Communication Between Left-Behind Children and Their Migrant Parents in China: A Study of Imagined Interactions, Relational Maintenance Behaviors, Family Support, and Relationship Quality

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Chapter I

Introduction

Millions of Chinese farmers have flocked to cities in search of better job opportunities in the last three decades as a result of uneven development in urban and rural areas in China. A report of the National Bureau of Statistics of China stated that the total number of migrant workers had reached 288.36 million (National Bureau of Statics, 2019). When the labor migrants left their children behind with extended family members or friends to work in the cities, a vulnerable group known as left-behind children came into being (Chan, 2009).

The term *left-behind children* was defined as "children under 18 who have been left behind at their original residence while one or both parents migrate into other places for work and have not been living together with them for at least six months" (F. L. Zhou & Duan, 2006). About 37.7% of rural children under 18, estimated at 61 million, were left behind when their parents migrated to cities to work (All-China Women's Federation [ACWF], 2014), and the numbers have grown steadily in China's vast rural areas. Left-behind children were recently redefined as

> children under 16 who have been left behind at their original residence while both parents migrate into other places for work or one of the parents migrates into other places for work and the other one has no capacity of parental custody. (State Council of China, 2016)

This definition reduced the number of left-behind children to 6.97 million across the country (Ministry of Civil Affairs of China, 2018).

A 2014 national survey showed that 46.74% of left-behind children were separated from both parents; among those, 32.67% of left-behind children lived with grandparents, and 10.7%

lived with others (i.e., relatives, friends, or neighbors) (ACWF, 2014). In the western and central regions of China, the proportion of the left-behind children living with grandparents was as high as 73% (S. Z. Lu & Lu, 2006). The most recent national report indicated that 96% of the left-behind children were taken care of by their grandparents (Ministry of Civil Affairs of China, 2018). When entrusted with the care of left-behind children, grandparents often experience difficulties providing the psychological and emotional support children need. In a survey in Sichuan, the province with the highest number of left-behind children, 80% of caregiving grandparents had difficulty satisfying the psychological needs (e.g., affection, companionship, and communication) of their grandchildren because of their physical weakness, lower educational levels, and poorer living conditions; in fact, 15% said they did not care about such needs (China Youth Research Center, 2008). Compared to children living with both parents, left-behind children became less attached and more depressed when their need for love and communication was unsatisfied by both migrant parents and caregiving grandparents (Chan, 2009).

Compared to children living with parents, left-behind children were furthermore reported to experience greater psychological and behavioral problems caused by long-term separation from their parents (Biao, 2007). A study of 250 junior high school students who were left behind for more than six months in Jichun County, Hubei Province, showed that more than half of them had difficulties adapting to the left-behind life, 16.6% felt abandoned, 12.3% had problems expressing difficulties or obtaining help, and 6.5% felt anguish about being left behind (Liang, 2004). In 2004 a survey conducted by the Women's Federation of Meishan City, Sichuan Province, sampled nearly 12,000 students, 51.2% of whom were left-behind children. The report suggested that left-behind children experienced high drop-out rates, poor academic performance,

and problems in socialization and psychological development (X. Li, 2004). Without proper intervention, these problems, taken together, might result in emotional symptoms, peer problems, and antisocial behaviors (F. Fan, Su, Gill, & Birmaher, 2010). This phenomenon is now so commonplace that the Chinese media refers to it as "left-behind children syndrome" (S. Ren, 2005).

Experts have called for more efforts from society to care for these children; in fact, some have argued that the only long-term solution to the problems facing left-behind children is a wide-ranging, systematic reform of the social welfare system and abolition of China's antiquated household registration system (Chan, 2009). The Chinese government issued a white paper on medical reform and the draft of a social insurance law, both acknowledging the needs of migrants (Chan, 2009). The social insurance law specified the rights of migrant workers to social insurance for the first time. To reduce the financial burden of rural children, the Chinese government has initiated the "two-waiver and one-subsidy" policy (Chan, 2009). Students in the poorest rural areas are no longer required to pay textbook and miscellaneous fees, and boarding students with financial difficulties are subsidized. In addition, many programs in China have been designed to improve these children's economic status, physical health, school performance (Luo et al., 2008), mental health, and psychological well-being (Jia & Tian, 2010).

Problem Statement and Rationale of the Study

Several scholars have examined relationships based on the underlying principle that relationships do not simply exist; instead, they must be maintained through various behaviors (e.g., Canary & Zelley, 2000). From a relational maintenance perspective, scholars posit that people keep their close relationships intact through communication, which reflects how relational

partners attempt and achieve longevity and contentment in their relationships (Bute, Donovan-Kicken, & Martins, 2007).

One of the most personal and enduring relationships experienced by an individual is the parent–child relationship (Golish, 2000). Unfortunately, "of all the relation types studied, perhaps the ones most neglected, overlooked, or taken for granted by individuals are those of familial origin" (Vogl-Bauer, 2003, p. 31). It is important that parents and their children maintain relationships with one another to ensure the development of physically and psychologically healthy children; however, parenting and communication have become more complex in left-behind children's families because of changing roles and geographical dispersion.

Contemporary scholarship has focused on maintaining long-distance relationships (LDRs) (Stafford, 2005, 2011) primarily of two types of LDRs: romantic and child–parent (Stafford, 2004). Given the scarcity of research on long-distance families, more research has been conducted on long-distance romantic relationships than other forms of LDRs (e.g., Janning, Gao, & Snyder, 2018). Definitions of *long-distance parent–child relationships* have been absent from the literature. Children are generally considered only secondary in long-distance romantic relationships, that is, in terms of the way their mere existence or age affects long-distance couples; and only a few researchers have examined the long-distance family as a whole (Stafford, 2005, 2011). In addition to children of long-distance partners, parents and children may be separated when the parents are no longer romantically involved—as in the case of divorced or never-married partners. Children may live apart from one parent because of court restrictions or other factors limiting access to that parent; long-distance parent–child relationships may also occur because of incarceration or military deployment. Little research has been conducted to

examine the long-distance parent–child relationship when two parents are away and the child is under the care of a surrogate.

Given the complexity and difficulty of LDRs involving left-behind children and their migrant parents, a systems perspective may facilitate full understanding of the relationship and its maintenance. A metaperspective of maintenance has demonstrated how all existing relational maintenance behaviors can be subsumed within four maintenance supracategories: the self, the relational system, the network, and the culture (Dainton, 2003). *The self* refers to intrapersonal maintenance, which is psychologically based (e.g., imagined interaction proposed by Honeycutt [2002]); *the relational system* refers to the dyadic maintenance (e.g., five relational maintenance typologies proposed by Stafford and Canary [1991]); *the network* refers to relational maintenance facilitated by third parties (e.g., family support), and *culture* is conceptualized as providing context for the relationship (e.g., maintenance influenced by belief systems) (Dainton, 2003). In this study I used the metaperspective of maintenance as a framework and looked mainly at the first three levels: (a) the self, that is, imagined interactions used by left-behind children on parent–child communication, based on Honeycutt's (2002) imagined interaction; (b) the relational system, that is, relational maintenance behaviors used by migrant parents and left-behind children to maintain the long-distance parent–child relationship; and (c) the network, that is, grandparents' support for the maintenance of the parent–child relationship. The possible cultural influence, although unexamined in this study, is addressed in the discussion section and will be included in future research.

A form of intrapersonal communication in which individuals imagine themselves in recent, anticipated, or hypothetical interactions with others (Honeycutt, 2010b), imagined interactions (IIs) constitute a type of mental imagery and cognition in which people think about

anticipated encounters with others as well as review prior conversations. IIs have been frequently reported in the relational domain with numerous studies demonstrating their attributes and functions in personal relationships (e.g., Honeycutt, 2003; Honeycutt, Vickery, & Hatcher, 2015). Individuals have reported IIs involving relational partners: romantic partners, friends, family members, authority figures, people from work, and former and prospective relational partners (Honeycutt, 1989c). Studies have provided support for the usefulness of IIs in allowing individuals to continue their relationships even when circumstances prevent real interaction (Allen, 1994), yet little is known about how IIs function in the long-distance parent–child relationship.

Relational maintenance has been conceptualized as the activities that occur in interpersonal relationships after the relationship is developed and before it is terminated (Stafford, 1994). Although many studies of relational maintenance have been focused on voluntary relationships, such as friendships (e.g., Forsythe & Ledbetter, 2015) and romantic relationships (e.g., Goodboy & Bolkan, 2011), a host of researchers have investigated relational maintenance in a variety of nonvoluntary family relationships, including those between siblings (e.g., Goodboy, Myers, & Patterson, 2009), grandparents and grandchildren (e.g., Mansson, Myers, & Turner, 2010), and young adult children and parents (e.g., Myers & Glover, 2007; Vogl-Bauer, Kalbfleisch, & Beatty, 1999); yet little is known about the relationship maintenance of parents and younger children at a distance.

From the perspective of relational maintenance, support involves giving advice and offering comfort and reassurance (Messman, Canary, & Hause, 2000). In a study of opposite-sex friendships, researchers found that support was one of the most frequently used maintenance behaviors (Messman et al., 2000); furthermore, the conceptualization of support appears to

overlap with the maintenance behaviors of assurance and advice (Messman et al., 2000; Stafford, 2003). Social support has three categories: emotional support, which includes making someone feel loved and supported; instrumental support, which includes giving assistance to accomplish tasks; informational support, which is the provision of education and knowledge (Fahey & Shenassa, 2013; Negron, Martin, Almog, Balbierz, & Howell, 2013). Grandparents can be significant providers of all these types of social support (Burgess, 2015). The researchers of intergenerational support have examined the support exchange of grandparents and grandchildren (e.g., Chen & Jordan, 2018; Cong & Silverstein, 2012; Hoff, 2007), but limited attention has been paid to grandparents' support in helping maintain the parent–child relationship.

Accordingly, the main goal of this study was to examine the communication and relationship quality in China's left-behind children and their migrant parents from the systems approach of relationship maintenance at three levels (i.e., the *self* context, the *system* context, and the *network* context). If the overlapping theoretical space of IIs (i.e., the *self* context), relational maintenance behaviors (i.e., the *system* context), and social support (i.e., the *network* context) offers a potential source of new tools for predicting and explaining parent–child relationships occurring in the specific context of the phenomenon of left-behind children in China, then it deserves careful examination.

The first objective of this study was to extend Honeycutt's (2002) previous research by focusing specifically on the IIs used to maintain parent–child relationships and the manner in which it in turn affects parent–child relationship quality. IIs serve six basic functions: (a) maintaining relationships, (b) managing conflict, (c) rehearsing messages, (d) aiding people in self-understanding by clarifying thoughts and feelings, (e) providing emotional catharsis by relieving tension, and (f) compensating for lack of real interaction (Honeycutt, 2003; Honeycutt

& Ford, 2001); notably, any combination of these functions can occur simultaneously. IIs help maintain relationships as people think about their relational partners outside their physical presence. Researchers tend to ignore IIs used in parent–child dyads because of the assumption that parents and children live together and have plenty of chances to communicate face to face. By looking at the IIs used in left-behind children and migrant parents' relational communication, this study may add empirical investigation to the domain of II research.

Another primary objective of this study was to extend the existing literature about relational maintenance in long-distance parent–child dyads. Specifically, in this study the researcher examined the relational maintenance behaviors used by left-behind children and their migrant parents and their association with parent–child relationship quality. In relational maintenance research, little attention has been focused on young children and both parents in geographic dispersion. Various forms of LDRs (e.g., romantic, friendship) have received increased and adequate attention in the interpersonal communication domain, but few researchers in this area have explored the parent–child relationship (Vogl-Bauer, 2003), which also requires maintenance by communication and relational behaviors despite its nonvoluntary nature.

Third, the aim of this study was to access the manner in which grandparents' support can help maintain the long-distance parent–child relationship and improve the relationship quality. Previous research on family support has seldom touched upon the grandparents' support to help maintain the parent–child relationship, making it an aspect worth investigating.

Next, the study also offers an exploration of the communication between left-behind children and their migrant parents as well as the way it relates to left-behind children's IIs and affects the long-distance parent–child relationship quality.

The final aim of this study was to test the way IIs, relational maintenance behaviors, and family support work together to affect the long-distance parent–child relationship by applying a systems perspective to the research domain of relationship maintenance.

In the next chapter, I will (a) introduce the current status of Chinese left-behind children; (b) summarize the three main factors of the four-level metaperspective of relational maintenance that guided this study; (c) identify and explain empirical findings of II in terms of maintaining interpersonal relationships; (d) highlight relevant literature on long-distance relational maintenance; (e) summarize past studies addressing family support; and (f) pose relevant hypotheses and research questions for the study.

Chapter II

Literature Review, Hypotheses, and Research Questions

The current chapter provides an overview and summary of relevant literature pertaining to each hypothesis and research question. First, an introduction of left-behind children and migrant parents in China is provided. Second, an overview of the main theoretical framework (i.e., four-level metaperspective of relational maintenance) used in the study is explained, followed by a summary and related research on the first three levels: (a) the *self* level (i.e., left-behind children's IIs with migrant parents), (b) the *system* level (i.e., relational maintenance behaviors between left-behind children and their migrant parents), and (c) the *network* level (i.e., caregiving grandparents' support). Third, the relevant hypotheses and research questions of the study are offered at the end of the chapter.

Left-Behind Children and Migrant Parents in China

The following sections elaborate on the phenomenon of left-behind children, definition of left-behind children, and communication between left-behind children and their migrant parents identified in the current literature.

Phenomenon of Left-Behind Children

The mass movement of more than 200 million rural laborers to China's cities has been described as the greatest internal migration in history (Chan, 2009). Migrant workers have built the gleaming skyscrapers, superhighways, and shopping malls that have transformed China over the last three decades; they have worked for hours on end in stifling factories to produce the electronics, clothes, and shoes demanded by Western consumers.

Migrant workers seek jobs in big cities because they want to build better lives for themselves and their families. A massive oversupply of labor lies in the Chinese countryside,

where employment opportunities are few and far between and income levels are roughly one sixth of those in the cities (Zhu, 2008). Few signs indicate that the disparity in rural and urban China will diminish in the near future. Most rural residents of working age have few options but to leave home and look for work in the cities. They want to escape the poverty, austerity, and rigidity of life in the Chinese countryside and sample at least some of the benefits that city dwellers take for granted.

The vast majority of migrant workers are typically aged 16 to 40 (Chan, 2009), and at some point nearly all of them will start families of their own; but when their first child is born, workers will face a stark choice: either take the child with them to the city and subject them to institutionalized discrimination or leave him or her behind in the countryside in the uncertain care of relatives. When rural workers decide to move in search of better prospects elsewhere, most choose to leave their children in their hometowns (Chan, 2009).

China's household registration system, known as the hukou system, is the key reason that a large number of children have been separated from their migrant working parents. China established the hukou system in the 1950s in order to prevent rural populations from moving to cities and to keep the price of grain low enough to support a high rate of industrialization in cities (Biao, 2007). The hukou is like a domestic passport, which identifies the city, town, or village where a person resides. Under the hukou system, people born in urban areas are officially registered as residents and those in rural areas, peasants (Biao, 2007). Residents and peasants are thus two distinct categories of social status that entail designated rights; furthermore, peasants cannot obtain urban hukou unless mandated by the government (Biao, 2007). This designation limits a person's ability to find legitimate work or access social services in another part of the country. Migrant rural workers may live in a city for years without an urban hukou, and until

they get one, they are not entitled to subsidized public housing, medical insurance, government welfare, or public education beyond elementary school. Consequently, migrant working parents tend to leave their children behind in the care of others (e.g., grandparents).

An estimated 58 million children below age 18 were left behind in the countryside according to the 2005 census (ACWF, 2008; Chan, 2009), accounting for 21% of all children in China and 28% of all rural children (ACWF, 2011). Henan, Hunan, Guangdong, and Shandong Provinces had a higher concentration of younger left-behind children (Chan, 2009). A more recent study conducted by ACWF (2013) showed that an estimated 61 million children were left behind in the countryside. The survey indicated that 23.42 million left-behind children were of preschool age and that 29.48 million were aged between 6 to14 (ACWF, 2014). A majority of children left behind were boys (54.08%), reflecting the overall gender ratio in rural China of 117.77:100 in favor of boys. Sichuan, Henan, Anhui, Guangdong, and Hunan Provinces had a higher concentration of left-behind children, accounting for 43.64% of all left-behind children. Statistics have revealed that the number of left-behind children has grown steadily in China's vast rural areas and that most of the left-behind children were located in underdeveloped provinces in central and western China.

After 2016, the Chinese government narrowed down the age range and criteria for rural children to be regarded as left-behind children. With more social welfare supports provided by the government, some migrant parents chose to take children to the cities where they work, but others decided to return to their hometowns. The 2016 national survey showed a total of 9.02 million left-behind children all over the country, 51.33% of whom lived in central rural areas; 39.02%, in western regions; and 9.65%, in eastern rural areas (Xinhua News Agency, 2016). Jiangxi, Sichuan, Guizhou, Anhui, Henan, Hunan, and Hubei Provinces had a higher

concentration of left-behind children according to the 2016 national survey (Xinhua News Agency, 2016). The 2018 report showed a total of 6.97 million left-behind children, mostly from provinces of Anhui, Hunan, Henan, Jiangxi, Hubei, and Guizhou (Ministry of Civil Affairs of China, 2018); the report also indicated that grandparents cared for 96% of the left-behind children (Ministry of Civil Affairs of China, 2018).

Definition of Left-Behind Children

Researchers have adopted various age ranges in their criteria for left-behind children. In an earlier study, children aged 14 or below were regarded as left-behind children (Duan & Wu, 2009; Duan & Zhou, 2005). In a survey conducted by the ACWF in 2007, left-behind children were designated as those aged 17 or less (ACWF, 2008). Duan and Young (2008) employed the same age range for left-behind children as the ACWF did in its 2007 survey. Zhang (2010) suggested that left-behind children were between 7 and 18 years old. Zhou and Duan (2006) designated left-behind children as those "under 18 who have been left behind at their original residence while one or both parents migrate into other places for work and have been not living together with them for at least six months" (p. 61). In spite of the variation in age, most scholars have agreed on some essential features and characteristics of left-behind children, including a lack of the ability to be independent (Beh, 2014).

In 2016 the State Council of China redefined *left-behind children* as those "under 16 who have been left behind at their original residence while both parents migrate into other places for work or one of the parents migrates into other places for work and the other one has no capacity of parental custody." This definition reduced the total of left-behind children from an estimated 61 million to 6.97 million across the country. Four points emerged from the new definition. First, the age range of left-behind children decreased from under 18 to under 16. Second, the new

definition suggested that a child can be considered left behind only when both parents are away or one is away and the other cannot take care of the child, but under the older definition a child was considered left behind when one or both parents migrated to cities. Next, more migrant parents have opted to take their children with them when working in other cities because the Chinese government has made education, health care, and social services more accessible to migrant children in cities in recent years. Finally, some migrant parents have chosen to return to their hometowns because more and better job opportunities have been developed by the local governments.

The author of the current study tends to agree with the State Council's definition of left-behind children. According to the General Principles of Civil Law in China, a citizen who has reached the age of 16 but not the age of 18 and whose main source of income is his or her own labor shall be regarded as a person with full capacity for civil conduct (National People's Congress, 2017). Most of the left-behind children over 16 have reportedly chosen to work in their hometowns or outside them (ACWF, 2011); thus, making the age limit 16 instead of 18 is reasonable. The majority of scholars have agreed that whether one of the parents or both have migrated to cities, the children who stay at home can be considered left-behind children (Beh, 2014; Duan & Zhou, 2006). They have also suggested that children cared for by one parent may have better health, nutrition, psychological state, and academic performance compared to children with both parents away (Chan, 2009), underscoring the value of distinguishing these two groups and looking at the "real" left-behind children whose parents are both away or one parent is away and the other one is incapable of caring for the children.

Scholars have pointed out a difference of opinion over the length of the duration of parents' migration (Beh, 2014). Some have defined left-behind children as those whose parents

have been away for more than three months; others, less than half a year; and still others, at least one year (J. Z. Ye & Pan, 2011). After the Fifth National Population Census in 2000, however, many researchers agreed that the minimum period for parents' absence is six months for children to be considered as left behind (Duan & Zhou, 2006). In the current study six months was the minimum considered for designation as a left-behind child.

In summary, in the current study, left-behind children are those under 16 who have been left behind at their original residence while both parents migrated to other places for work or one parent has migrated to another place for work and the other has no capacity for parental custody. In the current study a minimum of six months away was accepted as the baseline for parents to be considered as having migrated.

Communication Between Left-Behind Children and Migrant Parents

Left-behind children have limited contact with their parents. An extensive study of 10 villages in northern and western China, conducted by China Agricultural University in 2004, showed that 10% of the children interviewed had no communication with their parents during the year before the study (Chan, 2009). A survey by the Changsha municipal government showed that 44% of left-behind children saw their parents once a year; the same proportion of children were able to see their parents twice a year; and 3% saw their parents once every two years. In some remote areas like Weishan in Sichuan, 51% of migrant parents returned home only once a year; 18% returned home once in two years, and 13% had not returned home for three years (Chan, 2009). More than 62% of migrant parents in Hunan Province had been working away from home for two years or more, and 26% for three years or more. In extreme cases, children had not seen their parents in six years (China Youth Research Center, 2008). Nearly half the children (45%) did not know where their parents worked, and 75% of left-behind children had

not visited their parents in their host cities (Human Provincial Youth League, 2006). A 2014 survey showed that 11.7% of the estimated 61 million left-behind children reunited with their parents three to four times a year; 29.4% met their parents once or twice times a year, and 15.1% of the left-behind children had no opportunity to meet their parents throughout an entire year, even during the Spring Festival (the traditional Chinese New Year), which is regarded as the most important occasion for family reunion (On the Road to School, 2015). A more recent survey found depressingly similar results. For example, about 11% of the children surveyed claimed that their parents were dead when the actual number was estimated to be less than 1% (On the Road to School, 2017). All children wanted more communication time with their parents, and some hoped to have daily conversations; yet they knew their parents were unable to do so because of their work schedules (Pan et al., 2013). The survey conducted in Hubei Province showed that the more frequently parents returned home and communicated with their children, the better their relationship with their children (L. Liu, Sun, Zhang, Wang, & Guo, 2010).

Communication between migrant parents and children left behind occurs primarily via telephone (Pan et al., 2013), which is also limited. A survey in Beijing showed that about 80% of children talked with their parents on the phone once every two weeks (C. Li, 2006). The Agricultural University study showed that 30% of left-behind children contacted their parents only once a month, and half of them talked for less than three minutes during each call (Chan, 2009). Usually parents asked about the academic and practical aspects of the children's living arrangements, rarely touching upon psychological needs (L. Zhou, 2006). A white paper on the mental state of the left-behind children in China indicated that 23.9% of left-behind children contacted with their parents through phone calls or the Internet almost every day; 28.6% talked with parents two to four times a week; 19.3% communicated with parents three to four times a

month; 10.4% contacted parents 3 to 4 times a year; 10.2% communicated with parents once or twice per year; and 4.3% of left-behind children had no contact with parents during an entire year (On the Road to School, 2015).

Previous researchers who addressed parent–child communication among migrant families in different countries indicated that although labor migration generates stress on familial connectedness, information and communication technologies can ease this strain by allowing distant family members to participate in day-to-day life through technology (J. H. Xu, 2016). Mobile phones provided parents, children, and their friends with a direct and private communication channel; moreover, the mobile phone allowed parents and children to remain connected during periods of geographical separation (Ling, 2004). Mobile phones could not only help migrant users fill time gaps and deal with loneliness but also maintain family ties (Geser, 2005). Madianou and Miller (2011), who examined the influence of mobile communication between Filipina migrant mothers and their children over 17 years of age, pointed out that mobile communication was one of the crucial ways of mitigating the problems of family separation.

In another study on migrant parenting and mobile phone use, P. L. Liu and Leung (2017) examined how migrant parents used mobile phones to communicate with their left-behind children aged 3 to 17 years and to build quality parent–child relationships. Data gathered from a sample of 378 migrant parents working in factories in southern China showed that the mobile phone, an instant communication tool, had a tremendous positive impact on the quality of communication between migrant workers and their left-behind children (P. L. Liu & Leung, 2017). Results indicated that the use of mobile phones was meaningful in improving migrant parents' involvement and communication with their left-behind children as well as enhancing their satisfaction with parenting; unfortunately, the cost of long-distance calls was too expensive

for migrant workers with relatively low incomes. Even though QQ, WeChat, and mobile phone applications have replaced mobile phone texting and calling, these applications require access to a wireless network, sometimes unavailable to migrant workers and left-behind children in rural areas (P. L. Liu & Leung, 2017); nevertheless, phone calls also served as the most important method of communication among Chinese left-behind children and their migrant parents (Pan et al., 2013).

In a study on the topics and depth of phone-based communication between left-behind children and migrant parents, three major topics were identified—education, health, and parents' work—accounting for more than 90% of the conversations between left-behind children and their parents through phone calls (Pan et al., 2013). The left-behind children's education was the most discussed topic, constituting 38% of all topics; issues concerning the health of both the left-behind children and the parents accounted for 28% of all topics, and the work of the migrant parents was also discussed, representing 25% (Pan et al., 2013). Both migrant parents and left-behind children wanted to know more about each other's life, work or study and health. They tended to emphasize the positive side of their lives and to hide the difficulties and challenges they faced. A majority of the left-behind who were interviewed did not share the problems they had, such as poor grades or bad school experiences, nor did they discuss with their parents their deep emotions and feelings, such as their desire for a normal family life (Pan et al., 2013). The physical distance between left-behind children and their migrant parents may have led to psychological distance that further impeded openness between children and parents.

Long-term separation from parents and lack of relational maintenance might be the key reasons for the problems faced by left-behind children. Some researchers have suggested that left-behind children were likely to suffer from a broad range of mental health problems (F. Fan

& Sang, 2005; Wen & Lin, 2012), such as depression, anxiety, and loneliness (X. Fan, Liu, & Liu, 2009; B. Li, 2008; Magwaza, 1994; N. Ren & Shen, 2008); they might also have low quality of life (Jia, Shi, Cao, Delancey, & Tian, 2010), low level of satisfaction and happiness (X. Fan et al., 2009; L. Fan & Zhao, 2010; J. Gao, 2010; B. Liu & Ouyang, 2010), and poor academic performance (Amuedo-Dorantes & Pozo, 2010; Wu, Ding, & Tang, 2004) as well as exhibit problem behaviors (X. Fan et al., 2009; X. Fan & Fang, 2010; F. Fan & Sang, 2005). Global literature has shown that parent–child communication is an important factor in satisfying the developmental needs and promoting the psychological development of children (X. Fang, Dai, Fang, & Deng, 2006; C. Fang & Fang, 2003; Jeremy, Tilda, Ronald, & Bruce, 2010). A recent study about the characteristics of 1,165 rural left-behind children covered the differences in psychological adjustment (including satisfaction, loneliness and happiness) by patterns of parental migration (i.e., no parent migrating, one parent migrating or two parents migrating) and the level of parent–child communication in rural China (Su, Li, Lin, Xi, & Zhu, 2012). Results indicated that children with two parents migrating reported the lowest level of life satisfaction and a higher degree of loneliness among the three groups of rural children. The researchers suggested that parent–child communication played a significant role in the psychological development of left-behind children (Su et al., 2012).

Left-behind children face more life adversities than ordinary children. Without the care of their parents, some of them have developed the ability to take care of themselves; however, many have developed serious behavioral problems. And no matter how effectively these children learn to cope by themselves, extended periods of time away from their parents almost inevitably leads to pain and sorrow. In this case, maintaining a well-functioning relationship and communicating in an effective way constitute key solutions in the state of parent–child

separation. The goal of this study was to examine the communication between left-behind children and their migrant parents within the theoretical framework of relational maintenance. In doing so, the author hoped to offer practical suggestions based on the study results to help parents and children maintain a better relationship when separated.

Theoretical Perspective: Four-Level Metaperspective on Relational Maintenance

The following sections review the primary assumptions of the metaperspective of four-level relational maintenance and relevant findings that support this perspective.

Definition of Relational Maintenance

Relational maintenance is generally regarded as behavioral dynamics that facilitate preserving a relationship (Dindia, 2000). The earliest theoretical perspectives on relational maintenance were based on the idea that there are centripetal forces that hold intimates together and centrifugal forces that pull them apart (Davis, 1973; Dindia, 2000; Levinger, 1965; Lewin, 1951), corresponding to interdependence theory (Thibaut & Kelley, 1959) and relational dialectics theory (Bakhtin, 1981).

Drawing on interdependence theory (Thibaut & Kelley, 1959), Levinger (1965) indicated that an individual's attraction to a relationship is directly associated with its perceived rewards and inversely with its perceived costs. Whether a person will remain in or leave the relationship was hypothesized to depend on the individual's comparison of alternatives. One stays in a relationship only as long as one's outcomes exceed the outcomes in the best available alternative to the relationship. Interdependence theory distinguishes between and illuminates maintaining satisfaction and sustaining the existence of a relationship (Dindia & Canary, 1993).

According to relational dialectics, relationships are characterized by opposite but interrelated forces. Three primary oppositional forces have been identified by dialectical theorists:

autonomy and connection, novelty and predictability, and closedness and openness (Baxter, 1988). Constant change results from the dynamic tension of these opposing forces (Altman, Vinsel, & Brown, 1981; Baxter, 1988). As two individuals move closer together, they feel a need to move apart; as they move farther apart, they feel a need to move closer together. Thus, relationships cannot be maintained in a stable state because they constantly change. Under this premise, maintenance can mean to sustain the relationship through the constant flux (Montgomery, 1993) and to preserve a satisfactory relationship (Baxter & Simon, 1993).

Four definitions of *relational maintenance* have been culled from the literature: (a) to keep a relationship in existence, (b) to keep a relationship in a specified state or condition, (c) to keep a relationship in a satisfactory condition, and (d) to keep a relationship in repair (Dindia & Canary, 1993).

The first definition of relational maintenance involves continuing a relationship without termination. This definition implies nothing about the type or form of the relationship or any of its important dimensions or qualities, nor does it specify whether relationships change or remain stable during the maintenance stage; moreover, the activities associated with maintaining a relationship may vary dramatically depending on the relationship itself (Dindia & Canary, 1993).

The second definition of relational maintenance refers to sustaining the current level of certain dimensions or qualities thought to be important in relationship development (Dindia & Canary, 1993). Although doing so typically means maintaining a given level of intimacy (Ayres, 1983), this definition can be extended to whatever one considers to be the important dimensions, characteristics, or qualities of relationships (Morton & Douglas, 1981). Stable relationships contain three elements: (a) participants' minimal agreement about the relationship, (b)

relationships stabilizing at different levels of intimacy, and (c) considerable change occurring in a stable relationship (Wilmot, 1987).

The third definition of relational maintenance refers to maintaining a satisfactory relationship. In contrast with the first and second definitions, this definition implies that one can be in a stable but dissatisfying relationship. A number of researchers have improperly defined relational maintenance as maintaining satisfaction. Maintenance is often operationally defined as relational satisfaction instead of relational longevity, which is more difficult to study (Dindia & Canary, 1993).

The fourth definition of relational maintenance entails keeping a relationship in repair. This definition invokes two senses of the word *repair*. The first is to keep a relationship in good, sound or working condition, and the second is to repair a relationship that has fallen apart (Dindia & Canary, 1993). Although maintenance and repair can overlap, the two concepts should be examined separately because relational repair contrasts with relational maintenance from the standpoint of the second definition, in which maintenance refers to keeping the relationship in its current state (Dindia & Canary, 1993).

The four definitions of relational maintenance overlap to some degree and are commonly used interchangeably. Dindia and Canary (1993) suggested the importance of distinguishing between the various definitions for the purpose of conceptual clarity; however, Canary and Dainton (2006) argued that for scholars studying relational maintenance, an emphasis on the actions to sustain desired relational characteristics (e.g., satisfaction, intimacy) is sufficient because it allows scholars the flexibility of using various theoretical frameworks or perspectives in capturing the essence of relational maintenance. In other words, maintenance may encompass any activity that includes all four definitions of relational maintenance outlined by Canary and

Dainton (2006). Because of the complexity of the long-distance parent–child relationship, the author of the current study has tended to agree with Canary and Dainton (2006). The parent–child relationship in dispersion may not only require maintenance to keep it in existence but also maintenance at a certain level of intimacy, or attainment of a certain level of satisfaction, or repair as a result of disruption under various circumstances of the interaction between the left-behind children and migrant parents.

Four-Level Context of Maintenance

A systems perspective is ideal for the study of relational maintenance (Stafford, 1994). A review of the most frequently mentioned theories used by maintenance scholars indicates that no current theory (e.g., social exchange, uncertainty reduction theory, and relational dialectics), at least as presently used and understood, can effectively capture the entirety of relational maintenance (Dainton, 2003). A broad, systems frame may be overlaid (Merrola, 2010; Stafford, 1994); indeed, one researcher relied on systems ideas in suggesting that maintenance sustains equilibrium in relationships (Ayres, 1983). Systems approaches comprise a constellation of theories that share common metatheoretical assumptions and concepts, which can be used to understand varying relational types (Dainton, 2003). In short, systems approaches center on mutual influence between system members as well as between subsystems, systems, and suprasystems (Stafford, 1994; Dainton, 2003). As long as interaction occurs to bind two or more people together, a system is formed.

