WELL-BEING OF MIGRANT AND LEFT-BEHIND CHILDREN IN CHINA

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ABSTRACT OF THE DISSERTATION

Well-being of Migrant and Left-behind Children in China

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The global trend of urbanization has prompted large-scale rural-to-urban population migration. China, with 277 million rural migrant workers, represents the world's largest population migration today. The migration profoundly changes individuals' and families' lives. Synthesizing Bioecological Theory and Risk/Resilience Theory, this dissertation explores the impacts of family migration on children's educational achievement, psychosocial outcomes, and physical health. This mixed-methods research includes quantitative analysis of the 2012 China Family Panel Studies data and qualitative inquiry with migrant children, their parents and teachers, and nonprofit agency staff that work with them in Beijing, China. The dissertation argues that migrating to urban areas benefits child development to certain extent; Chinese children from migrant families, however, lack educational and economic opportunities due to China's *Household Registration* policy. The study pinpoints a gap in China's social service and welfare system, and proposes an integrated service model for children from migrant families,

which involves family, school, community, nonprofit agency, and government. Combining policy analysis and direct service perspectives, this research develops multi-level intervention strategies that are not currently in place for migrant families. Using China as an example, this research informs public policy and social work practice with children from migrant families on a global scope.

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DEDICATION

To my grandma,

who was always by my side,

and my parents,

who always believed in me.

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CHAPTER I: INTRODUCTION

The global trend of urbanization has prompted large-scale rural-to-urban population migration. Worldwide urban population increased by 77 million annually between 2010 and 2015. Approximately 4 billion people live in urban areas in 2015, representing a 43% growth since 1990 (UN-Habitat, 2016). The center of the urban world is shifting from the West to the South and East. Many new cities are emerging in Asia and Latin America (Cadena, Dobbs, & Remes, 2012).

Among the new urbanization centers, China, one of the world's largest economies today, has encountered mass rural-to-urban laborer migration during its economic transformation over the last several decades (UN-Habitat, 2016; UNICEF, 2010). The proportion of its urban population has grown from 36% to 50% in the past decade, and the amount of its urban population is expected to grow from 570 million in 2005 to 925 million in 2025 (Cadena et al., 2012). During this massive migration, children who are affected by family migration have dramatically increased in number. These migrant workers and their children are faced with a series of challenges due to inequality in policies and institutional structure (Hu, Lu, & Huang, 2014; Lu, Lin, Vikse, & Huang, 2016; Xu, Guan, & Yao, 2011). This dissertation examines the levels of well-being of children impacted by migration in China and provides policy and practice implications for addressing this issue. This chapter introduces the research background, states the scope of the problem, explains the research purposes, and presents the research questions.

Background of Study

Since the late 1970s, China's rapid industrialization and urbanization have led to a large number of surplus agricultural laborers (UNICEF, 2010). From 1978 to 2009, the percentage of laborers in agriculture was reduced from 70% to 38% (Lu, 2011). Millions of rural laborers have migrated to cities to look for better job opportunities (Jia & Tian, 2010), which represents the largest migration of population in modern history (UNICEF, 2010). The China National Bureau of Statistics (2016) estimates that the number of rural migrant workers in 2015 reaches 277.47 million, accounting for 20.3% of the entire population in Mainland China.

These migrant workers have made remarkable contribution to national economy. Each rural migrant worker in China on average produces CNY 25,000 (approximately USD 3761) GDP annually (The National People's Congress of China, 2010). In total, Chinese rural migrant workers create CNY 6.9 trillion (or USD 1 trillion) GDP every year. Despite their large participation in the urban workforce, these migrant workers experience challenges in multiple aspects of their lives. They often work in poor conditions in receiving cities (Wang, 2014), have access to few public benefits (UNICEF, 2010), and experience social marginalization and distress (Lu et al., 2016). For instance, migrant workers were more likely to work in low-income, low-skill industries, such as manufacturing, construction, and service industries (Li & Li, 2007; Wang, 2014). It is also not uncommon for employers to hold migrant workers' monthly wages until the end of the year, or even purposefully delay wage payments for years. In 2015, 2.77 million migrant workers experienced wage arrears (National Bureau of Statistics of China, 2016).

In addition to their lower wages, migrants usually work longer hours than urban workers. Li and Li (2007) found that the average weekly working time was 56.6 hours for migrant workers and 47.9 hours for urban workers. Approximately 34% of migrant workers worked 60 hours per week or even longer. Furthermore, over 56% of migrant workers had no official employment contract with their employers, which made it difficult to argue for their wages and labor rights through legal process (Wang, 2014).

Migrant workers also receive few job-related benefits. Many employers fail to pay the government-required social security or medical insurance premium for migrant workers (Xu et al., 2011). The most recent data on migrant workers' social insurance coverages show that in 2014, only 17.6% of migrant workers had health insurance, 16.7% had pension, and 10.5% had unemployment insurance (National Bureau of Statistics of China, 2015). In addition, the disconnection and non-transferability between rural and urban medical insurance schemes lead to inadequate insurance coverage for migrant workers and their families. Consequently, high medical costs impede migrant families' access to medical services. Maternal and child mortality is significantly higher among migrants than urban residents (UNICEF, 2010).

The rural-to-urban migration experience and the disadvantaged working situations in cities also cause migrant workers' mental health problems. As methods of work and social life changes, individuals' adjustment to the economic transitions often elicits distress (Piven & Cloward, 1993). Migrant workers in China experience more severe psychological symptoms than the general population on a variety of dimensions, such as somatization, interpersonal sensitivity, depression, anxiety, and hostility (Zhong et al., 2013). This may partly results from their long work hours, income dissatisfaction,

separation from families, and experiences of discrimination in cities (Li et al., 2014). In fact, rural migrant workers are often disrespected or marginalized by urban residents, as they are considered threats to social stability and competitors in the urban labor market (Wong, Chang, & He, 2007).

In examining the challenges facing China's migrant workers, two main causes have been identified. First, the *Household Registration System ("hukou")* has led to urban and rural residents' disparate socioeconomic status (Chan & Zhang, 1999; Xu et al., 2011). In 1949, the Chinese Communist Party established its governance in China while the country economy was lagging (Chan, 2009). In order to develop capital-intensive heavy industries and urban economies, the Party began to enforce the *hukou* system in the 1950s (Chan, 2009; Wu & Yao, 2003). This system was initially designed to achieve social stability (Chan & Zhang, 1999), control resource redistribution (Chan, 2009), and reduce the risk of high urban unemployment (Wu & Yao, 2003). The *hukou* system registers all Chinese citizens as residents in specific regions, which usually were their birthplace. Also, the *hukou* divides citizens into two types—*agricultural* (predominantly rural residents) and *non-agricultural* (urban residents) (Chan, 2009). Since then, every Chinese citizen has to obtain a household registration booklet, which identifies his/her place of registration and *agricultural/non-agricultural* status (Chan & Zhang, 1999). Moving among regions and changing the *hukou* type (e.g. from *agricultural* to *non-agricultural*) require local governments' approvals at both the place of origin and the destination of migration (Wong et al, 2007).

The *hukou* system has changed over time in response to the country's needs for economic development. The system, however, has continuously inhibited migrant

population from settling down in cities permanently (Chan, 2009; Xu et al., 2011). In the mid-1980s, China's economic reform and openness to global markets boosted its economy. While technology advanced agricultural productivity, urban industrial development created demands for more laborers in cities. The central government therefore began to encourage rural laborers to migrate to cities. During 1986 and 1989, urban state-owned enterprises were permitted to recruit rural employees; qualified rural workers and their families were encouraged to change their *hukou* status and settle down in cities (Lu, 2011).

Since 1989, when the national inflation led to economic recession and high urban unemployment, the central government required urban employers to dismiss migrant workers. Provincial and municipal governments were also required to strictly restrain rural residents' emigration and household registration change. In the late 1990s, the recovery of urban economy led to loosened migration policy; the government again began to allow rural-to-urban laborer migration (Liang & Chen, 2007; Lu, 2011). These migrant laborers, however, were not granted the official registration to reside in cities. To date, despite their meaningful contribution to the urban economy, migrants could hardly change their residency registration or transfer from the "agricultural" to the "non-agricultural."

Another cause of migrant workers' challenges is the inequality in welfare provisions, which are tied to individuals' *hukou* status. While welfare systems are well-established in urban areas, most migrants are treated as "second-class" citizens and are excluded from various benefits (Chan & Buckingham, 2008). Historically, the Chinese central government solely focused on urban development during the late 1980s and the

1990s. At that time, almost all social spendings were in cities; welfare benefits, such as housing subsidies and healthcare services, were exclusively provided to urban laborers (Wong et al., 2007; Xu et al., 2011). By the mid-90s, over 70 million migrant workers in cities were not eligible for any social insurance (Croll, 1999). At the same time, individuals' "local" residency was associated with eligibility for benefits provided by local governments; entitlement of benefits were linked to where they were registered (Chan, 2009).

