeping.	0	1	2	YSR100
101.	I cut classes or skip school.	0	1	2	YSR101
102.	I don’t have much energy.	0	1	2	YSR102
103.	I am unhappy, sad, or depressed.	0	1	2	YSR103
104.	I am louder than other kids.	0	1	2	YSR104
105.	I use drugs for nonmedical purposes. **(DON’T INCLUDE ALCOHOL OR TOBACCO)**	0	1	2	YSR105

		Not true	Somewhat true or sometimes true	Very true or often true	
106.	I like to be fair to others.	0	1	2	YSR106
107.	I enjoy a good joke.	0	1	2	YSR107
108.	I like to take life easy.	0	1	2	YSR108
109.	I try to help other people when I can.	0	1	2	YSR109
110.	I wish I were of the opposite sex.	0	1	2	YSR110
111.	I keep from getting involved with others.	0	1	2	YSR111
112.	I worry a lot.	0	1	2	YSR112
113.	I have allergies	0	1	2	YSR113
114.	I have asthma.	0	1	2	YSR114
115.	I behave like a girl/boy.	0	1	2	YSR115
116.	When others need help, I gladly help them.	0	1	2	YSR116
117.	I have strong imagination	0	1	2	YSR117
118.	I am overly concerned about cleanliness	0	1	2	YSR118

CHILD DEPRESSION INVENTORY (CDI)

Now I'm going to ask you some questions about your thoughts and feelings in the **past two weeks**. People sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group of three sentences I read to you, please pick one sentence that describes you *best* for the past two weeks. After you pick a sentence from the first group, we will go on to the next group. There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently.

Remember; pick out the sentences that describe you best in the PAST TWO WEEKS.
(PLACE EMPHASIS ON THE WORDS IN BOLD).

1.	ITEM 1	I am sad **once in a while**.	0	CDI1
		I am sad **many** times.	1	
		I am sad **all** the time.	2	
2.	ITEM 2	**Nothing** will ever work out for me.	2	CDI2
		I am **not sure** if things will work out for me.	1	
		Things will work out for me **O.K.**	0	
3.	ITEM 3	I do **most** things O.K.	0	CDI3
		I do **many** things wrong.	1	
		I do **everything** wrong.	2	
4.	ITEM 4	I have fun in **many** things.	0	CDI4
		I have fun in **some** things.	1	
		Nothing is fun at all.	2	
5.	ITEM 5	I am bad **all** the time.	2	CDI5
		I am bad **many** times.	1	
		I am bad **once in a while**.	0	
6.	ITEM 6	I **think about** bad things happening to me once in awhile.	0	CDI6
		I **worry** that bad things will happen to me.	1	
		I am **sure** that terrible things will happen to me.	2	

7.	ITEM 7	I **hate** myself.	2	CDI7
		I **do not like** myself.	1	
		I **like** myself.	0	
8.	ITEM 8	**All** bad things are my fault.	2	CDI8
		Many bad things are my fault.	1	
		Bad things are **not usually** my fault.	0	
9.	ITEM 9	I **do not** think about killing myself.	0	CDI9
		I think about killing myself but I **would not** do it.	1	
		I **want** to kill myself.	2	
10.	ITEM 10	I feel like crying **every** day.	2	CDI10
		I feel like crying **many** days.	1	
		I feel like crying **once in a while**.	0	
11.	ITEM 11	Things bother me **all** the time.	2	CDI11
		Things bother me **many** times.	1	
		Things bother me **once in a while**.	0	
12.	ITEM 12	I **like** being with people.	0	CDI12
		I **do not like** being with people **many times**.	1	
		I **do not** want to be with people **at all**.	2	
13.	ITEM 13	I **cannot** make up my mind about things.	2	CDI13
		It is **hard** to make up my mind about things.	1	
		I make up my mind about things **too easily**.	0	
14.	ITEM 14	I look **o.k.**	0	CDI14
		There are **some** bad things about my looks.	1	
		I look **ugly**.	2	
15.	ITEM 15	I have to push myself **all** the time to do my schoolwork.	2	CDI15
		I have to push myself **many** times to do my schoolwork.	1	
		Doing schoolwork is **not a big problem**.	0	

16.	ITEM 16	I have trouble sleeping **every** night.	2	CDI16
		I have trouble sleeping **many** nights.	1	
		I sleep **pretty well**.	0	
17.	ITEM 17	I am tired **once in a while**.	0	CDI17
		I am tired **many** days.	1	
		I am tired **all** the time.	2	
18.	ITEM 18	**Most** days I do not feel like eating.	2	CDI18
		Many days I do not feel like eating.	1	
		I eat **pretty well**.	0	
	Remember; pick out the sentences that describe you best in the PAST TWO WEEKS.			
19.	ITEM 19	I **do not** worry about aches and pains.	0	CDI19
		I worry about aches and pains **many** times.	1	
		I worry about aches and pains **all** the time.	2	
20.	ITEM 20	I **do not** feel alone.	0	CDI20
		I feel alone **many** times.	1	
		I feel alone **all** the time.	2	
21.	ITEM 21	I **never** have fun at school	2	CDI21
		I have fun at school only **once in a while**.	1	
		I have fun at school **many** times.	0	
22.	ITEM 22	I have **plenty** of friends.	0	CDI22
		I have **some** friends but I wish I had more.	1	
		I **do not have** any friends.	2	
23.	ITEM 23	My schoolwork is **alright**.	0	CDI23
		My schoolwork is **not as good** as before.	1	
		I do **very badly** in subjects I used to be good in.	2	
24.	ITEM 24	I can **never be** as good as other kids.	2	CDI24
		I **can be** as good as other kids if I want to.	1	
		I am **just** as good as other kids.	0	