A four-level perspective—the self, the system, the network, and the culture (see Figure 1)—captures the contextual variations of relational maintenance in a systems approach (Daintan, 2003).

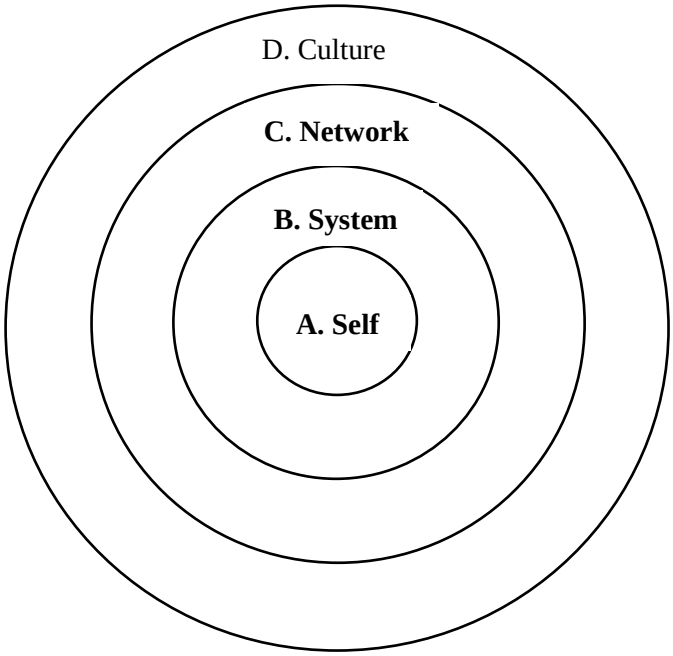

Figure 1. Four-level contexts of relational maintenance (Dainton, 2003).

Note: This is a simplified model of four-level contexts of relational maintenance (Dainton, 2003), which shows the four levels and their relationship. Three levels (i.e., *self*, *system*, and *network*) are bolded because they were the three key factors in the current study. Culture is included in the model but is not a focus of this study.

In this context the *self* refers to the psychological and individual influences on maintenance (Dainton, 2003). Canary and Stafford (1993, 1994) suggested that noninteractive processes complement interactive processes in relational maintenance. Scholars have studied the way the maintenance process is influenced by the individual's locus of control (Canary& Stafford, 1994), emotions (Emmers-Smmor, 2003), self-image (Hess, 2003), identity (Rabby & Walther, 2003; Waldron, 2003), gender (Dainton, Zelley, & Langan, 2003; Stafford, 2003), and imagined interaction (Van Kelegom & Wright, 2013). Dainton (2003) pointed out that these concentric circles shown in Figure 1 can be understood in two ways. On one hand, they can be understood as influences on the maintenance process; for example, regarding the *self* context, an individual's attachment style may influence his or her use of negative relational maintenance

(Goodboy, Dainton, Borzea, & Goldman, 2017). On the other hand, one can also consider the use of this context as the maintenance process itself; for example, Allen (1994) investigated the use of imagined interactions by geographically separated couples and found that such interactions were used as a coping strategy to maintain the LDR. Accordingly, the *self* context represents both influences upon maintenance and a means of maintenance achievement itself (Dainton, 2003).

The *system* refers to the maintenance efforts that take place in the relational system by the relational partners (Dainton, 2003). To date, the majority of maintenance research published has been focused on the identification of behaviors used in the relational system for maintenance purposes as well as the impact of those behaviors on the relationship itself. Numerous typologies have been developed to identify the behaviors used in a system for the purpose of relational maintenance. Of these typologies, the most commonly used is the one developed by Stafford and Canary (1991), consisting of five relational maintenance strategies: positivity, openness, assurances, networks, and sharing tasks (Stafford & Canary, 1991). Researchers have found support for the use of these strategies across contexts. For example, the typology has been used to examine romantic relationships (Canary & Stafford, 1992; Goodboy & Bolkan, 2011), parent–child relationships (Ledbetter & Beck, 2014; Schon, 2018; Vogl-Bauer et al., 1999), grandchild–grandparent relationships (Mansson et al., 2010), sibling relationships (Myers, Byrnes, Frisby, & Mansson, 2011; Myers & Odenweller, 2015), friendships (Forsythe & Ledbetter, 2015; LaBelle & Myers, 2016; Oswald, Clark, & Kelly, 2004), gay and lesbian couples (Haas & Stafford, 1998), and coworkers (Madlock & Booth-Butterfield, 2012). The use of the Stafford and Canary typology has provided support for the notion that specific communicative behaviors are used in

the system context and that these same behaviors are used in different types of relational systems (Dainton, 2003).

The *network* refers to interaction between the system and the larger circle of family, friends, and community. (Dainton, 2003). Relationships do not exist in a vacuum, and researchers must acknowledge the importance of social networks in relationship maintenance Dainton (2003); furthermore, any given relationship is nested within a complex system of vertical and horizontal networks (Waldron, 2003). Although the conclusion is drawn from a study on workplace relationships (Waldron, 2003), this complex system holds true for other relational forms as well. Some scholars have argued that a lack of societal support for gay and lesbian relationships and for intercultural relationships makes network support even more important for couples in these relational types (Gaines & Agnew, 2003; Haas, 2003). Networks are particularly important for relational maintenance in Korea, where dating and marriage are typically initiated by the extended family (Yum & Canary, 2003). Despite the relative importance of the extended network in the maintenance of relationships, few studies have been conducted to directly assess the manner in which various levels of networks inhibit or facilitate relational maintenance.

The *culture* level, which refers to historical patterns of ideas, beliefs, rules, and roles for the relational type (Dainton, 2003), has enormous implications for the process of relational maintenance. For example, an examination of the relational maintenance behaviors in six different countries showed that relational communication patterns changed according to the countries and values under consideration (Yum & Canary, 2009). Another study involved reasons that individuals' maintenance of romantic relationships varied in different societies; results suggested that people in the United States and Malaysia, countries that espouse self-

expression values (e.g., quality of life, individual rights, and fairness) more frequently used relational maintenance strategies than did those in Singapore, a country endorsing survival values (e.g., physical and economic security) (Yum, Canary, & Baptist, 2015).

As noted above, the majority of maintenance research falls in the *system* context. Few scholars have addressed the contexts of self, network, or culture; moreover, a systems approach to include all the four contexts to examine the relational maintenance is worth recommending (Dainton, 2003). Merolla (2010, 2012) included three levels of relational maintenance in his studies to examine a model of long-distance relationship maintenance. Specifically, he argued that LDRs were sustained through a combination of relationship-oriented cognitions (intrapersonal relational maintenance behaviors), interactions with one's partner (dyadic relational maintenance behaviors), and communication with one's broader social network regarding the relationship (network-level relational maintenance behaviors). His study echoed Dainton's metaperspective of relational maintenance and provided a systematic way to examine long-distance relationship maintenance.

When examining relational maintenance between left-behind children and their migrant parents, considering the following is reasonable and necessary: (a) how the left-behind children daydream about interaction with parents at a distance from the perspective of *self* (i.e., imagined interaction), (b) what relational maintenance behaviors are used by migrant parents and left-behind children as the coping strategies from the perspective of *system*, (c) how family support from grandparents facilitates the long-distance parent–child relationship from the perspective of *network*, and (d) how values and beliefs play a role in the relational maintenance from the perspective of *culture*. The current study focused mainly on the first three aspects of the four-level perspective (i.e., self, system, and network). The perspective of *self* provided the insights of

the psychological and individual influences on maintenance; the perspective of *system* facilitated understand the maintenance efforts that take place between the left-behind children and their migrant parents; and the perspective of *network* included the interaction between the system and the larger circle of family (i.e., grandparents). Each of these perspectives provided a unique angle to examine the long-distance parent–child relationship and operated together to influence the relationship outcome. The *culture* level, although also relevant to the study, was conceptualized as providing context for and thus asserting more macro influence upon the first three levels.

The *Self* Context: Imagined Interactions

The following sections discuss the definitions and theoretical foundations of IIs, the functions and attributes of IIs, and the application of IIs in relaitonal maintenance.

Definitions and Theoretical Foundations of IIs

Imagined interaction (II) refers to a cognitive process whereby actors imagine an interaction with a partner or partners and by doing so indirectly experience themselves in anticipated and/or past communicative encounters with others (Honeycutt, Edwards, & Zagacki, 1989; Honeycutt, Zagacki, & Edwards, 1989). IIs are a type of social cognition in which communicators experience cognitive representations of conversation with accompanying verbal and nonverbal features (Honeycutt, 2003). IIs focus and organize individuals' thoughts on communication—on the actors involved in specific acts of communication and on the communicative context (Honeycutt, 2003).

To fully address the research dealing with IIs, a discussion of the preliminary developments that led to the construct is important. These research findings have been discussed

below in terms of the attributes and functions of IIs. To begin, one must first gain an understanding of the theoretical framework that serves to shape the construct of IIs.

IIs are conceptually rooted in symbolic interactionism, which has as a part of its formulation the idea of an internalized conversation of gestures that enables an individual to consciously monitor social action (Mead, 1934). This allows an individual to envision a variety of scenarios and to create alternate possibilities for the overt completion of a given act in which the individual is engaged. Mead (1934) noted a human being's ability to monitor social action as a distinguishing sign of intelligence separating humans from all other beings. A person is capable of testing several possible endings of an initiated act prior to the actual conclusion of the act. These internalized conversations, as Mead (1934) proposed, permit an individual to take the role of another in these mentally based dialogues. Edwards, Honeycutt, and Zagacki (1988) related Mead's (1934) notion of an internal conversation to the construct of IIs. This particular aspect of IIs allows for the proposed link between relational maintenance and IIs under investigation in the current study.

IIs are a means of measuring intrapersonal communication in which individuals talk to themselves (Edwards et al., 1988; Honeycutt, 2003). Honeycutt and his colleagues (1989) stated:

> The notion that intrapersonal communication involves "talking" to oneself is important but somewhat limited. For, in our view, not only do individuals talk to themselves, but during imagined interactions they imagine themselves talking to others as well. Thus, we surmise that imagined interactions are an extended form of intrapersonal communication. (p. 168)

An II is a relatively mindful type of cognitive activity that can play a role in the development of memory structures (Honeycutt, 1989b, 2003), and its nature suggests that

individuals have certain expectancies for relational development that are used in the formulation of a relational prototype for categorizing various relationships (Honeycutt, 1995; Honeycutt & Cantrill, 2001).

IIs are a form of covert dialogue, which occurs with real-life significant others. Support for the assertion that IIs occur with real-life significant others was demonstrated by Edwards et al. (1988), whose study revealed that, for college students, most IIs were with romantic partners (33%), followed by friends (16%), family members (12%), authority figures (9.4%), coworkers (8%), ex-relational partners (6%), and prospective partners (4%). This data demonstrated that IIs involve significant others, not strangers or acquaintances. Thus, the conceptualization of the II focuses on ones with real-life significant others; these exclude fantasy but include all forms of internal thought and memory (Honeycutt & Brown, 1998; (Honeycutt, Edwards, et al., 1989).

In describing IIs, Honeycutt, Edwards, and Zagacki (1989) clearly articulated the difference between an II and a fantasy, stating that IIs simulate communication encounters that a person expects actually to experience or has actually experienced during his or her interpersonal life. However, these scholars noted that for various reasons, the "real life" interactions may never occur or may take place in ways quite different from the imagined situation. Fantasies involve highly improbable or even impossible communicative encounters; for example, imagining oneself chatting with a pop star or celebrity would be quite unlikely to actually occur and thus would qualify as pure fantasy. These imagined encounters would not, or at least rarely would, serve as the basis for real communicative exchanges. Researchers have suggested that they do not intend to disregard the psychological importance of fantasies but note their irrelevance to the study of IIs as currently defined (Honeycutt, Edwards, et al., 1989).

IIs have been found to differ in the imagery used (Honeycutt, 1989c; 2003). They can involve verbal or visual imagery exclusively, or they may comprise a mix of both forms. In an investigation of the mode of imagery used in IIs, three possible modes of imagery emerged: few reported IIs were primarily of the visual mode (4%); more individuals reported primarily verbal IIs (31%), but the majority reported IIs that were of a mixed imagery mode (65%) (Zagacki, Edwards, & Honeycutt, 1992). Those reporting a mixed mode also indicated more pleasant IIs than did those reporting primarily verbal modes (Zagacki et al., 1992).

With a description of the construct's development established, the next section includes a description of the various functions and attributes of IIs accompanied by a detailed description of those features relevant to the current study.

Functions of IIs

Six functions of IIs explain motivation for their use: They (a) keep a relationship alive (*relational maintenance*), (b) serve to aid in rehearsal for future interaction (*rehearsal*), (c) serve to compensate for the lack of real interaction (*compensation*), (d) aid an individual in self-understanding in terms of clarifying thoughts and feelings (*self-understanding*), (e) serve as a form of catharsis by relieving tension and reducing uncertainty (*catharsis*), and (f) help to manage and resolve conflict (*conflict-management*) (Honeycutt, 2003, 2008, 2010a).

Relational maintenance. The study of relational communication should involve interpersonal research that examines relationships evolving outside direct relational encounters (Duck, 1980). The research can be conducted by investigating such processes as replaying relational events during time spent alone, planning future encounters, and remembering the pleasures of previous encounters. The study of IIs has provided for a means of investigating such

phenomena (Honeycutt, 1989b). IIs can psychologically maintain relationships by concentrating thought on relational scenes and partners (Honeycutt, 1995).

The relational maintenance function allows partners to keep a relationship alive by using IIs to aid relational development with close relational partners, including family members, friends, and dating partners (Bodie, Honeycutt, & Vickery, 2013). Researchers have demonstrated that geographically separated couples use IIs as a means of maintaining their relationships (Allen, 1994). Suggesting that IIs can and do serve a specific purpose in establishing relational significance for anticipated relational encounters, Allen (1994) explored II use to relieve separation anxiety, studying 40 couples, half in long-distance relationships, and found that geographically separated couples reported an increase in the number of IIs experienced during times of separation and viewed them as a coping strategy. These results strongly indicated that IIs have relational significance and support the idea that IIs are used to create as well as maintain interpersonal relationships (Honeycutt, Zagacki, et al., 1989).

Underlying the memory structure approach to IIs is the suggestion that not only do IIs bring the relationship into existence, they can also serve to shape the developmental progression of said relationship (Honeycutt & Cantrill, 2001). The assumption inherent in such an approach is that individuals have certain expectancies in terms of the developmental stages of relationships that can be used to formulate an expected prototype for categorizing another's as well as one's own relationship. They are assimilated into the expectancies and revisited in the form of IIs, which may serve to keep an existing relationship intact or perhaps to rehearse for the initiation of a new one. Thus, IIs enable the process of thinking about a relationship even through its various developmental phases.

Rehearsal. Researchers have suggested that IIs can be used strategically for rehearsing anticipated encounters and for relieving stress in various settings. Rehearsal is a very common reason for people to use IIs; in fact, Honeycutt, Vickery, and Hatcher (2015) found rehearsal to be the most commonly reported function when they asked subjects to keep a diary of their IIs and intrapersonal communication (e.g., the frequency of IIs, the location when having IIs, the imaginary topics of conversation, the communicative partner of IIs, and what is specifically said in IIs) for 79 days.

A study by Choi, Honeycutt, and Bodie (2015) on speaking performance indicated that a rehearsal consisting of both II training and the mix modes of imagery resulted in more overall fluency in speech and in higher self-reported speech evaluations. People involved in speech and debate competition must be aware of the communication environment and in control of the messages they convey because the nature of this type of competition is such that those most adept at doing so receive the highest rewards (Honeycutt & Gotcher, 1991). Gotcher and Honeycutt (1989) suggested that IIs can be used to practice possible messages even when several possibilities exist for the way the actual interaction may occur.

Petress (1995) also looked at the use of IIs by Chinese graduate students preparing to study abroad in the United States. Results of the oral interviews of 56 Chinese graduate students indicated that they used IIs for rehearsal purposes in three settings: (a) interviews with others connected with their foreign study plans, (b) reviewing and evaluating each interview after it had occurred, and (c) rehearsing future meetings with a major professor or academic adviser. Over two thirds of the Chinese students reported that the rehearsal function of IIs was very helpful in message planning. By rehearsing with IIs, the anxieties of the Chinese foreign exchange students were decreased prior to arriving in the US.

Geographically separated couples have been found to make particular use of IIs for the purpose of rehearsing future interactions (Allen, 1994). In comparison with couples not in geographical dispersion, geographically separated couples reported a greater use of IIs for the purpose of preparing for the next interaction with their partners. Such a result suggests that rehearsal may play an important role in maintaining long-distance romantic relationships.

Compensation. Researchers have suggested that IIs function to compensate for the lack of real interaction (Allen, 1994; Honeycutt, 1989c). IIs have been purported to serve in place of real interaction when face-to-face communication is impossible (Honeycutt, 2003; Rosenblatt & Meyer, 1986). In a discussion of IIs used for therapeutic purposes, Rosenblatt and Meyer (1986) indicated that an individual might choose to use IIs in place of actually confronting a loved one for fear that the loved one would be hurt by the message.

Additional support was found in a study by Honeycutt (1989b), who examined the use of IIs among the elderly who could not see their loved ones as often as they would have liked. For example, retirement center residents reported imagining conversations with their children as well as fellow residents. Research has shown an increased use of IIs during separation for the purposes of coping among geographically separated individuals (Allen, 1994). In addition, engaged couples were more likely to use IIs to compensate for the lack of real interaction because of their living apart than were other types of couples (e.g., dating couples or married couples) living apart (Allen, 1994).

Self-understanding. IIs help people understand themselves better in terms of reasons that they hold the beliefs that they do (Honeycutt, 2003). In their original conception of the therapeutic use of IIs, Rosenblatt and Meyer (1986) recognized that II involving explaining

concepts or relating one thing to another can aid in the process of clarification of the self. They later concluded that IIs help to uncover opposing or differing aspects of the self.

Research has shown that geographically separated couples use IIs as a tool for increasing self-understanding more than do couples who are not in separation (Allen, 1994). Results indicated that geographically separated couples had a greater need to develop better self-understanding prior to interaction because they had limited time for interaction. The use of IIs helped to create a better understanding of the partner as well as the self (Allen, 1994). Geographically separated couples may also use IIs to discuss and resolve certain issues with the relational partner so as to save precious and limited interaction time (Allen, 1994).

Zagacki et al. (1992) studied the role of mental imagery and emotion in IIs and found IIs involving more conflict were related to an increase in self-understanding. IIs that provided increased self-understanding were also found to involve more verbal imagery with the self playing a greater role in the II or achieving greater dominance.

Catharsis. IIs have been recognized for their ability to relieve tension and reduce uncertainty about another's actions (Honeycutt, 1995, 1989a). Rosenblatt and Meyer (1986), who first proposed IIs as a means of emotional catharsis in counseling sessions, found that IIs served as an outlet for patients to release unresolved tension. After experiencing an II, patients noted feeling less relational tension (Rosenblatt & Meyer, 1986). Honeycutt (1989a) described an example of IIs functioning in a cathartic way, noting a husband's report of an II with his wife in which he questioned the example she was setting for their son. The husband reported having "mostly positive" feelings about the II, but it involved criticizing his wife for her views on child rearing. In this case, Honeycutt (1989a) suggested that the husband was able to use an II as a means of inwardly voicing repressed feelings that served to promote a sense of catharsis.

Individuals reportedly use IIs to release emotions when they know that enacting certain behaviors or expressing certain emotions may be inappropriate in actual interactions (Allen & Berkos, 1998; Berkos, Allen, Kearney, & Plax, 2001). The use of IIs has also been associated with a reduction in anxiety level (Allen & Honeycutt, 1997). When planning for an interaction, making use of IIs results in a lower occurrence of object adaptors. This result seems to suggest that when one uses IIs, one experiences anxiety relief. In fact, Honeycutt (1995) offered numerous accounts of individuals who reported that their IIs made them feel better and helped them release anxiety. Gotcher and Edward (1990) also reported that the prevalence of cancer patients' high frequency of pleasant IIs might produce a cathartic release which in turn, reduces stress and anxiety.

Conflict management. Conflict management or conflict linkage refers to the repeated rehearsal of negative, conflict-laden messages, leading to a situation whereby IIs may occur after one encounter and prior to the next. In other words, IIs may link one interpersonal episode, which typically includes conflict, to the next interpersonal episode. The largely detrimental result of conflict linkage is that IIs can keep conflict alive in the absence of actual dialogue. In his study addressing the oral history interview as a means of studying married couples and their use of IIs, Honeycutt (1995) reported discussion of questions concerning IIs and conflict resolution during the interview. Couples have acknowledged that memories of conflict, reexperienced as retroactive IIs keep conflict alive. Honeycutt (1995) pointed out that using the oral history interview in the study of married couples revealed that spouses often reported imagining conversations with their partner concerning a number of topics when not in the other's presence.

Honeycutt (1999) focused specifically on conflict linkage in a study where his subjects (spouses) continuously replayed encounters in their minds and sometimes felt anguish and stress

about not having said things that they were currently thinking. Similarly, Duck, Pond, and Leatham (1991) found that recall of prior conversations was more pleasant for individuals whose relationship was doing well than for individuals who were having problems in their relationship at the time of recall. In sum, IIs may keep conflict alive in the absence of actual dialogue. Honeycutt (2003) also discussed how IIs could be used to effectively manage conflict, such as rehearsing positive messages.

A person may use IIs to work through a conflict situation. Wallenfelsz and Hample (2010) examined the relationship between taking conflict personally and IIs involving conflict. Results indicated that individuals who believed that conflict had a positive impact on relationships had more IIs involving conflicts than those who did not. People who believed that conflict is positive apparently spent more time thinking about, planning, and rehearsing future conflict scenarios, perhaps in an attempt to maximize relational benefits. In addition, such individuals may also spend time thinking about past conflicts to analyze how best to improve the outcomes of future conflicts (Wallenfelsz & Hample, 2010). In addition, with regard to serial arguing, the way people cognitively experienced conflict episodes had more to do with the IIs they had between conflict episodes than with what actually occurred during those episodes (Hample & Allen, 2012; Hample & Cionea, 2012; Hample & Krueger, 2011; Hample, Richards, & Na, 2012).

Attributes of IIs

II theorists have posited that IIs can vary in eight ways, called attributes or characteristics (see Honeycutt, 2003; Honeycutt & Ford, 2001, for a review): frequency, valence, discrepancy, self-dominance, variety, proactivity, retroactivity, and specificity (Honeycutt, 2003, 2008, 2010a).

Frequency. Frequency (also referred to as *activity*) represents the regularity with which individuals experience IIs. Researchers have found that some people have many IIs throughout

the day, whereas others rarely do (Honeycutt, 2010b). For instance, women tend to report having more frequent IIs than men (Honeycutt, Zagacki, et al., 1989). Results from previous studies have also suggested that II frequency is negatively correlated to loneliness; the less lonely an individual, the more likely he or she will experience IIs (Honeycutt, 2003; Honeycutt, Zagacki, et al., 1989). Couples experiencing geographical separation have reported that they experienced an increase in the number of IIs (Allen, 1994); furthermore, marital status was related to the use of IIs in that engaged couples had more IIs than married couples (Honeycutt & Wiemann, 1999).

The frequency with which IIs are used has been linked to a number of functions, but it has primarily been viewed as a positive element of close relationships. Such a view is appropriate given that an early study showed that IIs primarily addressed relational topics and included relational partners (Edwards, Honeycutt, & Zagacki, 1988). This finding has since directed researchers toward investigating IIs "as major wellsprings that create expectations for relationship development" (Honeycutt, 2009, p. 315).

Indeed, IIs are used quite frequently to maintain relationships in conjunction with more traditional relational maintenance behaviors, such as sharing tasks and joint activities (see Canary, Stafford, Hause, & Wallace, 1993). At the same time IIs are used to keep relationships alive, they are used just as frequently to keep conflict in those relationships active (Honeycutt, 1995). In addition, especially for individuals in nonmarital relationships, who presumably have less frequent actual interactions (e.g., long-distance relationships; see Honeycutt, Mapp, Nasser, & Banner, 2009), the use of compensatory IIs is quite frequent. In contrast to these three functions (i.e., relationship maintenance, conflict, and compensation), the use of IIs for purposes of catharsis should be comparatively less frequent. Because this II function is primarily used

during or after a traumatic experience (Honeycutt, Nasser, Banner, Mapp, & DuPont, 2008), the general infrequency of such experiences has suggested that IIs involving anxiety and uncertainty are also less frequent than other uses. To date, therefore, II researchers have suggested that when compared to catharsis, IIs should be used more frequently for relational maintenance, conflict management, and compensation purposes.

Valence. Valence reflects the way positive or negative emotions are experienced while imagining a conversation. IIs vary in the amount of emotion felt as they are experienced. The affect may be positive, negative, or mixed as well as nonexistent. High valence reflects positive emotional affect; low valence reflects negative emotions, such as anger, sadness, pity or disgust. Honeycutt (2003) reviewed research indicating that females reported having more pleasant IIs than males did.

Using IIs to provide emotional catharsis, although often resulting in positive emotional improvement, is marked primarily by (a) negative thoughts and emotions surrounding past traumatic events (e.g., Honeycutt et al., 2008) or (b) uncertainty with respect to a potentially stressful one (e.g., Honeycutt, 1989a; Rosenblatt & Meyer, 1986). Thus, these IIs should be primarily unpleasant. In a similar manner, according to conflict linkage theory (Honeycutt, 2004) imagining conflict or recalling a past conflict often results in negative feelings and emotions, a prediction that has been supported with data (see Hample et al., 2012; Honeycutt, 2010a).

In contrast, II research with married couples has shown that the sole predictor o relational happiness and satisfaction is the pleasantness of IIs (Honeycutt, 1999; Honeycutt & Wiemann, 1999), suggesting that the relationship maintenance function involves primarily positively valenced IIs. Similarly, IIs used for compensation are likely to be positively valenced. Although individuals may compensate for a lack of negative interaction by having negatively valenced IIs,

researchers have suggested that substituting for actual interaction is more plausibly marked by positive emotions. For example, Honeycutt (1989b) found that elderly residents in a retirement home who reported using the compensation function had more pleasant IIs with children who visited regularly compared with children who rarely visited.

Discrepancy. Discrepancy involves the degree to which IIs differ from or resemble the actual conversation. For example, when individuals imagine encounters, their internal images may be congruent (i.e., nondiscrepant) or different (i.e., discrepant) from what actually occurs in real encounters. Gottman (2014) identified effective communication as that occurring when the intent of a message is congruent with the received impact of the message on the recipient; hence, high discrepancy is associated with communication incompetence. Honeycutt (2003) provided examples of how IIs could be similar to or different from relevant interaction. Highly discrepant IIs were reported by chronically lonely people, a finding that researchers have suggested serves to perpetuate the lonely state (Edwards et al., 1988). Lonely people have limited prior interactions upon which to base their IIs, so anything they experience prior to new interaction is likely to be high in discrepancy, a feature also found to be negatively correlated with communication competence (Honeycutt, Zagacki, & Edwards, 1993).

The relationship between the mode of imagery and discrepancy has also been explored. Zagacki et al. (1992) noted that verbally based IIs are usually less similar to the actual communication they represent. Thus, through a syllogistic approach (a logical argument of deductive reasoning to arrive at a conclusion based on two or more propositions asserted or assumed to be true), if conflictual IIs are more verbal, and verbally based IIs are usually discrepant, then conflictual IIs are more discrepant and thus distort reality.

The function discussed most often in terms of discrepancy is rehearsal. For instance, although practice will not completely nullify discrepancy between imagining and engaging in the conversation, Honeycutt (1989a) speculated that it should reduce discrepancy. In particular, using IIs to rehearse for upcoming conversations is thought to be most helpful because it can cause the individual to anticipate and prepare for "contingent actions to be manifested" (Allen & Honeycutt, 1997, p. 78); in other words, using IIs for rehearsal lowers discrepancy because it prepares the individual to plan more effectively and efficiently during the actual conversation.

Self-dominance. Self-dominance refers to the extent to which individuals imagine that they do the majority of the talking during an imagined encounter. Attention is focused on one's own message planning as opposed to reacting to what others might say. The interaction partner is frequently placed in a predominantly listening role. Self-dominance may be explained in terms of the availability heuristic (a mental shortcut that relies on immediate examples coming to a person's mind when evaluating a specific topic, concept, method, or decision) because the self has relatively fast and efficient access to messages through extensive knowledge of previous encounters (Tversky & Kahneman, 1974).

Early researchers suggested that self-dominance in the II was associated with having less pleasant IIs (Honeycutt, Edwards, et al., 1989); furthermore, researchers also suggested that a person engaging in IIs concerned with matters of conflict would likely find the self being more dominant than the II partner. Honeycutt (2003) concluded that prior research showed that an individual (the self) tends to talk more during IIs than in real-life situations. The opposite of self-dominance is other-dominance, which McCann and Honeycutt (2006) found tends to characterize collectivistic cultures like Japan compared to individualistic cultures like the US.

The II function most readily described as self-dominant is used for self-understanding to uncover core attitudes and beliefs. By definition, these IIs should include imagined dialog that reflects more self-dominance than the other functions. Conversely, using IIs for both relational maintenance and compensation are more likely to include imagined conversations with romantic partners, friends, and family (Honeycutt, Edwards, et al., 1989) with a focus primarily on the valued relational partner, not the self.

Variety. Variety refers to the diversity of topics and partners in IIs. Some individuals imagine conversations with many people, whereas others tend to think about conversations with a selected few. Researchers have suggested that IIs involve a wide variety of topics, including conflict, dating, activities, and school as well as family and home, and include various partners, such as family members, dating partners, friends, and roommates (Edwards et al., 1988). Honeycutt, Zagacki et al., (1989) found that college students had most of their IIs with romantic partners, followed by friends, family members, authority figures, coworkers, ex-relational partners, and prospective partners. Theirs was but one of many studies demonstrating that IIs almost always involve significant others instead of strangers or acquaintances (for review, see Honeycutt, 2003).

Honeycutt (2003) indicated that variety is positively associated with conversational alternatives, referring to flexibility in speaking and being skilled at wording the same thought in a number of ways. Variety was also found to be negatively associated with loneliness, but positively associated with an internal locus of control and overall conversational sensitivity (Honeycutt, 2003).

Proactivity. Proactivity refers to those IIs which are engaged in prior to actual interaction; their prevalence has been shown in research (Zagacki et al., 1992). In proactive IIs, individuals

are able to "stylize . . . intrapersonal anticipations, expectations, predictions, projections, hopes and forecasting" (Bruneau, 1989, p. 69) prior to any actual encounters, most likely to happen when using IIs to rehearse or assist in making decisions (Honeycutt, 2003).

Proactivity emerged as a valuable characteristic in research conducted by Gotcher and Honeycutt (1989) to assess the use of IIs during competitive debate; they found a correlation between proactive IIs and imagined success during competition rounds but not with actual success. The use of IIs appeared to help competitors in psychologically preparing for actual competition and may serve to create success through a self-fulfilling prophecy (Honeycutt & Gotcher, 1991).

Retroactivity. Retroactivity involves reviewing the interaction once it has taken place. Rehearsal IIs are much less likely to occur after an actual conversation (Bodie et al., 2013). For example, a worker who desires a raise in salary may decide to approach the boss concerning the matter. Using an II proactively, he may visualize himself entering his boss's office and may devise a plan for what he will say; this process of planning is an example of a proactive II. Once the real-life interaction has taken place, he may reflect on it, analyzing it to determine what worked and what did not. His reflection is an example of making use of a retroactive II. A majority of IIs (53%) have been found to be proactive; whereas 30% were retroactive (Kroll-Mensing, 1992).

In a discussion of the planning process, Berger (1993) acknowledged the likelihood that individuals recall previous interaction with others in order to determine whether past interactions have or will have bearing on a present goal, providing indirect support for the value of retroactive IIs.

Specificity. IIs are also characterized by their specificity, or the level of detail and distinctiveness of images contained in them. Researchers found that individuals can imagine specific dialog, nonverbal behaviors, or settings in their IIs, or the II can be quite vague.

Honeycutt et al. (1993) assessed IIs and their correlation with communication competence as well as conversational sensitivity. Their results suggested that the level of detail in IIs, or specificity, positively predicted several dimensions of conversational sensitivity, including the ability to detect meaning in another's messages, conversational memory, and conversational alternatives.

These aspects of IIs can lead to the use of IIs for various functions. A person may use IIs to produce a sense of catharsis by releasing emotions or to develop a better understanding of self. IIs also allow one to rehearse for upcoming interactions and may allow for compensation in the absence of actual interaction.

Bodie et al. (2013) examined the multidimensional nature of II functions and attributes in terms of how often each attribute applied to each function. Findings suggested that the strength of the attributes of a person's II use would change across functions. For example, IIs used for rehearsal were more proactive, less retroactive, and more discrepant than IIs used for any of the other functions. In addition, IIs used for rehearsal were higher in self-dominance and lower in specificity than those used for the compensation and relational maintenance functions (Bodie et al., 2013). Bodie et al. (2013) also conducted a canonical correlation between the attributes and functions that yielded three dimensions containing various sets of functions and attributes. The first dimension suggested a link between using IIs for the rehearsal, self-understanding, conflict management, relational maintenance, and catharsis functions and lower levels of proactivity, retroactivity, specificity, frequency, and variety. The second dimension suggested an association

between the compensation function and lower levels of self-dominance, discrepancy, frequency, and valence but higher levels of variety. The third dimension linked lower use of the relational maintenance and conflict management and higher use of the catharsis function with higher levels of frequency and lower levels of self-dominance. Bodie et al. (2013) interpreted their findings as suggesting "a multivariate association at the most fundamental level—that is, the functions can be described by the various attributes" (p. 18). This implies that the pattern of a person's II attributes will likely look different as the function(s) that he or she aims to achieve with the II changes.