Moving to cities in search of a better life, migrant workers in China are struggling to meet their basic life needs. They deal with challenges such as poor working condition, inadequate public benefits, mental health issues, and social marginalization. These challenges, which are imposed by the *hukou* system and related welfare inequality, also apply to their families. While adjusting to the urban environment themselves and dealing with their own problems, migrant parents face difficulties in parenting. For instance, they are facing the difficult choice of whether to bring their children with them to cities. Distance from home and long work hours limit migrant parents' time with their children. As a result of parental migration, children from migrant families face more challenges than do their peers.

Statement of the Problem

The increasing number of migrant workers has led to a substantial growth of children impacted by family migration. These children consist of two groups: children that hold rural registration status and migrate with their parent(s) to a different county or province, who are defined as "migrant children"; and children whose care is entrusted to others (usually grandparents or other extended family members) while their parents leave home

to work for more than three months at a time, who are considered "left-behind children" (UNICEF, 2009). As shown in Figure 1, the two child populations continue to increase over the years. In fact, the number of migrant children (age 0–17) rose from 25.33 million in 2005 to approximately 35.81 million in 2010, which represents a growth rate of 41.4%; and the number of left-behind children (age 0–17) rose from 58.61 million in 2005 to an estimated 61.03 million in 2010, which represents a growth rate of 4.1%. Respectively, migrant and left-behind children account for 12.9% and 21.9% of China's child population (All-China Women's Federation, 2013). Although the number of left-behind children is much larger than that of migrant children, the migrant children population has been growing much faster than the left-behind. In addition to the problems facing their parents, migrant workers' children are facing problems specific to their development, which embody in their educational achievement (Duan & Liang, 2005; Lu & Zhang, 2004; Wei & Hou, 2010), social development (Chen, Wang, & Wang, 2009), psychological symptoms (Hu et al., 2014; Jia & Tian, 2010), and physical health (De Brauw & Mu, 2011; Lee, 2011).

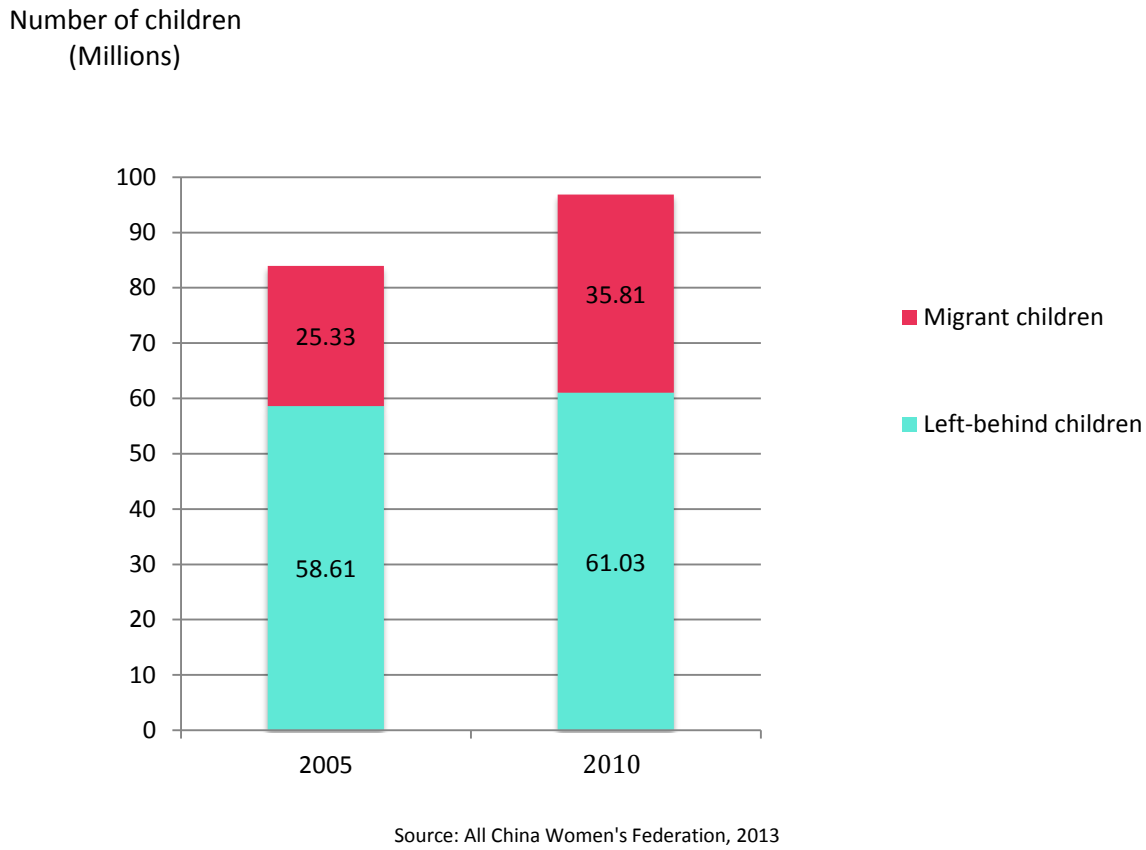


Figure 1. Size of migrant and left-behind children population in China

Purpose of Research

The purpose of this dissertation is to examine the effects of family migration and ecological systems on child well-being, and in particular, to identify risk and resilience factors for migrant children who live in urban China. This dissertation consists of a parallel mixed design, namely, a quantitative phase and a qualitative phase that take place in a parallel manner (Teddlie & Tashakkori, 2009). Through the analysis of 2012 China Family Panel Studies (CFPS) data, the *quantitative* phase aims to analyze Chinese migrant and left-behind children's educational achievement, psychosocial outcome, and physical health. This phase also aims to identify ecological factors that affect their well-being.

The *qualitative* phase seeks a deeper understanding of migrant children's life experiences and identifies risk/resilience factors for their well-being. This is achieved by semi-structured, in-depth, in-person interviews with ten migrant children who currently live in Beijing and interviews with their parents and teachers. This phase also explores the effects of nonprofit services on migrant children's well-being from the perspectives of children who have received a local nonprofit organization's services. Another perspective of the nonprofit services' impacts is obtained by interviewing the local nonprofit organization's leader, key staff, and social work interns.

Research Questions

The quantitative phase and qualitative phase are designed to answer related aspects of the fundamental research questions. My *quantitative* research questions are: to what extent does *migration and residency status* influence child well-being, with respect to educational achievement, psychosocial development, and physical health? What roles do children's ecological systems—micro-, meso-, exo-, and macro- system—play in their well-being? My *qualitative* research questions are: how do migrant children experience life in urban areas? How do they experience risk and resilience factors on the individual level, the interpersonal/social level, and the environmental level?

Implications for Social Work

Family migration impacts a significant portion of children in China, yet few policies and programs have been developed for children affected by migration based on evidence-based research. This dissertation generates research and practice implications for children from migrant families.

First, this dissertation depicts the experiences, challenges, and needs of children affected by migration. Children's voices are often not heard in the development of policies and programs that are intended to benefit them (Graham & Yeoh, 2013). Based on empirical findings, this dissertation provides recommendations for designing and implementing policies to improve migrant and left-behind children's well-being.

Second, as a mixed-methods research, this dissertation bridges the gap between quantitative measures and qualitative interviews with migrant children. The qualitative findings inform questions that could be incorporated in future surveys of migrant families and suggest research questions that future studies may examine.

Third, this dissertation identifies social organizations' impacts on migrant children. The findings provide insights for those working with migrant child populations, such as nonprofit organizations and school social workers, to design more effective programs and services that enhance migrant children's well-being. Last, by raising the public's awareness and knowledge of issues facing migrant families, this dissertation provides a base for advocating for migrant families' benefits in China and other countries facing similar problems.

CHAPTER II: THEORETICAL FRAMEWORK

This dissertation investigates the well-being of migrant children and left-behind children through two theoretical frameworks: bioecological theory and risk/resilience theory. By synthesizing these two frameworks, I identify risk and protective factors that influence child well-being at different levels of their ecological systems.

Bioecological Theory

According to Bronfenbrenner's (1986, 1994) bioecological theory of human development, children are active beings whose interactions with their environments directly affect their development. Individuals are influenced by the ecological environment that can be conceived as a set of nested subsystems: microsystem, mesosystem, exosystem, and macrosystem. The *microsystem* is comprised of children themselves and their immediate environment, such as their personal characteristics and their family members. The *mesosystem* refers to interactions among the microsystem components, such as child–parent interaction. The *exosystem* refers to factors that influence children indirectly through microsystem and mesosystem. This may include parents' working condition, and family socioeconomic status. The *macrosystem*, the outermost level, is comprised of political, social, and cultural elements that impact children's developmental environment. In addition, child development also involves a third-dimension *chronosystem,* which refers to changes in micro-, meso-, exo-, and macro- systems over time (Bronfenbrenner, 1994). This may include changes in family structure, socioeconomic status, and social context.