25.	ITEM 25	**Nobody** really loves me.	2	CDI25
		I am **not sure** if anybody loves me.	1	
		I am **sure** that somebody loves me.	0	
26.	ITEM 26	I **usually** do what I am told.	0	CDI26
		I **do not** do what I am told most times.	1	
		I **never** do what I am told.	2	
27.	ITEM 27	I **get along** with people.	0	CDI27
		I get into fights **many** times.	1	
		I get into fights **all** the time.	2	

SCHOOL BACKGROUND

Teenagers have a variety of experiences at school. Now I'm going to ask a few questions about your school experiences.

1. Are you currently in school? SB1

YES 1

NO 0

If "NO" ask: "How long have you been out of school and why they are not in school?" **(SKIP TO 6)**

---

2. What grade are you in? SB2

Elemen. School: _____ GRADE 1

Middle School: _____ GRADE 2

High School: _____ GRADE 3

SKIP TO 4

3. What are your educational plans for completing MIDDLE school? Are you **(READ LIST):** SB3

Not planning to finish middle school 1

Planning to finish middle school and go to a vocational high school 2

Planning to finish high school and go to an regular high school 3

Planning to finish high school and go to an special high school 4

SKIP TO 5

4. Is your high school a **(READ LIST):** SB4

Vocational High School 1

Regular High School 2

Special High School 3

5. What are your educational plans for AFTER high school? **(READ LIST)** SB5

2 or 4 year college Beyond college like graduate school, law school or medical school 1

Get a paid job/ Will work (include with family_ 2

Founded will?? 3

	Part-time job	4	
	Help family business without pay	5	
	Work placement	6	
	No plans	7	
6.	Since elementary school, how many different schools have you attended?	# OF SCHOOLS	SB6
7.	Do you have any medical condition or disability that keeps you from attending school regularly?	YES 1 NO 0	HW1
8.	Throughout your whole life, Have you ever been told that you have any kind of learning or behavior problem?	YES 1 NO **(SKIP TO 11)** 0	SB8
9.	What did they tell you? _____ _____	CODER	SB9
10.	Have you received help for this problem? **(IF YES, ASK TO DESCRIBE)** _____ _____	YES 1 NO 0 CODER	SB10
11.	In the past week , on average how much TV did you watch during the week (Sunday-Thursday)	# HOURS	HW4
12.	In the past week, on average how many hours did you spend on Internet, computer games or smartphone game during the week? (Sunday to Thursday)	# HOURS	HW5
	Some children attend programs after school.		
13.	Do you attend an after school private institution (hagwon), a private tutor, or	YES 1	SB11

any other classes that you have to pay for after school (i.e. internet lectures)?

NO (**SKIP TO NEXT SECTION)** 0

14. What do you learn in these after school programs? (i.e. school subjects, math, Korean, piano, arts & crafts)

SB112

_____

_____

CODER

Source: http://www.uncssp.org/ School Success Profile

SCHOOL: GRADES, ENGAGEMENT, SAFETY, BULLYING

Now I'm going to ask you about your most recent grades**.**

(GRADES) [National adolescents 2012, p.3, Q3]

1. During the past year, how were your school grades? Unknown to others, so please feel free to be honest. Please respond for each item "Bottom, Below average, Average, Above Average, Top". **(IF NOT CURRENTLY IN SCHOOL ASK ABOUT LAST YEAR IN SCHOOL.)** **HAND RESPONSE CARD)** SA1

		Bottom	Below Average	Average	Above Average	Top	
a.	Average all subjects	1	2	3	4	5	SA1a
b.	language	1	2	3	4	5	SA1b
c.	mathematics	1	2	3	4	5	SA1c
d.	English	1	2	3	4	5	SA1d

(**SCHOOL ENGAGEMENT)** [National adolescents 2012, p.3, Q2]

2. The following are questions about i school during the past year. Please respond "None", "Not Really" , "Relatively", Almost". (**HAND RESPONSE CARD)** SA2

		Strongly disagree	Disagree	Agree	Strongly Agree	
a.	School is fun	1	2	3	4	SA2a
b.	I like to learn most subjects	1	2	3	4	SA2b
c.	I have respect for most teachers in our school	1	2	3	4	SA2c
d.	I have a good class attitude	1	2	3	4	SA2d
e.	I regularly do my homework	1	2	3	4	SA2e
f.	I follow the teacher's instructions	1	2	3	4	SA2f
g.	There are times when I attempted to quit school	1	2	3	4	SA2g
h.	I have looked at a friend's answers during an exam	1	2	3	4	SA2h
i.	I have left class without permission	1	2	3	4	SA2i

Now I'm going to ask you some questions about your school environment and teachers.

(SCHOOL SAFETY) [National adolescents 2012, p.3, Q4]

1. In general, aplease share your opinion about your school. After each statement please respond". "Strongly disagree", "disagree", "Agree", "Strongly Agree".