In all, this suggests that the most promising way of furthering research on individual tendencies and IIs is to forgo attempts to measure general II use across all functions and instead focus on function-specific investigations. Eventually, this should help identify by function what attributes play a role and how variation in those attributes relates to other variables.

IIs in Maintaining Relationships

A critical function of IIs is the maintenance of relationships (Edwards et al., 1988). Across types of LDRs (e.g., separations resulting from military deployment, incarceration, school, and work), researchers have highlighted IIs as important maintenance strategies among others (Comfort, Grinstead, McCartney, Bourgois, & Knight, 2005). IIs create relational expectancies and contribute to the partners' memories about relationships. Honeycutt (2008) argued that relationships exist as much in the minds of the relational partners as in the actual, observable interactions between those individuals. Thus, in addition to examining relationships through the interactional behaviors of partners, one can also study relationships from inside the minds of the individuals. II research frequently involves relational scenarios, and its eight attributes are commonly used in purposes involving relational maintenance. Edwards et al. (1988)

examined II topics among college students and identified eleven topics: dating, conflicts/problems, work, activities, school, miscellaneous (idiosyncratic topics), friends, family/home, money, small talk, and ex-partners (in descending order of frequency). The survey done among married couples revealed a different ranking of II topics: future plans, sex life, how they communicate, how they manage finances, social life, the relationship, children, job, feelings/emotions, and fantasies (Honeycutt, 2002). Sex difference also played a role in II topics; for example, future plans and goals was the main topic for husbands, whereas communication concerns was the most imagined topic for wives (Honeycutt, 2002). This finding was consistent with other research reported by Honeycutt and Cantrill (2001), who showed that women think more about communication in their personal relationships while men think about it less often.

IIs have also been used to maintain LDRs. Stephen (1984) examined symbolic interdependence in couples jointly constructing reality and communication. Long-distance couples, who tended to experience higher levels of symbolic interdependence and optimism than couples living together, talked about fewer topics during their phone conversations than intact couples. Indeed, the costs of long-distance calling may mitigate against long speaking times covering a variety of topics (Honeycutt, 2002), yet IIs may be used to compensate for the lack of shared time as well as psychologically to maintain the relationship. Allen (1990) compared long-distance couples and nongeographically separated couples and found couples in LDRs experiencing more IIs to increase self and partner understandings as well as using IIs to resolve relational issues in their minds. Allen (1990) also found that long-distance couples reported that their IIs were used as a coping strategy to maintain their relationship. In addition, couples in LDRs had more IIs during times of separation.

IIs have been only recently applied to relationships in the online context. Berkos (2010) examined the use of IIs in online communication (e.g., having a proactive II before sending an instant message to a prospective date or having a retroactive II recalling an online argument with others). Six main topic areas were identified: school, social plans, dating, sports, conflict, and recent events/gossip. Participants reported having IIs with a variety of online conversational partners with romantic partners, friends, and family making up the largest categories. Even in online communication, individuals maintain the need to rehearse, reflect, analyze, understand, avoid conflict, and substitute their actual online communication encounters through the use of IIs (Berkos, 2010). The IIs affect online communication by improving communication, managing emotion, rehearsing, managing situations, and presenting a professional self.

The most frequent type of other parties in IIs is a relational partner (Edwards et al., 1988), but not much attention has been paid to the parent–child dyad. Woods and Edwards (1990) examined the IIs of parents and their children who were leaving for college. A survey of 72 parent–student pairs showed that all of the II topics concerned the college-bound student; none concerned the family as a whole. Many of the topics of parents and students overlapped, such as course of study, choice of college, living arrangements, and finances; however, students also reported IIs about independent living and social life, whereas parents were concerned with assuming responsibility and adjusting to college life.

The connection between IIs and relationship satisfaction has been well documented. For example, Honeycutt (2010a) found that loneliness was associated with discrepant IIs, ambiguous IIs, and fewer interaction partners. Honeycutt and Keaton (2012) examined IIs as predictors of relationship quality by surveying a sample of 136 couples who were either dating, engaged, or

married. The results showed that having more specific, frequent, self-dominant, proactive, retroactive, and pleasant IIs predicted higher relationship satisfaction.

To date, no researchers have addressed the use of IIs among the children and parents living apart in situations like those of left-behind children in China. Separated from their parents, left-behind children in China have a strong desire to interact and communicate with their migrant parents (e.g., Pan et al., 2013). When real interaction or communication cannot be frequently achieved, IIs may play an important role to help maintain the long-distance parent–child relationship. In the current study the researcher attempted to address questions about left-behind children's use of IIs, the functions and attributes of the IIs concerning long-distance parent–child relationships, and the connection between IIs and relational quality, among others.

The *System* Context: Relational Maintenance Behaviors

The following sections summarize the literature related to perspectives on relational maintenance, types of relational maintenance behaviors, long-distance parent–child relationship maintenance, and the connection between relational maintenance behaviors and relationship outcomes.

Perspectives on Relational Maintenance

Since the early 1980s, scholars have identified relationship maintenance as one of the factors that can significantly improve relationships, and during the last 40 years scholars have explicitly used the term *relational maintenance* in their lines of research (Dindia, 2003). Doubtless, relationship maintenance is an important component in interpersonal relationships. Duck (1988) suggested that relational partners spend more time and effort maintaining relationships instead of initiating or terminating them; therefore, relationship scholars have

focused their efforts on examining the process and strategies of maintaining relationships in greater detail (Dindia, 2003).

Although scholars cannot agree on a single definition of *relational maintenance*, the relationship that is maintained can be understood through at least four different aspects—the type, form, level, or stage of the relationship (Dindia, 2000). In general, *relational maintenance* can refer to the behavioral dynamics that preserve a relationship (Dindia, 2000). Dindia and Canary (1993) elaborated four definitions of *relational maintenance* they found in the literature. First, the most basic definition of *relational maintenance* involves keeping a relationship in existence (Dindia, 2003); for instance, a romantic relationship is maintained when it is not terminated through breakup. Second, *relational maintenance* can refer to keeping a relationship in a specified state (Dindia, 2003), denotes a condition involving sustaining a relationship in a steady state or in a particular condition with certain characteristics associated with the state of a relationship; for example, for a married couple, maintaining a relationship can mean sustaining the relationship through trust, commitment, and intimacy. Third, *relational maintenance* denotes the process of keeping a relationship in a satisfactory condition (Canary & Dainton, 2006); this definition conceptually and operationally specifies maintenance as relational satisfaction or as relational continuity (e.g., whether or not it is intact). Finally, the fourth use of relational maintenance is to keep a relationship in repair (Dindia, 2003); it involves both the maintenance and repair of relationships and can include two elements—preventative maintenance and fixing a relationship in disrepair—that can prevent a relationship from deescalating and terminating (Dindia, 2003).

The central theme unifying these definitions is that maintenance involves keeping a relationship at a level of intimacy that is satisfactory to both relational partners. Regardless of the

reason behind the use of relational maintenance behaviors, an individual's use of them is generally believed to be proactive, constructive, and rewarding (Canary & Stafford, 1994; Guerrero, Eloy, & Wabnik, 1993).

Types of Relational Maintenance Behaviors

Interpersonal communication researchers have offered various conceptualizations of maintenance and corresponding typologies for examining strategies that people use to maintain their relationships (Canary et al., 1993; Dainton & Stafford, 1993; Haas & Stafford, 1998; Messman, Canary, & Hause, 2000; Nix, 1999; Stafford & Canary, 1991; J. Ye, 2006). Stafford and Canary (1991) captured one of the earliest and most widely used typologies of relational maintenance behaviors. In their initial research on relational maintenance strategies used by married couples, they identified five positive and proactive maintenance strategies through factor analyses. These five strategies include positivity, openness, assurances, networks, and sharing tasks.

Positivity involves interacting with a partner in an enjoyable, optimistic, and uncritical manner, such as acting in an agreeable and cheerful manner when one does not necessarily feel that way, carrying out favors for the partner, and also suppressing complaints. *Openness* includes directly discussing the nature of the relationship and disclosing one's desires for the relationship, for example, relationship history, rules, and also personal disclosures. *Assurances* are messages that emphasize an individual's continuation in the relationship, such as providing partner support, comforting the partner, and making clear commitments or faithfulness. *Networks* involve both relational partners interacting with or relying on common affiliations and relationships, for example, asking advice from parents to help with child rearing. *Sharing tasks* requires partners to perform responsibilities specific to the relationship, such as sharing household chores.

One limitation of Stafford and Canary's (1991) typology is that they evaluated only romantic relationships (i.e., married, engaged, or dating partners). It is possible that people use different strategies to maintain different relationships (e.g., friendships, family relations, or working relationships). Realizing the weakness of previous research, Canary et al. (1993) conducted an inductive study on relational maintenance behaviors among different relationship types: lovers, relatives, friends, and others. Five new behaviors were identified: joint activities (e.g., spending time together), cards/letters/calls (e.g., use of mass communication), avoidance (e.g., evasion of partners or issues), antisocial (e.g., behaviors that are unfriendly or coercive), and humor (e.g., jokes and sarcasm). Canary et al. (1993) also provided further evidence that behaviors vary depending on the relationship type. Thus, studying a relationship type that has been somewhat neglected, such as the parent–child relationship, is a worthy venture. Stafford, Dainton, and Haas (2000) identified two additional relational maintenance behaviors: advice and conflict management. First, advice centers on providing social support to a partner; and second, conflict management involves behaviors pertaining to understanding, forgiveness, and patience. After reevaluating Stafford and Canary's (1991) typology, Stafford et al. (2000) observed that sometimes openness takes on characteristics similar to advice and that positivity sometimes resembles characteristics similar to conflict management.

Stafford (2011) revised the earlier version of the relational maintenance strategy measure (RMSM) to account for some fundamental flaws in the earlier measure and offered improvement in the form of the relational maintenance behavior measure (RMBM), which included seven factors of relational maintenance: positivity, assurances, understanding, relational talks, self-disclosure, networks, and tasks. Although this measure was primarily developed for marital

relationships, it includes factors to measure relational maintenance for nonromantic relationships (e.g., in friendship and family relationship), such as self-disclosure and understanding.

Other typologies used to successfully maintain romantic relationships have been identified for LDRs; for example, Westefeld and Liddell (1982) found the following maintenance strategies: developing support systems for partners who are separated; developing alternative ways to communicate, including sending videotapes and gifts; discussing relational expectations and ground rules prior to the separation; being open and honest with each other; developing and maintaining trust; focusing on the positive aspects of long-distance relationships; and using face-to-face time wisely.

Strategic and routine relational maintenance behaviors. Maintenance strategies were narrowed in the research of Aylor and Dainton (2004), who stated that individuals can use strategic or routine maintenance behaviors. Strategic behaviors are those that are "intentionally chosen and enacted for the purpose of maintaining a relationship, [and routine behaviors are] behaviors at a lower level of consciousness than strategic behaviors" (Aylor & Dainton, 2004, p. 3). Stafford, Dainton, and Haas (2000) examined the patterns in strategic and routine maintenance strategies. Based on their research, the maintenance behavior of positivity and sharing tasks was performed more routinely than strategically; however, the same maintenance behavior can also be performed routinely at one time and strategically at another. In addition, routine behaviors are mundane maintenance behaviors performed frequently until something occurs to disrupt the relationship; at that point, partners might use more strategic maintenance behaviors. Thus, routine maintenance is performed during times when preferred levels of

satisfaction and commitment are experienced; strategic maintenance is carried out in times of perceived relational uncertainties.

Positive and negative relational maintenance behaviors. Maintenance scholars have also distinguished between *positive*/*prosocial* and *negative*/*antisocial* relational maintenance behaviors (e.g. Clark & Grote, 1998; Dainton & Berkoski, 2013; Dainton & Gross, 2008; Goodboy & Bolkan, 2011; Goodboy, Myers, & Members of Investigating Communication, 2010; Guererro & Chavez, 2005; Simon & Baxter, 1993; J. Ye, 2006). The initial work carried out on relationship maintenance (e.g. Canary & Stafford, 1992; Stafford et al., 2000) primarily operationalized maintenance behaviors as those including positivity, openness, assurances, social networks, sharing tasks, conflict management, and advice-giving. Others have argued for a positivity bias in terms of these maintenance behaviors, however, and negative behaviors can emerge out of a concerted effort in enacting maintenance activities (Dainton & Berkoski, 2013; Dainton & Gross, 2008). According to Dainton and Gross (2008), negative maintenance behaviors are socially unacceptable behaviors that might serve relational maintenance purposes. These can also include antisocial maintenance behaviors, which dissuade interaction and are often coercive, manipulative, or controlling and involve giving ultimatums, threats, or remaining distant (Dindia, 2003). Antisocial or negative maintenance behaviors can be used to keep the relationship at a certain state, such as keeping a close friendship from escalating into romance.

Other possible reasons for adopting antisocial behaviors in relational maintenance can include protecting oneself, avoiding rejection or conflict, manipulating others, or gaining favor, attention, and rewards (Saarni & Lewis, 1993). Dainton and Gross (2008) inductively identified six negative maintenance behaviors, including (a) jealousy induction, which is an intentional effort to make the partner jealous; (b) avoidance, which refers both to avoiding the partner as

well as avoiding topics that might lead to arguments; (c) spying, which involves checking the partner's mail or phone or actively talking to the partner's friends to gather information; (d) infidelity, which includes behaviors ranging from flirting to having sex with other people so that the individual can prevent boredom in the relationship; (e) destructive conflict, which refers to controlling behavior and seeking arguments; and (f) allowing control, that is, breaking plans with family or friends to be with the partner, avoiding activities that the individual previously enjoyed because the partner does not like them, and letting the partner make decisions for him or her. Generally, although they serve their purpose, negative maintenance behaviors rarely lead to positive relational outcomes and can sometimes even decrease relationship satisfaction (Dainton & Gross, 2008).

Across the relationships examined (i.e., romantic, friendship, sibling, and others) in the literature, researchers have drawn two general conclusions. First, relational maintenance behaviors may be used in isolation or in conjunction with one another (Canary & Stafford, 1994). Although romantic partners report using the five relational maintenance behaviors as identified by Canary and Stafford (1992), not all partners report using the same behaviors with the same frequency (Dibble, Punyanunt-Carter, & Drouin, 2018; Ragsdale, 1996; Weigel & Ballard-Reisch, 1999). The use of a particular relational maintenance behavior can depend on whether the relationship is perceived as equitable (Canary & Stafford, 1992, 2001; Messman et al., 2000) or whether the relationship is long distance or geographically close (Dainton & Aylor, 2001). Other factors include the channel used to relay the behavior (Dainton & Aylor, 2002; Wright, 2004) and the expectations associated with a partner's use of the behavior (Dainton, 2000).

Second, the use of relational maintenance behaviors varies based on the development and type of relationship (Canary & Stafford, 1994). In romantic relationships, an increase in

relational intensity results in an increase in the perceived use of openness and assurances; a decrease in relational intensity results in a decrease in the perceived use of positivity, assurances, and tasks (Guerrero et al., 1993). Among friends, relational maintenance behaviors such as support (i.e., providing disclosure, comfort, and advice), no flirting (i.e., discouraging behaviors that could be misinterpreted as flirting), and passive disassociation (i.e., excluding a friend in a dating relationship from plans with mutual friends) are used (Craig & Wright, 2012; Messman et al., 2000; Nix, 1999).

Collectively, the research conducted on relational maintenance behaviors supports Stafford and Canary's (1991) contention that all on-going relationships, regardless of type, require maintenance. Previous researchers have suggested that relationship types affect relationship maintenance behaviors; therefore, in order to clarify which relational maintenance behaviors are likely to occur in various relationships, a clear understanding of relationship types and the variables that might affect those relationships is necessary. Although prior research has applied the Stafford and Canary (1991) typology in friends (Canary et al., 1993; Tengku, 2014) and sibling relationships (Myers & Members of COM 200, 2001; Myers & Odenweller, 2015), researchers have virtually ignored the role that relational maintenance behaviors play in parent−child relationships, not to mention long-distance parent−child relationships.

Maintaining Long-Distance Parent–Child Relationships

Several variables that may affect relationships were not specifically mentioned or addressed in Stafford and Canary's (1991) original study. One such variable involves the element of geographical dispersion among those involved in the relationship.

Defining LDRs. Reaching a consensus in defining LDRs has been difficult. Various considerations, premises and perceptions of "distance" have been applied to various studies,

resulting in two major dimensions of LDR definition: the actual time spent apart and the physical distance separating the participants.

In some studies researchers set a minimum number of miles for a relationship to be considered long distance, ranging from 100 miles to an average of 421 miles (Carpenter & Knox, 1986; Stafford & Reske, 1990). Holt and Stone (1988) used the measure of miles to separate participants into three categories: 0–1 miles apart, 2–249 miles apart, and 250 or more miles apart. Helgeson (1994) required that the relational partner be outside a particular area, but Stephen (1986) defined long distance as one partner stationed in another part of the state. In recent work LDRs were defined using a 20 km cut-off (Sapiro, 2016).

Differentiating the proximal measure, other researchers (Gerstel & Gross, 1984; Govaerts & Dixon, 1988; Guldner & Swensen, 1995) suggested that time spent apart is also an essential distinguishing variable in LDRs. Guldner and Swensen (1995) classified participants who agreed to the statement "My partner lives far enough away from me that it would be very difficult or impossible for me to see him or her every day" as being in a LDR (p. 315). Some researchers (Bergen, 2010; Gerstel & Gross, 1984; Govaerts & Dixon, 1988; Y. S. Lee, 2018; Sandow, 2014) described commuter marriages as ones in which both partners maintain separate residences and experience separation from each other several times a week to several months at a time.

Holt and Stone (1988), who used time and distance variables to define LDRs, categorized couples based on demographic information of the participants, three time-apart ranges (zero, less than six months, more than six months), three frequency ranges (visiting more than once a week, once a week to once a month, and less than once a month), and three distances ranges (0–1 miles, 2–294 miles, and over 250 miles). They found that subtypes of distance relationships existed based on combinations of the three variables.

In summary, a distinguishing factor in past definitions of LDRs is that communication was limited to either verbal expression via telephone conversations or to some form of written exchange (e.g., Guldner & Swensen, 1995; Sapiro, 2016). Clearly, researchers have been unable to come to consensus in terms of a precise definition of LDRs (Stafford, 2004). Thus, other researchers have chosen to allow participants to define whether they are in a long-distance relationship or not (i.e., subjective perceptions in defining LDR status). Dellmann-Jenkins, Bernard-Paolucci, and Rushing (1994) suggested that allowing participants to define their relationships as LDRs and geographically close relationships based on their perception of distance is the most appropriate way to define the physical characteristics of a relationship. They argued that in many cases, individuals whose relationships may be considered LDR by mile separation may not perceive their relationship as long-distance if they are still able to see each other frequently.

Instead of using a guiding principle, the researcher in the current study conceptualized LDR as follows: when communication opportunities are restricted for the individuals involved because of geographic parameters and when the individuals in the relationship have expectations of a continued close connection (Stafford, 2004). In the case of dyads that include migrant parents and left-behind children, they both have the strong intention of connecting to each other closely; but the opportunities for communication are limited because they are apart from each other.

Definitions of *long-distance parent–child relationships* have not been attempted in the literature (Stafford, 2004). Children are generally considered only secondarily in long-distance romantic relationships in terms of how their mere existence or age affects long-distance couples, and only a few researchers have examined the long-distance family as a whole (Stafford, 2004).

Long-distance parent−child relationships may occur in the case of long-distance marriage, divorce, or relationships in which the partners never married; and separation between parents and children may also occur as a result of parental military deployment, incarceration, or occupational demands (Stafford, 2004). In this study, long-distance parent–child relationships occur because of the internal migration for jobs in cities.

Maintenance in LDRs. Relational maintenance is a logical outgrowth of LDRs, maintenance behaviors serve to sustain "the nature of the relationship to the actor's satisfaction" (Stafford & Canary, 1991, p. 220).

Across types of LDRs (e.g., separations resulting from military deployment, incarceration, school, work), researchers have highlighted IIs (Comfort et al., 2005) as well as future thinking, avoidance, and letter writing (Maguire, Heinemann-LaFave, & Sahlstein, 2013) as important maintenance strategies. Military couples, for example, often use social network sites (in addition to video chat tools like Skype) as a means of staying connected, sharing experiences, and giving or receiving updates (Rea, Behnke, Huff, & Allen, 2015). Technology-mediated communication (e.g., email, social networking sites), also integral to maintenance, largely consists of self-disclosure, positivity, assurances, and social network discussions between partners (Dainton & Aylor, 2002; Johnson, Haigh, Becker, Craig & Wigley, 2008). Long-distance couples, for example, may use text messaging, Skype, or social networking sites to communicate more frequently and maintain relationships (e.g., Billedo, Kerkhof, & Finkenauer, 2015; Dargie, Blair, Goldfinger, & Pukall, 2015; Jiang & Hancock, 2013), whereas the lack of geographic proximity would have limited them in the past. Individual characteristics like humility are, moreover, associated with some relational maintenance processes (e.g., forgiveness) and used by long-

distance partners, suggesting that partners' individual characteristics contribute to maintenance (Van Tongeren, Davis, & Hook, 2014).

Some scholars have used relational continuity constructional units (RCCUs) to conceptualize maintenance in LDRs. RCCUs are maintenance behaviors enacted before (i.e., prospective), during (i.e., introspective), and after (i.e., retrospective) separations at the individual, dyadic, and network levels, helping individuals in LDRs to manage periods of separation (e.g., Merolla, 2012). Prospectively, individuals cognitively acknowledge the temporary nature of the separation, couples engage in relationship talk, and social networks become informed of the impending separation. Introspectively, individuals reminisce about positive experiences and plan future interactions with their partners, couples engage in positive mediated communication, and partners reflect on relational experiences with network members. Retrospectively, individuals focus on positive interactions and events that occurred during the separation, couples focus on spending time together, and social networks are informed of feelings and thoughts experienced throughout the separation (Merolla, 2012). Thus, partners maintain their relationship by addressing the expected separation, sustaining closeness during the separation, and assuring partners of their connection after the separation (Merolla, 2012; Pistole, Roberts, & Chapman, 2010).

Maintenance of parent–child LDR. The most intimate and enduring relationship in which an individual engages is the parent–child relationship (Golish, 2000), yet few researchers have focused on relational maintenance in long-distance parent–child relationship, compared to other types of LDRs.

The parent−child relationship is differentiated by several features not associated with romantic relationships. These features include the nonvoluntary and intimate nature (Cicirelli,

1991), geographical dispersion, and the parent's initiation of the maintenance behaviors. Based on these distinctive features, one may reasonably expect parents to use relational maintenance behaviors unique to and reflective of the parent−child relationship that extend beyond the five relational maintenance behaviors identified by Stafford and Canary (1991); however, studies on parent–child relationship maintenance have revealed maintenance behaviors similar to those used by romantic partners (e.g., Burke, Ruppel, & Dinsmore, 2016; Punyanunt-Carter, 2005).

Punyanunt-Carter (2005) examined relational maintenance in father–daughter relationships using equity theory. Results indicated that daughters mainly used positivity, assurances, openness, conflict management, and social networks to maintain their relationships with fathers in equitable father–daughter relationships (Punyanunt-Carter, 2005). When daughters were away at college, they wanted to let their fathers know how much they cared for them. When disagreements occurred, daughters knew when to cooperate or apologize; moreover, daughters wanted to share their experiences with their fathers. The results also indicated that fathers were more likely than daughters to use all of the relationship maintenance behaviors (i.e., assurances, openness, conflict management, shared tasks, positivity, advice, and social networks).

Burke, Ruppel, and Dinsmore (2016) examined young adults' relational maintenance and psychosocial well-being during the transition to college. The findings of their study suggested that expressions of openness and assurances with a parent seemed to be the most beneficial to students' well-being, not entirely surprising given that these types of relational maintenance have the potential to be relationally confirming (Canary & Stafford, 1992). These relationally confirming behaviors appeared to be salient in distance relationships and during times of adjustment. Students under greater stress who engaged in less daily openness and assurances

with their parent were also lonelier. Whereas lonely students might compound their stress and loneliness by not reaching out to their parents, students motivated to communicate openness and assurances with their parents seemed to experience less loneliness. Using relational maintenance behaviors might have made them more likely to continue reaching out to their parents and ultimately, improve their psychosocial well-being.

Myers and Glover (2007) explored the relational maintenance behaviors used by emerging adults (aged 18–25 years) with their parents. The results indicated that the emerging adults used six of the seven relational maintenance behaviors (i.e., networks, assurances, positivity, tasks, conflict management, and advice) more often than not with their parents, and their use of relational maintenance behaviors was related directly to perceived commitment, trust, and control mutuality with their parents. The use of these six relational maintenance behaviors reflected the developmental phase in which emerging adults are located. According to Arnett (2000), emerging adults encountered fluctuations in their residential, vocational, and educational endeavors. As such, they may have strategically used the networks and tasks relational maintenance behaviors to remain physically involved in their parents' lives; they may have also strategically used the assurances, positivity, conflict management, and advice as relational maintenance behaviors to remain emotionally or communicatively involved in their parents' lives (Myers & Glover, 2007). These findings may explain why the parent–child relationship has been regarded by children as an emotionally close and involved relationship (Golish, 2000) and why emerging adults consider their parents to be a valuable source of affection and alliance (Lempers & Clark-Lempers, 1992).

Some researchers have explored nonresidential parent–child relationship maintenance. Rodriguez (2014), for example, found that nonresidential fathers who had limited interactions

struggled to "know" their children, but those having frequent interaction with their children had access to the mundane stories of their children's lives, which helped to maintain the relationships. This research suggested that the process of updating what has occured during absence may be central to maintaining relationships.

A recent study by Pan et al. (2013) explored the long-distance communication between left-behind children (age range between 10 and 13) and their parents in China. Results showed that the left-behind children and their migrant parents used mobile phones as their primary method of maintaining the parent–child connection. Most of the left-behind children surveyed talked to their parents once a week. Although the left-behind children were eager to communicate with their parents more frequently, they usually did not initiate phone calls. These asymmetric roles of parents and left-behind children in phone call initiation can be explained by the unequal social relationship between them. Parents typically bear more family responsibilities and feel the need to pay attention to their children's development, but children depend on their parents and may not see the need to report their every move to them.

Pan et al. (2013) also identified three major topics in parent–child phone conversations: education, health, and work. The education of the left-behind children was the most discussed topic, followed the health of both children and parents and the work of the parents. Both left-behind children and their parents tended to talk about pleasant things instead of the problems. They both avoided talking about negative topics and suppressed complaints about life, work, and school to comfort each other. This finding coincided with the relational maintenance strategies of *positivity* and *assurances*. A majority of left-behind children interviewed would not discuss with their parents their deep emotions and innermost feelings, showing no or limited *openness* maintenance behavior in the parent–child interaction for several reasons. First, the generation

gap may contribute to the unwillingness of children to share their inner thoughts with parents. Second, the physical distance between left-behind children and their migrant parents may also lead to psychological distance that further impedes openness between children and parents.

Although some researchers have examined the communication and relationship building of left-behind children and migrant parents in China (e.g., F. Fan et al., 2010; P. L. Liu & Leung, 2017), few have discussed the relational maintenance behaviors they used, and even fewer have addressed the relationship outcomes associated with the relational maintenance behaviors.

Relational Maintenance Behaviors and Relationship Outcomes

Successfully maintaining relationships has been linked to several positive outcomes, including relational satisfaction, commitment, trust, and longevity (Canary & Stafford, 1992; 1993; Guerrero et al., 1993; McNallie & Hall, 2015).

Previous researchers assumed that the more behaviors practiced, the greater the satisfaction would be for those in the relationship. Thus, even though LDRs would seem to make relational maintenance behaviors difficult, they are not impossible to practice; however, some scholars (e.g., Ellis & Ledbetter, 2015; Govaerts & Dixon, 1988; Guldner & Swensen, 1995; Johnson, 2001; Stafford & Reske, 1990) explained that LDRs are not always less satisfying than geographically close relationships. The comparison of these two types of relationships includes perspectives new to the field of relational maintenance behaviors. First, the successful practice of relational maintenance is not necessarily dependent on geographical dispersion. Second, the satisfaction gained from relational maintenance behaviors is not dependent solely on quantity but is also possibly influenced by the quality of relational maintenance behaviors.

Belus, Pentel, Cohen, Fischer, and Baucom (2019) examined different levels of relational maintenance behaviors (i.e., intrapersonal, dyadic, and network-level relational maintenance

behaviors) at three time points (i.e., before, during, and after separation). Their results indicated that the intrapersonal relational maintenance behaviors used before, during, and after separation were associated with relationship satisfaction as were dyadic relational maintenance behaviors during separation. More specifically, intrapersonal relational maintenance behaviors used before separation and during separation and dyadic relational maintenance behaviors during separation were associated with greater relationship satisfaction, whereas those used after separation were associated with lower relationship satisfaction.

A study of grandchild–grandparent relationships (Mansson et al., 2010) showed that grandchildren used (in descending order) positivity, conflict management, tasks, assurances, networks, advice, and openness relational maintenance behaviors in their relationships with their grandparents. Perceived grandparent provision of communication-based emotional support and grandchildren's communication satisfaction with grandparents were directly and positively related to grandchildren's use of relational maintenance behaviors. Study of parent–young child relationships (Myers & Glover, 2007) dealing with emerging adults' use of relational maintenance behaviors with their parents showed that emerging adults (aged 18–25 years) used networks, assurances, positivity, tasks, conflict management, and advice relational maintenance behaviors with their parents, reflecting the developmental phase in which emerging adults were located. The results also showed that the young adults' use of relational maintenance behaviors was related directly to perceived commitment, trust, and control mutuality with their parents. Another study on daughter–father relationships showed that daughters' communication satisfaction was based on fathers' positivity relationship maintenance behavior and relational satisfaction was based on fathers' shared tasks (Punyanunt-Carter, 2005). This finding supports the study by Dainton, Stafford, and Canary (1994) on relationship maintenance behaviors and

satisfaction. They found that married couples reported high levels of satisfaction with assurances and positivity; moreover, they found higher satisfaction levels when spouses shared tasks. Even though fathers and daughters are not in a marital relationship, they may find the same type of pleasure that married couples do when they share tasks (Dainton, Stafford, & Canary, 1994).

The aim of the present study was to explore deeper into the communication between the left-behind children and their migrant parents, so as to (a) identify the specific relational maintenance behaviors initiated by the migrant parents and perceived by the left-behind children when they are separated and (b) examine the relationship between the use of parent–child relational maintenance behaviors and relationship outcomes.

The *Network* Context: Grandparents' Support

The following sections elaborate the related literature on family support and grandparents' role as caregivers.

Family Support

Social support. Although no consensus has been reached on what constitutes social support, many definitions have been proposed. Sarason, Levine, Basham, and Sarason (1983) stated that social support entails the degree to which an individual is liked and respected by others; Cobb (1976) discussed social support as the sum of information that makes the individual believe that others are concerned about or like the individual and that he or she is important and part of the network of communication. House (1981) also stated that social support refers to an individual's experiences of being cared for, responded to, and helped by people in that individual's social group. For J. J. Gallagher, Beckman, and Cross (1983), social support is a cure that may reduce the negative effects of crises and changes in people's lives. Caplan and

Kilhlea (1976) defined social support as connections between people or groups that serve to improve adaptive adequacy to cope with short-term crises or transitions in life, long-term difficulties, stresses, and deprivation. Social support serves many functions, summarized as follows:

1. It provides emotional ease for people by supplying the goods and services they need.
2. It provides people with the means to confront problems by guiding those people.
3. It provides feedbacks that improve individuals' performance.
4. It contributes to positive adaptation and self-development.
5. It protects people from the negative effects of stress by providing connections among individuals during ordinary daily life as well as in crises (Celik & Ayna, 2014; Dunst, Trivette, & Cross, 1986; Kazak & Marvin, 1984; Sarason, Levine, Basham, & Sarason, 1983).

As can be understood from its definitions and functions, social support has a multidimensional structure. Just as it is fed by various supportive sources, it also refers to the number of supportive sources needed for the family. Several categories of communication behaviors have been identified and used as operational definitions for support. For instance, scholars (Fahey & Shenassa, 2013; House, 1981) have identified four types as follows: emotional support, appraisal support, instrumental support, and informational support. Emotional support refers to providing messages that involve emotional concerns, such as caring, understanding, affect, trust, or empathy. Appraisal support involves providing affirmation and feedback. Instrumental support includes giving assistance (e.g., money and labor) to accomplish tasks. Informational support refers to providing messages in the form of recommendations, advice, or knowledge that could be helpful in solving problems (Albrecht & Adelman, 1984;

Fahey & Shenassa, 2013; Negron et al., 2013; Taylor et al., 2004). Gottlieb and Todd (1979) reported categories of emotionally sustaining behaviors (talking, listening, empathizing); problem-solving (offering clarification, making suggestions); indirect persuasive influence (providing unconditional access, intervening); and environmental action (intervening in the environment to remove or diminish the source of stress).