Based on the bioecological theory, migrant children and left-behind children's well-being is a result of multi-level ecological systems. Within the *microsystem,* parental

migration changes children's personal adjustment and immediate family environment. For instance, parental absence and insufficient parental care may cause child difficulties in attachment, or the emotional bond between children and their caregivers (Bowlby, 1969). Such attachment difficulties have important consequences for children's personality development and social behaviors throughout their lives, such as sense of insecurity, anxiety, delinquency, academic problems, and depressive disorders (Ainsworth, 1985; Bowlby, 1969).

The *mesosystem* also changes as parents migrate to cities. Due to their long work hours and relatively low levels of education, migrant parents often lack time or skills to tutor children's homework or involve in children's school activities (Guo, Yao, & Yang, 2005; Li & Li, 2007). This may impair child ability of mentalization—an ability to understand and interpret our own and others' mental states, such as needs, feelings, and reasons (Fonagy, Gergely, Jurist, & Target, 2002). It is learned through caregivers' compassionate response to child needs in a secure attachment relationship. Insufficient parental engagement can cause child's poor mentalization skill, which likely predicts emotional and behavioral problems and interpersonal difficulties (Fonagy et al., 2002).

Within the *exosystem*, the economic and social disintegration of migrant workers in urban areas can indirectly impact child well-being. Pierre Bourdieu (1986) argues that capital presents in three forms: economic capital, cultural capital, and social capital. As a low-income group, rural migrant workers suffer from substandard economic conditions in their receiving cities. The migrant parents' low income leaves their children little economic capital. Migrant children and left-behind children's limited schooling options and poor educational quality provide them with little cultural capital. Migrant parents'

lack of connections, or social networks, in the city also limits the actual or potential social capital they can provide to their children. Both cultural capital and social capital can potentially convert into economic capital (Bourdieu, 1986). Consequently, these factors restrict migrant and left-behind children's resources and opportunities.

In terms of the *macrosystem*, China's regional inequality imposes challenges on children from less developed areas. The long-standing rural–urban disparity also causes unequal development among the urban, migrant, and rural neighborhoods. Furthermore, the institutional discrimination against agricultural, non-local population, which is rooted in the *hukou* System, limits migrant and left-behind children's access to equal benefits as their urban peers, such as the types of school they are allowed to attend and the housing and neighborhoods their families can afford to live.

Finally, in the *chronosystem*, parental migration causes changes in the micro-, meso-, exo-, and macro- system and impact child well-being over time. In other words, migrant children and left-behind children's development is determined by their past, present, and future. However, given that this dissertation is a cross-sectional study, the *chronosystem* is not included in analyses.

The bioecological theory highlights the multi-dimensional factors that influence child well-being. This framework stresses the interactional effects between children's internal characteristics and their external environments. Cross-culturally, as Bronfenbrenner (1986) stated, this framework enables us to study the experience of immigrant families that come from considerably contrasting environments with respect to values, customs, and socioeconomic conditions. Based on the bioecological theory, this dissertation looks at both direct and indirect effects of migration on children's

relationships with their families, peers, schools, communities, and broader policy contexts.

Risk/Resilience Theory

While the bioecological theory looks at multi-level subsystems of children's ecological environment, the risk/resilience theory focuses on adverse and protective factors in child development. In general, the term *risk factor* refers to events, conditions, or experiences that increase the likelihood of forming, maintaining, or exacerbating problems (Fraser & Terzian, 2005). With respect to child well-being, risk factors refer to individual, school, peer, family, and community factors that increase children's likelihood of experiencing social or health problems (Jenson & Fraser, 2010). Common risk factors for childhood problems may present in three levels: individual, interpersonal/social, and environmental (Jenson & Fraser, 2010, p. 12). Examples of individual-level risk factors include child's poor impulse control, attention deficits, and hyperactivity. Interpersonal/social risk factors may include family conflict, poor parent–child bonding, and rejection by peers. These risk factors, as discussed in the previous section, likely predict child attachment difficulties and mentalization problems. In addition, environmental risk factors, which include poverty and neighborhood disorganization, deprive children from economic, cultural, and social capital.

Risk factors, however, do not necessarily lead to adverse outcomes. Individuals may exhibit positive adaptation in a risk context. This positive adaptation relates to the concept of *resilience* (Luthar, 2003). Resilience is defined as a dynamic process that encompasses positive adaptation within significant adversities (Luthar, Cicchetti, & Becker, 2000). It is the outcome of risk exposure and protective factors, which refer to

characteristics and conditions that buffer or mitigate individuals' exposure to risk (Jenson & Fraser, 2010). In high-risk occasions, resilience exerts its influence on developmental outcomes with the presence of protective factors.

Children's resilience also derives from three levels: individual factors, interpersonal and social factors, and the wider environments (Graham & Yeoh, 2013; Jenson & Fraser, 2010; Luthar et al., 2000). Individual-level protective factors refer to children's own attributes, such as their social skills, positive attitude (Daniel & Wassell, 2002; Jenson & Fraser, 2010), independence, reflectivity (Daniel & Wassell, 2002), ability to concentrate, willingness and capacity to plan, and willingness to try new things (Daniel & Wassell, 2002; Grotberg, 1995). Examples of interpersonal and social protective factors are strong attachment to parents, harmonious family relationship (Daniel & Wassell, 2002; Jenson & Fraser, 2010), peer contact, and good school experiences (Daniel & Wassell, 2002). Last, examples of protective factors in wider environments include opportunities for education and employment, and social support from non-family members (Jenson & Fraser, 2010).

In the literature of children with migrant/immigrant background, risk and resilience are considered joint pathways to understand child well-being in the context of parental migration (Graham & Yeoh, 2013). On the one hand, children from migrant families are exposed to risk factors such as family restructure, difficulties in establishing and maintaining relationships, linguistic barriers, and cultural differences. Migration may cause family restructure and children's detachment from parents, which results in new roles and relationships and disrupts normal patterns of family interaction (Hamilton, 2013). On the other hand, children are influenced by protective factors in parental

migration, such as increased family social support and neighborhood social capital (Wu, Tsang, & Ming, 2014). For instance, in a survey of 806 migrant children in Beijing, China, Wu and colleagues (2014) find that living in cities for more years produces more social capital. They also find that more social capital and family support are related to higher child resilience, which predicts children's more efforts in study, higher self-expectation of educational achievement, and less intention to drop out after middle school.

As illustrated in Figure 2, this dissertation synthesizes the bioecological framework and the risk/resilience framework, both of which look at individual child development within the broader contexts. The quantitative phase examines how ecological systems positively or adversely impact child well-being; in other words, it identifies the risk and resilience factors within the ecological systems. The qualitative phase identifies risk and resilience factors on the individual level, the interpersonal and social level, and the environmental level. Respectively, these three levels correspond to the microsystem, the mesosystem, and the exosystem and macrosystem. By integrating these two frameworks, this dissertation provides insights for how to reduce risks and build resilience in children themselves and their environments. This could be achieved through interventions in child, family, school, community, social organizations, and public policy.