		Strongly disagree	Disagree	Agree	Strongly Agree	
a.	Overall, our school teachers and students are friendly and fair	1	2	3	4	SSBP1a
b.	Teachers in my school treat all students fairly	1	2	3	4	SSBP1b
c.	Teachers praise students for working hard	1	2	3	4	SSBP1c
d.	Teachers discourage students in class.	1	2	3	4	SSBP1d
e.	I feel safe at school	1	2	3	4	SSBP1e
f.	Teachers scold for making mistakes	1	2	3	4	SSBP1f

Now I want to ask you about your experience at school.

(BULLYING/BULLIED) [National adolescents 2012, p.7, Q10]

2. During the past year, the school suffered following experience before? If you have, and how often? Please respond "Never", 1 time, 2-3 times, 4 times or more. (**HAND RESPONSE CARD)** SSBP2

		Never	1time	2-3 times	4 + times	
a.	Other children tease or taunt me by calling me nickname or a fool	1	2	3	4	SSBP2a
b.	Other children intentionally do not invite me to do anything or exclude/leave me out deliberately	1	2	3	4	SSBP2b
c.	Other children spread gossip and bad rumors about me behind my back	1	2	3	4	SSBP2c
d.	Other children have threatened or intimated me for not doing what they wanted	1	2	3	4	SSBP2d
e.	Other children have intimidated, hit or scared me for money or property	1	2	3	4	SSBP2e
f.	Other children have hit, kicked or punched me	1	2	3	4	SSBP2f

UCLA PTSD INDEX (UCLA)

So now, I'm going to ask about traumatic and stressful things that sometimes happen to people. This is a list of some traumatic things that can happen. Tell me "**YES** if the stressful thing has ever happened. Tell me "**NO"** if it has never happened. Do NOT include things you may have only heard about from other people or from the TV, radio, news, or the movies. Only answer what has happened to you in real life. Some questions ask about what you SAW happen to someone else. And other questions ask about what actually happened to YOU. There are no right or wrong answers and this is not a test.

1.	Have you or someone you know, ever been in a serious accident where someone could have been or was badly hurt, or died?	YES	1	UCLA1
		NO	0	
2.	Have you ever experienced a disaster like a fire, flood, tornado, or earthquake?	YES	1	UCLA2
		NO	0	
3.	Have you ever been in a place where a war was going on around you?	YES	1	UCLA3
		NO	0	
4.	Has anyone close to you ever been very sick or seriously injured?	YES	1	UCLA4
		NO	0	
5.	Has anyone close to you died?	YES	1	UCLA5
		NO	0	
6.	Have you had a serious illness or injury, or had to be rushed to the hospital?	YES	1	UCLA6
		NO	0	
7.	Have you ever been attacked by a dog or other animal?	YES	1	UCLA7
		NO	0	
8.	Have you ever been beaten up, attacked with a weapon, shot at or threatened to be hurt badly in your neighborhood?	YES	1	UCLA8
		NO	0	
9.	Have you seen someone else being beaten up, attacked with a weapon, shot at or killed in your neighborhood?	YES	1	UCLA9
		NO	0	

10.	Have you ever been hit, punched, or kicked very hard at home?	YES NO	1 0	UCLA10
11.	Have you ever seen a family member being hit, punched or kicked very hard at home?	YES NO	1 0	UCLA11
12.	Have you ever had an adult or someone older than you touch your private sexual body parts when you did not want them to?	YES NO	1 0	UCLA12
13.	Have you had to be separated from you parent or someone you depend on for more than a few days when you didn't want to be?	YES NO	1 0	UCLA13
14.	Other than the situations already described, has anything else ever happened to you that was really scary, dangerous, or violent?	YES NO	1 0	UCLA14
a.	If yes, what happened?			UCLA14a
		CODER		

Steinberg, A.M., Brymer, M.J., Decker, K.B., & Pynoos, R. (2004). *The University of California at Los Angeles Post-traumatic Stress Disorder Reaction Index.* Current Psychiatry Reports, 6, 96-100. UCLA PTSD Index

CHILD PTSD SYMPTOM SCALE (CPSS)

Now I am going to read you some phrases that describe a problem. Please tell me how often that problem or trauma has bothered you in the **past month** by using **"not at all", "once a week or less", "two to four times a week", or "five or more times a week" HAND RESPONSE CARD.**

		Not at all	Once a week or less	Two to Four times a week	Five or more times a week	
1.	Having upsetting thoughts or images about the problem or trauma that came into your head when you didn't want them to	0	1	2	3	CPSS1
2.	Having bad dreams or nightmares	0	1	2	3	CPSS2
3.	Acting or feeling as if the trauma was happening again (hearing something or seeing a picture about it and feeling as if I am there again)	0	1	2	3	CPSS3
4.	Feeling upset when you think about or hear about the trauma (for example, feeling scared, angry, sad, guilty, etc)	0	1	2	3	CPSS4
5.	Having feelings in your body when you think about or hear about the trauma (for example, breaking out in a sweat, heart beating fast)	0	1	2	3	CPSS5
6.	Trying not to think about, talk about, or have feelings about the trauma	0	1	2	3	CPSS6
7.	Trying to avoid activities, people, or places that remind you of the traumatic event	0	1	2	3	CPSS7
8.	Not being able to remember an important part of the trauma	0	1	2	3	CPSS8
9.	Having much less interest or not doing things you used to do	0	1	2	3	CPSS9
10.	Not feeling close to people around you	0	1	2	3	CPSS10
11.	Not being able to have strong feelings (for example, being unable to cry or unable to feel very happy)	0	1	2	3	CPSS11