Several definitions of support, derived from the image of communication *networks*, enumerate ways that assistance can be provided (Hammer, 1981; Mitchell & Trickett, 1980). These have been somewhat vague, for example, "the manner in which human attachments are structured as systems of support and the resources that are exchanged among the members of these systems" (Gottlieb, 1981, p. 11); or the "social field" that embeds a focal individual (Mitchell & Trickett, 1980, p. 28). Nevertheless, operational definitions have been more precise because of the use of specific measures of structural properties (i.e., size, density, reciprocity, multiplexity).

In each of these approaches, *social support* was defined in terms of the way in which communication behaviors tie an individual to his or her social environment and function to enable the individual to relate positively to that environment. Although some emphasize the content of communication (e.g., Caplan & Kilhlea, 1976) and others focus on the structure of communication networks (e.g., Mitchell & Trickett, 1980), support is conceptualized in all of these approaches as a communication process (Albrecht & Adelman, 1984).

Albrecht and Adelman (1984) examined research on the functions of supportive communication and pointed out:

1. Support occurs when givers encourage stressed individuals to openly vent their frustrations and when they allow stressed persons to move from one topic to another until all their frustrations have been covered (Silver & Wortman, 1980).
2. Support occurs when givers express messages that function to provide either acceptance or reassurance.
3. Functional, supportive responses by hairdressers include offering sympathy, being "light-hearted," listening, presenting alternatives, and telling the client to "count her blessings" (Cowen et al., 1979).
4. Support occurs when givers provide information that enhances the communication skills (e.g., the ability to identify sources of material aid and the ability to cope with specific communication problems like conflict) of the recipient.

Family support. Family support can be understood in terms of interpersonal transactions that involve emotional concern, instrumental aid, information, or appraisal because it is rooted in social support (Ezzedeen & Ritchey, 2008). A basic definition of family support is "any activity or facility provided either by statutory agencies or by community groups or individuals, aimed at providing advice and support to parents to help them in bringing up their children" (Audit Commission, 1994, p. 1).

Support is generally tied to various family outcomes; for example, the quantity and quality of family support received is often associated with family quality of life (Summers et al., 2007; Wheeler, Skinner, & Bailey, 2008). Family quality of life is "a dynamic sense of well-being of the family, collectively and subjectively defined and informed by its members, in which individual and family level needs interact" (Zuna, Summers, Turnbull, Hu, & Xu, 2010, p. 262). In addition to family quality of life, much of the research to date on outcomes of family support

has been focused on stress with many studies demonstrating an association between greater satisfaction with support and the experience of less stress (e.g., Plant & Sanders, 2007; White & Hastings, 2004). Family support has also been linked to improved health outcomes (such as lowered blood pressure in parental caregivers; S. Gallagher & Whiteley, 2012), higher levels of family empowerment (Wakimizu, Fujioka, Yoneyama, Iejima, & Miyamoto, 2011), and greater family functioning and satisfaction in the parental role (Fagan & Schor, 1993).

The burdens placed on parents raising children sometimes necessitate that they receive some degree of support from outside the nuclear family (J. E. Gardner, Scherman, Efthimiadis, & Schultz, 2004; Sandler, Warren, & Raver, 1995). Among the support sources outside the nuclear family, grandparents are the most prevalent and important (Katz & Kessel, 2002).

Grandparents and support. Researchers have developed different typologies of grandparenting. In an earlier study based on interviews with middle-class grandparents, Neugarten and Weinstein (1964) postulated five grandparenting styles, including fun-seeking, formal, distant figures, reservoir of family wisdom, and surrogate parents. Each grandparenting style may provide various types of support to grandchildren and their family in varying degrees. The support roles occupied by grandparents are diverse. Although the level or types of support differed slightly across research, consistent findings have been observed. Vadasy (1987) found that grandparents brought four types of basic resources to families: their experience, time, financial resources, and access to various kinds of instrumental support, including shopping, running errands, and providing child care as well as assisting their adult children with respite care. Sandler (1998) observed similar findings, reporting that grandparents provided practical support in the form of baby-sitting, and help with finances and daily routines, such as shopping, cooking, and running errands. Above all, the most important and precious support from

grandparents appears to have been their emotional support and love of the grandchildren (C. A. Gardner, 1996). Although financial and practical support was valuable to the family, grandparents' openness and trust helped the families feel emotional support and love.

Grandparents as Caregivers

Globally, considerable diversity characterizes the way grandparents are involved in their grandchildren's lives. Grandparents may contribute to grandchildren's lives via socialization, mentoring, emotional support, and financial assistance (Uhlenherg & Cheuk, 2010). In both developed and developing societies, grandparents commonly facilitate women's participation in the labor force and support the household by providing child care (Uhlenherg & Cheuk, 2010). Grandparents as caregivers provide a wide range of hours of care per week. On the most intensive level, grandparents serve as surrogate parents. In these situations, known as "skipped-generation households" (Uhlenherg & Cheuk, 2010) or "informal kinship-based fostering" (Leinaweaver, 2014), parents are frequently absent or unable to care for their children, and grandparents assume primary responsibility for their grandchildren's care.

The grandparent role as a caregiver entails two aspects: the role in relation to the grandchildren and the role in relation to the parents of the grandchildren (Leung & Fung, 2014). Robertson (1977) identified two dimensions of the grandmother role: the personal dimension (emphasis on grandchildren fulfilling the grandmother's personal needs) and the social dimension (emphasis on meeting the social and normative needs of the society). Cherlin and Furstenberg (1985) classified grandparents' involvement with their grandchildren along two dimensions: exchange of service and exerting parent-like influence.

In studies of grandparents raising grandchildren, children most often come to live with grandparents when the family is in crisis (e.g., parent's death, drug use, and incarceration).

Grandparents are essentially unprepared for the task: They may not have room in their home, child-safe accommodation, or sufficient finances to make necessary changes. Grandparents often need to deal with anger, guilt, and hostility toward their own children in order to be emotionally available for their grandchildren (Jones & Kennedy, 1996). Grandparents may make considerable efforts trying to support the grandchildren's attachment with their parents while at the same time ensuring the children's comfort and protection (Connor, 2006). An extensive search of the literature has, however, revealed little empirical evidence or relevant studies about grandparents taking care of grandchildren left behind by their migrant parents.

In China, it is a cultural norm for grandparents to engage in coparenting and care for grandchildren on an extensive daily basis (L. Xu & Chi, 2015, 2018; Yee, Su, Kim, & Yancura, 2009). The vast majority of migrant workers, however, simply do not have the time, ability, or resources to provide their children with the support they need. Grandparents in rural China voluntarily involve themselves in supporting grandchildren for the purpose of improving the family's financial situation (Baker & Silverstein, 2012). The high prevalence of grandparents raising grandchildren is largely the result of modernization, which has shifted employment opportunities from rural to urban areas, causing an outmigration of working-age adults to cities. The most recent national survey showed that 96% of the left-behind children were care for by their grandparents (Ministry of Civil Affairs of China, 2018).

Most surrogate grandparents regard the personal safety of the child as their most important consideration, followed by academic achievement and the satisfaction of material needs (ACWF, 2011). Left-behind children growing up in impoverished and remote rural areas with their grandparents as primary caregivers are likely to suffer more than other children in terms of psychological and educational development. Grandparents taking the role of caregiver

of left-behind children often have difficulty providing the emotional and instrumental support the children need. Studies (Stanford REAP, 2018) have shown that many elderly grandparents are poorly educated; most have completed only primary school and speak a local dialect, not Mandarin, the language of instruction in nearly all Chinese schools. Grandparents very often cannot assist the children with their schoolwork and focus only on the children's physical needs, overlooking their developmental and emotional needs. In a survey in Sichuan, the province with the highest number of left-behind children, 80% of caregiving grandparents had difficulty satisfying the psychological needs of their grandchildren; 15% said they did not care about such needs (China Youth Research Center, 2008). Left-behind children often reported a sense of emotional detachment from their grandparents. One secondary school student said, "I help [my grandparents] cook and we watch TV together, but we don't really talk." Previous research showed that, compared to the non-left-behind children, left-behind children reported lower levels of social support, particularly emotional support (Luo, Wang, & Gao, 2009); however, support still played an important role in the psychological adjustment and social adaptation of left-behind children (Hu, Liu, Shen, & Fan, 2008).

Grandparents, who serve many important functions in the lives of their children and grandchildren, play a critical role in maintaining family life. Grandparents' behaviors directed at helping maintain the relationships between the left-behind children and their migrant parents are important when examining long-distance parent−child relationship because of the grandparents' special role as primary caregiver and significant attachment figure for the children when their parents are away. A study on left-behind children in Wuxi County in Chongqing showed that 41.7% of left-behind children received support mostly from their grandparents (Beh, 2014). Grandparents can act as baby-sitters and playmates, giving relief to the parent and time to the

child, and also as a surrogate, replacing the absent parent (Tinsley & Parke, 1984). They offer support, advice, and a sense of the past; they can act as mediators of parental influence, while modeling appropriate parent–child interactions (Apfel & Seitz, 1991). They frequently provide practical, instrumental (e.g., childcare and finance), and emotional support to their children and grandchildren, facilitating intrafamily communication and connections (Tomlin, 1998). Thus, grandparents serve as the bridge between migrant parents and left-behind children in relationship maintenance. For example, the informational support provided by grandparents concerning the parent–child relationship comprises delivering loving messages from the migrant parents to the left-behind children, explaining to the children the reasons their parents work elsewhere (e.g., to offer them a better life), telling the children that their parents are emotionally with them despite their physical unavailability. The instrumental supports offered by grandparents include showing parents' photos to the left-behind children frequently, helping them to call their parents, and taking them to visit their parents in their working city during school breaks. The emotional supports provided by grandparents can assure the left-behind children that they are deeply loved by their parents. Taken together, grandparents' support may contribute to the relationship maintenance between left-behind children and the migrant parents.

Studies on grandparents' support in China have generally been focused on intergenerational relationships (e.g., Xu, Silversten, & Chi, 2014), support exchange between grandparents and grandchildren (e.g., Silverstein, Giarrusso, & Bengtson, 1998; L. Xu & Chi, 2018), support and its association with life satisfaction (e.g., Lou, 2010; L. Xu & Chi, 2011) as well as its impact on health (Lou et al., 2013). To the best of the author's knowledge, no other researchers have investigated grandparents' support to help maintain grandchildren's relationship with their parents. Goodman (2003) noted that close or distant relationships among grandparents,

parents, and grandchildren can affect one other, and studies of three generations have shown the middle generation occupies a strong, mediating position in relationship to adjacent generations (e.g., L. Xu & Chi, 2018). The middle generation may facilitate or undermine the interaction between grandparents and grandchildren (Attar-Schwartz, Tan, & Buchanan, 2009; Barnett, Scaramella, Neppl, Ontai, & Conger, 2010; Goodman, 2003). The grandparents of left-behind children take the role of primary caregiver, and thus act more as parental figures. The support offered by caregiving grandparents has shown its impact on parent–child relationship maintenance and may result in children's perceptions of the quality of their relationships with their parents. In the current study the author aimed to examine: (a) how grandparents' support helps maintain the parent–child relationship during separation, and (b) how grandparents' support works with left-behind children's IIs and parent–child relational maintenance behaviors to affect quality of the relationship of the left-behind children and their migrant parents.

Hypotheses and Research Questions

Earlier in this dissertation, the author elaborated on the three-level metaperspective of relationship maintenance: the *self* context from the perspective of imagined interaction, focusing on left-behind children's intrapersonal communication; the *system* context from the perspective of relational maintenance behaviors, focusing on dyadic interaction between the migrant parents and the left-behind children; and the *network* context from the perspective of social support, focusing on the caregiving grandparents' involvement. In the following section the research questions and hypotheses for this study are elaborated.

The first goal of this study was to extend the previous research of Honeycutt (2002) by focusing specifically on IIs used to maintain parent–child relationships. As noted above, in the current study the researcher attempted to address questions about left-behind children's use of IIs,

the functions and attributes of IIs with regard to long-distance parent–child relationship, and the relationship between IIs and relational quality among others. The following research questions and hypotheses were, therefore, posed for this study:

RQ1a: When using IIs with migrant parents, what attributes of IIs do left-behind children report?

RQ1b: Which attributes of IIs are most and least reported?

RQ2a: When using IIs with migrant parents, what functions of IIs do left-behind children report?

RQ2b: Which functions of IIs are most and least reported?

Previous researchers have suggested that males and females interpreted communication behavior differently; for example, Edwards, Honeycutt, and Zagacki (1989) reported that females experienced more frequent and more pleasant IIs than males. No gender differences were found for the following II features: variety, discrepancy, proactivity, specificity, self-dominance, or retroactivity. The participants in the study by Edwards et al. (1989), however, were mostly university students involved in romantic relationships. To test whether or not gender differences also exist in the use of IIs in the parent–child dyad, two research questions were posed:

RQ3a: Do attributes of IIs (i.e., frequency, valence, variety, discrepancy, proactivity, retroactivity, specificity, and self-dominance) differ between male and female left-behind children's reported use with migrant parents?

RQ3b: Do functions of IIs (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance) differ between male and female left-behind children's reported use with migrant parents?

In this study, the outcome variable was the relationship quality. Some scholars posited that parent–child relationship quality strongly affects children's development (Morris, Silk, Steinberg, Myers, & Robinson, 2007). IIs were reported to be associated with a variety of relational outcomes, including satisfaction, love, and commitment among others (Honeycutt & Keaton, 2012; Honeycutt & McCann, 2008). For example, proactive IIs were found to promote affinity in relationships (Honeycutt, 2003). Importantly, they also play a productive role in the maintenance of LDRs by helping compensate for decreased dyadic interaction caused by distance (Holt & Stone, 1988; Honeycutt, 2003). Proactive IIs can bolster intimacy and satisfaction by reducing emotional disconnectedness (Pistole et al., 2010). However, no consensus has been reached on the connection of various dimensions of II attributes and functions with parent–child relationship quality. Accordingly, the following research questions were posed:

RQ4: What are the relationships between the use of IIs (with migrant parents) with left-behind children's perceived parent–child relationship quality?

RQ4 can be interpreted in terms of two main features of IIs: attributes and functions; therefore, RQ4 is further presented as follows:

RQ4a: What are the relationships between the attributes of IIs used by left-behind children with their perceived parent–child relationship quality?

RQ4b: What are the relationships between the functions of IIs used by left-behind children with their perceived parent–child relationship quality?

The research questions noted above address the *self* context (i.e., IIs) of the parent–child relationship maintenance as well as the relationship between the *self* context and relational outcomes.

The second goal of this study was to extend the existing literature about relational maintenance in long-distance parent–child dyads. Researchers have not yet examined the relational maintenance behaviors occurring in the long-distance parent−child relationships in a Chinese context. To identify the specific relational maintenance behaviors used by absent parents with their left-behind children, the following research question was posed:

RQ5: What relational maintenance behaviors do left-behind children perceive from their migrant parents?

Previous researchers have suggested that women perform more relational maintenance than men (Aylor & Dainton, 2004); specifically, women have been found to use openness, tasks, and networks more frequently than men (Canary & Stafford, 1992). In addition, greater use of positivity, openness, assurances, networks, and tasks by women than by men has been reported (Ragsdale, 1996); yet the studies producing these results were restricted to the domain of romantic relationships. The gender difference in parent–child relationship maintenance behaviors may resemble those of romantic relationships but may be more complicated because of the four possible dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter). The following RQ was intended to examine the gender differences of both the providers and the receivers of relational maintenance behaviors:

RQ6: Do left-behind children's perceptions of parents' relational maintenance behaviors differ across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?

Although relational maintenance behaviors can be positive (e.g., positivity, openness, assurances, social networks, sharing tasks, conflict management, and advice-giving) or negative (e.g., jealousy induction, avoidance, spying, infidelity, destructive conflict, and allowing control),

the maintenance strategies used in the parent–child relationship are mostly positive and affect the relational outcome in a positive manner (Burke et al., 2016; Myers & Glover, 2007; Punyanunt-Carter, 2005). Accordingly, the following hypothesis was posed:

> H1: Left-behind children's perceived relational maintenance behaviors by migrant parents are positively associated with left-behind children's perceived parent–child relationship quality.

The forgoing research questions and hypothesis address the *system* context (i.e., maintenance behaviors) of the parent–child relationship as well as the relationship between the *system* context and relational outcomes.

The third goal of this study was to examine left-behind children's perceptions of support from caregiving grandparents and its effect on the maintenance of parent–child relationship in dispersion.

One important aspect that may influence the effectiveness of support is the receiver's perception of the type of support considered helpful and desirable from whom (Haas, 2002). Perceived support may be more important than actual received support (Wethington & Kessler, 1986). In fact, received support might be mediated by one's interpretation of perceived helpfulness and potential availability of various sources of support. In other words, if certain communicative behaviors are intended to be supportive by a source but are not perceived as helpful by the receiver, then social support has not successfully occurred.

Researchers have indicated that support is positively associated with relationship quality (e.g., Bradbury, Fincham, & Beach, 2000; Cohen & Wills, 1985; Dehle, Larsen, & Landers, 2001; Lorenzo, Barry, & Khalifian, 2018). From the perspective of relational maintenance, support involves giving advice, offering comfort, and conveying reassurance (Messman et al.,

2000). The support from caregiving grandparents may play a positive role in helping maintain the long-distance parent–child relationship. Accordingly, the hypothesis was posed as follows:

H2: The perceived support from grandparent(s) is positively correlated with left-behind children's perceived parent–child relationship quality.

The above research questions and hypotheses were designed to address the *network* context (i.e., grandparents' supports) of the parent–child relationship as well as the relationship between the *network* context and relational outcomes.

In addition, the use of communication media by left-behind children and their migrant parents is also essential to relationship maintenance. Parents and children in geographic dispersion may use various communication channels to contact each other. To identify the use of communication channels (i.e., phone call, audio chat, video chat, email, text message, and letter) by left-behind children and their migrant parents, the following research questions were posed:

RQ7: What are the most and least reported communication channels used by left-behind children with their migrant parents?

RQ8: Do differences exist in the frequency of the use of communication channels (i.e., phone call, audio chat, video chat, email, text message, and letter) across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?

The frequency of communication is related to the use of IIs. Geographically separated individuals may experience increased use of IIs during separation for the purpose of coping and compensating for lack of real communication (Honeycutt, 2002). Left-behind children tended to use more IIs when they had fewer opportunities for real interaction (i.e., the functions of compensation and relational maintenance). With more opportunities for communication between

left-behind children and migrant parents, no matter face-to-face or via technology, the use of IIs may be reduced. Thus, the following hypotheses were posed:

H3a: The frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.

H3b: The wished frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.

If left-behind children wish to reunite and communicate with their migrant parents more, but the opportunities for reunion and communication are fewer, they may use more compensatory IIs to cope with the tension between strong desire for reunion and communication and their slim chances for them. Thus, the wishes of left-behind children to reunite and communicate with their migrant parents may work as a moderator in the effect of the frequency of parent–child communication on the use of compensatory IIs by left-behind children with migrant parents, such that the relationship between the frequency of parent–child communication and the use of compensatory IIs is significant when the wishes of the left-behind children to reunite or to communicate with their migrant parents is strong. Therefore, the following hypotheses were posed:

H4a: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to reunite with migrant parents.

H4b: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to communicate with migrant parents.

Moreover, frequency of communication may influence parent–child relationship quality. To identify the relationship between frequency of contact and parent–child relationship quality, the following research question was posed:

RQ9: What is the relationship between the frequency of left-behind children's communication with migrant parents and parent–child relationship quality?

Importantly, the manner in which the three levels of relationship maintenance (in this study, IIs, relational maintenance behaviors, and support) and the frequency of communication interact to predict the parent–child relationship quality is worth examining. Thus, the following research question was posed:

RQ10: Do IIs used by left-behind children with their migrant parents, left-behind children's perceptions of the relational maintenance behaviors from their parents, left-behind children's perceptions of grandparents' support, and parent–child communication frequency positively predict left-behind children's perceptions of the parent–child relationship quality, if controlled for gender, age, length of parents' absence, and frequency of parent–child reunion?

Therefore, based on previous literature and the main theoretical framework, the research questions and hypotheses of interest for this study are summarized as follows:

IIs and Their Association With Relationship Quality

RQ1a: When using IIs with migrant parents, what attributes of IIs do left-behind children report?

RQ1b: Which attributes of IIs are most and least reported?

RQ2a: When using IIs with migrant parents, what functions of IIs do left-behind children report?

RQ2b: Which functions of IIs are most and least reported?

RQ3a: Do attributes of IIs (i.e., frequency, valence, variety, discrepancy, proactivity, retroactivity, specificity, and self-dominance) differ between male and female left-behind children's reported use with migrant parents?

RQ3b: Do functions of IIs (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance) differ between male and female left-behind children's reported use with migrant parents?

RQ4a: What are the relationships between the attributes of IIs used by left-behind children with their perceived parent–child relationship quality?

RQ4b: What are the relationships between the functions of IIs used by left-behind children with their perceived parent–child relationship quality?

Relational Maintenance Behaviors and Their Association With Relationship Quality

RQ5: What relational maintenance behaviors do left-behind children perceive from their migrant parents?

RQ6: Do left-behind children's perceptions of parents' relational maintenance behaviors differ across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?

H1: Left-behind children's perceived relational maintenance behaviors by migrant parents are positively associated with left-behind children's perceived parent–child relationship quality.

Support and Relationship Quality

H2: The perceived support from grandparent(s) is positively correlated with left-behind children's perceived parent–child relationship quality.

Communication and Its Association With IIs and Relationship Quality

RQ7: What are the most and least reported communication channels used by left-behind children with their migrant parents?

RQ8: Do differences exist in the frequency of the use of communication channels (i.e., phone call, audio chat, video chat, email, text message, and letter) across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?

H3a: The frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.

H3b: The wished frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.

H4a: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to reunite with migrant parents.

H4b: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to communicate with migrant parents.

RQ9: What is the relationship between the frequency of left-behind children's communication with migrant parents and parent–child relationship quality?

IIs, Relational Maintenance Behaviors, Support, and Relationship Quality

RQ10: Do IIs used by left-behind children with their migrant parents, left-behind children's perceptions of the relational maintenance behaviors from their parents, left-behind children's perceptions of grandparents' support, and parent–child communication frequency positively predict left-behind children's perceptions of the parent–child

relationship quality, if controlled for gender, age, length of parents' absence, and frequency of parent–child reunion?

Chapter III

Methodology

The purpose of this chapter was to describe the pilot study and the main study, including the main sample of the study, the sampling and the data collection procedure, and the scales used in both.

Pilot Study

Henan is one of the three provinces with the highest concentration of left-behind children according the 2018 national survey released by the Ministry of Civil Affairs of China. The phenomenon of left-behind children in Dengzhou of Henan Province, in particular, epitomizes those occurring throughout the entire country. The 2018 report showed that 67.4% of left-behind children's age ranged from 6 to 13, and 10.9% from 14 to 16. Moreover, 51.9% of left-behind children attended elementary schools, and 21.8% attended middle schools and high schools. Among those, 96% were taken care of by their grandparents. Thus, the sampling of this study is an appropriate representation of the population of the left-behind children in China. In the current study, a survey method is used. Participants' age and comprehension ability are taken into consideration. As a result, left-behind children age range between 13 to 16 were chosen to be included in the current study, given their ability to comprehend and complete the questionnaire is more advanced than the younger age group.

Based on the definition of left-behind children, literature on long-distance relationship, the living status of left-behind children, and the cognitive development of the children, eligibility criteria for left-behind children in the current study included the following: (a) children were aged 13 to 16; (b) both parents had migrated to cities for employment; (c) children's caregivers

were grandparents while parents were away; and (d) the minimum length of parents' absence was six months.

Given that the participants in this study were children between 13 and 16, conducting a questionnaire survey might be problematic, especially with regard to the ability of young children in this age range to comprehend and respond to lengthy and complicated survey items. Honeycutt, Pecchioni, Keaton, and Pence (2011) included a 20-minute interview with children ranging in age from 3 to 10 in a study on IIs. Although the children participating in the current study were older than those in Honeycutt et al. (2011), answering a survey with more than 100 questions required the participants to be developmentally ready to concentrate and linguistically advanced enough to comprehend abstract concepts. To solve the potential problems, a two-step pilot study was designed to help determine whether the wording and design of the survey questions were appropriate for the cognitive and emotional development of children aged 13 to 16. First, eight experts on elementary and secondary education, child psychology, children's cognitive development, and quantitative research methodology were asked for their suggestions on revising the survey questions. Some revisions were made based on their advice to (a) use plain language and paraphrase the questions to make them easier for children to understand and (b) ask the participating children to check the appropriate answers instead of rating them with numbers. In the next step, a small sample of left-behind children were recruited to complete the revised version of the questionnaire and to point out the items that were difficult for them to comprehend. Based on their feedback, the questionnaire was revised again. Details from the small sample survey appear in the following section.

Participants and Procedures

Participants were enrolled at a boarding school, which included elementary school, middle school, and high school in Dengzhou, Henan Province. After securing permission from the school principal, the guardians' consent forms were distributed to children's caregiving grandparents on a Friday. The guardian–grandparents were given two days to discuss with family members (i.e., the grandchild and the parents) to decide whether they would like to participate in the study. At that time posters about the study were hung in the hallways and on doors of classrooms at the school. The poster included a brief introduction to the study, the recruiting criteria, and time and place to gather if children were interested in knowing more or joining in. After obtaining the guardians' consent, children gathered in a meeting room on the scheduled date. Participants were given a verbal explanation of the study along with a printed consent form. The children were reassured that their participation was not mandatory and they had the right to refuse to participate even if their grandparents had already given permission to do so.

Among the children who were willing to participate and had guardians' permission, 20 girls and 20 boys were randomly selected to complete a paper-and-pencil questionnaire regarding their communication and relationship with their migrant father or mother. They were also asked to circle any questions that seemed confusing or did not make sense to them in terms of the wording or the meaning of the question. To protect children from a coercive atmosphere caused by the presence of an adult, two research assistants interacted with them in a very gentle manner; furthermore, the school administrators and teachers were absent from the meeting room while the students completed the survey. All participating students received a colored marker as the compensation for their time and effort.

Measurements

All participants were asked to provide information regarding their sex, age, length of parents' absence, frequency of parent–child communication, and use of communication channel (see Appendix A). All the scales used for the main study were included in the pilot study, that is, scales to measure left-behind children's II functions and attributes, their perception of migrant parents' relational maintenance behaviors, their perception of caregiving grandparents' support, and the quality of the parent–child relationship from the left-behind children's perspective. All items to be answered by the participants were translated into Chinese. The Chinese version of the questionnaire was proofread by an expert with proficiency in both the English and Chinese languages.

Imagined interactions. A modified version of the Survey of Imagined Interaction (SII) that included functions and attributes of II was used (Honeycutt, 2003, 2008; Honeycutt, Zagacki, & Edwards, 1993). The SII is a multidimensional instrument that describes the concept of IIs using a 7-point Likert scale ranging from 1 (*very strong disagreement*) to 7 (*very strong agreement*). Participants were asked to circle the appropriate answers from "very strong disagreement" to "very strong agreement" as honestly as possible.

As noted by Honeycutt (2010b), contextualizing items for specific research domains is important. Many of the II studies in which researchers used some version of the SII indicated that items had been adapted for the specific context of the study. Van Kelegom, Kotowski, and Levine (2011) suggested imagining a specific partner when completing the SII. In particular, participants were asked to think about IIs with a specific partner and to report on their typical use of IIs with this partner. In the current study, the SII was modified to focus on specific interaction partners (i.e., the migrant father or mother), and items were worded accordingly (e.g., "Imagined

interactions with my father/mother help me relieve tension and stress."). Participants were asked to rate each item considering their migrant fathers or mothers as relational partners.

***Functions of imagined interaction*.** The six functions of IIs (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance) were measured with 21 items to determine how participants used them. For instance, the following subcategories, modified to highlight the specific situational partner, were measured on the 7-point Likert scale: (a) *Self-understanding*: "Imagined interactions often help me to actually talk about feelings or problems later on with my father/mother"; (b) *Rehearsal*: "Imagined interactions help me plan what I am going to say in an anticipated encounter with my father/mother"; (c) *Catharsis*: "Imagined interactions help me to reduce uncertainty about my father/mother's actions and behaviors"; (d) *Conflict management*: "Imagined interactions help me manage conflict with my father/mother"; (e) *Compensation*: "Imagining talking to my father/mother substitutes for the absence of real communication"; (f) *Relational maintenance*: "I use imagined interactions to think about my father/mother." Honeycutt, Pence, and Gearhart (2013) found the reliability for the II functions were good, except for the conflict-management subscale: self-understanding (α = .83), rehearsal (α = .88), catharsis (α = .78), conflict management (α = .61), compensation (α = .88), and relational maintenance (α = .90). The subscale of conflict management was reported to have a higher reliability (α = .79) in another study (Van Kelegom & Wright, 2013).

Attributes of imagined interaction. In addition to the six functions of II, its eight attributes were measured with 31 items on a 7-point Likert scale: (a) *frequency*: "I often have imagined interactions with my father/mother throughout a day"; (b) *discrepancy*: "In my real conversations, my father/mother is very different than in my imagined ones"; (c) *valence*: "My

imagined interactions with my father/mother are usually enjoyable"; (d) *self-dominance*: "I talk a lot in my imagined interactions with my father/mother"; (e) *specificity*: "When I have imagined interactions with my father/mother, they tend to be detailed and well developed"; (f) *proactivity*: "Before I meet my father/mother, I imagine a conversation with him/her"; (g) *retroactivity*: "After meeting with my father/mother, I frequently imagine the meeting"; (h) *variety*: "My imagined interactions with my father/mother tend to be on a lot of different topics." In the category of *variety*, the survey questions on having IIs with different people were removed from the original questionnaire because in the current study only IIs with parents were examined. The measure was found to be reliable with good Cronbach's alphas: frequency (α = .91), discrepancy (α = .79), valence (α = .80), self-dominance (α = .70), specificity (α = .70), proactivity (α = .85), retroactivity (α = .80), and variety (α = .76) (Honeycutt et al., 2013).

Imagined interaction topics. Participants were, moreover, asked to provide information on their II topics with their migrant fathers or mothers, for instance, "Please list the three most frequently used II topics you recall having with your father/mother in some of your recent IIs." Responses to this question will be analyzed in a future study, and therefore, were not included in the results of the pilot and main studies.

Relational maintenance behaviors. Stafford and Canary's (1991) relational maintenance strategy measure (RMSM) was used to assess participants' perceptions of parents' relational maintenance behaviors. During separation, parents probably used different communication channels in maintaining the parent–child relationship. This measure was chosen because the wording aligned with assessing one partner's perceptions of the other partner's relational maintenance instead of one's own behavior.

Twenty-five items most applicable to examine parent–child relationships on positivity, openness, assurances, networks, and sharing tasks were included in this study, including the following: “My father/mother acts cheerful and positive with me” (positivity), “My father/mother tells me how he/she feels about our relationship” (openness), “My father/mother tells me how much I mean to him/her” (assurances), “My father/mother discusses people we both know” (networks), and “My father/mother helps equally with tasks that need to be done when he/she is home” (shared tasks). The wording of some items was revised to suit the parent–child relationship. For instance, the original item of assurances “(My partner) implies that our relationship has a future” was reworded as “My father/mother talks about our plans for the future.” Items were rated on a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants were asked to circle the right option from “strongly disagree” to “strongly agree,” thinking of behaviors that their father/mother displayed when their father/mother communicated with them face-to-face or via a given communication channel (e.g., phone call, audio chat, video chat, email, text message, and letter). All five factors demonstrated acceptable reliabilities with Cronbach’s α ranging from .79 to .92 (Ledbetter & Beck, 2014). Dainton (2013) also reported good Cronbach’s alphas for the following measures: positivity (α = .87), openness (α = .85), assurances (α = .81), networks (α = .89), and sharing tasks (α = .90).

Perceived grandparents’ support. The Family Subscale from the Multidimensional Scale of Perceived Social Support (MSPSS), which includes the family subscale, friend subscale, and significant other subscale (Zimet, Dahlem, Zimet, & Farley, 1988), was used to test left-behind children’s perceptions of their grandparents’ supportive behaviors. The Family Subscale consisted of four items related to family support. The wording was modified to specify the relational partner (i.e., the caregiving grandparents) and the context of parent–child relationship

maintenance. Sample items included “My grandparents really try to help me maintain the relationship with my father/mother” and “I get the emotional help and support I need from my grandparents to help me maintain my relationship with my father/mother.” The original item “My grandparents are willing to help me make decisions” was reworked into two items: “My grandparents are willing to help me make decisions concerning parent–child relationship” and “My grandparents are willing to help me make decisions concerning parent–child interactions.” Each item was rated on a 7-point Likert-type scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Participants were asked to circle their answer from “very strongly disagree” to “very strongly agree,” thinking of behaviors that their grandparents displayed when interacting with them. Adequate internal reliability was demonstrated with Cronbach’s α = .87 for the Family Subscale and Cronbach’s α = .88 for the total scale (Zimet et al., 1988).