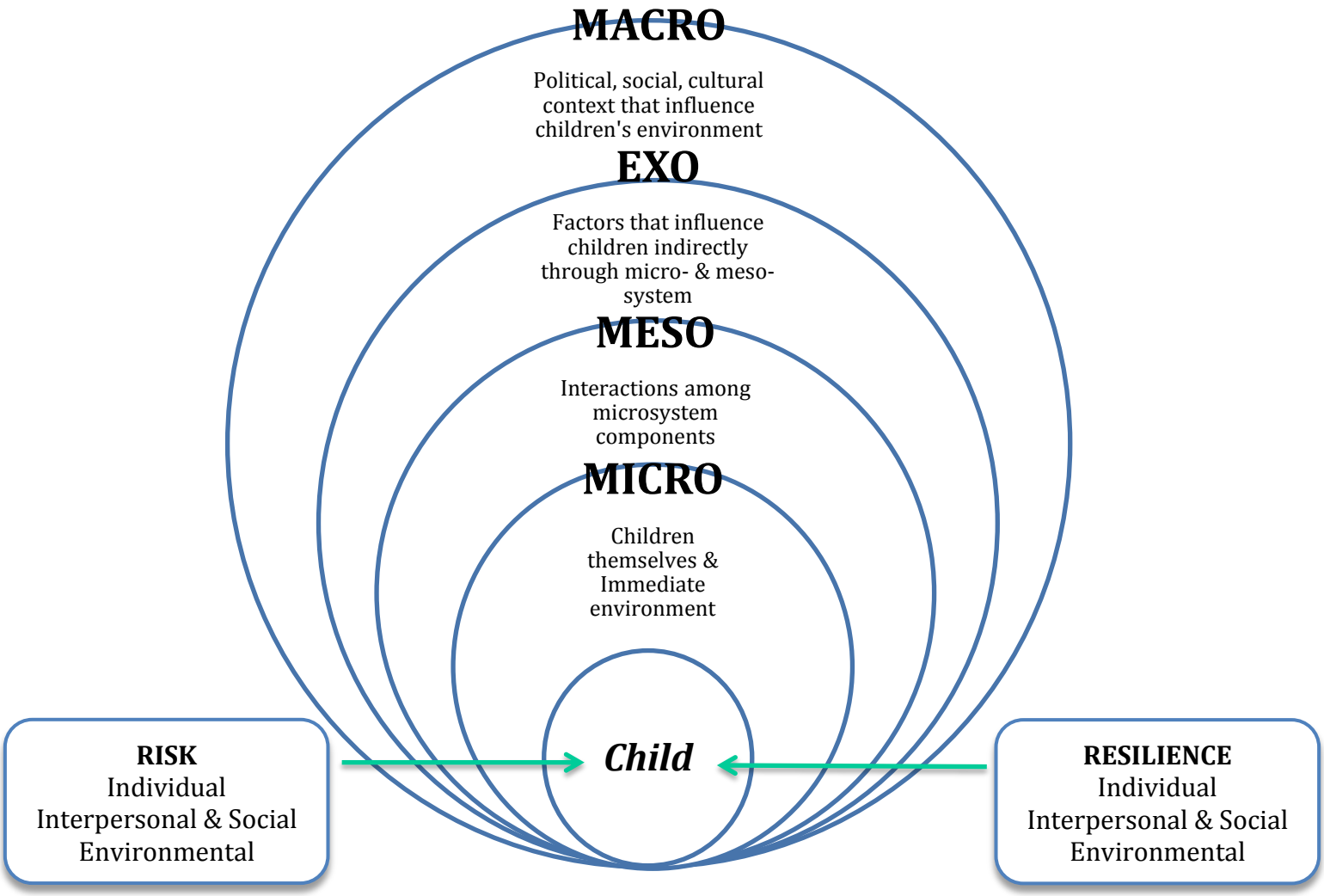


Figure 2. Bioecological and risk/resilience theoretical frameworks

CHAPTER III: LITERATURE REVIEW

Studies across countries show that parental migration profoundly impacts child well-being in multiple dimensions, such as educational attainment and psychosocial development. This chapter reviews the empirical findings of the effects of family migration on migrant children and left-behind children's well-being respectively.

Family Migration and Migrant Children's Well-being

Despite the fact that parents may migrate for more opportunities for themselves and their families, migration may limit educational opportunities for children who relocate in cities with their parents. Being deemed temporary urban residents under China's *hukou* policy, migrant children do not have equal access to public education as do their urban peers. Many urban public schools charge migrant students extra fees or require complicated documentation to attend (Dong, 2010; Wang & Holland, 2011). A qualitative study in Shanghai found that few migrant children were able to attend public high schools in the city, mainly due to the prohibitively high costs or strict residency requirements (Wang & Holland, 2011). An analysis of the 2006–2009 China Health and Nutrition Survey also showed that migrant children were more likely to discontinue their education after middle school (Lu et al., 2016).

As a result, many migrant children are left with no choice but to attend privately-run schools for them, where facilities and teaching quality are often substandard as their funding is much lower than public schools (Dong, 2010; Wang & Holland, 2011). In addition, with limited funding, space, and infrastructure, these migrant schools usually have less diverse curricula and fewer extracurricular activities, such as music classes, art classes, and field trips (Guo et al., 2005).

Migrant children also often experience delayed education, which may due to their frequent travel with families and limited schooling options (Duan & Liang, 2005; Lu & Zhang, 2004; Wei & Hou, 2010). A survey of migrant students in Beijing, for example, found that 15 of the 53 third graders at Wabian No. 4 Elementary School were over the age of 14—significantly older than the average 10-year-old third graders. At Zhangbei Elementary School, some second-grade students were aged 18. At the Taiyanggong Migrant School, over one fourth (42 out of 148) of the students were deemed "over-age" (Lu & Zhang, 2004).

Migration also influences migrant children's psychosocial development. A qualitative study of East European immigrant children in U.K. elementary schools showed that the lifestyle transition significantly changed children's family roles and interactive patterns with parents (Hamilton, 2013). Many migrant parents' long and unstable work hours limit the time they are able to spend at home, which reduces their interactions with children (Hamilton, 2013; Li & Li, 2007).

Migration also disrupts children's existing social relationships with their peers and teachers. Migrant children are more likely to experience the loss of meaningful relationships and challenges in establishing new relationships (Hamilton, 2013). A study in Ireland found that some migrant children were very conscious of their behavior and strived to secure acceptance at school, likely because of their feelings of vulnerability. These children also struggled to negotiate belongingness and decipher what was valued in their peer relationships (Devine, 2013). Similarly, another study found that migrant children in China valued peer recognition more than rural children did. On the one hand,

it may indicate migrant children's feelings of vulnerability; on the other hand, it may instead indicate that migrant children are more socially interconnected (Lu et al., 2016).

Migration may also influence children's self-recognition. Devine's (2013) study of migrant children in Ireland found that being appraised differently at school caused migrant students' internalization of their underachievement. Hamilton (2013) also found that teachers' expectations of migrant students' achievement significantly influenced children's self-belief and self-expectation.

Migration may also bring about stressors that impact children's health. A survey of youths and young adults in urban Vietnam showed that the prevalence of cigarette smoking was higher among rural migrants than urban residents. This might link to the higher prevalence of depression among migrants than urban residents (Nguyen, Rahman, Emerson, Nguyen, & Zabin, 2012). A Chinese study also showed that migrant children were more likely to smoke cigarettes than rural children (Lu et al., 2016). This may attribute to several reasons: the stress of separation from hometown communities and friends, inadequate emotional connection with parents (Lee, 2011), difficulties in adjustment, and experiences of discrimination in cities (Chen, Wang, & Wang, 2009; Zhan, Sun, & Dong, 2005).

Parental Migration and Left-behind Children's Well-being

Without experiencing migration themselves, children who are left behind in rural areas are also deeply impacted by parental migration. With respect to educational attainment, parental migration disrupts left-behind children's schooling, particularly for those younger in age (Lu, 2011). One study in China showed that left-behind children had 37 percentage point lower probability of being enrolled in school than rural children who

live with their parents. Left-behind children were also more likely to discontinue their education after middle school (Lee, 2011).

Parental migration also impedes left-behind children's regular contact with their parents (Jia & Tian, 2010). Even though they live in the same country, some children see their parents only once a year during the Chinese Spring Festival holiday when many migrant workers return to visit families. The main caregivers of many left-behind children, grandparents oftentimes, are unable to provide adequate emotional support, hygiene and nutrition, and homework supervision (UNICEF, 2010). For instance, left-behind children's parents are least likely to restrict children's television watching time, compared with other parents. This indicates that parents have little time to supervise their children that are left behind (Lu et al., 2016). As a substitute for attachment to parents, left-behind children may demand more attention from those around them during their parents' absence, such as peers and teachers. Consequently, left-behind children in rural China placed greater value on peer popularity, and were more likely to care about school grades than were children who resided with their parents (Lee, 2011).

The absence of parents also predicts left-behind children's psychological problems. Separation with parents and inadequate family support often lead to their feeling of loneliness (Jia & Tian, 2010). In a study of children in Wuhan, China, left-behind children also presented more emotional symptoms, poorer peer relationships, and fewer prosocial behaviors than their peers. These negative effects, however, were moderated by parents' stable marital status, harmonious family relationship, and mother's more years of education (Hu et al., 2014).

Parents' migration also impacts left-behind children's physical health. A study of rural Chinese children aged 2–12 in years showed that families where parents or other household members had migrated to work spent 4–5 fewer hours buying, preparing, and cooking food than families without migrant members. This might have led to lower quality and smaller amounts of left-behind children's food consumption (De Brauw & Mu, 2011). Being left behind by parents also increased the probability of being underweight for children aged 7–12 in years (De Brauw & Mu, 2011).

Limitations to Existing Literature

In sum, family migration deeply impacts a significant portion of children in China. Most studies focus on certain aspects of Chinese migrant and left-behind children's well-being, such as education (e.g. Wei & Hou, 2010) or mental health outcomes (e.g. Jia & Tian, 2010). Few studies, however, have looked at these children's well-being from a holistic perspective, one that involves child well-being in multiple dimensions, such as education, psychosocial, and health outcomes. Also, most studies employ either quantitative (e.g. Lee, 2011) or qualitative analysis (Wang & Holland, 2011), whereas few have integrated both approaches to examine this issue. In addition, although many have discussed the roles of Chinese government in this issue (Guan, 2014; Hu et al., 2014; Xu et al., 2011), few studies have explored the roles of social organizations, such as nonprofit organizations, in the well-being of children from migrant families.