		Not at all	Once a week or less	Two to Four times a week	Five or more times a week	
12.	Feeling as if your future plans or hopes will not come true (for example, you will not have a job or get married or have kids)	0	1	2	3	CPSS12
13.	Having trouble falling or staying asleep	0	1	2	3	CPSS13
14.	Feeling irritable or having fits of anger	0	1	2	3	CPSS14
15.	Having trouble concentrating (for example, losing track of a story on television, forgetting what you read, not paying attention in class)	0	1	2	3	CPSS15
16.	Being overly careful (for example, checking to see who is around you and what is around you)	0	1	2	3	CPSS16
17.	Being jumpy or easily startled (for example, when someone walks up behind you)	0	1	2	3	CPSS17

IF RESPONDENT ANSWERED "NOT AT ALL" TO ALL QUESTIONS 1-17 SKIP TO NEXT SECTION

Now I'm going to ask you if the problems you rated in part 1 have gotten in the way with any of the following areas of your life DURING THE PAST MONTH. Please answer by using "Yes" or "No".

18.	Religious and spiritual activities	YES	1	CPSS18
		NO	0	
19.	Chores and duties where you live	YES	1	CPSS19
		NO	0	
20.	Relationships with friends	YES	1	CPSS20
		NO	0	
21.	Hobbies and other fun activities	YES	1	CPSS21
		NO	0	

22.	Schoolwork	YES	1	CPSS22
		NO	0	
23.	Relationships with your family	YES	1	CPSS23
		NO	0	
24.	General happiness with your life	YES	1	CPSS24
		NO	0	

Source: Foa, E., Johnson, K., Feeny, N. & Treadwell, K. (2001). The child PTSD symptom scale: A preliminary examination of its psychometric properties. *Journal of Clinical Child Psychology, 30*(3), 376-284. Subscales: Reexperiencing, Avoidance, Arousal

CHILDHOOD ABUSE/NEGLECT (CAN)

Please indicate how often the following things have happened over the past year .In the following questions, parents refers to any grown-up who has cared for you in the past year" After each statement please respond "**Never**", "1-2 times per year", "1-2 times in 2-3 times", "1-2 times a month", "1-2 times a week" (**HAND RESPONSE CARD).**

		Never	1-2 times per year	1-2 times in 2-3 months	1-2 times a month	About 1-2 times a week	
1.	I have been hit badly by my parents	1	2	3	4	5	CAN1
2.	My parents made me I feel shame and humiliation	1	2	3	4	5	CAN2
3.	My parents told me, "If only you would be comfortable hollow"	1	2	3	4	5	CAN3
4.	Parents tole me, I was 'stupid things', 'idiot' and other offensive words	1	2	3	4	5	CAN4
5.	After school, my parents come home late and have no interest in me	1	2	3	4	5	CAN5
6.	If I am absent from school withouat a reason, my parents will not say anything to me.	1	2	3	4	5	CAN6
7.	My parents notice if I need things like money or material things	1	2	3	4	5	CAN7
8.	My parents notice what I do for fun	1	2	3	4	5	CAN8

ATTACHMENT/RELATIONSHIP QUESTIONNAIRE (ARQ)

Now I am going to read four general relationship styles that people often report.

1. Please tell me which letter corresponds to the style that best describes you or is closest to the way you are. **(HAND RESPONSE CARD)**

Style A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	1	ARQ1
Style B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	2	
Style C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.	3	
Style D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	4	

Bartholomew, K. & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four- category model. Journal of Personality and Social Psychology, 61, 226-244.

BIRTH FAMILY BACKGROUND (BF)

Now I am going to ask you some questions about your birth family. Your birth parents are your mother and father who are related to you by blood and who gave birth to you. Your birth family include people who are related to you by blood, but are not your parents. Try to answer the questions to the best of your ability.

1. How old were you when you were separated from your birth parent or family and (ADOPTED / PLACED IN A FACILITY)? ____ AGE — BF1

2. Do you have information about your birth parents or family? YES 1, NO 0 — BF2

   If "YES": Describe how did you get information about your birth family.
   If "NO": Describe a time when you have tried or thought about getting information about your birth family?

   _____
   _____
   _____

Now I am going to ask you what you remember or have been told about your birth parents.