Relationship quality. The relationship quality of left-behind children and migrant parents was evaluated using the modified Perceived Relationship Quality Component (PRQC) Inventory (Fletcher, Simpson, & Thomas, 2000). The original inventory consisted of 18 items and assessed six components of relationship quality: satisfaction, commitment, intimacy, trust, passion, and love. The scale demonstrated good internal reliability and predictive validity. The six components were highly inter-correlated with correlations ranging from .47 to .83 (Locke, 2008). In previous studies, a single index was created to reflect participants’ assessment of relationship quality with their partner (Cronbach’s α = .95) (Locke, 2008). In the current study, the component of passion, normally used to evaluate romantic relationships was removed; 15 items about the other five components (i.e., satisfaction, commitment, intimacy, trust, and love) were retained. Each statement was answered on a 7-point Likert-type scale ranging from 1 (*not at all*) to 7 (*extremely*). Sample questions included the following: “How satisfied are you with

your relationship with father/mother?"; "How close is your relationship with father/mother?"; and "How much do you trust your father/mother?"

Results of the Pilot Study

One participant's questionnaire was excluded because of its incomplete and invalid responses with all answers as "4" (i.e., neither agree nor disagree). A total of 39 surveys with feedback were received (male = 21, female = 18, M_{age} = 14.46, *SD* = 1.12) Most participants were from the middle school (*n* = 34, 87.2%), but some were from high school (*n* = 4, 10.3%) and elementary school (*n* = 1, 2.6%). Among the participants, about half (*n* = 20, 51.3%) answered the survey considering their migrant father as the relational partner; the other half (*n* = 19, 48.7%), considering their migrant mother.

Their feedback showed that these young participants might have difficulty in understanding the words like *dominate* in that four of them circled the II items "My father/mother dominates the conversation in my imagined interactions" and "I dominate the conversation in my imagined interactions with my father/mother" as confusing. Revisions were made accordingly. The two aforementioned items were deleted from the "self-dominance" dimension of II scale, which left three items in the subscale of "self-dominance." Thus, 51 II items (i.e., 21 items on II functions, 29 items on II attributes, and 1 item on II topics) were retained for the subsequent main study.

Another issue arising in the pilot study was that some participants asked whether they were required to score all the items next to each item because the corresponding scores of the options appeared in the instruction of each scale. These questions were answered by the on-site research assistants, who told participants that they could simply circle the answers instead of giving scores. The corresponding scores (i.e., 1 to 7) of each scale were then removed from the

instruction to avoid confusion, since it would be easier for the participants to circle appropriate answers instead of scoring each item.

Because this was the first time these participants had ever heard of IIs, they might have had difficulty understanding the concept (e.g., confusing IIs with fantasy). More explanation on IIs and how they worked in daily life were, therefore, added to the instructions for the II questionnaire as prompts like "For instance, you might imagine your interaction with parents before you actually meet or imagine your previous conversation with your parents when you are separated" and "Following are a few items asking you about your experiences of imagined interactions with your migrant father/mother (e.g., the contents of your IIs with father/mother, whether IIs can help maintain your father–child/mother–child relationship, and whether IIs can help relieve conflict with your father/mother)." The English–Chinese translation of the II items was further simplified to increase participants' understanding of the questions.

Main Study

Participants and Procedures

A total of 327 participants were recruited from Dengzhou, Henan Province. The sample pool in this study consisted of boarding school students because more than 80% left-behind children in Henan Province are attending boarding schools, partly due to the Chinese government's 'care for left-behind children' policies to ensure the enrollment of left-behind children in both public and private boarding schools at their affordable expenses. Normally, children aged 13 to 16 are attending middle schools and high schools. Children in rural areas of China tend to go to school at an older age or younger age due to different reasons. Thus, it is possible that some 13-year-old children are still in 5^{th} or 6^{th} grade of elementary school. The current study included this group of children, as long as they met the research criteria. A two-

step sampling procedure was used to obtain a sample of the left-behind children. In the first step, three boarding schools (i.e., one elementary school, one middle school, and one high school) were randomly selected from all the boarding schools in Dengzhou after securing permission from the Dengzhou Education Bureau and the school principals. In the second step, on the premise of guardian's permission and children's self-will, left-behind children who met the research criteria were randomly selected from the three target schools.

The gender ratio of the participants and their relational partners (i.e., migrant father or migrant mother) was balanced and controlled during the data collection. The survey administrators tried to ensure that around 50% of the participants were female left-behind children and 50% were male left-behind children. Half the female participants were asked to answer the survey questions regarding their migrant fathers, and half were asked to answer the questionnaire regarding their migrant mothers. Similarly, half the male participants were asked to answer the survey questions regarding their migrant fathers, and half were asked to answer the survey questions regarding their migrant mothers.

The procedure was the same as in the pilot study. After securing permission from the school principals, the guardians' consent forms were distributed to children's caregiving grandparents on a Friday when they picked up the children from school. The guardian grandparents were given two days to discuss with their family members (i.e., children and their migrant parents) to make a decision on participation. At the same time, posters about the study were hung in the hallways and on the doors of classrooms in the school. The poster included a brief introduction to the study, recruiting criteria, and time and place to gather if children were interested to participate. After we obtained the guardians' consents, children were gathered in a meeting room on the scheduled date. Participants were given a verbal explanation of the study

along with a printed consent form. The children were reassured that the participation was voluntary and subject to their free will.

Among the children willing to participate and having guardians' permission, a total of 327 left-behind children were randomly selected from the three target schools to complete a paper-and-pencil survey. Participants were told that no answers were right or wrong and that they had the right to quit the survey at any time. Two on-site research assistants were present to answer any questions participants may have had regarding the survey items and procedure. To protect children from a coercive atmosphere caused by the appearance of an adult figure, the research assistants interacted with them in a very gentle manner, and no school administrators and teachers were present in the meeting room while they completed the survey. We invited the psychological counselors from the Psychology Counseling Center in each school to stand by and be prepared to interfere if some participating children experienced sadness after they answered the survey questions. All participants were given a colored marker as the compensation for their time and effort.

Measurements

All participants were asked to provide information regarding their sex, age, length of parents' absence, frequency of parent–child communication, frequency of reunion, and communication channels (see Appendix A).

Based on the pilot study results, a revised version of the SII (see Appendix B) was used to measure the left-behind children's IIs with their migrant father or mother.

Stafford and Canary's (1991) RMSM (see Appendix C) was used to assess the participants' perceptions of parents' relational maintenance behaviors.

The modified Family Subscale from the MSPSS (see Appendix D) was used (Zimet et al., 1988) to test left-behind children's perceptions of their grandparents' support.

The quality of the relationship of the left-behind children and migrant parents was evaluated using the modified PRQC Inventory (Fletcher, Simpson, & Thomas, 2000; see Appendix E).

Statistical Analysis

In this study, independent variables included the left-behind children's use of IIs, relational maintenance behaviors of migrant parents, grandparents' support, frequency of communication, and demographic background (i.e., gender, age, length of parents' absence, and length of parent–child reunions); the dependent variable was relationship quality in some of the research questions and hypotheses. Descriptive analyses were conducted to obtain mean, standard deviation, and reliability of each variable, including its subdimensions, when applicable.

First, to identify the attributes of IIs used by the left-behind children, RQ1a was examined by reporting the mean and standard deviation of each II attribute reported by the respondents. RQ1b asked the most and least reported II attributes. To answer RQ1b, a paired-sample *t*-test was performed to determine whether the most reported and least reported II attributes were significantly different from each other.

Second, to identify the functions of IIs used by the left-behind children, RQ2a was answered by reporting the mean and standard deviation of each II function used by the respondents. To answer RQ2b, a paired-sample *t*-test was performed to examine whether the most and least reported II functions were significantly different from each other.

Furthermore, RQ3a and RQ3b addressed gender differences in the reported attributes and functions of the IIs. A series of independent-samples *t*-tests were conducted to evaluate the

gender differences in II attributes (i.e., frequency, discrepancy, self-dominance, valence, proactivity, retroactivity, specificity, and variety) and II functions (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance).

RQ4 was designed to examine the association between left-behind children's use of IIs with parents and their perceptions of the quality of their relationship with their migrant parents. RQ4a and RQ4b separately addressed the association between II attributes and parent–child relationship quality, and the association between II functions and parent–child relationship quality separately. To answer these research questions, correlation coefficients were computed to assess the relationship between the II attributes and the parent–child relationship quality, and between the II functions and the parent–child relationship quality.

The next research question (RQ5) addressed left-behind children's perception of the relational maintenance behaviors initiated by migrant parents. This question was answered by reporting the means and standard deviations of the perceived parents' maintenance behaviors by the respondents. RQ6 was designed to inquire into the effect of gender difference in the left-behind children and the type of relational partner on the perception of relational maintenance behaviors. To answer it, five one-way ANOVAs were conducted to compare left-behind children's perceptions of their migrant parents' maintenance behaviors (i.e., positivity, openness, assurances, networks, and sharing tasks) across the four dyads.

The intent underlying H1 was an examination of the association between left-behind children's perceptions of the relational maintenance behaviors of their migrant parents and their perceptions of the quality of their relationship with their migrant parents. Correlation coefficients were conducted to assess the relationship between the left-behind children's perceptions of parents' relational maintenance behaviors and parent–child relationship quality.

H2 suggested that the perceived support emanating from parent–child relationship maintenance from grandparent(s) were positively associated with the left-behind children's perceptions of the quality of their relationship with their migrant parents. Correlation coefficients were conducted to test this hypothesis.

Next, to answer RQ7, a one-sample chi-square test was conducted to identify the most and least reported communication channel among the six categories (i.e., phone call, audio chat, video chat, email, text message, and letter). RQ8 dealt with the differences in the frequency of communication channels used by left-behind children and their migrant parents as a function of the participants' gender (i.e., son or daughter) and parental role (i.e., father or mother). To answer RQ8, six one-way ANOVAs were conducted.

H3a and H3b were designed to suggest that the frequency of communication and the wished frequency of communication between left-behind children and migrant parents were both associated with left-behind children's use of IIs. Two correlation coefficients were conducted to test these two hypotheses.

H4a and H4b addressed the moderating effect of left-behind children's wish to reunite and communicate with migrant parents on the relationship between communication frequency and the use of compensatory IIs. To test these hypotheses, Haye's PROCESS macro for the SPSS (Model 1) was used to examine the moderation effects.

RQ9 was designed to ascertain the relationship between the frequency of communication and relationship quality, and it was answered by conducting a correlation coefficient test.

Finally, a main focus of this study was to examine how IIs, relational maintenance behaviors, family support, and frequency of communication predict parent–child relationship quality. To answer RQ10, a hierarchical multiple regression was run, in which the independent

variables were the participants' demographic variables, left-behind children's IIs, the perception of migrant parents' relational maintenance behaviors, grandparents' support, and frequency of communication; the parent–child relationship quality served as the dependent variable for the analysis. IIs were the intrapersonal communication performed in left-behind children's minds to compensate for the lack of real interaction and maintain the parent–child relationship, and migrant parents' relational maintenance behaviors comprised the interpersonal communication that directly predicted bond, intimacy, and satisfaction (Canary & Stafford, 1992, 1993; Guerrero et al., 1993; McNallie & Hall, 2015). These two factors served as the most centered aspects in parent–child relationship maintenance (Dainton, 2003). Family support served the additional function that helped maintain parent–child relationship. The frequency of communication indicated the intensity of the contact between left-behind children and their migrant parents, which exerted its influence on parent–child relationship maintenance.

Thus, in the hierarchical regression analysis, the variables that required control (i.e., gender, age, the length of parents' absence and the frequency of parent–child reunion) were entered into Step 1, and the frequency of communication was entered into Step 2. Grandparents' support was entered into Step 3; II functions (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance) were entered into Step 4, and perceived relational maintenance behaviors (i.e., positivity, openness, assurances, networks, and tasks) were entered into Step 5.

Chapter IV

Results

The previous chapter contained an overview of the methodology used in the current study. In this chapter, the results of the study appear: first, descriptions of the participants' demographic information; next, the descriptive statistics for the variables of parent–child communication, IIs, relational maintenance behaviors, grandparents' support, and relationship quality, followed by the results of the tests of the hypotheses and research questions for the study. Finally, a summary of the findings pertaining to all the research questions and hypotheses is offered.

Background Characteristics

The following sections present results on participants' demographic characteristics and parent–child communication.

Participants' Demographic Information

After eliminating incomplete and invalid responses, the total number of respondents for the study was 306. The participants ranged in age from 13 to 16, and the mean age of the participants was 14.07 (*SD* = .97; male = 149, female = 157). A majority of them (n = 237, 77.5%) were enrolled in middle school; and the remaining respondents, in elementary school (n = 51, 16.7%) and high school (n = 18, 5.9%). One hundred fifty-one respondents (74 boys and 77 girls) answered the questionnaire with their migrant father as the relational partner; and 155 respondents (75 boys and 80 girls), with their migrant mother as their relational partner. More than half the respondents (n = 207, 67.6%) indicated that the approximate length of parents' absence was six to eleven months, and 76 (24.8%) indicated that they were usually separated from parents for one to two years. Twenty-three participants (7.5%) indicated that they reunited with migrant parents once in more than two years. A majority of the respondents (n = 265, 86.6%)

were cared for by their grandparents on their father's side, and the remaining respondents (n = 41; 13.4%) lived with grandparents on their mother's side when parents migrated to cities.

Parent–Child Communication

The phone call was reported by the respondents as the most used communication channel (n = 152, 49.7%), followed by video chat (n = 133, 43.5%), audio chat (n = 12, 3.9%), text messaging (n = 8, 2.6%), and email (n = 1, 0.3%).

Participants were asked to estimate the frequency of their communication with their migrant parents during separation, based on a 5-point scale, with response options ranging from 1 (*never*) to 5 (*very often*). The overall mean frequency of communication with migrant parents was 3.76 (*SD* = 0.96). The respondents' communication with mothers (*M* = 3.86, *SD* = 0.89) occurred more frequently than communication with fathers (*M* = 3.66, *SD* = 1.01). Respondents wished for more opportunities to communicate with migrant parents in general (*M* = 4.21, *SD* = 0.94), and their desire was shared across participants with migrant mothers (*M* = 4.25, *SD* = 0.92) and migrant fathers (*M* = 4.17, *SD* = 0.96). Table 1 displays the means and standard deviations of communication frequency using the various channels.

Almost half (n = 144, 47.1%) the respondents reported that they reunited with their migrant parents once in six months; 132 (43.1%), indicating that the frequency of reunion with parents occurred once in a year. Fourteen (4.6%) reported the reunion frequency was once in one and a half years; nine respondents (2.9%) reunited with migrant parents once in two years, and four (1.3%) reported the frequency of reunion as once in more than two years. Three respondents checked the last option "We have not reunited since he/she left," which might overlap the other options if the migrant parents had left home for the first time and had not yet had the opportunity to reunite with family members at the time of data collection. In this case, the "reunion" data of

these three respondents were marked “missing”. More than half of the respondents (n = 199, 65%) wished to reunite with migrant parents at least twice every six months; 59 (19.3%), once every six months; 37 (12.1%), once a year; 5 (1.7%), once in more than one year. Six (2%) chose “I do care whether we reunite or not.”

Table 1

Means and Standard Deviations for Parent–child Communication Variables

Variables	Overall		FC		MC	
	M	*SD*	*M*	*SD*	*M*	*SD*
• PC frequency	3.31	1.01	3.30	1.02	3.32	1.01
• AC frequency	2.57	1.09	2.62	1.09	2.52	1.08
• VC frequency	3.08	1.36	3.13	1.37	3.03	1.34
• EM frequency	1.45	0.89	1.44	0.85	1.46	0.92
• TM frequency	2.19	1.16	2.26	1.16	2.12	1.16
• LT frequency	1.46	0.85	1.49	0.89	1.43	0.81
• OC frequency	3.76	0.96	3.66	1.01	3.86	0.89
• WC frequency	4.21	0.94	4.17	0.96	4.25	0.92

Note. *N* = 306. FC = father-child (n = 151). MC = mother-child (n = 155). PC = phone call. AC = audio chat. VC = video chat. EM = email. TM = text message. LT = letter. OC = overall communication. WC = wish for communication. Higher means indicate more frequent communication via various channels.

Communication between the participants and their migrant parent was largely initiated directly by either side instead of through their guardian grandparents. Approximately half the communication was initiated by parents (n = 154, 50.3%); the remaining half, by left-behind children (n = 119, 38.9%) and grandparents (n = 33, 10.8%).

Findings of the Proposed Research Questions and Hypotheses

The following variables were created: IIs, relational maintenance behaviors, and grandparents’ social support. All measures used in the current study demonstrated moderate to high internal consistency (see Table 2).

Table 2

Means, Standard Deviations, and Cronbach's Alphas for Variables of Left-behind Children's IIs, Perceived Relational Maintenance Behaviors of Migrant Parents, Grandparents' Support, and Parent–child Relationship Quality

Variables	Overall			FC		MC	
	M	*SD*	*α*	*M*	*SD*	*M*	*SD*
II attributes							
• Frequency	4.45	1.16	.86	4.26	1.20	4.63	1.10
• Discrepancy	3.99	1.02	.85	3.79	1.04	4.18	0.97
• Valence	4.62	1.02	.83	4.60	1.05	4.63	0.99
• Self-dominance	3.76	0.95	.71	3.83	0.96	3.70	0.94
• Specificity	4.51	0.92	.82	4.47	0.97	4.56	0.86
• Proactivity	4.95	1.11	.85	4.87	1.21	5.02	1.00
• Retroactivity	4.92	1.09	.83	4.89	1.20	4.96	0.98
• Variety	4.83	1.06	-	4.80	1.11	4.86	1.02
II functions							
• Self-understanding	5.04	0.86	.79	5.01	0.89	5.06	0.84
• Rehearsal	5.07	0.99	.80	5.02	1.05	5.12	0.93
• Catharsis	4.92	1.01	.76	4.91	1.08	4.94	0.95
• CM	4.55	1.02	.78	4.51	1.03	4.59	1.00
• Compensation	4.07	1.36	.86	3.96	1.40	4.18	1.31
• RM	4.82	1.08	.75	4.73	1.08	4.91	1.07
RMBs							
• Positivity	5.17	1.10	.91	5.15	1.18	5.19	1.03
• Openness	4.78	1.27	.84	4.65	1.41	4.90	1.11
• Assurances	5.34	1.10	.74	5.23	1.15	5.45	1.04
• Networks	4.97	1.32	.81	4.87	1.42	5.07	1.22
• Tasks	5.80	1.06	.83	5.76	1.10	5.83	1.03
Grandparents' support	5.50	1.12	.84	5.46	1.14	5.54	1.10
PC relationship quality							
• Satisfaction	5.65	1.31	.88	5.52	1.46	5.77	1.14
• Commitment	5.32	1.30	.82	5.19	1.43	5.46	1.15
• Intimacy	5.54	1.31	.85	5.37	1.46	5.71	1.12
• Trust	5.87	1.15	.81	5.78	1.26	5.96	1.03
• Love	6.17	1.23	.90	6.02	1.43	6.32	0.99

Note. N = 306. FC = father–child. MC = mother–child. PC = parent–child. II = Imagined interaction, RMB = Relational maintenance behavior. CM = conflict management. RM = relational maintenance. Range/scale is from 1 to 7. Higher means indicate greater use of IIs, relational maintenance behaviors, grandparents' support, and parent–child relationship quality.

IIs and Their Association With Relationship Quality

Attributes of left-behind children's IIs with migrant parents (RQ1a and RQ1b).

RQ1a asked what attributes of IIs were used by the left-behind children during separation from their migrant parents. Overall, the eight II attributes (i.e., proactivity, retroactivity, variety, valence, specificity, frequency, discrepancy, and self-dominance) appeared to differing degrees in left-behind children's IIs with their migrant parents. The regularly emerging attributes of left-behind children's IIs with migrant parents reported by the respondents listed in descending order are as follows: proactivity (M = 4.95, SD = 1.11), retroactivity (M = 4.92, SD = 1.09), variety (M = 4.83, SD = 1.06), valence (M = 4.62, SD = 1.02), specificity (M = 4.51, SD = 0.92), frequency (M = 4.45, SD = 1.16), discrepancy (M = 3.99, SD = 1.02), and self-dominance (M = 3.76, SD = 0.95). The most frequently reported attribute of IIs used with migrant fathers was *retroactivity* (M = 4.89, SD = 1.20); the least frequently reported, *discrepancy* (M = 3.79, SD = 1.04). The most frequently reported attribute of IIs used with migrant mothers was *proactivity* (M = 5.02, SD = 1.00); the least frequently reported, *self-dominance* (M = 3.70, SD = 0.94). In other words, left-behind children tended to review the interactions more with migrant fathers and imagine future encounters more with migrant mothers. Left-behind children's IIs with migrant parents were dominated by migrant fathers and mothers rather than themselves. The IIs they had with migrant parents resembled their real conversations.

RQ1b asked what were the most and least reported II attribute. The most frequently enacted II attribute (i.e., proactivity) and the least used II attribute (i.e., self-dominance) were compared using a paired sample t-test. The result showed that the difference between the two reported II attributes (i.e., proactivity and self-dominance) was significant, and the size of this effect was large (t = 12.50, df = 305, p < .001, two-tailed). That is, the left-behind children

tended to engage more in IIs before they reunited with their migrant parent, and the imagined conversations were more dominated by the parent than child.

Functions of left-behind children's IIs with migrant parents (RQ2a and RQ2b). RQ2a asked what functions of IIs were used by the left-behind children during separation from their migrant parents. Overall, the six II functions (i.e., rehearsal, self-understanding, catharsis, relational maintenance, conflict management, and compensation) appeared to differing degrees in left-behind children's IIs with their migrant parents. The regularly emerging functions of IIs with migrant parents reported by the respondents listed in descending order are as follows: rehearsal (M = 5.07, SD = 0.99), self-understanding (M = 5.04, SD = 0.86), catharsis (M = 4.92, SD = 1.01), relational maintenance (M = 4.82, SD = 1.08), conflict management (M = 4.55, SD = 1.02), and compensation (M = 4.07, SD = 1.36). Rehearsal was the most frequently used function of IIs with both migrant fathers (M = 5.02, SD = 1.05) and migrant mothers (M = 5.12, SD = 0.93), and compensation was the least frequently reported function of IIs with both migrant fathers (M = 3.96, SD = 1.40) and migrant mothers (M = 4.18, SD = 1.31); that is, left-behind children tended to use IIs to practice what they were actually going to say to their migrant parents. What's more, left-behind children's IIs could not be used to substitute for real conversations with their migrant parents.

RQ2b asked what were the most and the least reported II function. The most frequently used II function (i.e., rehearsal) and the least used II function (i.e., compensation) were compared via a paired sample t-test. Results showed that the difference between the two reported II functions (i.e., rehearsal and compensation) was significant, and the size of this effect was large (t = 11.73, df = 305, p < .001, two-tailed). That is, left-behind children tended to rehearse

extensively before they actually communicated with their migrant parent, and IIs could not totally compensate for the lack of real face-to-face interaction.

Gender differences in II attributes and functions (RQ3a and RQ3b). RQ3a and RQ3b asked whether male and female left-behind children differed in the attributes (i.e., frequency, discrepancy, valence, self-dominance, specificity, proactivity, retroactivity, and variety) and functions (i.e., self-understanding, rehearsal, catharsis, conflict-management, compensation, and relational maintenance) of IIs with migrant parents. A series of independent-samples *t* tests were computed to answer RQ3a and RQ3b. The results indicated no significant differences between male and female left-behind children in their use of IIs in terms of the attributes and functions (see Table 3).

Association between II attributes and functions and parent–child relationship quality (RQ4a and RQ4b). RQ4a asked about the relationship between left-behind children's use of II attributes (i.e., frequency, discrepancy, valence, self-dominance, specificity, proactivity, retroactivity, and variety) and their perceived relationship quality with their migrant parents. This research question was answered by conducting Pearson's correlational analysis between left-behind children's reported II attributes and their perceptions of the quality of their relationships with their migrant parents (see Table 4). The results showed that seven II attributes (i.e., frequency, discrepancy, valence, specificity, proactivity, retroactivity, and variety) were significantly associated with the five dimensions of parent–child relationship quality (i.e., satisfaction, commitment, intimacy, trust, and love). Self-dominance was correlated only with trust ($r = -.14$) but not other subdimensions of relational quality (i.e., satisfaction, commitment, intimacy, and love). Thus, H1a was partially supported.

Table 3

t-Tests for Gender Difference in Attributes and Functions of IIs

Variables	Male		Female		*t*	*df*	*p*
	M	*SD*	*M*	*SD*			
II attributes							
• Frequency	4.34	1.22	4.55	1.10	1.64	304	.10
• Discrepancy	4.02	1.00	3.95	1.04	0.64	304	.52
• Valence	4.59	1.03	4.64	1.02	0.41	304	.68
• Self-dominance	3.79	0.96	3.74	0.95	0.51	304	.61
• Specificity	4.49	0.93	4.54	0.92	0.44	304	.66
• Proactivity	4.94	1.07	4.96	1.15	0.16	304	.87
• Retroactivity	4.90	1.05	4.94	1.13	0.33	304	.74
• Variety	4.89	0.95	4.78	1.16	0.96	297	.34
II functions							
• Self-understanding	4.96	0.87	5.11	0.85	1.55	304	.12
• Rehearsal	5.11	0.92	5.04	1.05	0.58	304	.56
• Catharsis	4.93	1.00	4.92	1.02	0.02	304	.98
• CM	4.54	1.02	4.56	1.02	0.19	304	.85
• Compensation	3.99	1.38	4.15	1.34	1.01	304	.31
• RM	4.82	1.07	4.82	1.09	0.01	304	.99

Note. n (male) = 149. n (female) = 157. CM = conflict management. RM = relational maintenance.

Specifically, the positive correlation between frequency and parent–child relationship quality suggested that left-behind children who had more frequent IIs had better relationships with their migrant parents. The negative association between discrepancy and relationship quality indicated that the left-behind children who had more IIs different from real- life conversations would have less satisfying relationships with their migrant parents. Valence was positively associated with parent–child relationship quality, suggesting that the more enjoyable IIs were, the better the parent–child relationship was. Self-dominance was negatively associated with only one dimension of parent–child relationship quality (i.e., trust), which showed that more parent-dominated IIs related to greater degrees of trust in parents. The positive association between specificity and parent–child relationship quality indicated that the left-behind children

who had more specific IIs would have better relationships with their migrant parents. The positive correlation between proactivity and relationship quality suggested that more IIs before real encounters related to better parent–child relationship. Retroactivity was positively associated with parent–child relationship quality, which showed that more IIs after real encounters related to better parent–child relationships. Finally, variety was also found to be positively associated with parent–child relationship quality, which indicated that left-behind children who discussed a greater variety of topics in their IIs with migrant parents had better relationships with them.

Table 4

Correlation Between Left-Behind Children's II Attributes and Parent–Child Relationship Quality

II Attributes	Relationship Quality				
	Satisfaction	Commitment	Intimacy	Trust	Love
Frequency	**.44****	**.42****	**.43****	**.32****	**.43****
Discrepancy	**-.36****	**-.34****	**-.31****	**-.24****	**-.24****
Valence	**.44****	**.36****	**.41****	**.36****	**.38****
Self-dominance	-.09	-.11	-.11	**-.14***	-.09
Specificity	**.37****	**.31****	**.34****	**.31****	**.39****
Proactivity	**.31****	**.29****	**.30****	**.22****	**.33****
Retroactivity	**.44****	**.44****	**.45****	**.31****	**.44****
Variety	**.29****	**.28****	**.30****	**.25****	**.31****

Note. $N = 306$. $*p < .05$. $**p < .001$.

RQ4b asked about the relationship between left-behind children's use of II functions (i.e., self-understanding, rehearsal, catharsis, conflict-management, compensation, and relational maintenance) with their perceptions of the quality of their relationship with their migrant parents. This research question was answered by completing the Pearson's correlational analysis between left-behind children's reported II functions and their perceived relationship quality with migrant parents (see Table 5). The results showed significant correlations between the four II functions (i.e., self-understanding, rehearsal, catharsis, and relational maintenance) and the five dimensions of parent–child relationship quality (i.e., satisfaction, commitment, intimacy, trust, and love).

Conflict management was not related to any of the five dimensions of relationship quality. Compensation was not associated with satisfaction, commitment, trust, or love.

Specifically, if the left-behind children used more IIs to understand themselves or their parents in terms of their parent–child relationship, if they had practiced what they were actually going to say later on to their migrant parents, if they had more opportunities to relieve tension through their IIs, and if they used more IIs to compensate for the lack of real interaction with their parents, they would have better relationships with their migrant parents. Overall, the positive association between relational maintenance and parent–child relationship quality showed that left-behind children who used more IIs to think about their migrant parents enjoyed better parent–child relationship quality.

Relational Maintenance Behaviors and Their Association With Relationship Quality

Left-behind children's perceived relational maintenance behaviors (RQ5). RQ5 asked what were left-behind children's perceived relational maintenance behaviors initiated by migrant parents. Means and standard deviations were computed and reported in Table 2. Overall, the five relational maintenance behaviors (i.e., sharing tasks, assurances, positivity, openness, and networks) initiated by migrant parents were perceived by the left-behind children to varying degrees. The most reported relational maintenance behaviors of migrant parents included tasks (M = 5.80, SD = 1.06), assurances (M = 5.34, SD = 1.10), and positivity (M = 5.17, SD = 1.10). The least reported parents' relational maintenance behaviors were openness (M = 4.78, SD = 1.27) and networks (M = 4.97, SD = 1.32). Tasks was the most reported relational maintenance behaviors initiated by both migrant fathers (M = 5.76, SD = 1.10) and migrant mothers (M = 5.83, SD = 1.03), and openness was the least reported relational maintenance behaviors initiated by migrant fathers (M = 4.65, SD = 1.41) and migrant mothers (M = 4.90, SD = 1.11). In other

words left-behind children perceived more task-sharing behaviors (e.g., helping with the joint responsibilities that the family faces) and fewer openness behaviors (e.g., talking about the parent–child relationship) from their migrant parents.

Table 5

Correlation Between Left-Behind Children's II Functions and Parent–Child Relationship Quality

II Functions	Relationship Quality				
	Satisfaction	Commitment	Intimacy	Trust	Love
Self-understanding	**.33****	**.36****	**.36****	**.29****	**.32****
Rehearsal	**.29****	**.26****	**.30****	**.17****	**.27****
Catharsis	**.41****	**.36****	**.42****	**.27****	**.39****
Conflict management	.06	.06	.06	.09	.08
Compensation	.07	.11	**.12***	.05	.04
Relational maintenance	**.24****	**.21****	**.26****	**.14***	**.22****

Note. $N = 306$. $^{*}p < .05$. $^{**}p < .001$.

Difference in relational maintenance behaviors in the four parent–child dyads (RQ6). RQ6 was designed to examine any differences in left-behind children's perceptions of parents' relational maintenance behaviors across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter). In order to answer RQ6, a new variable was created to reflect the four dyads (1 = father–son, 2 = father–daughter, 3 = mother–son, 4 = mother–daughter). One-way ANOVAs were then conducted to determine whether the mean scores of five relational maintenance behaviors (i.e. positivity, openness, assurances, networks, and tasks) perceived by the respondents differed across the four different types of parent–child dyads. The results revealed no significant differences across these four relational dyads on the perceived relational maintenance behaviors of positivity ($F(3, 302) = 0.06$, $p = .098$), openness ($F(3, 302) = 1.02$, $p = .38$), assurances ($F(3, 302) = 1.93$, $p = .12$), and tasks ($F(3, 302) = 0.54$, p

= .66). A significant effect on the relational maintenance behavior of *networks* appeared across these four relational dyads ($F(3, 302) = 2.68$, $p < .05$). See Table 6.

The post-hoc comparisons based on the Tukey HSD test revealed significant difference in mother–daughter dyads ($M = 5.28$, $SD = 1.09$) and father–daughter dyads ($M = 4.72$, $SD = 1.55$) in their use of *networks* relational maintenance behaviors ($p < .05$). That is, *networks* relational maintenance behaviors (e.g., discussing people they both know) were used more frequently by mother and daughter dyads than by the father and daughter dyads.

Table 6

Comparison of Parent–child Dyads in Respondent's Perceived Relational Maintenance Behaviors (ANOVA)

RMBs	Parent–child Dyads								*F*-statistic
	FS		FD		MS		MD		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Positivity	5.18	1.21	5.13	1.15	5.19	1.00	5.20	1.05	0.06
Openness	4.69	1.31	4.62	1.51	4.89	1.00	4.91	1.21	1.02
Assurances	5.33	1.08	5.13	1.22	5.56	0.91	5.36	1.14	1.93
Networks	5.04^{ab}	1.25	4.72^{b}	1.55	4.85^{ab}	1.32	5.28^{a}	1.09	**2.68***
Tasks	5.85	0.91	5.68	1.26	5.77	1.14	5.88	0.91	0.54

Note. RMBs = relational maintenance behaviors. FS = father–son, $n = 74$. FD = father–daughter, $n = 77$. MS = mother–son, $n = 75$. MD = mother–daughter, $n = 80$. PS = parent sex. CS = child sex. Means were computed on a 7-point scale. For all measures, larger means indicate greater perceived use of each relational maintenance behaviors. *$p < .05$.

Association between relational maintenance behaviors and parent–child relationship quality (H1). H1 predicted that left-behind children's perceived relational maintenance behaviors are positively associated with left-behind children's perceptions of the quality of their relationships with their migrant parents. To test the hypothesis, Pearson's correlation coefficients were calculated (see Table 7). All 25 correlations emerged as significant, and H1 was supported.