This dissertation fills the gap in three ways. First, it explores the multiple dimensions of migrant and left-behind children's well-being—educational achievement, psychosocial outcome, and physical health. Second, it uses a mixed-methods design that involves both a quantitative phase and a qualitative phase to examine this issue. While

the quantitative phase analyzes a recent-published nationally representative data, the qualitative phase elucidates the stories behind the data by interviewing migrant children, their parents, and their teachers. The qualitative findings also inform the questions that could be incorporated in future surveys of migrant families and suggest research questions that future studies may examine. Last, this dissertation is one of the few evidence-based research that identifies social organization's (in this case, a nonprofit organization in Beijing) impacts on migrant children. The findings, therefore, provide implications for both public policy and social service.

CHAPTER IV: METHOD

Research Questions and Hypotheses

This dissertation answers four main research questions. First, to what extent does *migration and residency status* (defined by *hukou* status, residency location, and parents' presence) influence child well-being, with respect to educational achievement, psychosocial development, and physical health? This question is answered by quantitative analysis. Based on previous literature, my hypothesis is that migrant and left-behind children have lower educational achievement, poorer psychosocial development, and poorer physical health than their peers. Second, what roles do children's ecological systems—micro-, meso-, exo-, and macro- system—play in their well-being? This is also answered by quantitative analysis, which identifies risk factors and resilience indicators within children's ecological subsystems—micro-, meso-, exo-, and macro- system.

Third, how do migrant children experience life in urban areas? And last, how do they experience risk and resilience factors on the individual level, the interpersonal/social level, and the environmental level? These two exploratory questions are answered by qualitative analysis. Without hypotheses for these two questions, I look for emerging patterns or themes in interviews with migrant children and people involved in their development.

Methods

This dissertation involves a quantitative phase and a qualitative phase with a parallel mixed design. This section presents data source, sampling strategy, measures, and analytic strategy for the *quantitative* phase and participants, procedures, and analytic approach for the *qualitative* phase respectively.

Phase I. Quantitative study:

Data. In this phase, the data come from the 2012 China Family Panel Studies (CFPS), a nationally representative, longitudinal survey of individuals, families, and communities in China. Funded by the Chinese central government, CFPS is conducted by the Institute of Social Science Survey of Peking University since 2010. Focusing on Chinese population's well-being over time, it provides a variety of information on individuals' economic activities, educational outcomes, family dynamics and relationships, migration, and health status (Institute of Social Science Survey, 2013). Using the 2012 data, this dissertation examines migrant and left-behind children's well-being and factors that influence their well-being.

Sample. The CFPS sample includes households in 25 provinces or municipalities of mainland China. All family members over age 9 in sampled households are interviewed. Through multi-stage probability sampling, the baseline survey included 14,960 families, which involved 33,600 adults and 8,990 children from these families. These respondents were tracked through annual follow-up surveys. The 2012 survey results, the most recent data available to the public, were used in my quantitative analysis. The 2012 survey included 7,257 children aged 15 years or below that were interviewed in 2010 and 1,367 children as a new addition to the sample. For children aged below 10 years, their guardians answered questions for them; for children aged between 10 and 15, they answered certain questions by themselves, in addition to the guardian-reported questions. These child-reported questions include school experiences, use of time, interpersonal communication, health, subjective feelings and so forth. This dissertation only included children that were aged between 10 and 15 (10 and 15

included, n=3,056), among which the eligible sample size was 2,287 (excluded cases with "Not Applicable" answers on key variables). After excluding those with incomplete information on variables in the study, the final sample size was 1,748. Table 1 lists the missing pattern for all variables.

Table 1. Missing pattern of variables

Variable	Number of Missing
Chinese grade	25
Math grade	29
Depressive symptom	87
Level of popularity	99
Confidence about the future	103
Weight status	247
Frequency of exercise	89
Type of child	14
Male	--
Age	--
Personal attributes	39
Frequency of seeing parents	5
Frequency of discussing school life with parents	5
Parents' level of education	138
Household income	78
Family social support	10
Household size	8
Neighborhood environment	18
Region	--
Total cases with missing values	539

Measures. The main dependent variables measure three dimensions of child well-being: educational achievement, psychosocial outcome, and physical health. Educational achievement was measured by two variables: *Chinese grade* and *math grade*. Respectively, the two grades were measured by parent-reported average grade in Chinese language and grammar and average grade in math last semester. Answers were coded as 1 for "poor," 2 for "average," 3 for "good," and 4 for "excellent."

Psychosocial outcome was indicated by three variables: depressive symptom, level of popularity, and confidence about the future. First, *depressive symptom* was measured by the Chinese version of Center for Epidemiologic Studies Depression (CES-D) scale. The scale consists of 20 items, such as worrying about trivial things, having a poor appetite and not wanting to eat, and unable to concentrate on things. Children rated their own frequencies of having each feeling/behavior in the past week. Answers were coded as 0 for "never," 1 for "sometimes," 2 for "often," and 3 for "most of the time." Four positive items, including "I find myself not worse than others," "I find the future promising," "I feel happy," and "I have a happy life," were reverse-coded. As a sum score for the 20 items, higher scores on the scale represent more depressive symptoms. Score 16 points or higher is considered at risk for clinical depression (Lewinsohn, Seeley, Roberts, & Allen, 1997). This cutoff point is also applicable to Chinese adolescents (Chen, Yang, & Li, 2009). According to the China Family Panel Studies survey team, the CES-D scale is applicable to children in China's context. In this survey, CES-D shows good reliability (Cronbach's alpha=0.8092) among child sample (age 10–15) (Luo & Wu, 2014). *Second, level of popularity* was measured by the child-reported item "How popular do you think you are." From 0 to 10, children rated their own experiences with higher scores representing higher levels of popularity. Similarly, *confidence about the future* was measured by the question "How confident are you about your future."

Last, physical health included two variables: weight status and frequency of exercise. *Weight status* included three categories: underweight, normal weight, and overweight. These categories were based on the international sex- and age- adjusted Body Mass Index (BMI) cut-off points (Cole, Flegal, Nicholls, & Jackson, 2007).

Frequency of exercise was measured by the child-reported item "How frequently did you exercise (including PE class at school) in the past month." Answers were coded as 1 to 5 from "never" to "almost everyday."

The main independent variable was *Child migration and residency status*. Based on children's *hukou* status (agricultural/non-agricultural), current residence location (rural/urban), and whether living with parent(s), the sample were categorized into four types: migrant children (n=131), left-behind children (n=597), rural children (n=642), and urban children (n=378). In this study, *migrant children* were defined as those living in urban areas with agricultural *hukou* and who resided with one or both of their parents for at least eight months last year. *Left-behind children* were defined as those living in rural areas with agricultural *hukou* and resided with neither or only one parent for over eight months last year. *Rural children* were defined as those living in rural areas with agricultural *hukou* and resided with both parents for at least eight months last year. Last, *urban children* were defined as those living in urban areas with non-agricultural *hukou* and resided with one or both of their parents for at least eight months last year. Figure 3 depicts the definition and percentage of each child group in the sample.

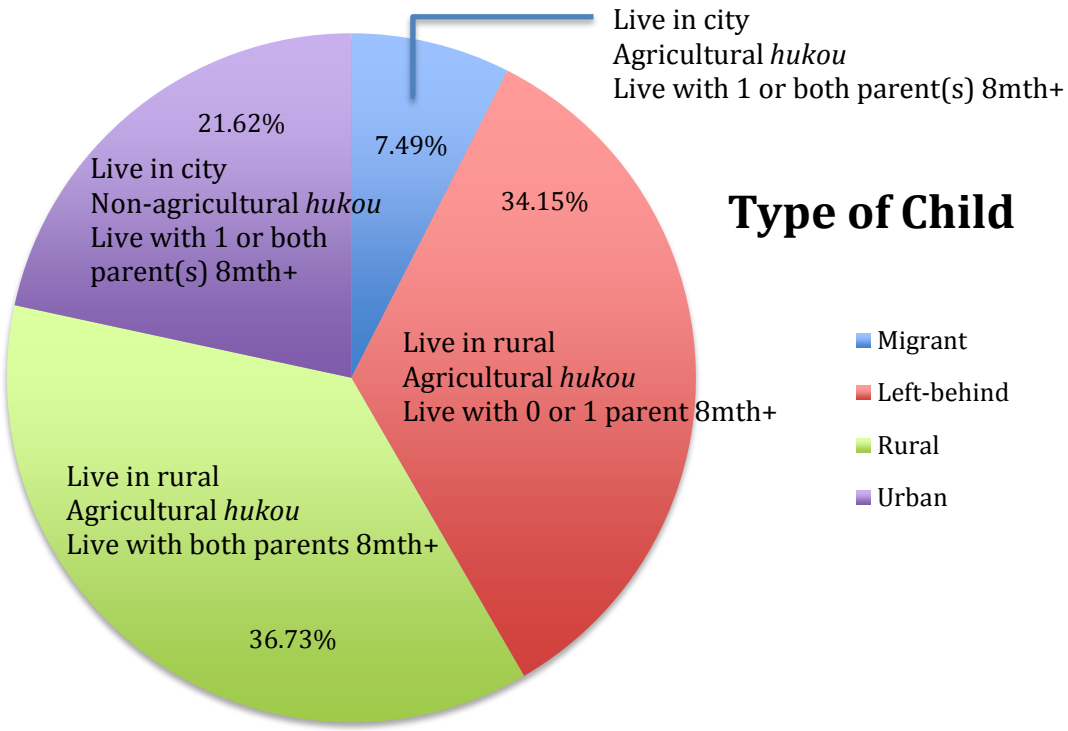


Figure 3. Sample composition by child migration and residency status

As shown in Table 2, to focus on the effects of migration and residency status, three special cases were dropped in the study—1) children living in urban areas with agricultural *hukou* and resided with neither parents for over eight months last year (n=30); 2) children living in urban areas with non-agricultural *hukou* and resided with neither parents for over eight months last year (n=46); and 3) children living in rural areas with non-agricultural *hukou* (n=87).