3. What was your birth parent's marital status when you were born? — BF3

Not Married	1
Separated	2
Divorced	3
Married	4
Don't Know	998

4. Economically, were your birth parents (**READ LIST):** — BF4

Poor	1
Middle	2
Wealthy	3
Don't Know	998

5. What was the highest education level your birth mother completed? — BF5

Less than high school	1
High school or GED	2
College	3
Beyond college (ie law, grad)	4
Don't Know	998

6. What was the highest education level your birth father completed? — BF6

Less than high school	1
High school or GED	2
College	3
Beyond college (ie law, grad)	4
Don't Know	998

7. Has either your birth mother or father died? BF7

YES	1
If "Yes" Ask Who: _____	
NO	0
Don't Know	998

8. Do you have biological brothers or sisters? BF8

YES	1
NO **SKIP TO 10**	0
Don't Know	998
SKIP TO 10	

9. In your current living situation, are you living with biological brothers or sisters? BF9

YES	1
NO	0

10. Now I would like to ask you about contact with your birth parents or family. Since being separated, have you had contact with a birth parent or birth family? BF10

YES	1
NO	0
SKIP TO 12	

11. a. Since living in your current situation, what birth parents or birth family members have you been in contact with? For example, your birth mother, father, grandparents, Aunts/Uncles etc. BF11a

b. Since living in your current situation, about how often do you have contact with them? For example, only one time, once a year, 5 times a month, or 10 times a week. BF11b

b. Since living in your current situation, what ways do you have contact with them? For example mailing letters, email, calling on the phone, text messaging, or face to face visits. BF11c

a.Person	b. # of times	c. Type of contact (i.e. mail letter, email, phone, text, face to face visit)

12. There are many reasons children leave their birth parents to be cared by others. I am going to list several reasons children leave their birth parent or family and (ARE ADOPTED / PLACED IN A FACILITY). Please say "Yes" or "No" if this is the reason you left your birth parents or family **(READ LIST):** BF12

		Y	N	
a.	Birth parents were poor	1	0	BF12a
b.	One or both parents got sick	1	0	BF12b
c.	Birth parents were not married	1	0	BF12c
d.	Birth parent ~~hurt~~ abuse and neglected me	1	0	BF12d
e.	One birth parent died	1	0	BF12e
f.	Both birth parents died	1	0	BF12f
g.	Birth parents divorced	1	0	BF12g
h.	Birth relative could not take care of me anymore	1	0	BF12h
i.	Other reasons **(SPECIFY): _____**	1	0	BF12i

13. Of the reasons, which one do you think is the MAIN reason you left your birth parents? BF13

_____ ☐☐☐

CODER

(ADOPTEES ONLY)

14. What are the reasons your adoptive parents wanted to adopt you? For example, maybe because they could not give birth, or they wanted more children, or they wanted a daughter or son. BF14

_____

_____

BIRTHPARENT APPRAISAL SCALE (BPAS)

Now I am going to describe some feelings and thoughts and feelings you might have about birth parents. Each question below describes two kinds of kids. Please listen to each statement and decide first, which type of kid is more like YOU. Once you picked the statement that is more like you, then say if you think it is**: "*Really true for me" or "Sort of True*" for me.**

(USE "ADOPTED KIDS" OR "KIDS IN FACILITIES" TO REFLECT CURRENT LIVING SITUATION)

	Which person is most like you, 1 or 2:	**Really True for me**	**Sort of True for me**	
1.	1. Some (adopted kids/ kids in facilities) don't wish to know what their birth parents look like **BUT** 2. Other (adopted kids/ kids in facilities) wish they knew what their birth parents look like.	1 4	2 3	BPAS1
2.	1. Some (adopted kids/ kids in facilities) wonder why their birth parents placed them (for adoption/ in a facility) **BUT** 2. Other (adopted kids/ kids in facilities) **don't** think about the reasons their birth parents had for placing them.	4 1	3 2	BPAS2
3.	1. When they think about being placed for (adoption/ in a facility) by their birth parents, some kids feel angry **BUT** 2. Other (adopted kids/ kids in facilities) **don't** feel angry when they think about being placed for (adoption/in a facility).	4 1	3 2	BPAS3
4.	1. Some (adopted kids/ kids in facilities) believe they know enough about their birth parents **BUT** 2. Other (adopted kids/ kids in facilities) wish they knew more about their birth parents	1 4	2 3	BPAS4
5.	1. Some (adopted kids/ kids in facilities) believe they will never be really happy until they meet their birth parents **BUT** 2. Other (adopted kids/ kids in facilities) believe they can be happy even if they never meet their birth parents.	4 1	3 2	BPAS5

		Really True for me	Sort of True for me	
6.	1. When they think about being placed (for adoption/ in a facility) by their birth parents, some kids feel sad or upset **BUT** 2. Other (adopted kids/ kids in facilities) **don't** feel sad or upset when they think about being placed (for adoption/facility).	4 1	3 2	BPAS6
7.	1. Some (adopted kids/ kids in facilities) feel confused when they think about why their birth parents placed them (for adoption/in a facility) **BUT** 2. Other (adopted kids/ kids in facilities) **don't** feel confused when they think about this.	4 1	3 2	BPAS7
8.	1. Some (adopted kids/ kids in facilities) don't care a lot about what their birth parents are like **BUT** 2. Other (adopted kids/ kids in facilities) care a great deal about what their birth parents are like.	1 4	2 3	BPAS8
9.	1. Some (adopted kids/ kids in facilities) feel OK when they think about their birth parents **BUT** 2. Other (adopted kids/ kids in facilities) feel sad or upset when they think about their birth parents.	1 4	2 3	BPAS9
10.	1. Some (adopted kids/ kids in facilities) hardly ever think about their birth parents **BUT** 2. Other (adopted kids/ kids in facilities) think about their birth parents all the time	1 4	2 3	BPAS10

COPING SCALE FOR CHILDREN AND YOUTH (CSCY)

All children and teenagers have some problems they find hard to deal with and that upset them or worry them. Kids who are (**ADOPTED / LIVING IN A FACILITY)** have told us that when they think about their birth parents they have lots of different feelings.