Table 7

Correlation Between Left-behind Children's Perceived Relational Maintenance Behaviors and Parent–Child Relationship Quality

RMBs	Relationship Quality				
	Satisfaction	Commitment	Intimacy	Trust	Love
Positivity	**.64****	**.56****	**.56****	**.46****	**.47****
Openness	**.40****	**.35****	**.35****	**.28****	**.24****
Assurances	**.45****	**.37****	**.41****	**.33****	**.32****
Networks	**.46****	**.43****	**.44****	**.34****	**.34****
Tasks	**.53****	**.46****	**.48****	**.45****	**.51****

Note. $N = 306$. RMBs = relational maintenance behaviors. $^{**}p < .001$.

Specifically, if the left-behind children perceived more enjoyable and optimistic behaviors from their migrant parents, if the migrant parents discussed their parent–child relationship in an open manner with the left-behind children, if the left-behind children received more supports and comfort from their migrant parents, if left-behind children and their migrant parents both interacted with or relied on common affiliations and relationships, and finally, if migrant parents shared more tasks and responsibilities at home, the left-behind children would perceive better parent–child relationship in terms of relational satisfaction, commitment, intimacy, trust, and love. Overall, these results indicated that if the left-behind children perceived more encouraging, open, caring, involving, and responsible behaviors from migrant parents, they might have better parent–child relationship.

Support and Relationship Quality

Association between grandparents' support and parent–child relationship quality (H2). H2 predicted that the perceived support (concerning parent–child relational maintenance) from grandparents was positively associated with left-behind children's perceptions of the quality of their relationship with their migrant parents. Correlation coefficients were calculated

to test the hypothesis (see Table 8). All five correlations emerged as significant, and H2 was supported. Overall, these results suggested that when caregiving grandparents tried to help the left-behind children maintain their relationships with their migrant parents, the left-behind children were more likely to perceive a better relationship with their migrant parents.

Table 8

Correlation Between Grandparents' Support and Parent–Child Relationship Quality

Relationship Quality	Grandparents' Support
Satisfaction	**.36****
Commitment	**.37****
Intimacy	**.31****
Trust	**.31****
Love	**.28****

Note. $N = 306$. **$p < .001$.

Communication and Its Association With IIs and Relationship Quality

Communication channel use (RQ7). RQ7 asked what were the most and least reported communication channels used by the migrant parents and the left-behind children. A chi-square goodness-of-fit test was calculated comparing the frequency of different communication channel use. The result showed significant deviation from the hypothesized values (χ^2 (4) = 363.97, $p < .001$). Overall, the phone call was the significantly more used communication channel by the respondents ($M = 3.31$, $SD = 1.01$), and email was the least frequently used communication channel ($M = 1.45$, $SD = 0.89$). When examined by the gender of the migrant parent, the phone call was significantly used most frequently by both migrant mothers ($M = 3.32$, $SD = 1.01$) and migrant fathers ($M = 3.30$, $SD = 1.02$). Email was the communication channel least used by migrant fathers ($M = 1.44$, $SD = 0.85$), and the letter was the communication channel least used by migrant mothers ($M = 1.43$, $SD = 0.81$).

Difference in four parent–child dyads on the frequency of communication channel use (RQ8). RQ8 asked whether any differences occurred in the frequency of the use of various communication channels (i.e., phone call, audio chat, video chat, email, text message, and letter) across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter). A previously created new variable was used to reflect the four dyads (1 = father–son, 2 = father–daughter, 3 = mother–son, 4 = mother–daughter). Six one-way ANOVAs were then computed to answer the research question. Results revealed no significant effect of the relational dyads on the frequency of phone calls ($F(3, 302) = 0.47$, $p = .71$), audio chat ($F(3, 302) = 0.28$, $p = .84$), video chat ($F(3, 302) = 0.37$, $p = .78$), email ($F(3, 302) = 0.88$, $p = .45$), text messages ($F(3, 302) = 1.62$, $p = .19$), and letter ($F(3, 302) = 1.18$, $p = .32$). The results suggested that even though the most frequently used communication channel differed by the gender of the migrant parent (see results for RQ7), the frequency of communicating through phone call, audio chat, video chat, email, text message, and letter did not differ significantly across the four parent–child dyads (see Table 9).

Table 9

Comparison of Parent–child Dyads in the Frequency of Communication Channel Use (ANOVA)

CCU	Parent–child Dyads								*F-statistic*	*p*
	FS		FD		MS		MD			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
PC	3.35	1.09	3.25	0.96	3.24	1.05	3.40	0.96	0.47	.71
AC	2.66	1.16	2.58	1.03	2.52	1.03	2.53	1.14	0.28	.84
VC	3.18	1.40	3.08	1.35	2.95	1.26	3.10	1.42	0.37	.78
EM	1.49	0.93	1.40	0.78	1.35	0.81	1.56	1.00	0.88	.45
TM	2.35	1.25	2.17	1.06	1.96	1.08	2.28	1.22	1.62	.19
LT	1.55	0.91	1.43	0.86	1.32	0.64	1.53	0.94	1.18	.32

Note. CCU = communication channel use. FS = father–son, $n = 74$. FD = father–daughter, $n = 77$. MS = mother–son, $n = 75$. MD = mother–daughter, $n = 80$. PS = parent sex. CS = child sex. PC = phone call. AC = audio chat. VC = video chat. EM = email. TM = text message. LT = letter. *$p < .05$.

Association between left-behind children's frequency of communication with migrant parents and their IIs with parents (H3a). H3a predicted that left-behind children's frequency of communication with migrant parents was associated with the children's IIs with migrant parents. Six correlational analyses were conducted to test the hypothesis. Results showed that the parent–child communication frequency was positively related with self-understanding (r = .22, p < .001), rehearsal (r = .24, p < .001), catharsis (r = .19, p < .01), and relational maintenance (r = .13, p < .05) (see Table 10). Conflict management and compensation are the II functions that revealed no correlation with parent–child communication frequency. H3a was partially supported. The result indicated that left-behind children who had more frequent communication with migrant parents would have more IIs to better understand themselves in relation to parents, prepare themselves for future interactions with their parents, relieve their tension, and maintain parent–child relationship (i.e., self-understanding, rehearsal, catharsis, and relational maintenance). Their frequent communication, however, had no bearing on their use of IIs to manage or relive conflicts with their migrant parent, nor did it have any bearing on their use of IIs as a substitute for real interactions with their migrant parents.

Table 10

Correlation Between Parent–child Communication Frequency and Left-Behind Children's IIs with Migrant Parents

II Functions	PC Communication Frequency
Self-understanding	**.22****
Rehearsal	**.24****
Catharsis	**.19****
Conflict-management	-.03
Compensation	-.01
Relational Maintenance	**.13***

Note. N = 306. II = imagined interaction. PC = parent–child. *p < .05, ** p < .01.

Association between left-behind children's expected frequency of communication with migrant parents and their IIs with parents (H3b). H3b predicted that left-behind children's expected frequency of communication with migrant parents was associated with the attributes of their IIs with migrant parents. Six correlation coefficients were computed to test the hypothesis. Result showed that the left-behind children's expected parent–child communication frequency was positively related with self-understanding ($r = .35$, $p < .001$), rehearsal ($r = .32$, $p < .001$), catharsis ($r = .34$, $p < .01$), and relational maintenance ($r = .31$, $p < .05$) (see Table 11). II functions of conflict-management and compensation revealed no correlation with the expected parent–child communication frequency. H3b was partially supported. Results indicated that left-behind children who wished to have more communication with migrant parents would have more IIs (i.e., self-understanding, rehearsal, catharsis, and relational maintenance) with their migrant parents.

Table 11

Correlation Between Expected Parent–child Communication Frequency and Left-Behind Children's IIs With Migrant Parents

II Functions	Wished PC Communication Frequency
Self-understanding	**.35****
Rehearsal	**.32****
Catharsis	**.34****
Conflict-management	.06
Compensation	.10
Relational Maintenance	**.31****

Note. $N = 306$. II = imagined interaction. PC = parent–child. ** $p < .001$.

Relationship between parent–child communication frequency, compensatory IIs, and left-behind children's wish to reunite with migrant parents (H4a). H4a predicted that the relationship between the parent–child communication frequency and the use of compensatory IIs is moderated by the degree to which left-behind children wish to reunite with migrant parents,

such that the relationship between parent–child communication frequency and the use of compensatory IIs will be significant and the extent to which this relationship is significant varies depending on the left-behind children's wish to reunite with their migrant parents. Six respondents who answered the expected reunion frequency question as "I do not care whether we reunite or not" were excluded from the dataset. Left-behind children who wished to reunite with migrant parents were examined for this hypothesis. Haye's PROCESS macro (Model 1) was computed, and the overall model was not significant: $F(3, 296) = .77$, $R^2 = .01$, $p = .51$. Communication frequency was not an significant predictor of compensatory IIs ($b = -.25$, $t(296) = -1.30$, $p = .19$). The frequency of left-behind children's wished reunion with parents did not predict the compensatory function of II ($b = -.54$, $t(296) = .83$, $p = .20$), nor was the interaction effect of parent–child communication frequency and left-behind children's expected reunion frequency a significant predictor of compensatory IIs ($b = .17$, $t(296) = 1.44$, $p = .15$). Results indicated that the respondents' wish to reunite with their migrant parents did not influence the relationship between the parent–child communication frequency and compensatory IIs. Therefore, H4a was not supported.

Relationship between parent–child communication frequency, compensatory IIs, and left-behind children's wish to communicate with migrant parents (H4b). H4b predicted that the relationship between the frequency of parent–child communication and the use of compensatory IIs is moderated by the degree to which left-behind children wish to communicate with migrant parents, such that the relationship between parent–child communication frequency and the use of compensatory IIs will be significant and the extent to which this relationship varies depends on the left-behind children's wish to communicate with their migrant parents. Haye's PROCESS macro (Model 1) was conducted to test the hypothesis. The overall model was

not significant: $F(3, 302) = 1.26$, , $R^2 = .01$, $p = .29$. Communication frequency was not a significant predictor of compensatory IIs ($b = -.01$, $t(302) = -.03$, $p = .98$). The expected communication frequency with parents was not a significant predictor ($b = .24$, $t(302) = .83$, $p = .40$), nor did the interaction effect of parent–child communication frequency and left-behind children's wish to communicate significantly predict their use of the compensatory IIs ($b = -.02$, $t(302) = -.23$, $p = .82$). Results indicated that the respondents' wish to communicate with their migrant parents did not moderate the relationship between parent–child communication frequency and compensatory IIs. Therefore, H4b was not supported.

Association between communication frequency and parent–child relationship quality (RQ9). The purpose of RQ9 was to examine the relationship between left-behind children and their migrant parents' frequency of communication and relationship quality. Correlation coefficients were calculated to answer the research question. Overall, results showed a positive association between parent–child communication frequency and parent–child relationship quality in terms of the dimensions of relational satisfaction, commitment, intimacy, trust, and love (see Table 12). Results indicated that left-behind children who had more frequent communication with migrant parents had better relationship quality with their parents.

Table 12

Correlation Between Communication Frequency and Parent–child Relationship Quality

Relationship Quality	PC Communication Frequency
Satisfaction	**.37****
Commitment	**.36****
Intimacy	**.43****
Trust	**.33****
Love	**.31****

Note. $N = 306$. PC = parent–child. ** $p < .001$.

IIs, Relational Maintenance Behaviors, Support, and Relationship Quality

RQ10 asked whether left-behind children's IIs with migrant parents, left-behind children's perceptions of the relational maintenance behaviors of migrant parents, left-behind children's perceptions of grandparents' support, and parent–child communication frequency positively predicted left-behind children's perceptions of the quality of their relationship with their parents if controlled for gender, age, length of parents' absence, and frequency of parent–child reunion. To answer this research question, five hierarchical multiple regressions were conducted; that is, the five dimensions of parent–child relationship quality—satisfaction, commitment, intimacy, trust, and love—were separately entered as dependent variables. Correlation coefficients were computed to obtain a preliminary understanding of the relationships between all the independent variables and dependent variables included in RQ10 (see Table 13). At Step 1 of the hierarchical regression analysis, the variables that needed to be controlled (i.e., gender, age, the length of parents' absence, and the length of parent–child reunion) were entered. At Step 2, parent–child communication frequency was entered. At Step 3, grandparents' support was entered. At Step 4, the six dimensions of IIs (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance). Finally, the five dimensions of relational maintenance behaviors (i.e., positivity, openness, assurances, networks, and tasks) were entered at Step 5 of the regress analysis.

Table 13

Summary of Correlation Between Variables in Regression Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	1																					
2	**-.12***	1																				
3	.06	.03	1																			
4	-.04	.02	**.48****	1																		
5	-.07	**-.12***	**-.12***	**-.12***	1																	
6	-.01	-.01	-.09	-.03	**.15****	1																
7	.09	-.11*	.00	-.06	**.22****	**.32****	1															
8	-.03	-.03	-.11	-.06	**.24****	**.37****	**.49****	1														
9	-.00	.00	-.03	-.01	**.19***	**.40****	**.52****	**.56****	1													
10	.01	-.01	.03	.11	-.03	**.17****	**.25****	**.30****	**.21****	1												
11	.06	.01	.08	**.16****	-.01	.09	**.31****	**.23****	**.35****	**.35****	1											
12	-.00	-.10	-.03	.05	**.13***	**.23****	**.56****	**.48****	**.44****	**.36****	**.46****	1										
13	-.01	-.03	-.08	-.04	**.32****	**.48****	**.35****	**.34****	**.41****	.10	.10	**.23****	1									
14	-.01	.04	-.03	.03	**.17****	**.50****	**.29****	**.45****	**.43****	.10	**.17****	**.28****	**.56****	1								
15	-.09	-.03	-.10	-.09	**.28****	**.47****	**.32****	**.40****	**.45****	**.14***	.08	**.26****	**.56****	**.59****	1							
16	.02	-.07	-.05	-.05	**.31****	**.40****	**.24****	**.26****	**.33****	.05	.09	**.19****	**.54****	**.52****	**.44****	1						
17	-.01	-.02	-.11	-.06	**.30****	**.47****	**.25****	**.26****	**.39****	.07	.04	**.21****	**.62****	**.48****	**.54****	**.55****	1					
18	-.03	**-.13***	**-.13***	**-.20****	**.37****	**.36****	**.33****	**.29****	**.41****	.06	.07	**.24****	**.64****	**.40****	**.45****	**.46****	**.53****	1				
19	-.02	**-.15****	-.06	-.09	**.36****	**.37****	**.36****	**.26****	**.36****	.06	.11	**.21****	**.56****	**.35****	**.37****	**.43****	**.46****	**.65****	1			
20	.01	**-.12***	-.07	**-.13***	**.43****	**.31****	**.36****	**.30****	**.42****	.09	**.12***	**.26****	**.56****	**.35****	**.41****	**.44****	**.48****	**.75****	**.74****	1		
21	.05	-.11	-.11	**-.16****	**.33****	**.31****	**.29****	**.17****	**.27****	.09	.05	**.14***	**.46****	**.28****	**.33****	**.34****	**.45****	**.58****	**.56****	**.58****	1	
22	.04	**-.18****	-.04	**-.12***	**.31****	**.28****	**.32****	**.27****	**.39****	.08	.04	**.22****	**.47****	**.24****	**.32****	**.34****	**.51****	**.67****	**.65****	**.68****	**.67****	1

Note. $N = 306$. 1 = sex. 2 = age. 3 = length of separation. 4 = reunion frequency. 5 = communication frequency. 6 = grandparents' support. 7 = II self-understanding. 8 = II rehearsal. 9 = II catharsis. 10 = II conflict management. 11 = II compensation. 12 = II relational maintenance. 13 = positivity. 14 = openness. 15 = assurances. 16 = networks. 17 = tasks. 18 = satisfaction. 19 = commitment. 20 = intimacy. 21 = trust. 22 = love. *$p < .05$, ** $p < .01$.

In the first regression analysis, relational satisfaction was the dependent variable (see Table 14). Model 1, with gender, age, length of separation, and frequency of reunion as predictors, explained 8.0% of variance (adjusted R^2 = .08) and was significant (F (4, 301) = 7.61, p < .001). Model 2, in which parent–child communication frequency was added, explained significantly more variance (R^2change = .10, F (1, 300) = 35.37, p < .001). This model explained 17.4% of the variance in parent–child relational satisfaction (adjusted R^2 = .174) and was significant (F (5, 300) = 13.86, p < .001). Model 3, with grandparents' support added into the equation, explained yet more variance and this increase was also significant (R^2change = .09, F (1, 299) = 34.83, p < .001). Model 3 explained 25.8% of the variance in parent–child relational satisfaction (adjusted R^2 = .258) and was significant (F (6, 299) = 18.65, p < .001). Model 4, in which six II functions were added, explained significantly more variance (R^2change = .07, F (6, 293) = 5.20, p < .001). The model explained 31.5% of the variance in parent–child relationship satisfaction (adjusted R^2 = .315) and was significant (F (12, 293) = 12.71, p < .001). In the final step, Model 5, with five relational maintenance behaviors added, explained yet more variance and this increase was also significant (R^2change = .18, F (5, 288) = 20.87, p < .001). The final model explained 48.9% of the variance in parent–child relational satisfaction (adjusted R^2 = .489) and was significant (F (17, 288) = 18.15, p < .001). The significant individual predictors in the final model were age (β = -.10, p < .05), reunion frequency (β = -.17, p < .001), communication frequency (β = .12, p < .05), catharsis (β = .15, p < .01), positivity (β = .41, p < .001), and sharing tasks (β = .14, p < .05). In other words, those who were younger, had reunited with their migrant parent less, had more communication with their migrant parents, engaged in more IIs that helped relieve tension (i.e., catharsis), and perceived their migrant parent as more

encouraging (i.e., positivity) and sharing more tasks at home (i.e., sharing tasks) had higher parent–child relational satisfaction.

Table 14

Summary of Regression Analysis for Predicting Parent–child Relationship Quality (Satisfaction)

Predictors	Relational Satisfaction		
	B	*SE B*	*β*
Step 1			
Age	-.19	.08	**-.14***
Gender	-.09	.15	-.03
Length of Separation	-.08	.12	-.04
Reunion Frequency	-.41	.09	**-.26*****
R^2 = .09			
Step 2			
Age	-.13	.07	-.09
Gender	-.02	.14	-.01
Length of Separation	-.05	.12	-.02
Reunion Frequency	-.33	.09	**-.20*****
Communication Frequency	.44	.07	**.32*****
R^2 *Change* = .10			
Step 3			
Age	-.13	.07	-.10
Gender	-.03	.13	-.01
Length of Separation	-.01	.11	-.01
Reunion Frequency	-.31	.09	**-.19*****
Communication Frequency	.38	.07	**.28*****
Grandparents' Support	.35	.06	**.30*****
R^2 *Change* = .09			
Step 4			
Age	-.12	.07	-.09
Gender	-.05	.13	-.02
Length of Separation	-.03	.11	-.02
Reunion Frequency	-.28	.08	**-.18****
Communication Frequency	.32	.07	**.24*****

(Continued)

Table 14 *(Continued)*

Predictors	Relational Satisfaction		
	B	*SE B*	*β*
Grandparents' Support	.22	.06	**.19*** **
II Self-Understanding	.10	.10	.06
II Rehearsal	-.07	.08	-.05
II Catharsis	.35	.08	**.27*** **
II Conflict Management	-.02	.07	-.02
II Compensation	-.05	.06	-.05
II Relational Maintenance	.07	.08	.06
R^2 *Change* = .07			
Step 5			
Age	-.13	.06	**-.10***
Gender	-.06	.11	-.02
Length of Separation	-.02	.09	-.01
Reunion Frequency	-.26	.07	**-.17*** **
Communication Frequency	.16	.06	**.12***
Grandparents' Support	-.02	.06	-.02
II Self-Understanding	.03	.09	.02
II Rehearsal	-.07	.08	-.05
II Catharsis	.20	.07	**.15****
II Conflict Management	-.01	.06	-.01
II Compensation	-.03	.05	-.03
II Relational Maintenance	.07	.07	.05
RMB Positivity	.49	.07	**.41*** **
RMB Openness	.01	.06	.01
RMB Assurances	-.01	.07	-.01
RMB Networks	.05	.05	.05
RMB Tasks	.18	.07	**.14***
R^2 *Change* = .16			

Note. $N = 306$. $R = .30$, $R^2 = .09$, $F(4, 301) = 7.61$, $p < .001$, for Step 1. $R = .43$, $R^2 = .19$, $\Delta R^2 = .10$, $F(1, 300) = 35.37$, $p < .001$, for Step 2. $R = .52$, $R^2 = .27$, $\Delta R^2 = .09$, $F(1, 299) = 34.83$, $p < .001$, for Step 3. $R = .59$, $R^2 = .34$, $\Delta R^2 = .07$, $F(6, 293) = 5.20$, $p < .001$, for Step 4. $R = .72$, $R^2 = .52$, $\Delta R^2 = .16$, $F(5, 288) = 20.87$, $p < .001$, for Step 5. *$p < .05$, ** $p < .01$, ***$p < .001$.

In the second regression analysis, commitment was entered as the dependent variable (see Table 14). In Step 1, with gender, age, length of separation, and frequency of reunion in the equation, $F(4, 301) = 4.91$, $p < .01$, the model explained 4.9% of the variance in commitment of

the parent–child relationship quality (adjusted R^2 = .049). Model 2, in which parent–child communication frequency was added, explained significantly more variance (R^2change = .10, F (1, 300) = 34.48, p < .001). The model explained 14.4% of the variance in commitment (adjusted R^2 = .144) and was significant (F (5, 300) = 11.26, p < .001). Model 3, with grandparents' support added into the equation, explained yet more variance; and this increase was also significant (R^2change = .10, F (1, 299) = 40.52, p < .001). Model 3 explained 24.4% of the variance in commitment (adjusted R^2 = .244) and was significant (F (6, 299) = 17.37, p < .001). In Step 4, with six II functions added into the equation, R^2change = .05, F (6, 293) = 3.72, p < .05). The model explained 28.3% of the variance in the commitment to parent–child relationship (adjusted R^2 = .283) and was significant (F (12, 293) = 11.02, p < .001). Model 5, with five relational maintenance behaviors added, explained yet more variance; and this increase was also significant (R^2change = .11, F (5, 288) = 11.25, p < .001). Model 5 explained 39% of the variance in commitment (adjusted R^2 = .39) and was significant (F (17, 288) = 12.45, p < .001). The significant predictors in Model 5 were age (β = -.11, p < .05), reunion frequency (β = -.10, p < .05), communication frequency (β = .14, p < .01), self-understanding (β = .13, p < .05), and positivity (β = .34, p < .001). In other words, those who were younger, had reunited with their migrant parent less, had more communication with their migrant parents, engaged in more IIs that helped understand themselves in relation to parents (i.e., self-understanding), and perceived their migrant parent as more optimistic (i.e., positivity) experienced higher parent–child relationship commitment.

Table 15

Summary of Regression Analysis for Predicting Parent–child Relationship Quality (Commitment)

Predictors	Commitment		
	B	*SE B*	*β*
Step 1			
Age	-.21	.08	**-.16****
Gender	-.10	.15	-.04
Length of Separation	.03	.12	.02
Reunion Frequency	-.32	.10	**-.20****
R^2 = .06			
Step 2			
Age	-.15	.07	**-.12***
Gender	-.03	.14	-.01
Length of Separation	.07	.12	.03
Reunion Frequency	-.23	.09	**-.15***
Communication Frequency	.44	.07	**.32*****
R^2 *Change* = .10			
Step 3			
Age	-.16	.07	**-.12***
Gender	-.04	.13	-.02
Length of Separation	.10	.11	.05
Reunion Frequency	-.21	.09	**-.13***
Communication Frequency	.38	.07	**.28*****
Grandparents' Support	.38	.06	**.32*****
R^2 *Change* = .10			
Step 4			
Age	-.15	.07	**-.11***
Gender	-.09	.13	-.03
Length of Separation	.06	.11	.03
Reunion Frequency	-.18	.08	**-.11***
Communication Frequency	.33	.07	**.24*****
Grandparents' Support	.28	.06	**.24*****
II Self-Understanding	.25	.10	**.16***
II Rehearsal	-.08	.09	-.06
II Catharsis	.22	.08	**.17****

(Continued)

Table 15 *(Continued)*

Predictors	Commitment		
	B	*SE B*	*β*
II Conflict Management	-.03	.07	-.02
II Compensation	.02	.06	.02
II Relational Maintenance	-.04	.08	-.03
R^2 *Change* = .05			
Step 5			
Age	-.15	.06	**-.11***
Gender	-.11	.12	-.04
Length of Separation	.07	.10	.03
Reunion Frequency	-.17	.08	**-.10***
Communication Frequency	.19	.07	**.14****
Grandparents' Support	.10	.07	.09
II Self-Understanding	.20	.09	**.13***
II Rehearsal	-.06	.08	-.05
II Catharsis	.11	.08	.09
II Conflict Management	-.02	.07	-.01
II Compensation	.03	.05	.03
II Relational Maintenance	-.04	.07	-.03
RMB Positivity	.40	.08	**.34*****
RMB Openness	-.02	.07	-.02
RMB Assurances	-.07	.08	-.06
RMB Networks	.09	.06	.09
RMB Tasks	.12	.08	.10
R^2 *Change* = .11			

Note. N = 306. R = .25, R^2 = .06, $F(4, 301) = 4.91$, $p < .01$, for Step 1. R = .40, R^2 = .16, ΔR^2 = .10, F (1, 300) = 34.48, $p < .001$, for Step 2. R = .51, R^2 = .26, ΔR^2 = .10, F (1, 299) = 40.52, $p < .001$, for Step 3. R = .56, R^2 = .31, ΔR^2 = .05, $F(6, 293) = 3.72$, $p < .01$, for Step 4. R = .65, R^2 = .42, ΔR^2 = .11, $F(5, 288) = 11.25$, $p < .001$, for Step 5. *$p < .05$, ** $p < .01$, ***$p < .001$.

In the third hierarchical multiple regression, intimacy was entered as the dependent variable (see Table 16). Model 1, with gender, age, length of separation, and frequency of reunion in the equation, explained 4.5% of the variance (adjusted R^2 = .045) and was just significant ($F(4, 300) = 4.54$, $p < .01$). In the second step, parent–child communication frequency was added. Model 2 explained significantly more variance (R^2change = .15, F (1, 299) = 57.58, p

< .001). The model explained 19.6% of the variance in parent–child intimacy (adjusted R^2 = .196) and was significant (F (5, 299) = 15.83, p < .001). Model 3, with grandparents' support added into the equation, explained yet more variance and this increase was also significant (R^2change = .06, F (1, 298) = 22.97, p < .001). Model 3 explained 25.1% of the variance in intimacy (adjusted R^2 = .251) and was significant (F (6, 298) = 17.99, p < .001). In Model 4, with six II functions added into the equation, R^2change = .08, F (6, 292) = 6.31, p < .001). The model explained 35% of the variance in the parent–child intimacy (adjusted R^2 = .35) and was significant (F (12, 292) = 13.11, p < .001). Model 5, with five relational maintenance behaviors added into the equation, explained more variance and this increase was also significant (R^2change = .11, F (5, 287) = 11.76, p < .001). Model 5 explained 42.9% of the variance in intimacy (adjusted R^2 = .429) and was significant (F (17, 287) = 14.42, p < .001). The significant predictors in Model 5 included reunion frequency (β = -.11, p < .05), communication frequency (β = .22, p < .001), catharsis (β = .17, p < .01), and positivity (β = .30, p < .001). In other words, those who had reunited with their migrant parent less, had more communication with their migrant parents, engaged in more IIs that helped relieve tension and reduce uncertainty (i.e., catharsis), and perceived their migrant parent as more encouraging (i.e., positivity) had higher parent–child intimacy.

Table 16

Summary of Regression Analysis for Predicting Parent–child Relationship Quality (Intimacy)

Predictors	Intimacy		
	B	*SE B*	*β*
Step 1			
Age	-.17	.08	**-.13***
Gender	-.02	.15	-.01
Length of Separation	.02	.13	.01
Reunion Frequency	-.34	.10	**-.21****
R^2 = .06			
Step 2			
Age	-.10	.07	-.07
Gender	.07	.14	.03
Length of Separation	.06	.12	.03
Reunion Frequency	-.23	.09	**-.14***
Communication Frequency	.55	.07	**.40*****
R^2 *Change* = .15			
Step 3			
Age	-.10	.07	**-.07**
Gender	.06	.13	.02
Length of Separation	.09	.11	.04
Reunion Frequency	-.21	.09	**-.13***
Communication Frequency	.50	.07	**.37*****
Grandparents' Support	.28	.06	**.24*****
R^2 *Change* = .06			
Step 4			
Age	-.09	.07	-.07
Gender	.03	.13	.01
Length of Separation	.06	.11	.03
Reunion Frequency	-.19	.08	**-.12***
Communication Frequency	.44	.07	**.32*****
Grandparents' Support	.15	.06	**.12***
II Self-Understanding	.15	.10	.10
II Rehearsal	-.06	.08	-.05
II Catharsis	.34	.08	**.27*****
II Conflict Management	-.04	.07	-.03

(Continued)

Table 16 *(Continued)*

Predictors	Intimacy		
	B	*SE B*	*β*
II Compensation	-.01	.05	-.01
II Relational Maintenance	.06	.08	.05
R^2 *Change* = .08			
Step 5			
Age	-.09	.06	**-.07**
Gender	.02	.12	.01
Length of Separation	.07	.10	.04
Reunion Frequency	-.17	.08	**-.11***
Communication Frequency	.29	.07	**.22*****
Grandparents' Support	-.04	.06	-.04
II Self-Understanding	.10	.09	.07
II Rehearsal	-.05	.08	-.04
II Catharsis	.22	.08	**.17****
II Conflict Management	-.03	.06	-.02
II Compensation	.01	.05	.01
II Relational Maintenance	.05	.07	.04
RMB Positivity	.36	.08	**.30*****
RMB Openness	-.04	.07	-.04
RMB Assurances	.01	.07	.01
RMB Networks	.08	.06	.08
RMB Tasks	.15	.08	.12
R^2 *Change* = .11			

Note. N = 305. R = .24, R^2 = .06, $F(4, 300) = 4.54$, $p < .01$, for Step 1. R = .46, R^2 = .21, ΔR^2 = .15, F (1, 299) = 57.58, $p < .001$, for Step 2. R = .52, R^2 = .27, ΔR^2 = .06, F (1, 298) = 22.97, $p < .001$, for Step 3. R = .59, R^2 = .35, ΔR^2 = .08, $F(6, 292) = 6.31$, $p < .001$, for Step 4. R = .68, R^2 = .46, ΔR^2 = .11, $F(5, 287) = 11.76$, $p < .001$, for Step 5. *$p < .05$, ** $p < .01$, ***$p < .001$.

In the fourth regression analysis, trust was entered as the dependent variable (see Table 16). Model 1, with gender, age, length of separation, and frequency of reunion as the predictors, explained 4.1% of the variance (adjusted R^2 = .041) and was just significant ($F(4, 301) = 4.28$, $p < .01$. Model 2, in which parent–child communication frequency was added, explained significantly more variance (R^2change = .08, F (1, 300) = 29.41, $p < .001$). The model explained 13.8% of the variance in commitment (adjusted R^2 = .138) and was significant (F (5, 300) = 9.63,

$p < .001$). Model 3, with grandparents' support added into the equation, explained yet more variance; and this increase was also significant (R^2change = .07, F (1, 299) = 24.25, $p < .001$). Model 3 explained 18.7% of the variance in trust (adjusted R^2 = .187) and was significant (F (6, 299) = 12.69, $p < .001$). In Model 4, six II functions were added into the equation. R^2change = .04, F (6, 293) = 2.49, $p < .05$). The model explained 21% of the variance in the parent–child trust (adjusted R^2 = .21) and was significant (F (12, 293) = 7.78, $p < .001$). Model 5, with five relational maintenance behaviors added into the equation, explained yet more variance; and this increase was also significant (R^2change = .09, F (5, 288) = 7.54, $p < .001$). Model 5 explained 29% of the variance in trust (adjusted R^2 = .29) and was significant (F (17, 288) = 8.32, $p < .001$). The significant predictors in this step were communication frequency (β = .17, $p < .01$), self-understanding (β = .14, $p < .05$), positivity (β = .21, $p < .01$), and sharing tasks (β = .22, $p < .01$). That is, those who had more communication with their migrant parents, engaged in more IIs that helped understand themselves in relation to parents (i.e., self-understanding), and perceived their migrant parent as more encouraging (i.e., positivity) and sharing more family responsibilities (i.e., sharing tasks) had higher trust in the parent–child relationship.