Table 2. Definition of child type by migration and residency status

Child type	Residence location	Household Registration (*hukou*) status	Resided with father for at least 8 months last year	Resided with mother for at least 8 months last year
Migrant	Urban	Agricultural	No	Yes
Migrant	Urban	Agricultural	Yes	No
Migrant	Urban	Agricultural	Yes	Yes
Dropped, n=30	Urban	Agricultural	No	No
Dropped, n=46	Urban	Non-agricultural	No	No
Urban	Urban	Non-agricultural	No	Yes
Urban	Urban	Non-agricultural	Yes	No
Urban	Urban	Non-agricultural	Yes	Yes
Left-behind	Rural	Agricultural	No	No
Left-behind	Rural	Agricultural	No	Yes
Left-behind	Rural	Agricultural	Yes	No
Rural	Rural	Agricultural	Yes	Yes
Dropped, n=87	Rural	Non-agricultural	Yes	Yes
	Rural	Non-agricultural	No	Yes
	Rural	Non-agricultural	Yes	No
	Rural	Non-agricultural	No	No

In addition to child migration and residency status, the study also controlled for factors in children's micro-, meso-, exo-, and macro- systems based on the bioecological theory. Microsystem included children's gender (male coded as 1, n=909; female as 0, n=839), age (ranged from 10 to 15), and personal attributes. *Personal attributes* were measured by a three-item scale of child personal characteristics, which consisted of ability to concentrate, perseverance, and ability to organize (Cronbach's alpha=0.64). Respectively, these characteristics were measured by item "the child can concentrate when he/she is working on something," "the child always completes things once he/she starts," and "the child likes to arrange his/her things in order." Parents rated their levels of agreement to these descriptions based on their daily observation of their children. Answers were coded as 1 to 5 from "strongly disagree" to "strongly agree." Summing up the scores on the three items, higher scores on the scale indicate more positive personal

attributes. Based on the risk/resilience theory, higher score on the scale also indicates higher level of resilience the child presents.

This dissertation uses *frequency of seeing parents* and *frequency of discussing school life with parents* as indicators for mesosystem, that is, interactions among microsystem factors (i.e. child and family). Respectively, *frequency of seeing parents* was measured by parent-reported or other guardian-reported question "In the most recent month when the parents were not on vacation, how many times could the child meet his/her parent(s) per week on average." The answer ranges from 0 (indicates the child did not see parents at all) to 7 (indicates the child saw parents on a daily basis). Notably, children who lived with parents for less than 8 months but reported seeing parents everyday in the past month were excluded in analyses, as these cases might result from misreport or special occasions (i.e. summer break/winter break/spring festival).

Frequency of discussing school life with parents was measured by the parent-reported question "How often have you discussed what happens at school with your child over the past year." Answers were coded as 1 for "never," 2 for "rarely" (1 time/month), 3 for "sometimes" (1 time/week), 4 for "often" (2–4 times/week), and 5 for "very often" (5–7 times/week).

Exosystem included four variables of family characteristics that do not directly involve children but potentially influence children: parents' level of education, household income, family social support, and household size. *Parents' level of education* was measured by father/mother's (whoever possessed higher level of education) highest level of education attained by 2012. Answers were categorized into "illiterate" (n=243), "elementary or middle school graduated" (n=1,093), and "high school and above"

(n=412). *Household income* was measured by the 2011–2012 household gross income after the survey team's multiple imputation. In the analyses, household income was measured in natural log form. As an indicator for external resources that family received from its network, *family social support* was measured by whether the family received financial support from people that did not live in the household last year. This might include support from parents, parents-in-law, other extended family members, friends, and colleagues. Answers were coded as 1 for "yes" and 0 for "no." *Household size* was measured by number of family members living in the household, which include core family members and extended family members.

Last, macrosystem consisted of two variables: neighborhood environment and region. *Neighborhood environment* was measured by interviewer-rated economic condition of the child's residential community. Answers ranged from 1 to 7 denote "very poor" to "very wealthy." According to the definition of National Bureau of Statistics of China (2011), the sample was divided into three *regions*: East (n=735, including the east and northeast), Middle (n=432), and West (n=581) based on family's province id. Table 3 presents all measured dimensions and variables for the quantitative analysis.

Table 3. Dimensions measured and variables

Measured Dimensions	Variables
	Dependent Variables
Educational Achievement	Chinese grade
	Math grade
Psychosocial Outcome	Depressive symptom
	Level of popularity
	Confidence about the future
Physical Health	Weight status [Underweight/Normal weight/Overweight]
	Frequency of exercise
	Independent Variables
Main IV	Type of child [Migrant/Left-behind/Rural/Urban]
Microsystem	Male
	Age
	Personal attributes
Mesosystem	Frequency of seeing parents
	Frequency of discussing school life with parents
Exosystem	Parents' level of education
	Household income
	Family social support
	Household size
Macrosystem	Neighborhood environment
	Region

Analytic strategy. Descriptive analyses of all variables were conducted. These were followed by bivariate analyses by key variables (e.g. type of child, personal attributes, frequency of seeing parents per week, parents' level of education, neighborhood environment, etc.). Here, continuous key independent variables (i.e. personal attributes, frequency of seeing parents, frequency of discussing school life with parents, household income, and neighborhood environment) were transformed into

categorical variables. Respectively, personal attributes were divided into "mean value and below" and "above mean value." Frequency of seeing parents was divided into three categories: none, sometimes, and everyday. Frequency of discussing school life with parents was also divided into three categories: never, sometimes, and often. Household income was divided into low, medium, and high based on the 33.3, 66.6, and 100 percentile. For neighborhood environment (range 1–7), those rated 1 and 2 were categorized as "poor," 3–5 as "medium," and 6 and 7 as "rich." To examine the group differences, Chi-square test and F-test were performed for discrete dependent variables and continuous dependent variables respectively.

Last, multivariate analyses were performed to examine the effects of migration and residency status and ecological systems on child educational, psychosocial, and health outcomes. The types of analyses varied by dependent variables. Ordered Logistic Regressions were performed for Chinese grade and math grade; Multinomial Logistic Regressions were performed for weight status; Ordinary Least Squares regressions were performed for all other variables. Hierarchical regression models were used to examine the effects of the multi-level ecological system. Since the analyses used rural children as the reference group, additional tests of the differences among other child groups (i.e. migrant *vs.* left-behind children, migrant *vs.* urban children, and left-behind *vs.* urban children) were also performed after each regression analysis to compare the differences across all child groups.

Phase II. Qualitative study:

In addition to quantitative study, this dissertation also involves a qualitative study. The qualitative phase seeks a deeper understanding of migrant children's experiences and identifies the risk and resilience factors for their well-being.

The qualitative study was conducted for two reasons. First, it addressed the quantitative data limitation. Since the CFPS survey was not designed for examining migration and child development issues, its measures have many limitations for this study. For example, the only available measure for children's personal attributes (i.e. ability to concentrate, perseverance, and organize) did not fully identify children's strengths and weaknesses. Second, through the research subjects' own narratives, the qualitative study might further explain the quantitative findings—why are migrant children different from non-migrant children? How do the ecological systems influence migrant children?

Participants. The qualitative research was approved by the Institutional Review Board of a university in northeast U.S. In-person, in-depth interviews were conducted with ten migrant children that were fifth graders (10–13 years in age; 5 boys and 5 girls) in an elementary school (referred to "BS" in this dissertation) in Beijing, the largest Chinese city with the densest population of migrant workers. For each child, the teacher in charge of his/her class [*"ban-zhu-ren"*] and one of his/her parents were interviewed (as shown in Figure 4). These interviews explored migrant children's experiences from perspectives of themselves and people that directly engage in their lives.