Listed below are some ways that children and teenagers try to deal with their thoughts and feelings when they have a problem. Please tell us how often you have used these behaviors when you tried to deal with thoughts and feelings about your birth parents, especially those times when you have been confused or upset, even a little. After each statement please respond **"Never", "Sometimes", "Often" or "Very Often". HAND RESPONSE CARD.**

	When you think about your birth parents and feel upset…..	**Never**	**Sometimes**	**Often**	**Very Often**	
1.	I asked someone in my family for help	1	2	3	4	CSCY1
2.	I tried not thinking about the problem.	1	2	3	4	CSCY2
3.	I went on with my usual activities as if nothing was wrong.	1	2	3	4	CSCY3
4.	I thought about the problem and tried to figure out what I could do about it.	1	2	3	4	CSCY4
5.	I stayed away from things that reminded me about the problem.	1	2	3	4	CSCY5
6.	I tried not to feel anything inside me. I wanted to feel numb.	1	2	3	4	CSCY6
7.	I pretended the problem wasn't very important to me.	1	2	3	4	CSCY7
8.	I knew I had lots of feelings about the problem, but I just didn't pay any attention to them.	1	2	3	4	CSCY8
9.	I took a chance and tried a new way to solve the problem.	1	2	3	4	CSCY9
10.	I tried to get away from the problem for awhile by doing other things.	1	2	3	4	CSCY10

11.	I made a plan to solve the problem and then I followed the plan.	1	2	3	4	CSCY11
12.	I pretended the problem had nothing to do with me.	1	2	3	4	CSCY12
13.	I went over in my head some of the things I could do about the problem.	1	2	3	4	CSCY13
	When you think about your birth parents and feel upset…..	**Never**	**Sometimes**	**Often**	**Very Often**	
14.	I thought about the problem in a new way so that it didn't upset me as much.	1	2	3	4	CSCY14
15.	I went to sleep so that I wouldn't have to think about it.	1	2	3	4	CSCY15
16.	When I was upset about the problem, I was mean to someone even though they didn't deserve it.	1	2	3	4	CSCY16
17.	I learned a new way of dealing with the problem.	1	2	3	4	CSCY17
18.	I tried to pretend that the problem didn't happen.	1	2	3	4	CSCY18
19.	I got advice from someone about what I should do.	1	2	3	4	CSCY19
20.	I hoped that things would somehow work out so I didn't do anything.	1	2	3	4	CSCY20
21.	I tried to pretend that my problem wasn't real.	1	2	3	4	CSCY21
22.	I tried not to be with anyone who reminded me of the problem.	1	2	3	4	CSCY22
23.	I shared my feelings about the problem with another person.	1	2	3	4	CSCY23

24.	I tried to figure out how I felt about the problem.	1	2	3	4	CSCY24
25.	I figured out what had to be done and then I did it.	1	2	3	4	CSCY25
26.	I kept my feelings to myself.	1	2	3	4	CSCY26
27.	I realized there was nothing I could do. I just waited for it to be over with.	1	2	3	4	CSCY27
28.	I decided to stay away from people and be by myself.	1	2	3	4	CSCY28
29.	I put the problem out of mind.	1	2	3	4	CSCY29

DISCRIMINATION (DIS)

Now I am going to ask you about feelings and being treated differently because you are ADOPTED/ LIVING IN A FACILITY

(Disclosure)

1. Who knows you are ADOPTED/ LIVING IN A FACILITY? (READ LIST) DIS1

	Y	N	DK	
Grandparents	1	0	DIS1a	D11a
Aunts/Uncles	1	0	DIS1b	D11b
Cousins	1	0	DIS1c	D11c
Siblings	1	0	DIS1d	D11d
Teachers	1	0	DIS1e	D11e
Class mates	1	0	DIS1f	D11f
Close friends	1	0	DIS1g	D115
Neighbors	1	0	DIS1h	D11h
Religious person	1	0	DIS1i	D11i
Others **(SPECIFY):** _____	1	0	DIS1j	D11j

2. At what age did you know you were ADOPTED/LIVING IN A FACILITY? ALL MY LIFE 0 DIS2

(IF NOT "ALL MY LIFE", RECORD AGE IN MONTHS)

|__|__|

AGE

3. Can you describe how you felt when you understood you were ADOPTED/ LIVING IN A FACILITY (i.e. who told you, how old were you, what did you think and feel?) DIS3

_____

_____

4. Throughout your life, how often did you feel you were discriminated against by the following people because you were ADOPTED/ LIVING IN A FACILITY [5] Please respond "Never", "Almost never", "sometimes, "Fairly Often" or "Very often". **(HAND RESPONSE CARD)** DIS4

	Never	Almost never	Some times	Fairly Often	Very often	
a. Childhood friends	1	2	3	4	5	DIS4a
b. Parents of childhood friends	1	2	3	4	5	DIS4b
c. Classmates	1	2	3	4	5	DIS4c
d. Teachers	1	2	3	4	5	DIS4d
e. Romantic partner	1	2	3	4	5	DIS4e
f. Extended family (Aunts, Uncle, Grandparents)	1	2	3	4	5	DIS4f
g. Strangers	1	2	3	4	5	DIS4g
h. Other: _____	1	2	3	4	5	DIS4h