Table 17

Summary of Regression Analysis for Predicting Parent–child Relationship Quality (Trust)

Predictors	Trust		
	B	*SE B*	*β*
Step 1			
Age	-.13	.07	-.11
Gender	.10	.13	.05
Length of Separation	-.09	.11	-.05
Reunion Frequency	-.25	.08	**-.18****
R^2 = .05			

(Continued)

Table 17 *(Continued)*

Predictors	Trust		
	B	*SE B*	*β*
Step 2			
Age	-.08	.07	-.07
Gender	.16	.12	.07
Length of Separation	-.06	.11	-.03
Reunion Frequency	-.18	.08	**-.13***
Communication Frequency	.36	.07	**.30*****
R^2 *Change* = .08			
Step 3			
Age	-.08	.06	-.07
Gender	.15	.12	.07
Length of Separation	-.03	.10	-.02
Reunion Frequency	-.17	.08	**-.12***
Communication Frequency	.32	.06	**.26*****
Grandparents' Support	.26	.05	**.26*****
R^2 *Change* = .07			
Step 4			
Age	-.08	.06	-.07
Gender	.11	.12	.05
Length of Separation	-.07	.10	-.04
Reunion Frequency	-.15	.08	-.11
Communication Frequency	.30	.07	**.25*****
Grandparents' Support	.21	.06	**.20*****
II Self-Understanding	.21	.09	**.16***
II Rehearsal	-.16	.08	-.14
II Catharsis	.17	.08	**.15***
II Conflict-Management	.08	.07	.07
II Compensation	-.02	.05	-.03
II Relational Maintenance	-.05	.07	-.05
R^2 *Change* = .04			
Step 5			
Age	-.09	.06	**-.07**
Gender	.10	.11	.05
Length of Separation	-.05	.10	-.03

(Continued)

Table 17 *(Continued)*

Predictors	Trust		
	B	*SE B*	*β*
Reunion Frequency	-.14	.08	-.10
Communication Frequency	.20	.07	**.17****
Grandparents' Support	.06	.06	.05
II Self-Understanding	.19	.09	**.14***
II Rehearsal	-.14	.08	-.12
II Catharsis	.06	.08	.06
II Conflict-Management	.09	.06	.08
II Compensation	-.01	.05	-.01
II Relational Maintenance	-.07	.07	-.07
RMB Positivity	.21	.07	**.21****
RMB Openness	.01	.06	.01
RMB Assurances	-.01	.07	-.01
RMB Networks	-.00	.06	-.01
RMB Tasks	.24	.08	**.22****
R^2 *Change* = .09			

Note. N = 306. R = .23, R^2 = .05, $F(4, 301) = 4.28$, $p < .01$, for Step 1. R = .37, R^2 = .14, ΔR^2 = .08, F (1, 300) = 29.41, $p < .001$, for Step 2. R = .45, R^2 = .20, ΔR^2 = .07, F (1, 299) = 24.25, $p < .001$, for Step 3. R = .49, R^2 = .24, ΔR^2 = .04, $F(6, 293) = 2.49$, $p < .05$, for Step 4. R = .57, R^2 = .33, ΔR^2 = .09, $F(5, 288) = 7.54$, $p < .001$, for Step 5. *$p < .05$, ** $p < .01$, ***$p < .001$.

Finally, love was entered as the dependent variable in the fifth regression analysis (see Table 17). In Step 1, with gender, age, length of separation, and frequency of reunion in the equation, $F(4, 301) = 4.67$, $p < .01$. Model 1 explained 4.6% of the variance in love (adjusted R^2 = .046). Model 2, in which parent–child communication frequency was added, explained significantly more variance (R^2change = .07, F (1, 300) = 24.85, $p < .001$). The model explained 11.6% of the variance in love (adjusted R^2 = .116) and was significant (F (5, 300) = 9.00, $p < .001$). Model 3, with grandparents' support added into the equation, explained yet more variance; and this increase was also significant (R^2change = .05, F (1, 299) = 19.46, $p < .001$). Model 3 explained 16.7% of the variance in love (adjusted R^2 = .167) and was significant (F (6, 299) = 11.21, $p < .001$). In Step 4, with six II functions added into the equation, R^2change = .08,

F (6, 293) = 5.50, $p < .001$). The model explained 23.6% of the variance in love (adjusted R^2 = .236) and was significant (F (12, 293) = 8.86, $p < .001$). Model 5, with five relational maintenance behaviors added, explained yet more variance; and this increase was also significant (R^2change = .13, F (5, 288) = 12.59, $p < .001$). Model 5 explained 36.2% of the variance in love (adjusted R^2 = .362) and was significant (F (17, 288) = 11.19, $p < .001$). The significant predictors in Model 5 included age (β = -.14, $p < .01$), catharsis (β = .19, $p < .01$), positivity (β = .23, $p < .01$), and sharing tasks (β = .35, $p < .001$). That is, those who were younger, engaged in more IIs that helped relieve tension (i.e., catharsis), and perceived their migrant parent as more encouraging (i.e., positivity) and sharing more family tasks (i.e., sharing tasks) felt greater love for their migrant parents.

Table 18

Summary of Regression Analysis for Predicting Parent–child Relationship Quality (Love)

Predictors	Love		
	B	*SE B*	*β*
Step 1			
Age	-.23	.07	**-.18****
Gender	.06	.14	.02
Length of Separation	.05	.12	.02
Reunion Frequency	-.26	.09	**-.17****
R^2 = .06			
Step 2			
Age	-.18	.07	**-.14***
Gender	.11	.13	.04
Length of Separation	.08	.11	.04
Reunion Frequency	-.19	.09	**-.13***
Communication Frequency	.36	.07	**.28*****
R^2 *Change* = .07			

(Continued)

Table 18 *(Continued)*

Predictors	Love		
	B	*SE B*	*β*
Step 3			
Age	-.18	.07	**-.26****
Gender	.10	.13	.04
Length of Separation	.10	.11	.05
Reunion Frequency	-.18	.09	**-.12***
Communication Frequency	.32	.07	**.25*****
Grandparents' Support	.26	.06	**.23*****
R^2 *Change* = .05			
Step 4			
Age	-.17	.07	**-.13***
Gender	.09	.13	.04
Length of Separation	.09	.11	.04
Reunion Frequency	-.15	.08	-.10
Communication Frequency	.25	.07	**.20*****
Grandparents' Support	.12	.06	.11
II Self-Understanding	.12	.10	**.09**
II Rehearsal	-.03	.08	-.02
II Catharsis	.35	.08	**.29*****
II Conflict-Management	.02	.07	.02
II Compensation	-.10	.05	-.12
II Relational Maintenance	.04	.08	.04
R^2 *Change* = .08			
Step 5			
Age	-.17	.06	**-.14****
Gender	.07	.12	.03
Length of Separation	.13	.10	.06
Reunion Frequency	-.14	.08	-.09
Communication Frequency	.12	.07	.10
Grandparents' Support	-.03	.06	-.03
II Self-Understanding	.09	.09	.06
II Rehearsal	.05	.08	.04
II Catharsis	.24	.08	**.19****
II Conflict-Management	.02	.06	.02
II Compensation	-.07	.05	-.08
II Relational Maintenance	.02	.07	.02

(Continued)

Table 18 *(Continued)*

Predictors	Love		
	B	*SE B*	*β*
RMB Positivity	.25	.08	**.23****
RMB Openness	-.12	.07	-.12
RMB Assurances	-.08	.07	-.07
RMB Networks	-.01	.06	-.01
RMB Tasks	.41	.08	**.35*****
R^2 *Change* = .13			

Note. N = 306. R = .24, R^2 = .06, $F(4, 301) = 4.67$, $p < .01$, for Step 1. R = .36, R^2 = .13, ΔR^2 = .07, F (1, 300) = 24.85, $p < .001$, for Step 2. R = .43, R^2 = .18, ΔR^2 = .05, F (1, 299) = 19.46, $p < .001$, for Step 3. R = .52, R^2 = .27, ΔR^2 = .08, $F(6, 293) = 5.50$, $p < .001$, for Step 4. R = .63, R^2 = .40, ΔR^2 = .13, $F(5, 288) = 12.59$, $p < .001$, for Step 5. *$p < .05$, ** $p < .01$, ***$p < .001$.

In sum, Table 19 presents a summary of findings pertaining to the related research questions and hypotheses in the present study.

Table 19

Summary of Findings Pertaining to the Research Questions and Hypotheses of the Study

Hypotheses/research questions	Findings
RQ1a: When using IIs with migrant parents, what attributes of IIs do left-behind children report?	Proactivity, retroactivity, variety, valence, specificity, frequency, discrepancy, and self-dominance (in a descending order of mean).
RQ1b: Which attributes of IIs are most and least reported?	Most reported: proactivity. Least reported: self-dominance.
RQ2a: When using IIs with migrant parents, what functions of IIs do left-behind children report?	Rehearsal, self-understanding, catharsis, relational maintenance, conflict management, and compensation (in a descending order of mean).
RQ2b: Which functions of IIs are most and least reported?	Most reported: rehearsal. Least reported: compensation.

(Continued)

Table 19 *(Continued)*

Hypotheses/research questions	Findings
RQ3a: Do attributes of IIs (i.e., frequency, valence, variety, discrepancy, proactivity, retroactivity, specificity, and self-dominance) differ between male and female left-behind children's reported use with migrant parents?	No significant differences between male and female left-behind children in their II attributes.
RQ3b: Do functions of IIs (i.e., self-understanding, rehearsal, catharsis, conflict management, compensation, and relational maintenance) differ between male and female left-behind children's reported use with migrant parents?	No significant differences between male and female left-behind children in their II functions.
RQ4a: What are the relationships between the attributes of IIs used by left-behind children with their perceived parent–child relationship quality?	Frequency, discrepancy, valence, specificity, proactivity, retroactivity, and variety were significantly associated with relational satisfaction, commitment, intimacy, trust, and love. Self-dominance was correlated with trust.
RQ4b: What are the relationships between the functions of IIs used by left-behind children with their perceived parent–child relationship quality?	Self-understanding, rehearsal, catharsis, and relational maintenance were significantly associated with relational satisfaction, commitment, intimacy, trust, and love. Compensation was associated with intimacy.
RQ5: What relational maintenance behaviors do left-behind children perceive from their migrant parents?	Tasks, assurances, positivity, openness, and networks (in a descending order of mean).
RQ6: Do left-behind children's perceptions of parents' relational maintenance behaviors differ across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?	"Networks" relational maintenance behavior among mother–daughter dyads was significantly higher compared to father–daughter dyads.

(Continued)

Table 19 *(Continued)*

Hypotheses/research questions	Findings
H1: Left-behind children's perceived relational maintenance behaviors by migrant parents are positively associated with left-behind children's perceived parent–child relationship quality.	Supported.
H2: The perceived support from grandparent(s) is positively correlated with left-behind children's perceived parent–child relationship quality.	Supported.
RQ7: What are the most and least reported communication channels used by left-behind children with their migrant parents?	The phone call was the most frequently used communication channel, and email was the least frequently used communication channel.
RQ8: Do differences exist in the frequency of the use of communication channels (i.e., phone call, audio chat, video chat, email, text message, and letter) across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter)?	No significant effect of the relational dyads on the frequency of communication channel use.
H3a: The frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.	Partially supported. Frequency of parent–child communication was positively correlated with self-understanding, rehearsal, catharsis, and relational maintenance.
H3b: The wished frequency of left-behind children's communication with migrant parents is correlated with their IIs with migrant parents.	Partially supported. Frequency of wished parent–child communication was positively correlated with self-understanding, rehearsal, catharsis, and relational maintenance.

(Continued)

Table 19 *(Continued)*

Hypotheses/research questions	Findings
H4a: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to reunite with migrant parents.	Not supported.
H4b: The relationship between the frequency of parent–child communication and the use of the compensatory IIs is moderated by the strength of the wish of left-behind children to communicate with migrant parents.	Not supported.
RQ9: What is the relationship between the frequency of left-behind children's communication with migrant parents and parent–child relationship quality?	Frequency of parent–child communication was positively correlated with parent–child relationship quality.
RQ10: Do IIs used by left-behind children with their migrant parents, left-behind children's perceptions of the relational maintenance behaviors from their parents, left-behind children's perceptions of grandparents' support, and parent–child communication frequency positively predict left-behind children's perceptions of the parent–child relationship quality, if controlled for gender, age, length of parents' absence, and frequency of parent–child reunion?	Catharsis, positivity, and sharing tasks positively predicted parent–child relational satisfaction. Self-understanding and positivity positively predicted commitment. Catharsis and positivity positively predicted intimacy. Self-understanding, positivity, and sharing tasks positively predicted trust. Catharsis, positivity, and sharing tasks positively predicted love.

Note. II = imagined interaction.

Chapter V

Discussion

The parent–child relationship, which may be one of the most intimate and enduring relationships one has in life (Golish, 2000), is not inherently maintained, especially during separation. Parents and children who are geographically separated must find ways to sustain their relationships via meaningful exchanges of communication to satisfy their relational and instrumental needs. In the current study the researcher adopted a systemic approach to examining communicative behaviors, intrapersonal and interpersonal, that may contribute to healthy parent–child relationships.

This study contributed to the research on relational maintenance by filling a void in empirical research in this domain. Prior to this study, most of the scholarly work on relational maintenance centered on White, middle-class, romantic relationships (e.g., Belus, Pentel, Cohen, Fischer, & Baucom, 2019; Billedo et al., 2015; Dainton & Stokes, 2015; Dargie et al., 2015; Ellis & Ledbetter, 2015; Jiang & Hancock, 2013; Merolla, 2010, 2012) and friendship (e.g., Dainton et al., 2003; Forsythe & Ledbetter, 2015; Guerrero & Chavez, 2005; LaBelle & Myers, 2016; Messman et al., 2000; Oswald et al., 2004; Tengku, 2014; J. Ye, 2006) or applied a single perspective of relationship maintenance behaviors or strategies between partners in the dyads (e.g., Dainton & Berkoski, 2013; Goodboy & Bolkan, 2011; Pistole et al., 2010; Stafford & Canary, 1991; Yum et al., 2015). This study added to the literature in that the researchers examined the manner in which parents and children maintain long-distance relationships in a different cultural context and approach them from multiple perspectives relevant to this relationship.

Another contribution of the current study was that it offered a communication-based approach to the research on the left-behind children in China. To date, most of the contemporary work on China's left-behind children has been focused on left-behind children's general status (e.g., Biao, 2007; Duan & Wu, 2009; Duan & Zhou, 2006), health and nutrition (e.g., Jia et al., 2010; Luo et al., 2008), academic performance (e.g., Y. Lu, 2012), psychological and social development (e.g., Beh, 2014; F. Fan et al., 2010; J. Gao, 2010; Jia & Tian, 2010; Su et al., 2012), and media use (e.g., P. L. Liu & Leung, 2017; J. H. Xu, 2016). This study is the first one focused on the types of communication contributing to relationship maintenance. The results may add to the existing literature by offering an alternative way to understand the phenomenon of left-behind children and also provide practical suggestions not only for the family members involved but also the educators and school counselors directly interacting with these left-behind children.

To promote maintenance scholarship for better understanding of long-distance parent–child relationships, the researcher applied Dainton's (2003) relational maintenance model and integrated work on IIs, relational maintenance behaviors, and social support. The results support the suitability of Dainton's (2003) relational maintenance model for studying the long-distance parent–child relationship in China, suggesting that different levels of maintenance behaviors might function together to influence parent–child relationship quality.

The first section of this chapter includes findings and implications of this study for theory and research on long-distance parent–child relationship maintenance. In the second section, practical applications of the study findings are addressed. The third section covers limitations of this study and recommendations for future research. The final section concludes the study.

Theoretical Implications

The following sections discuss the systems approach to parent–child relationship maintenance, three-level maintenance and parent–child relationship quality, and other important findings of the current study.

A Systems Approach to Parent–child Relationship Maintenance

This study joins a growing body of research (e.g., Belus et al., 2019; Merrola, 2010, 2012) demonstrating the importance of a systems perspective to studying relationship maintenance. Dainton's (2003) four-level relational maintenance model, which undergirded this study, includes a systems perspective inherently concerned with the four levels of contexts (i.e., the *self* context, the *system* context, the *network* context, and the *culture* context). Several scholars, including Sahlstein (2004, 2006), Bergen, Kirby, and McBride (2007), and Stafford (2005), have argued for the necessity of exploring the role of communication at each of these levels: the individual, dyadic, and social-network levels in the maintenance of long-distance relationships. Thus, systems approaches can be fruitfully used for the long-distance parent–child relationship.

In the current study the maintenance of long-distance relationships between left-behind children and their migrant parents in China were examined in three contexts: the *self*, which involves internal or intrapersonal relational maintenance (i.e., left-behind children's IIs with migrant parents); the *system*, which entails interpersonal or dyadic maintenance (i.e., relational maintenance behaviors between left-behind children and their migrant parents); and the *network*, which includes external network maintenance (i.e., grandparents' support in maintaining the parent–child relationship) and how the three levels work together in the maintenance of long-distance parent–child relationship.

Three-Level Maintenance and Relationship Quality

The highlight of the findings of this study suggests that left-behind children who engaged in more IIs (i.e., catharsis and self-understanding) with their migrant parents and perceived more relational maintenance behaviors (i.e., positivity and sharing tasks) initiated by their migrant parents had a better relationship with their parents; these effects were independent of age, communication frequency via communication technologies during their separation, and reunion frequency. These findings echo the systems approach in that different contexts work together in the long-distance parent–child relationship maintenance.

***Self*-level maintenance: IIs.** The left-behind children enacted all aspects of IIs to varying degrees (attributes: frequency, valence, variety, discrepancy, proactivity, retroactivity, specificity, and self-dominance; functions: rehearsal, self-understanding, catharsis, conflict management, compensation, and relational maintenance). The most reported II attribute was proactivity; the least reported, self-dominance. The most reported II function was rehearsal; the least reported, compensation. Taken together, left-behind children's use of IIs mirrored findings from past studies of the daily use of IIs in general (e.g., Honeycutt et al., 2015). Unsurprisingly, *proactivity* and *rehearsal* were the most common II attribute and function. Most likely to happen when individuals use IIs to rehearse or assist in their decision-making processes (Honeycutt, 2003), proactive IIs, wherein left-behind children visualize the types of interaction they hope to have, might facilitate positive encounters. In particular, if conflict needs to be addressed, IIs can help them constructively manage it through scenario rehearsal (Honeycutt, 2003). These findings suggest that the left-behind children in the current study looked forward to communicating with their migrant parents and perhaps engaged in IIs to help them survive the waiting period. The IIs that reflect a desire and anticipation to meet are also commonly found in other types of long-

distance relationships, such as romantic relationships (e.g., Allen, 1990; Honeycutt, 2002). Honeycutt et al. (2015) suggested that IIs are used throughout daily life, imagined conversations preparing individuals for upcoming actual interactions.

In addition, the self-driven and self-focused nature of rehearsal, self-understanding, and catharsis (i.e., the three most frequently used II functions reported by the left-behind children) may also reflect an inward focus of left-behind children. The parent–child separation causes a series of difficult situations for left-behind children: the pressure of taking care of themselves at boarding schools, helplessness when doing schoolwork, and uncertainty about the future may be reasons that this self-focused use of IIs is prevalent in the findings. These left-behind children may be forced to be independent and self-reliant as a result of separation from their parents; hence, their use of IIs seemed to allow them to find comfort in and reconnection with their migrant parents in their minds. These focused IIs allow for better understanding of events that have occurred between parents and children (e.g., self-understanding and relational maintenance) as well as allow for better preparation for upcoming events by exploring emotions and possible scripts for interaction (e.g., rehearsal and catharsis).

One possible explanation for less use of *self-dominance* in left-behind children's IIs could be the result of the parent–child communication pattern in China. In Eastern culture, parents are dominant figures in children's daily encounters. Perhaps the left-behind children's imagined conversations are more likely to be based on their past communicative encounters with their parents, probably dominated by the parents as in their real lives. Furthermore, findings also suggest that the functions of *compensation* and *relational maintenance* were not frequently used, providing additional insight into the place of these functions in II theory. Perhaps the availability of communication technologies provided the left-behind children with various ways to contact

their migrant parents. Approximately 30 years have transpired since the identification of these functions, and during this time changes have occurred in the way individuals use technology to communicate with loved ones (Honeycutt et al., 2015). Although compensatory IIs may still be a prevalent function of IIs in situations with no other or fewer means of contacting a loved one, individuals may instead use technology to connect instantly with loved ones, such as sending a "thinking about you" text instead of engaging in a "thinking about you" II (Honeycutt et al., 2015). Similarly, the *relational maintenance* function of IIs did not emerge in this study as the most frequently used as shown in other studies (e.g., Bodie et al., 2013; Honeycutt et al., 2015). The II function of relational maintenance has been defined as "using IIs psychologically to maintain a relationship by thinking about a partner" (Honeycutt et al., 2015), which is a more abstract function to practice and sometimes taken for granted. Engaging in more instrumental functions of IIs (i.e., rehearsal, catharsis, and self-understanding) may better serve the purpose of relationship maintenance in this context. Instead of imagining disclosure and relational development, left-behind children and their migrant parents may send texts or pictures to increase intimacy in their long-distance relationship. Whereas left-behind children engaged in conflict management, relational maintenance, and compensatory IIs with their migrant parents, they may simply use IIs more commonly to rehearse, relieve, or relive conversations to develop a greater understanding of the self in relation to their migrant parents as part of the developmental process of adolescence (Honeycutt et al., 2015).

Even though some IIs were more frequently used than others, most II attributes and functions were significantly associated with parent–child relationship quality, suggesting that left-behind children who had more IIs with their migrant parents had better parent–child relationships, regardless of which functions they served or attributes they reflected. This is

encouraging: Left-behind children's willingness to converse intrapersonally with their migrant parents is beneficial to their relationships. II scholars have pointed out that relational maintenance occurs when individuals use mental imagery to psychologically maintain relations with other people (Honeycutt, 2010c; Honeycutt & Bryan, 2011). IIs help maintain and sustain relationships as people think about their relational partners outside their physical presence. The parent–child relationship is associated with the intrapersonal process of IIs, which helps left-behind children think about their previous conversations, rehearse for future encounters, understand themselves in relation to parents, relieve tensions, maintain the parent–child relationship, and compensate for lack of real interaction with their migrant parents in a pleasant, detailed, accordant, and frequent manner.

Among the II functions, the *catharsis* function positively predicted parent–child relational satisfaction, intimacy, and love, supporting Merolla's (2012) finding that intrapersonal maintenance activities are positive predictors of satisfaction and intimacy. IIs can help relieve left-behind children's tension and anxiety by preparing for forthcoming face-to-face interaction (Allen & Honeycutt, 1997), which can be a productive means of relational emotion management and lead to positive relationship outcomes (Merolla, 2012). The *self-understanding* function positively predicted different aspects of relational quality, that is, commitment and trust between left-behind children and their migrant parents. The use of IIs helped left-behind children gain a better understanding of their migrant parents themselves as well as their relationship (Honeycutt, 2010a). These findings suggest that even though the overall use of IIs is beneficial to the parent–child relationship, a variety of IIs serve to increase the parent–child relational quality in many ways. For example, IIs on tension relief and uncertainty reduction lead to more satisfied, intimate, and loving parent–child relationship, but IIs of self-understanding help left-behind children

understand themselves in relation to their parents and in turn improve commitment and trust in the parent–child relationship. Left-behind children's catharsis may likely help improve the emotional aspects of the relationship, whereas their self-understanding IIs with their migrant parents tap into their appraisal of the parent–child relationship. When they are able to make sense of what this relationship means for them, their trust and commitment to the relationship increase. Engaging in these IIs seemed to serve an essential purpose more effectively by increasing their thoughts and internal processing of the separation during their time apart.

Edwards et al. (1988) pointed out that IIs may function most importantly to maintain relationships. Honeycutt (2010a) also included two major axioms that directly indicate the impact of IIs on relationship quality in the imagined interaction conflict linkage theory: (a) Interpersonal relationships exist through intrapersonal communication as imagined interactions involving relational partners outside actual interaction, and (b) an interpersonal relationship is maintained and developed by thinking and dwelling on the relational partner. How left-behind children process the long-distance relationship through their cognition is important to psychologically maintain relationships in their minds during the time of parent–child separation. Engaging in effective IIs may allow for left-behind children to employ intrapersonal maintenance and feel closer to their migrant parents without an explicitly dyadic exchange; therefore, this study identifies *self*-level maintenance as a key factor in inner-level maintenance in Dainton's (2003) relational maintenance model.

***System*-level maintenance: relational maintenance behaviors.** Of all the relational maintenance behaviors (i.e., sharing tasks, assurances, positivity, openness, and network), left-behind children perceived more task-sharing behaviors (e.g., helping with the joint responsibilities that the family faces) and less openness behaviors (e.g., talking about the parent–

child relationship) from their migrant parents. One explanation for more parents' task-sharing behaviors perceived by left-behind children could be parents' intent to compensate. The migrant parents spent most of their time working in the cities, and financial support was the only family responsibility they could share during separation. They may have felt a sense of guilt for their inability to help with other family tasks. Thus, when they had an opportunity to return home and reunite with their children and other family members, they may have been more likely to take over most of the family tasks (e.g., household chores, farm work, and taking care of aging parents and young children). "Sharing tasks" was, in fact, predictive of left-behind children's relational satisfaction, trust, and love toward their migrant parents. Although sharing tasks is not a maintenance behavior that migrant parents perform on a daily basis, they still can share the family responsibilities, household chores, and other home tasks when they return home. Perhaps migrant parents may perform even more task-sharing behaviors at home as a way to compensate for what they are unable to do on a regular basis. Besides, in Asian cultures parents are more likely to show their love for their family by fulfilling instrumental functions of the household, allowing them to show that they are reliable (cf. features of exchange theory in Vogl-Bauer, 2003; Vogl-Bauer et al., 1999). The left-behind children may find their parents' involvement in household chores a visible way to express their commitment to the children, consequently increasing their relational satisfaction, trust, and love toward parents.

Assurances and positivity were also perceived as frequently used maintenance behaviors by the migrant parents, supporting previous studies on parent–child relationship maintenance (e.g., Punyanunt-Carter, 2005). In fact, positivity appeared to be a significant predictor in that it positively predicted all five dimensions of relationship quality. Similar findings were found in father–daughter relationships (Punyanunt-Carter, 2005) and romantic relationships (Belus et al.,

2019; Merolla, 2012). Conveying a cheerful attitude is always an important maintenance behavior to assure harmonious parent–children relationships, especially when parents and children are separated. Long-term separation may cause emotional and psychological distress to left-behind children in the form of unhappiness and sadness (Y. Gao et al., 2010), depression (He et al., 2012), and anxiety (Z. Liu, Li, & Ge, 2009). If the migrant parents interact with their children in an enjoyable, optimistic, and uncritical manner, carrying out favors for the children, and also suppressing complaints or criticism, the left-behind children may be soothed and cheered, the pain caused by separation may be mitigated, and the long-distance parent–child relationship may be sustained in terms of satisfaction, commitment, trust, intimacy, and love.

A possible reason for less *networks* relational maintenance behaviors could be the limited amount time parents and children have during reunion, which makes visiting common friends, relatives, and other affiliations less probable. Contrary to the results of study conducted in Western cultures (e.g., Burke et al., 2016; Myers & Glover, 2007; Punyanunt-Carter, 2005), openness was perceived by left-behind children as the least frequently used maintenance behavior by their migrant parents. This finding coincided with previous study results in China, in which left-behind children and their migrant parents both avoided talking about negative things and suppressed complaints about life, work, or school to comfort each other (Pan et al., 2013). According to Yum and Canary (2003), Koreans were less likely to engage in explicit communicative behavior to maintain their relationships as compared to their American counterparts. The Chinese share a communication pattern with Koreans. Individuals in collectivistic cultures tend to suppress their feelings to avoid hurting others' feelings or losing face (Frymier, Klopf, & Ishii, 1990; Kim, 1994; Yum & Canary, 2003). Telling good news and holding back unpleasant information is the typical way that Chinese parents and children

communicate with each other. Exchanges of inner thoughts about each other or in general are uncommon. What is more, geographic dispersion and long-term separation adds to the lack of self-disclosure and openness between left-behind children and their migrant parents. Pan et al. (2013) pointed out that the physical distance between left-behind children and their migrant parents may lead to psychological distance that further impedes openness between children and parents.

Perceptions of frequently used tasks, positivity, and assurance may also be the result of the nature of the age range of the participants. Perhaps parents' interactions with the left-behind children are child-focused instead of relationship-focused. Metacommunication about relationships may be more likely to occur among adults (Vogl-Bauer, 2003) when serious tension exists in the relationship or when both parties have more time to discuss issues.

Current literature suggests that the dyadic interaction is critical in relational maintenance because this is a key form of affection creation in everyday talk (Dainton, 1998; Merolla, 2012). Without such interaction, relational partners might feel left out of one another's lives (Merolla, 2012), true even in the long-distance parent–child relationship. During separation with no face-to-face interactions like hugs and kisses that children normally take for granted, active relational maintenance behaviors serve as a central factor linking the hearts of parents and children together. In this study *system*-level maintenance has been, therefore, identified as another inner-level maintenance in Dainton's (2003) relational maintenance model.

***Network*-level maintenance: support.** In this study respondents reported receiving abundant support from their caregiving grandparents. Results show that left-behind children's perceived support (concerning parent–child relational maintenance) from grandparents were positively associated with parent–child relationship quality, indicating that the more support

received from grandparents, the better the parent–child relationship (in terms of satisfaction, commitment, intimacy, trust, and love).

Even though the perceptions of grandparents' support emerged as a significant predictor of the left-behind children's perceptions of the quality of their relationship with their migrant parent (β ranged from .23 to .32, $p < .001$), such influence disappeared in the final model after the participants' use of IIs and perceptions of parents' relational maintenance behavior were entered. Similar insignificant results were found in previous studies. For example, Merolla (2012) found that the network-based maintenance was largely unrelated to the outcome variables of satisfaction and intimacy in romantic relationships. In addition, Belus et al. (2019) found that network-level relational maintenance behaviors were not significant predictors of relationship satisfaction. These studies provided no clear explanation of these findings and will require further investigation. In the current study, a potential explanation for this intriguing finding is that the variance was explained by variables entered later in the model. As shown in Table 13, relational maintenance behaviors and grandparents' support were highly correlated to each other (r ranged from .40 to .50, $p < .001$), which might result in a state of multicollinearity and underestimate the effect of grandparents' support on parent–child relationship quality in the final regression model. In other words, perceptions of parental RMB and use of IIs explained similar but greater variance in the outcome variable—relational quality—than the perceptions of grandparents' support did.

This may be the result of the way in which the grandparents' support was measured. The family subscale from the multidimensional scale of perceived social support (Zimet et al., 1988) was modified to suit the context of parent–child relationship maintenance in this study. For example, the original item "[Relational partner] really tries to help me" was revised to "My

grandparents really try to help me maintain the relationship with my father/mother," and "I get the emotional help and support I need from my family" was changed to "I get the emotional help and support I need from my grandparents to help me maintain my relationship with my father/mother." These items were very similar to the items evaluating relational maintenance behaviors initiated by the migrant parents. A possible alternative is to examine grandparents' support in general (e.g., the left-behind children's emotional needs or instrumental needs) or other types of intergenerational communication, such as reminiscence or discussion of frustration with grandparents (Carter & Renshaw, 2016) instead of the support specifically related to parent–child relationship maintenance. It is possible that intergenerational communication helps relieve the tension caused by separation, which in turn plays a positive role in parent–child relationship maintenance. Another consideration is the living status of the participating left-behind children. Living in boarding schools for at least five days a week, these left-behind children have relatively limited time to interact with their grandparents. They may, instead, have more opportunities to interact with their school teachers and peers on a daily basis. Therefore, future research can examine these other sources of support at the network level of relationship maintenance. Although grandparents' support appeared to be unpredictive of parent–child relationship quality in this study when other variables were considered, the existence and usefulness of the network level of maintenance cannot be simply denied, especially if and when parents' relational maintenance behaviors are lacking. With no or limited communication and relational maintenance behaviors from the migrant parents, the caregiving grandparents will probably take the role of parents to offer emotional, appraisal, instrumental, and informational support with understanding, helpfulness, consideration, and love.

In summary, the findings of this study (a) reemphasize the idea that long-distance parent–child relationship quality is affected by the interplay of individual-level cognition (e.g., II catharsis and self-understanding), dyadic partner behaviors (e.g., positivity and sharing tasks), and third-party interaction (Acitelli, 2001; Carl & Duck, 2004; Hinde, 1995; Merolla, 2012) and (b) proves the inner levels (i.e., the *system* and the *self*) in Dainton's (2003) relational maintenance model are most essential to maintain the parent–child relationship. Relationships are dyadic in nature. The dyadic communication between relational partners is an important relationship maintenance tool, yet relationships can be perceived and understood only through the internal process of cognition, the individual processing of information nested in all hierarchies of communication systems (Fisher, 1987). The *self* and the *system* cannot be divided in understanding the relationship maintenance domain. Recognition of the significance of the inner levels of maintenance does not imply overlooking the other levels. Even though the current study shows intrapersonal and parent–child communication behaviors as more important than influence from the network (i.e., grandparent support), it merely suggests that grandparent support may be manifested in a different form, other than the one measured in this study.

Other Important Findings

Gender and Relational Analysis. In the current study hypothesized questions related to gender and relational dyad differences across the four relational dyads (i.e., father–son, father–daughter, mother–son, and mother–daughter) on left-behind children's IIs and their perceptions of their migrant parents' relational maintenance behaviors. No significant differences were found in II attributes and functions across these four dyads; furthermore, no gender difference regarding the left-behind children's use of IIs emerged. IIs are usually cognitive experiences based on individuals' previous real interaction (Honeycutt, 2003). Perhaps because of

geographically separated status, parent–child communication style and daily topics might be similar; thus their use of IIs was similar as well. Left-behind boys and girls probably use IIs to anticipate future interactions, recall past conversations, understand themselves in relation to parents, relieve tensions, and maintain relationships with their migrant fathers and mothers in a similar vein.