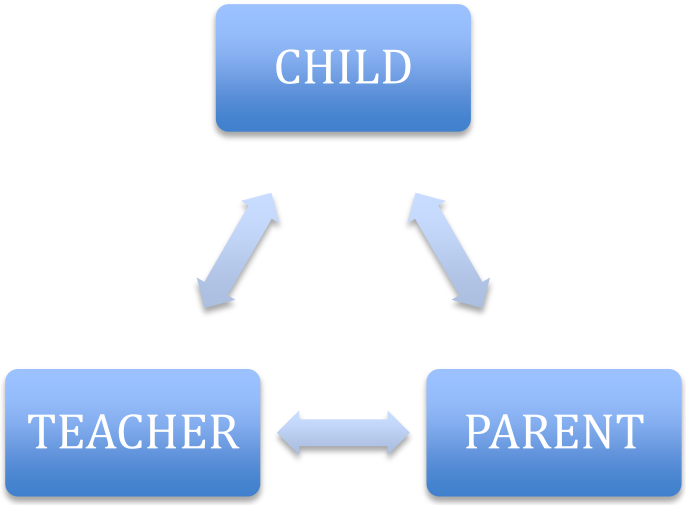


Figure 4. Participant composition for the qualitative phase

Subjects were recruited from the BS School through the coordination of NC, a nonprofit organization that works with migrant children in China. Founded in 2007, NC aims to improve migrant children's developmental environment by providing school social work services, supporting teachers in migrant schools, and conducting community education programs. By the end of 2012, NC has completed 178 programs for hundreds of thousands of migrant children with respect to different aspects of their education. In summers 2013–2015, I worked with NC with the BS School students and interacted with the students and teachers in school activities and field trips. This previous work gave me access to the BS School as my research site.

Using purposeful sampling, two groups of students were identified by the teachers: students who have received NC's services at BS School at certain time point before, and students who never received NC's services. Five participants were randomly selected from each group (Figure 5).

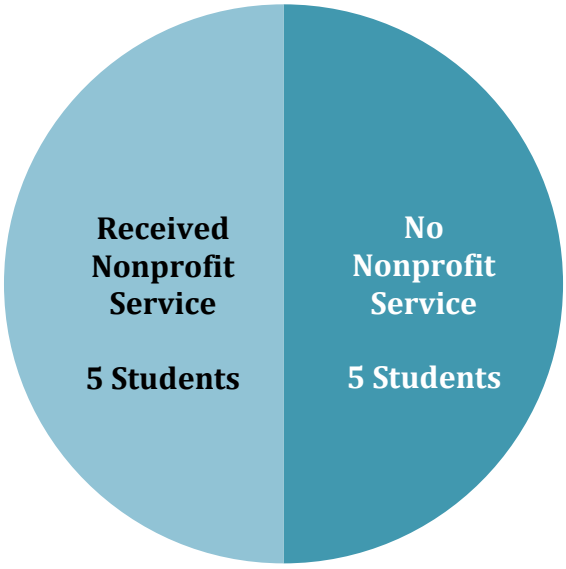


Figure 5. Participant structure for child subjects

I also interviewed staff and social work interns at NC to explore the impacts and challenges of their work. A total of eight interviewees were recruited from NC, including the agency director, two senior staff (the director of the social work department and the director of fundraising department), and five social work undergraduate students who had worked as NC interns at the BS School.

Procedures. The interviews were semi-structured with open-ended questions, which generate considerable information that allows me to explore topics in cross-cultural research (Teddlie & Tashakkori, 2009). All interviews with children and teachers took place at a private meeting room in the BS School at a time that was convenient to the participants. Parent interviews were conducted at time and places upon the participants' choice—7 interviews were conducted at home, 2 at the parent's workplace, and 1 over phone due to unavailability in person. Interviews with NC staff were also conducted at time and places that were convenient to the participants: 3 interviews at NC

agency office, 4 at cafes, and 1 over phone. Interviews with child subjects were on average 45 minutes in length, ranging from 35 to 55 minutes; interviews with adults on average lasted for an hour, ranging from 40 to 90 minutes.

All adult participants were provided with full informed consent. Parents for all child participants were provided with informed consent for interviewing their children, and children's assent was obtained prior to interview. All participants were asked if they agree to take part in an audio-taped interview. All consent/assent forms were translated into Chinese by the principal investigator and approved by the Institutional Review Board.

Based on the bioecological theory and the risk/resilience theory, the interviews consisted of risk and resilience factors that may influence child development on the individual, interpersonal/social, and environment level. From the perspectives of children, parents, and teachers, the interviews explored multiple aspects of migrant children's lives, such as their school life, family life, peer interaction, and neighborhood environment. The interviews also included background information that may influence child development, such as time of family migration, place of origin, parents' occupation, and family income. Considering children's literacy and their ability to concentrate, understand questions, and express themselves, interview techniques were adapted to be appropriate for fifth graders. Non-verbal communication techniques, such as interviewer's observation and drawing pictures, were also employed in the interviews. Supplies, such as drawing paper, markers, and crayons, were provided on site. The interviews with nonprofit staff focused on their perceived project impacts, process of project development and implementation, organizational strategic planning, vision, and

challenges. All interview questions (Appendix 1) were translated into Chinese by the principal investigator, and all interviews were conducted in Chinese.

Analytic approach. The qualitative data analyses involved content analysis and thematic analysis (Patton, 2002). The Atlas.ti software was used throughout the analytic process. First, initial open coding (Strauss & Corbin, 1998) and case study approach (Thomas, 2011) were performed to identify emerging concepts in each interview. Line-by-line analysis was conducted for all interview transcripts, using in-vivo codes that captured interviewees' own ideas as much as possible. The initial analysis developed 57 first-order concepts. Axial coding (Strauss & Corbin, 1998) was then conducted for each specific concept. Constant comparative method across all cases was performed to draw themes from the data (Thomas, 2011). The first-order concepts were summarized into 18 second-order constructs, such as stress of study, loss of meaningful relationship, and educational deprivation.

Based on my research questions and the theoretical frameworks, these second-order constructs were consolidated into eight themes: adverse factors in microsystem, adverse factors in mesosystem, adverse factors in exosystem, adverse factors in macrosystem, protective factors in microsystem, protective factors in mesosystem, protective factors in exosystem, and protective factors in macrosystem. These eight themes jointly illustrated migrant children's experiences on the individual level, the interpersonal/social level, and the environmental level. These themes also corresponded to my quantitative analyses and unfolded the real-life story of migrant and left-behind children. Finally, these themes were summarized into two overarching dimensions: risk factors and resilience factors. The detailed analytic process is illustrated in Appendix 2.

It is noteworthy that the interview transcripts were analyzed in Chinese and the final research findings were written in English. Being born and raised in China for twenty-two years, I am proficient in both oral and written Chinese and fully aware of Chinese cultural norms. However, previous exposure to the research subjects might also carry implicit expectations that constrained my scope of inquiry (Charmaz & Mitchell, 1997). To maintain neutrality and enhance credibility of the study, I was particularly aware of potential biases and over-immersion in the research.

CHAPTER V: QUANTITATIVE FINDINGS AND IMPLICATIONS

This chapter presents the first phase of this dissertation, quantitative research results, and discusses the implications of these results. The quantitative phase answers two questions: 1) Does *migration and residency status* influence child well-being with respect to educational achievement, psychosocial development, and physical health? 2) What roles do children's ecological systems—micro-, meso-, exo-, and macro- system—play in their well-being?

This chapter first presents descriptive statistics of the outcome variables (i.e. children's educational achievement, psychosocial outcome, and physical health) and the independent variables (i.e. children's migration and residency status, microsystem, mesosystem, exosystem, and macrosystem). Next, it presents bivariate analysis results of all outcome measures by key independent variables. This is followed by results of multivariate analyses. Last, this chapter discusses the implications of the findings.

Descriptive Statistics

Table 4 presents the descriptive statistics of the sample from CFPS.

Outcome variables. For educational achievement, among the 1,748 children aged 10–15, the majority's Chinese grades were at middle-range in the past semester at the survey time: most were graded "good" (33.4%) and "average" (32.3%), followed by "excellent" (24.3%) and "poor" (10.1%). Math grade showed the similar pattern: most were "good" (30.0%), followed by "average" (27.7%), "excellent" (26.4%), and "poor" (15.9%).

With respect to psychosocial outcome, the sample on average scored 11.5 on the 60-point CES-D scale, with a 6.6 points' standard deviation and a range from 0 to 40.

Almost one fourth of the children (i.e. 399 children, or 22.8% of the sample) scored 16 or higher, which indicates being at risk for clinical depression (Chen, Yang, & Li, 2009; Lewinsohn, Seeley, Roberts, & Allen, 1997). Second, on a scale of 0–10, these children on average reported high level of popularity (7.1 points), with a 2.0 points' standard deviation. Similarly, the sampled children reported good confidence about the future (7.7 out of a 10-point scale), with a 2.0-point standard deviation.

As for physical health, 13.1% of the children were overweight and 13.0% were underweight. These children exercised frequently, indicated by a mean of 3.9 out of a 5-point scale, with a standard deviation of 1.2 points.

Independent variables. Based on migration and residency status, the sample consisted of 36.7% rural children, 34.2% left-behind children, 21.6% urban children, and 7.5% migrant children. About 52% of them were boys. The average age was 12.5 years. These children overall presented positive personal attributes. On a 1–15 scale, their attributes were rated at 10.5 on average, with a standard deviation of 2.3 points.