[5] From DAI Identity study 2009

AGGRESSION PROBLEM BEHAVIOR FREQUENCY – VICTIM (APBV)

I am now going to read a list of behaviors. Please indicate if you have ever experienced any of the following events in your lifetime (check NO or YES). If YES, then please tell me the number of times this has happened in the last year. **(HAND RESPONSE CARD).**

	PHYSICAL AGGRESSION	**No**	**Yes**	**1-2 times**	**3-5 times**	**6-9 times**	**10-19 times**	**20 + times**	
1.	Someone threw something at you to hurt you because you are ADOPTED/ LIVING IN A FACILITY?	0	1	2	3	4	5	6	APBV1
2.	Been in a fight in which you were hit because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV2
3.	A teacher threatened to hurt you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV3
4.	Another person shoved or pushed you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV4
5.	Someone threatened you with a weapon (gun, knife, club, etc.) because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV5
6.	Another person hit or slapped you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV6
7.	Another person threatened to hit or physically harm you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV7
	NON-PHYSICAL AGGRESSION								
8.	Someone insulted your family because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV8
9.	Someone teased you to make you angry because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV9
10.	Someone put you down to your face because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV10
11.	Another person gave mean looks to you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV11
12.	Someone picked on you because you are ADOPTED/ LIVING IN A FACILITY?	0	1	2	3	4	5	6	APBV12
	RELATIONAL AGGRESSION								
13.	Another person didn't let you in the group anymore because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV13
14.	Another person told you they wouldn't like you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV14
15.	Another person tried to keep others from liking you by saying mean things about you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV15
16.	Another person spread a false rumor about you because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV16
17.	Another person left you out on purpose when it was time to do an activity because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV17
18.	Another person said things about you to make other people laugh because you are ADOPTED/ LIVING IN A FACILITY??	0	1	2	3	4	5	6	APBV18

Adapted from Dahlberg, L. L., Toal, S. B., Swahn, M., & Behrens, C. B. (2005). *Measuring violence-related attitudes, behavior, and influence among youths: A compendium of assessment tools, 2nd ed.*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, p. 181-182. *Revised items to reflect victim aggression related to being in an orphanage.*

MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MPSS)

Teens have people who give them emotional comfort and assistance. Indicate your level of agreement with each statement. Please respond **Strongly Disagree, Disagree, Slightly Disagree, Neither Agree nor Disagree, Slightly Agree, or Agree** after each statement. **HAND RESPONSE CARD.**

		Strongly Disagree	Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Agree	
1.	I do not have a special person to talk to when I am in need.	1	2	3	4	5	6	MPSS1
2.	I have a special person to talk with about good and bad times in my life.	1	2	3	4	5	6	MPSS2
3.	My family really tries to help me.	1	2	3	4	5	6	MPSS3
4.	If I had an emergency, no one in this community would be willing to help*	1	2	3	4	5	6	MPSS 4
5.	I do not get the emotional help and support I need from my family	1	2	3	4	5	6	MPSS5
6.	I have a special person who really makes me feel supported	1	2	3	4	5	6	MPSS6
7.	My friends really try to help me	1	2	3	4	5	6	MPSS7
8.	People here know that they can get help from the community if they are in trouble.*	1	2	3	4	5	6	MPSS8
9.	I cannot talk about my problems with my family.	1	2	3	4	5	6	MPSS9
10.	There is a feeling in this community that people should not get too friendly with each other.	1	2	3	4	5	6	MPSS10
11.	I have friends to talk to about good and bad times in my life	1	2	3	4	5	6	MPSS11
12.	There is no special person in my life who cares about my feelings	1	2	3	4	5	6	MPSS12
13.	My family is willing to help me make decisions	1	2	3	4	5	6	MPSS13

14.	I cannot talk about my problems with my friends.	1	2	3	4	5	6	MPSS14
15.	People can depend on each other in this community.*	1	2	3	4	5	6	MPSS15

CURRENT CAREGIVER/PARENT SUPPORT (CCPS)

Now I am going to ask you about the adults in your current living situation. In the following questions, family and home means the people you currently live with and adults who support you.

CAREGIVER/ PARENT SUPPORT

1. I want you to think of the adults in your home. During the past month, how often did the adults in your home support you in the following ways? Please respond, **Never, Once or Twice, More than Twice** after each statement. **(HAND RESPONSE CARD)** CCPS1

	NEVER	ONCE OR TWICE	MORE THAN TWICE	
a. Let you know you were loved	1	2	3	CCPS1a
b. Made you feel appreciated.	1	2	3	CCPS1b
c. Told you that you did a good job.	1	2	3	CCPS1c
d. Made you feel special.	1	2	3	CCPS1d
e. Spent free time with you.	1	2	3	CCPS1e

HOME ACADEMIC ENVIRONMENT

2. Now think about what you talk about with the adults in your home. During the past month, how often did you discuss the following with any adults who live in your home? CCPS2

a. Your plans for the future	1	2	3	CCPS2
b. Work/career choices	1	2	3	CCPS2
c. Your plans for college	1	2	3	CCPS2