One difference across these dyads was that *networks* relational maintenance behaviors (e.g., discussing people they both know and involving common friends in their activities) were used more frequently in mother–daughter dyads than in father–daughter dyads. Gender difference in the use of network was found in previous studies (e.g., Canary & Stafford, 1992; Ragsdale, 1996). Focusing on and spending time with friends and family, which are the hallmarks of the *networks* relational maintenance behaviors, are probably more characteristic of females as social–emotional specialists (Frazier & Esterly, 1990; Ragsdale, 1996) than other types of dyadic relationships. Network reflects women's stronger relationship orientation and different relationship activities (Acitelli, 2001). Although mothers and daughters may use the *networks* relational maintenance behaviors more frequently, fathers and daughters may use different communication patterns and relational maintenance approaches. Network was the least frequently used maintenance behavior in father–daughter relationships (Punyanunt-Carter, 2005). Migrant fathers used more relational maintenance behaviors: being positive, sharing household tasks, and delivering comforting messages to daughters as well as sons, reflecting the social and family role of fathers.

Communication and reunion. The researcher also examined the communication channel used by the left-behind children and their migrant parents. The commonly used communication channels of left-behind children and migrant parents included phone calls, video

chats, audio chats, and text messages. The phone call was the most used channel of communication, supporting the results of Pan et al. (2013). Apparently, mobile phones have become central to parent–child daily communication (Velasquez, 2018). Phone calls appear to offer unique benefits and appeal in long-distance parent–child relationships (Carter & Renshaw, 2016).

Notably, this study shows that video chat and audio chat have emerged and have been used frequently by left-behind children and migrant parents. Audio chat resembles the phone call in terms of its function, except that it is built into online applications; and the video chat is also part of online application functions, which offer communicators opportunities to see each other when talking. Users can switch between audio and video chat functions in the same app, without disrupting the flow of the conversation. In this case, the video chat mimics the face-to-face communication and is therefore used increasingly more if both left-behind children and their migrant parents have Internet access. Text messaging was used less frequently. Reports also indicated that mobile users have abandoned more traditional forms of text messaging to communicate in favor of newer, emerging technology like mobile messaging applications (Cuscuela, 2014). Email and letters are used much less for two reasons. First, 72.5% of migrant workers have an educational background of middle school or less (National Bureau of Statistics, 2019), so email and letters are probably not an easy or handy for them. Second, the limitations on synchronicity and richness of email and letters make them less preferred compared to the synchronous phone call, video chat, and audio chat.

The relationship between parent–child communication frequency and left-behind children's IIs was examined. Results show that both the parent–child communication frequency and the wished parent–child communication frequency were positively associated with self-

understanding, rehearsal, catharsis, and relational maintenance in IIs. An explanation of the finding is the connection between IIs and real interaction. Individuals who had more conversations with relational partners may be able to better rehearse common topics of everyday talk in their IIs (i.e., proactivity) (Vickery, 2019). Topics in real conversation may also reflect in future face-to-face communication (i.e., retroactivity). If left-behind children talk with their migrant parents more on topics related to self-understanding, catharsis, and relational maintenance in real conversation or IIs, their IIs may reflect this tendency and vice versa.

The researcher predicted that the relationship between parent–child communication frequency and the use of compensatory IIs would vary depending on the degree to which these left-behind children's wish to reunite or wish to communicate with their migrant parents. In other words, the hypotheses suggested if left-behind children had less chances of communicating with migrant parents in real life and if they have a stronger wish of parent–child communication or reunion, they would use more compensatory IIs. The hypotheses were not supported. The parent–child communication frequency was not associated with left-behind children's use of compensatory IIs as already shown in the result of H4a, and left-behind children's wish to communicate or reunite with migrant parents did not moderate the relationship between communication frequency and use of compensatory IIs. These findings suggested that communication frequency is irrelevant to the use of IIs for compensatory function. Since the independent and dependent variables were not significantly related, there should not be any moderation effect. Taken together, a possible explanation could be the increasing availability, accessibility, and affordability of communication channels. Left-behind children's strong wish to communicate with their migrant parents can be fulfilled by talking on the phones, chatting via video calls, or sending text messages on a daily basis, instead of imagining the interaction.

Though chances of reunion still remain limited, the rich media communication (e.g., video chat through WeChat) can mimic a great deal of features of face-to-face interaction. Though chances of reunion still remain limited, the rich media communication (e.g., video chat through WeChat) can mimic a great deal of features of face-to-face interaction. Therefore, the need to use IIs as a compensation for the lack of real interaction may be reduced drastically.

Surprisingly, the study shows that left-behind children had a strong wish to *communicate* more with their migrant parents, but their wish to *reunite* with parents was comparatively low. What is more, left-behind children's communication frequency positively predicted parent–child relationship quality, but their reunion frequency negatively predicted parent–child relationship quality. Different communication patterns between when separated and when together may be the reason. As noted above, migrant parents used positivity and assurances frequently in their communication with left-behind children during separation. When they reunite with each other, their face-to-face communication may be different; that is, even though the migrant parents try to be positive and pleasant in their phone calls or video chats because of their absence, their authoritative tendency may show more in face-to-face conversations. Adolescents who are in the transition from children to young adults may be more likely to resist their parents' attempts to discipline. After long-term separation, the reunion might be joyful at first, but then uncertainty and disharmony arise. Indeed, the reunion period can be one of the most stressful times even more so than the separation because the left-behind children's independence established during the separation is challenged when their migrant parents return home as they attempt to resume the role of a mother or a father (Drummet, Coleman, & Cable, 2003).

Moreover, each reunion may represent the coming of another long period of separation at the end of the visit. The emotional swings the left-behind children experienced between parents'

returning and leaving may add to their weak desire to reunite with their parents. Therefore, reunion can be regarded by left-behind children as a mixture of joyfulness and bitterness, which they are hoping for, and at the same time scared of. The left-behind children may need to downplay the significance of the presence of their migrant parent in order to cope with feelings of distress, sadness, or loneliness during the transition from reunion to separation. By detaching from such expectation, they may be able to better adjust and cope with the separation (Guldner, 2004). Researchers have pointed out that distance might make the hearts grow fonder if the long-distance relationship is well-maintained (Ellis & Ledbetter, 2015). Some researchers (e.g., Ellis & Ledbetter, 2015; Govaerts & Dixon, 1988; Guldner & Swensen, 1995; Johnson, 2001; Stafford & Reske, 1990) have also explained that long-distance relationships are not always less satisfying than geographically close relationships because satisfaction gained from relational maintenance behaviors is not dependent solely on quantity but is also possibly influenced by the quality of relational maintenance behaviors (Belus et al., 2019). If long-distance partners wish to maintain relational continuity across space and time, preparing for a separation, maintaining contact during the separation, and trying to make sense of the separation afterwards seem to be worth the effort (Merolla, 2010, 2012). Consequently, the left-behind children and their migrant parents might benefit by anticipating not only the joy of reunion but also adopting a realistic view of the discomfort it might bring as they (re)integrate into their face-to-face routines (Ellis & Ledbetter, 2015).

Practical Applications

Chinese society calls the phenomenon of left-behind children a “syndrome,” suggesting that it is a nationwide problem or unhealthy condition that requires work or a cure. Organizations, practitioners, and researchers (e.g., the civil department and education department of government,

schools, social workers, migrant parents, caretakers, and left-behind children themselves) have been involved, and numerous initiatives has been undertaken at the culture–society level, including the loosening of "hukou" restrictions, building up local boarding schools or migrant children's schools, launching cultural activities and social campaigns to help left-behind children, and implementing social workers' interventions to curb the negative impact on children resulting from such separation. Little attention, however, has been paid to the intra- and interpersonal levels and communication behaviors (i.e., the *self* and *system* levels), in terms of parent–child relationship maintenance that may help alleviate the problem.

The *system* level is the most central part of long-distance parent–child relational maintenance. Migrant parents leave home to work in remote cities in hopes of giving their children a better future. To see that such sacrifice may result in distant parent–child relationships or young children's emotional, psychological, or behavioral maladaptation is hardly difficult. A healthy and well-maintained relationship should be a priority for all parties involved. Migrant parents should bear in mind that in addition to relying on changes in social structure or assistance from the schools and communities, their engagement in communication and relational maintenance behaviors on a daily basis is an essential part of continuing the long-distance parent–child relationship. Recommended relational maintenance behaviors include adopting a cheerful attitude, talking about relational thoughts and feelings openly, conveying love for the child(ren), assuming family responsibilities, and spending time with common friends and family during reunions. Both communication quantity and quality matter. Improvement can be made in the way parents communicate with their children; for example, they can ask the child "How is your day going?" instead of "Have you done your homework?" They can tell the child "I love you and miss you" instead of "You have to look after your younger brother/sister." These

communicative behaviors demonstrate intimacy and commitment to their children, create pleasant interaction experiences for both sides, and reduce potential conflicts or dissatisfaction resulting from their separation.

Cultural variations account for relational maintenance strategies (Yum & Canary, 2003). In Asian cultures, individuals are less likely to engage in explicit communicative behavior to maintain their relationships (Yum & Canary, 2003). Expressing emotions and affection as a daily routine may be difficult for migrant parents, yet the indirect expression of feelings (such as through household chores) may help to some extent as the current study shows. Positivity and direct compliments of the children are equally if not more important as the current study also suggests. Chinese migrant parents are urged to change their communication pattern and maintain their relationship with their left-behind children through explicit communication. This type of communication may result in a substantial reward.

Instead of remaining separated, parents' alternatives are to return to their hometowns to work or take their children with them to cities, which in either case may be easier for parents to maintain the parent–child relationship; however, even if the wish to be together comes true, parents and children may still encounter problems and difficulties. For example, can parents, after returning to their hometowns, earn enough money from the local jobs to support the whole family? Can migrant children merge into the city life and receive adequate education and social welfare? In addition to these practical considerations, different communication behaviors may be needed to help restore their relationships after the left-behind children are reunited with their parents permanently. After a long separation their habitual copresence pattern may need to be recreated and reinforced with a different communication skill set. Both parents and children need to be well prepared and adjust to the new arrangements communicatively and relationally.

Self-level maintenance (i.e., IIs) is also important in parent–child relationship. Although changing the cognition and mechanism behind the IIs of left-behind children is difficult, the following contribute to the long-distance parent–child relationship maintenance: initiating communication with parents, talking about their deeper thoughts and feelings to parents, expressing their love for parents, imagining joyful encounters with parents, and asking for help and support from other family members, close friends, or schoolteachers. Intergroup research has shown that imagined interactions with an outgroup resulted in positive perceptions of the outgroup (Crisp & Turner, 2009). Considering IIs as part of the school counseling processes, especially for those at-risk left-behind children may be beneficial. Helping them imagine positive interactions with their parents, such as planning their future visits, sharing accomplishments in school, or engaging in pleasant conversations may reduce their anxiety or stress in their school or home lives.

Network-level maintenance is another factor related to the parent–child relationship. An implication of the findings of this study is that the importance of incorporating resources and assistance from the left-behind children's network during their separation from their parents. In addition to the caregiving grandparents, relatives, friends, schoolteachers, and social workers should all be included in the "care team" to provide support. More importantly, as a key provider of support to left-behind children, caregiving grandparents should focus not only on the children's physical needs but also pay attention to their emotional and relational needs. If grandparents try to offer the emotional help and support left-behind children need, talk with the left-behind children about their problems with their migrant parents, and help the left-behind children make decisions about their parent–child interactions, they will foster long-distance parent–child relationship maintenance. To do so, the boarding schools or the department of

education may need to help create social support groups or workshops for the guardian grandparents to learn how to communicate with their grandchildren. In Chinese culture, intergenerational communication is more likely to be characterized by deference from young to old and the superior status of the old (Zhang & Hummert, 2001). Providing emotional help or relational maintenance behaviors may not be something to which older adults are accustomed. Thus, training or social support groups may be helpful for the guardian grandparents to learn communication skills needed. Support from society will also help; for example, social workers and volunteers in the program of "stand-in parents" offer support to left-behind children in their academic performance, psychological development, socialization skills, and parent–child relationship maintenance. Rural schools should employ qualified counselors to look after the psychological needs of left-behind children.

Culture-level maintenance was not the focus of this study; nevertheless, its influence on the long-distance parent–child relationship cannot be denied. Much work can and must be done at the culture or society level to help maintain the relationship between left-behind children and their migrant parents. Government leaders should consider policies and programs to enhance the condition faced by left-behind children and migrant parents; for example, the link between social services and the hukou system should be considered. The hukou system has not effectively curbed the disparity between urban and rural areas in terms of socioeconomic development and welfare provision; instead, it has resulted in the separation of children and their migrant parents. Ultimately, the hukou system needs to be reformed, but any reformation will be a long-term process. In the meantime, the government should ensure that the rights of children are not compromised by their residence status. All children should be entitled to the same rights to health and education services, social advancement, and social participation. In this case, the

migrant parents may have more options, such as taking their children with them to the cities instead of leaving them behind. Central and provincial government leaders should ensure equitable economic development and create more job opportunities to motivate migrant workers to return to work in their hometowns or nearby so that the parents and children do not have to separate for long periods of time.

Limitations and Directions for Future Research

A number of limitations in the current study should be acknowledged and investigated in future research.

Culture Level of Relational Maintenance

This study focused on three levels (i.e., the *self* context, the *system* context, and the *network* context) of Dainton's (2003) relational maintenance model. Another important level, the *culture* level, was not examined in this study. The culture supracategory is conceptualized as providing context for and thus asserting more macroinfluence upon the first three levels. All microlevel maintenance takes place within and is influenced by sociocultural patterns (Minuchin, 1985). Cultures include values and beliefs about relationships as well as rules for enacting them (Dainton, 2003; Smith, 1966). Such values have enormous implications for the process of relationship maintenance. Culture may also affect individuals' perception, expectations, and experiences of relationship maintenance. Indeed, Stafford (2003) questioned whether research to date has actually uncovered effective maintenance strategies or whether it has simply exposed cultural ideology about relationship enactment. At its core, such a critique provides not only good fodder for discussion, but it also illustrates most clearly the impact that culture might have on relationship maintenance (Dainton, 2003). Yum and Canary (2003), for example, found that cultural rules may be more important than systemic maintenance efforts in Korea. Chinese

culture also has its impact on relationship maintenance. For instance, as a prevalent attitude toward relationships in the Chinese culture, 缘(yuan) conveys the belief that relationship are formed, maintained, and terminated by uncontrollable external forces, not by one's conscious efforts (Chang & Holt, 1991). This kind of attitude may result in a relatively pessimistic view of the parent–child relationship when either or both parties are unable to maintain the relationship. Another cultural variation, 孝道(filial piety), is regarded as the number one principle of moral standards and as the cornerstone of the Confucian ethics of humanities in China. Filial duty exerts its effect on the individuals, the family and the society. Children are supposed to act respectfully and obediently to their parents. Future research can examine family members' (i.e., the left-behind children, the migrant parent, and the grandparent) level of endorsement of filial piety and its relationship with specific relational maintenance behaviors, and parent–child relationship quality. How cultural variations play their role in parent–child relationship maintenance is intriguing; therefore, culture or the social environment should be included in the systems approach of relational maintenance in future research.

Developmental Issues in Parent–child Relationship Maintenance

Another limitation of this study is that the researcher examined parent–child relationship maintenance in a static view and overlooked the developmental issues in the relationship. Families encounter transitional periods across the lifespan. Adolescence presents a series of changes for multiple family members (McGoldrick, Heiman, & Carter, 1993; Vogl-Bauer, 2003); for example, a developmental need for children between 13 and 16 is the search for their identity (Wang, 2015). They may try to create a separate identity from their parents or caregivers as an independent adult but continue to look for ways to connect with their parents. Such pull-and-push forces between autonomy and connection may result in conflicts with parents and require

unique relational maintenance behaviors, other than the ones identified in this study, to satisfy those needs.

During adolescence, behavioral, emotional, and value adjustments occur (Noller, 1995; Vogl-Bauer, 2003). Although changes occur at the individual level, family interactions may be impacted on a larger scale (Vogl-Bauer, 2003), and this impact may be amplified or may present additional challenges for the long-distance parent–child relationship. As a result, both parents and adolescents may find themselves modifying their communication patterns and relational maintenance behaviors to accommodate the new situations (Bhushan, 1993). By their very nature relationships change; relationships involve people who themselves change developmentally across their life spans (Stafford, 1994). The first generation migrant parents are those in their fifties and have transferred their roles from parents to both parents and grandparents, change must occur in their maintenance of parent–child relationship. Therefore, future researchers should, therefore, focus on longitudinal studies with a life-span perspective to capture the changes both in individual and relational aspects and their impact on parent–child relationship maintenance.

A related point is the timing of the separation. This study focused solely on the long-distance parent–child relationship maintenance *during* separation, yet overlooking the fact that relational maintenance can occur at three points in time: before, during, and after separation (Belus et al., 2019; Merolla, 2010, 2012). The intrapersonal, dyadic, and network relational dimensions serve unique purposes before, during, and after separation to create relational continuity (Gilbertson, Dindia, & Allen, 1998; Merolla, 2012; Pistole et al., 2010; Sigman, 1991). Merolla (2012), for instance, found that intrapersonal maintenance activities before and during separation positively predicted relational satisfaction and intimacy; dyadic maintenance during

separation positively predicted satisfaction, and dyadic maintenance after separation positively predicted intimacy; the dyadic maintenance before separation negatively predicted satisfaction; and network-based maintenance activities negatively predicted satisfaction and intimacy. Merolla (2012) pointed out that relationships are necessarily maintained "on the go." Future researchers should, therefore, apply a longitudinal view and include different points in time into the framework of the study of long-distance parent–child relationship maintenance.

Research Frame and Design

Another limitation with the present study is the research design. The researcher used a self-report survey method; thus, response accuracy and issues with recall may have been compromised. Respondents may have also overestimated some behaviors and underestimated others. In addition, respondents' ages may also have affected the responses. For example, they may have had difficulty answering questions on the survey instrument honestly and accurately. Although a pilot study was conducted to revise the survey questions to best fit the comprehension ability of the respondents aged 13 to 16, the concern still existed because of the length and complexity of the survey. Furthermore, issues with social desirability may have been present (Phillips & Clancy, 1972). Participants may have wished to depict a satisfactory and happy relationship with their migrant parents. Future researchers can use both quantitative and qualitative methods to triangulate the responses in order to validate findings.

Next, the relationship between network relational maintenance (i.e., grandparents' support concerning parent–child relational maintenance) and parent–child relationship quality has not been clearly identified in this study. A positive correlation emerged, but the former is not predictive of the latter. Future researchers should further delve into the mechanism behind the relationship between the network maintenance behaviors and the relationship outcomes, for

example, how grandparents' instrumental and emotional support help relieve the tension caused by long-term separation between left-behind children and migrant parents, and in turn affect the parent–child relationship quality. Or, instead of examining grandparents' support in relation to parent–child relational quality, their emotional and instrumental support may have an impact on the left-behind children's sense of family solidarity or intergenerational solidarity, which is beneficial to children's overall attachment and commitment to the family, and could have implications for their psychological well-being. Another direction to include regards other sources of support. Living at boarding schools for at least five days a week, the left-behind children have more interactions with their school teachers and peers, who probably also play the "network" role in the long-distance parent–child relationship maintenance. Nonetheless, the importance of the guardian grandparents in helping the left-behind children maintain their relationship with their migrant parent should not be dismissed. Their role may be particularly critical when parental relational maintenance behavior is absent, given that they are the ones who are closest to the migrant parents and can have direct contact with the migrant parents on behalf of the children if need be.

Future researchers can also insert other contents of relational maintenance into Dainton's (2003) model. For example, in the *self* context, areas like cognition, relational thinking and rumination (Acitelli, 2001), and relational artifact engagement (Lohmann, Arriaga, & Goodfriend, 2003) can be examined. In the *system* context, specific relational maintenance behaviors generated within the parent–child dyad can be studied, such as helping with schoolwork and talking about childhood memories. Indirect communication, for example, Moments in WeChat or posts in Weibo, can also influence parent–child relationship for those who have access to the social platforms. For example, left-behind children may feel loved by

their migrant parents who post photos and/or share their achievement in school via social media. In the *network* context, family–friend support for the relationship (Milardo & Helms-Erikson, 2000) and peer–family advice (Canary et al., 1993) can be added to network relational maintenance research.

Though Dainton's (2003) relational maintenance model included various levels as inspired by the systems approach, it still lacks of the true vision of system – that is, an open system suggests that any influence is reciprocal. For example, IIs can be predictive of parent–child relationship quality. At the same time, the frequency, functions, and attributes of these IIs can be affected by the relationship quality that has already existed. Moreover, even though in the current study, the focus is on the attributes and functions of IIs, Honeycutt (year) discussed factors that may influence individuals' engagement with IIs, such as personality, emotions, and appraisal of the existing relationship. These can be taken into consideration for a through systems approach in future research.

Another direction for future research is to study relational maintenance by comparing different types of left-behind children: the "real" left-behind children who separate with both parents, the "half" left-behind children who live with one parent and separate from the other migrant parent, and migrant children who live with migrant parents in their working cities to see how they communicate and maintain parent–child relationship differently. This comparison may add to our knowledge of the relationship between parent–child separation, relationship maintenance, and relationship outcomes.

Finally, the researcher of the current study examined the long-distance parent–child relationship maintenance from the perspective of left-behind children. No records from migrant parents have been attempted. Future research can address this topic from the perspective of

migrant parents, or compare the perspectives of left-behind children and migrant parents to identify any possible cases of discrepancy. By dealing with these discrepancies, the long-distance parent–child relationship can be hopefully maintained at a satisfactory level.

Conclusion

Partners in relationships, as in any open system, should manage internal, dyadic, and external contingencies in order to survive in the relationships (Belus et al., 2019; Merolla, 2010, 2012; Stafford, 1994). This study has contributed to the literature on how the long-distance parent–child relationship is maintained from the systems approach comprising of three-level maintenance behaviors (i.e., IIs from the *self* context, relational maintenance behaviors from the *system* context, and grandparents' support from the *network* context) by examining the communication between China left-behind children and their migrant parents.

Maintaining the long-distance parent–child relationship at a satisfactory level is a complex, nonlinear, and interdependent process. Results suggest that left-behind children who engaged in more IIs that relieved tension and improved self-understanding in relation to their parents (a) perceived more joyful and task-sharing relational maintenance behaviors from migrant parents and (b) had better relationships with their parents when age, communication frequency, and reunion frequency were controlled for. Maintenance may be carried out in the form of enjoyable conversations through phone call or memories of and expectations for interactions (Hinde, 1988). Both efforts to connect with each other during separation as well as continued efforts to process the separation internally appear to be important for relationship quality. Relationship outcomes for both parents and children in separation are dependent on coping with distance through both relational and individual processes.

The current study provides only preliminary and small-scale evidence of the way long-distance parent–child relationships are maintained. Communication scholars must continue to increase their understanding of ways that long-distance parent–child relationships can benefit through the use of appropriate, relevant, and systemic relational maintenance behaviors.

APPENDICES

Instruction: Please consider your migrant father/mother when you are answering the questions.

Appendix A

Demographic Information and Communication between Left-behind Children and Migrant Parents

Please choose the appropriate answer about your demographics by checking the box or filling the blank.

1. What is your sex?

☐ Male

☐ Female

2. What is your age? _____

3. What is your current educational level?

☐ elementary school

☐ middle school

☐ high school

4. The approximate length of your father/mother's absence:

☐ six months to 11 months

☐ one year to two years

☐ more than two years

5. Who takes care of you when your parents are away?

☐ grandparent(s) on father's side

☐ grandparent(s) on mother's side

6. Which communication channel do you and your father/mother use most frequently to contact with each other during separation?

☐ phone call

☐ audio chat

☐ video chat

☐ email

☐ text message

☐ letter

7. Answer the following questions on the frequency of communication channel use during separation using 1 to 5:

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very often

1= never (My father/mother and I never communicate)

2= Rarely (My father/mother and I communicate less than once a month)

3= Sometimes (My father/mother and I communicate 2 to 4 times a month)

4= Often (My father/mother and I communicate 5 to 8 times a month)

5= Very often (My father/mother and I communicate at least 9 times a month)

(1) _____ How often do you and your migrant father/mother communicate via phone call?

(2) _____ How often do you and your migrant father/mother communicate via audio chat?

(3) _____ How often do you and your migrant father/mother communicate via video chat?

(4) _____ How often do you and your migrant father/mother communicate via email?

(5) _____ How often do you and your migrant father/mother communicate via text message?

(6) _____ How often do you and your migrant father/mother communicate via letter?

(7) _____ How often do you and your migrant father/mother communicate with each other in general during separation?

(8) _____ How often do you wish you and your migrant father/mother will communicate with each other during separation?

8. How often do you and your migrant father/mother reunite with each other?

☐ once in six months

☐ once in a year

☐ once in one and a half years

☐ once in two years

☐ once in more than two years

☐ We never reunite since he left

9. How often do you wish you and your migrant father/mother will reunite with each other?

☐ at least twice in six months

☐ once in six months

☐ once in a year

☐ once in one and a half years

☐ once in two years

☐ once in more than two years

☐ I do not care whether we reunite or not

10. who usually initiates the contact?

☐ me

☐ my father/mother

☐ my caregiving grandparent(s)

Appendix B

Modified Survey of Imagined Interactions (Honeycutt, 2003)

Instruction: Imagined interactions (IIs) are mental interactions we have with others who are not physically present. People may have imagined conversations that occur in daydreams or while the mind wanders. Sometimes they may occur before or after a real interaction takes place. For instance, you might imagine your interaction with parents before you actually meet or imagine your previous conversation with your parents when you are separated. Following are a few items asking you about your experiences of imagined interactions with your migrant father/mother (e.g., the contents of your IIs with father/mother, whether IIs can help maintain your father–child/mother–child relationship, and whether IIs can help relieve conflict with your father/mother). Please read each item carefully and check the box of the right answer from "very strong disagreement" to "very strong agreement" as honestly as possible. (Note: The category in italics will be removed and the sequence will be rearranged to avoid hints to participants during survey.)

<u>Functions of IIs</u>

Self-Understanding

1. Imagined interactions often help me to actually talk about feelings or problems later on with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

2. Imagined interactions help me understand my father/mother better in relation to me.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

3. Imagined interactions help me understand myself better in term of my relationship with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

4. Imagined interactions help me in clarifying my thoughts and feelings with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Rehearsal

5. Imagined interactions help me plan what I am going to say for an anticipated encounter with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

6. I have imagined interactions before entering a situation with my father/mother when I know he/she will be evaluating or judging me.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

7. Imagined interactions make me feel more confident and relaxed before I actually talk with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

8. I have imagined interactions to practice what I am actually going to say to my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Catharsis

9. Imagined interactions with my father/mother help me relieve tension and stress.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

10. Imagined interactions help me to reduce uncertainty about my father/mother's actions and behaviors.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

11. By thinking about important conversations with my father/mother, it helps relieve tension or stress.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Conflict Management

12. I relieve old arguments with my father/mother in my mind.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

13. I often have negative imagined interactions when I'm angry at my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

14. Imagined interactions help me manage conflict with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

15. It is sometimes hard to forget old arguments with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Compensation

16. Imagining talking to my father/mother substitutes for the absence of real communication.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

17. Imagined interactions can be used to substitute for real conversations with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

18. Imagined interactions may be used to compensate for the lack of real, face-to-face communication with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Relational Maintenance

19. I use imagined interactions to think about my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

20. Imagined interactions help keep my relationship with my father/mother alive.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

21. Imagined interactions are important in thinking about my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Attributes of IIs

Frequency

22. I have imagined interactions with my father/mother many times throughout the week.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

23. I frequently have imagined interactions about my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*24. I rarely imagine myself interacting with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

25. I often have imagined interactions with my father/mother throughout a day.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Discrepancy

26. In my real conversations with my father/mother, I am very different than in my imagined ones.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*27. I usually say in real life what I imagined I would to my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or	agreement	strong agreement	very strong agreement

			disagreement			

28. When I have a real conversation that I have imagined with my father/mother, the actual conversation is very different from what I imagined.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

29. In my real conversations, my father/mother is very different than in my imagined ones.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*30. My imagined interactions with my father/mother are quite similar to the real conversations that follow them.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Valence

*31. I do not enjoy most of my imagined interactions with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

32. I enjoy most of my imagined interactions with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*33. My imagined interactions with my father/mother are usually quite unpleasant.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

34. My imagined interactions with my father/mother are usually enjoyable.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

35. My imagined interactions with my father/mother usually involve happy or fun activities.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Self-dominance

*36. When I have imagined interactions with my father/mother, he/she talks a lot.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

37. I talk a lot in my imagined interactions with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*38. My father/mother has a lot to say in my imagined interactions.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Specificity

39. When I have imagined interactions with my father/mother, they tend to be detailed and well developed.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*40. It is hard recalling the details of imagined interactions with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

41. My imagined interactions with my father/mother are very specific.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

42. In my imagined interactions with my father/mother, I can “hear” what he/she says.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

*43. When I have an imagined interaction with my father/mother, I often only have a vague idea of what he/she says.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Proactivity

44. I often have imagined interactions before interacting with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

45. Before meeting with my father/mother, I frequently imagine the meeting.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

46. Before I meet my father/mother, I imagine a conversation with him/her.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Retroactivity

47. I often have imagined interactions after interacting with my father/mother.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

48. After meeting with my father/mother, I frequently imagine the meeting.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

49. After I meet my father/mother, I imagine my conversation with him/her.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

Variety

50. My imagined interactions with my father/mother tend to be on a lot of different topics.

very strong disagreement	strong disagreement	disagreement	neither agreement or disagreement	agreement	strong agreement	very strong agreement

51. Please list the three most frequently-used II topics you recall having with your father/mother in some of your recent IIs: _____

Appendix C

Perceptions of Parents' Relational Maintenance (Stafford & Canary, 1991)

Instructions: Read the following questions and check the right option from "strongly disagree" to "strongly agree" thinking only of behaviors that your father/mother engages in when your father/mother communicates with you face-to-face or via other channels (e.g., phone call, audio chat, video chat, email, text message, and letter). (Note: The category in italics will be removed during survey.)

Positivity

1. My father/mother attempts to make our interactions very enjoyable.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

2. My father/mother is cooperative in the ways he/she handles disagreements between us.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

3. My father/mother tries to build up my self-esteem, giving me compliments, etc.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

4. My father/mother asks how my day has gone.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

5. My father/mother is very nice, courteous, and polite.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

6. My father/mother acts cheerful and positive with me.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

7. My father/mother does not criticize me.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

8. My father/mother tries to be fun and interesting with me.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

9. My father/mother is patient and forgiving of me.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

10. My father/mother presents himself as cheerful and optimistic.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

Openness

11. My father/mother encourages me to disclose thoughts and feelings to him/her.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

12. My father/mother tells me how he/she feels about our relationship.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

13. My father/mother discusses the quality of our relationship.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

14. My father/mother discloses what he/she needs or wants from our relationship.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

15. My father/mother talks about our relationship.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

Assurances

16. My father/mother tells me how I mean to him/her.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

17. My father/mother talks about our plans for the future.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

18. My father/mother shows his/her love for me.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

19. My father/mother talks about future events.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

Networks

20. My father/mother discusses people we both know.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

21. My father/mother shows that he/she is willing to do things with my friends when he/she is home.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

22. My father/mother mentions including my friends in our activities when he/she is home.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

Tasks

23. My father/mother helps equally with tasks that need to be done when he/she is home.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

24. My father/mother shares the joint responsibilities that face us when he/she is home.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

25. My father/mother does not shrink from his/her duties.

strongly disagree	disagree	somewhat disagree	neither agree nor disagree	somewhat agree	agree	strongly agree

Appendix D

Modified Family Subscale from the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988)

Instructions: Read the following questions and check your answer from "very strongly disagree" to "very strongly agree" thinking of behaviors that your caregiving grandparents engage in.

1. My grandparents really try to help me maintain the relationship with my father/mother.

very strongly disagree	strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree	very strongly agree

2. I get the emotional help and support I need from my grandparents to help me maintain my relationships with my father/mother.

very strongly disagree	strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree	very strongly agree

3. I can talk about my problems with my father/mother with my grandparents.

very strongly disagree	strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree	very strongly agree

4. My grandparents are willing to help me make decisions concerning parent–child relationship.

very strongly disagree	strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree	very strongly agree

5. My grandparents are willing to help me make decisions concerning parent–child interactions.

very strongly disagree	strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree	very strongly agree

Appendix E

The Perceived Relationship Quality Component (PRQC) Inventory (Fletcher, Simpson, & Thomas, 2000).

Instructions: Please rate your relationship with migrant father/mother on each item. Write the number in the space provided, using the following rating scale (1=not at all, e.g., not at all satisfied; 7=extremely, e.g., extremely satisfied):

1 2 3 4 5 6 7

Not at all Extremely

Relationship Satisfaction

___ 1. How satisfied are you with your relationship with father/mother?

___ 2. How content are you with your relationship with father/mother?

___ 3. How happy are you with your relationship with father/mother?

Commitment

___ 4. How committed are you to your relationship with father/mother?

___ 5. How dedicated are you to your relationship with father/mother?

___ 6. How devoted are you to your relationship with father/mother?

Intimacy

___ 7. How intimate is your relationship with father/mother?

___ 8. How close is your relationship with father/mother?

___ 9. How connected are you to your father/mother?

Trust

___ 10. How much do you trust your father/mother?

___ 11. How much can you count on your father/mother?

___ 12. How dependable is your father/mother?

Love

___ 13. How much do you love your father/mother?

___ 14. How much do you adore your father/mother?

___ 15. How much do you cherish your father/mother?

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