PARENT EDUCATION SUPPORT

3. During the past month, how often did you any of the adults in your home do the following? CCPS3

a. Encouraged you to do well in school	1	2	3	CCPS3b
b. Helped you get books or supplies you needed to do your school work	1	2	3	CCPS3d
c. Praised or rewarded you for working hard on school work	1	2	3	CCPS3e
d. Offered to help you with a homework or special assignment	1	2	3	CCPS3f

ROSENBERG SELF-ESTEEM (RSE)

Over the past one year if you are on your own to see how it is. Please respond "Strongly disagree", "disagree", "Agree", "Strongly Agree" (HAND RESPONSE CARD)

		Strongly disagree	Disagree	Agree	Strongly agree	
1.	I feel I am a person of worth	1	2	3	4	RSE1
2.	I feel I have a numbmer of good qualities.	1	2	3	4	RSE2
3.	I am able to do things as well as most other people.	1	2	3	4	RSE3
4.	I take a positive attitude toward myself.	1	2	3	4	RSE4
5.	On the whole, I am satisfied with myself.	1	2	3	4	RSE5
6.	I think I have skills/talent *	1	2	3	4	RSE6
7.	I am strong willed *	1	2	3	4	RSE7
8.	Even if I cannot do it at first, I try hard. *	1	2	3	4	RSE8
9.	All in all, I am inclined to think that I am a failure.	1	2	3	4	RSE9
10.	I feel I do not have much to be proud of.	1	2	3	4	RSE10
11.	I certainly feel useless at times.	1	2	3	4	RSE11
12.	At times I think I am no good at all (no ability)	1	2	3	4	RSE12
13.	I wish I could have more respect for myself.	1	2	3	4	RSE13

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YOUTH SUGGESTIONS FOR CHANGE

1. If you could change anything about [ADOPTION/ LIFE IN AN ORPHANAGE] what would you change? [FG question #15] YSC

Appendix C: Focus Group Interview Guide

ORPHANAGE WORKERS

A. 5 MINUTES

- CHECK IN.

B. 10 MINUTES

- CONSENT FORMS INDIVIDUALLY AND ANSWER QUESTIONS.

C. 5 MINUTES

- INTRODUCTION/ WELCOME

Welcome and thanks for agreeing to participate in this focus group. My name is [INSERT NAME] and I am [INSERT PROJECT ROLE] on this project. [INSERT NAME] also works on the project and is here to take notes.

We are conducting a study to understand the feelings and experiences of adolescents growing up in orphanages and adoptive families. We are here to get your views on the challenges and strengths of these youth, their thoughts about their birth family, and being different because they are [LIVING IN AN ORPHANAGE]. We hope this research will help to identify ways we can support these youth in the future.

We thank you for your time and sharing your insights on [ADOPTION/LIVING IN AN ORPHANAGE]. Remember, there are no right or answers to these questions; we just want your opinions.

E. QUESTIONS

<BACKGROUND>

1. Please tell me your last name, age, and how long you have worked in (FACILITY) and training.

2. What is the typical age of children when they (ENTER FACILITY)? {ratio care:child}

3. What are the reasons (ENTER FACILITY)? {ask if have changed}

<PROBLEMS>

4. What do you think are some of the difficulties youth have because they are [ADOPTED/LIVING IN AN ORPHANAGE]? {Think about challenges see: emotional, school, behavior}

a. What do you think are some of the adolescents' strengths?

<BIRTH FAMILY>

5. Do youth have contact with their birth family? Please give an example. If not, what do you think are youth's feelings about meeting them?

a. What are the things youth have expressed wanting to know about their birth family?

b. When youth talk about their birth family, how do you think they feel?

c. Have a youth's thoughts and feelings about their family ever affected their relationships or contributed to problems in school?

6. When youth talk about being placed for [ORPHANAGE] by their birth family, how do you think they feel? Please give an example.

7. What do you think can be helpful to youth with their thoughts and feelings about their birth family?

<STIGMA, PREJUDICE, DISCRIMINATION>

8. Do you think youth feel different because they are [LIVING IN AN ORPHANAGE]? If yes, why do you think they feel different?

9. Have you heard of youth being teased or made fun of rejected, treated unfairly} **because they are [LIVING IN AN ORPHANAGE]? If yes, give an example.**

a. What are some things that **people say or do** that are most hurtful to youth who are [LIVING IN AN ORPHANAGE]?

b. Can give an example of when a youth was **treated unfairly** because they are [ADOPTED/LIVING IN AN ORPHANAGE]?

c. Can give an example of when a youth was **rejected by others** (friends, **teachers**, **adults, family members,** romantic partner) because they are [LIVING IN AN ORPHANAGE]?

d. Can you give an example of when a youth has been **denied an opportunity** (i.e. a job, school activity, scholarship) because they are [LIVING IN AN ORPHANAGE]?

10. Are there other ways that society or culture discriminate against youth who are [LIVING IN AN ORPHANAGE]? {create barriers/ make difficult}

a. In your view, what is society's **stereotype and** view/portrayal (i.e. movies, tv, news, books) of youth who are [LIVING IN AN ORPHANAGE]?

<ENDING><마무리>

11. What do you think has been most helpful to the emotional health and success in school or life for youth who are [LIVING IN AN ORPHANAGE]?

12. If you could change anything about [LIFE IN AN ORPHANAGE] {child welfare system} **what would you change?**

a. If you had unlimited money, what services or resources would you want to provide to youth who are [LIVING IN AN ORPHANAGE]?