With respect to parent–child interaction, most of the children saw and discussed school life with their parent(s) pretty frequently (respectively, 5.6 point on a 0–7 scale and 3.2 point on a 1–5 scale). More specifically, the majority (74.9%) saw their parent(s) on a daily basis; some saw parent(s) sometimes (18.4%). There were, however, 6.7% that did not see their parent(s) at all in the most recent month when the parent(s) were not on vacation, among whom 91.5% were left-behind children. Frequency of parent–child discussion on school life shows that the majority (51.8%) often talked about school with parent(s), 38.0% talked sometimes, whereas 10.1% of the children never had these conversations with their parents in the past year.

Next, in terms of parents' educational attainment, the majority of parents (62%) in this sample had primary education (elementary or middle school graduated); some (24%) finished secondary education or higher (high school to Ph.D.); and 14% of parents were illiterate. The average annual household income was CNY 44,676 (approximately USD 6,721), with a standard deviation of CNY 55,290 (approximately USD 8,318). On average, five family members (including core and extended family members) were living in each household.

Last, these children on average lived in medium economic conditions (4 points on a 1–7 scale). The majority (79%) were in medium neighborhoods, 11% were in poor neighborhoods and 10% were in rich neighborhoods. Most of the children (42%) were living in east China, where the economy is better and the region is more developed; 33% were living in the west, where the economic development is relatively lagging; and 25% were living in mid-China, where the economic development is between the east and the west.

Table 4. Descriptive statistics of key variables

N=1,748	Mean or Percentage	S.D.
Educational Achievement		
Chinese grade [%]		
Poor	10.07	
Average	32.27	
Good	33.41	
Excellent	24.26	
Math grade [%]		
Poor	15.85	
Average	27.69	
Good	30.03	
Excellent	26.43	
Psychosocial Outcome		
Depressive symptom [0–60]	11.50	6.61
Level of popularity [0–10]	7.07	2.04
Confidence about the future [0–10]	7.71	2.04
Physical Health		
Weight status [%]		
Underweight	12.99	
Normal weight	73.91	
Overweight	13.10	
Frequency of exercise [1–5]	3.89	1.15
Type of Child [%]		
Rural	36.73	
Left-behind	34.15	
Migrant	7.49	
Urban	21.62	
Microsystem		
Male [%]	52.00	
Age [10–15]	12.53	1.66
Personal attributes [1–15]	10.53	2.25
Mesosystem		
Frequency of seeing parents per week [0–7]	5.58	2.53
None [%]	6.69	
Sometimes [%]	18.42	
Everyday [%]	74.89	
Frequency of discussing school life with parents [1–5]	3.24	1.11
Never [%]	10.13	
Sometimes [%]	38.04	
Often [%]	51.83	
Exosystem		
Parents' level of education [%]		
Illiterate	13.90	
Elementary or middle school graduate	62.53	
High school and above	23.57	
Household income last year	44,675.69	55,290.46
Family received social support last year [%]	13.27	
Household size	4.78	1.65
Macrosystem		
Neighborhood environment [1–7]	3.94	1.26
Poor [1–2] [%]	10.81	
Medium [3–5] [%]	79.06	
Rich [6–7] [%]	10.13	
Region [%]		
East	42.05	
Middle	24.71	
West	33.24	

Note: Figures in the table are means or percentages and standard deviations (S.D.).

Bivariate Results

Figures 6–12 and Tables 5–11 present the one-way analysis of variance (ANOVA) of outcome variables by key independent variables.

Figure 6 and Table 5 show that Chinese grades significantly varied by child migration and residency status. On the one hand, children living in urban areas (including migrant and urban children) had smaller percentage of poor Chinese grades (both groups around 5%) compared with children living in rural areas (including left-behind and rural children, both above 10%). On the other hand, over one third (32.8%) of urban children had excellent Chinese grades, followed by left-behind (25.3%) and migrant (22.1%) children. Rural children had the smallest percentage (18.7%) of excellent Chinese grades.

Children's Chinese grades also varied by micro-, meso-, exo-, and macro-systems. In the microsystem, for instance, gender and personal attributes mattered. Girls had fewer poor Chinese grades and more excellent grades than boys. Children with more positive personal attributes had fewer poor Chinese grades and more excellent grades. In the mesosystem, children's Chinese grades did not significantly differ by frequency of seeing parents, but differed by frequency of discussing school life with parents. Children who often discuss school life with parents had significantly fewer poor grades and more excellent grades compared with those who never or sometimes discuss school life with parents. Children's Chinese grades significantly differed by exosystem (i.e. parents' level of education, household income) and macrosystem (i.e. neighborhood environment, region). Those whose parents graduated from high school or above, who come from high-income families or rich neighborhoods, and who live in east and central China (compared with west China) had fewer poor grades and more excellent grades.

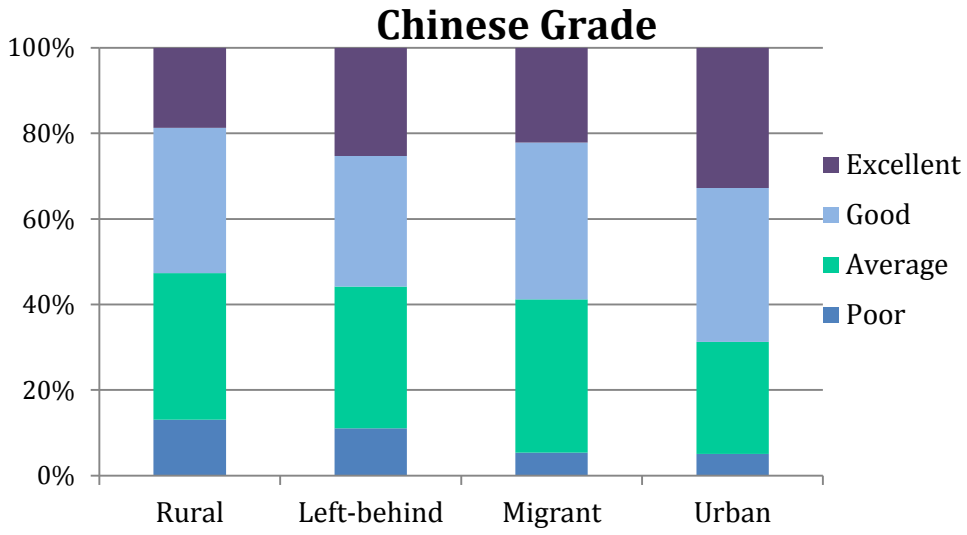


Figure 6. Chinese grade by type of child

Table 5. Educational achievement by key variables: Chinese grade

N=1,748	Chinese Grade			
	Poor	**Average**	**Good**	**Excellent**
All sample	10.07	32.27	33.41	24.26
Type of Child				
Rural	13.08	34.27	33.96	18.69
Left-behind	11.06	33.17	30.49	25.29
Migrant	5.34	35.88	36.64	22.14
Urban	5.03	26.19	35.98	32.80
Chi-square test		47.46***		
Gender				
Female	6.79	26.10	34.56	32.54
Male	13.09	37.95	32.34	16.61
Chi-square test		82.45***		
Personal attributes				
Low	12.72	33.16	33.16	20.95
High	7.94	31.55	33.61	26.91
Chi-square test		16.51**		
Frequency of seeing parents per week				
None	8.55	36.75	28.21	26.50
Sometimes	8.39	33.23	34.47	23.91
Everyday	10.62	31.63	33.61	24.14
Chi-square test		3.90		
Frequency of discussing school life with parents				
Never	11.86	36.16	32.77	19.21
Sometimes	11.73	35.49	33.68	19.1
Often	8.50	29.14	33.33	29.03
Chi-square test		28.02***		
Parents' level of education				
Illiterate	15.23	34.16	29.22	21.4
Elementary or middle school graduate	11.25	35.50	32.11	21.13
High school and above	3.88	22.57	39.32	34.22
Chi-square test		67.62***		
ln (Household income last year)				
Low income	11.21	34.16	32.21	22.42
Middle income	11.93	33.99	32.03	22.06
High income	6.97	28.57	36.06	28.4
Chi-square test		19.79**		
Neighborhood environment				
Poor	15.87	37.57	28.04	18.52
Medium	9.77	32.34	33.57	24.31
Rich	6.21	25.99	37.85	29.94
Chi-square test		20.48**		
Region				
East	9.25	29.66	34.29	26.80
Middle	7.18	32.18	34.03	26.62
West	13.25	35.63	31.84	19.28
Chi-square test		23.06**		

Note: Figures in table are percentages.
** $p < .01$, *** $p < .001$

Figure 7 and Table 6 show that child math grades also significantly varied by their migration and residency status. Urban children had the largest percentage of excellent math grades (37.8%), followed by left-behind (24.3%), migrant (23.7%), and rural (22.3%) children. Urban children also had the smallest percentage of poor math grades (9.0%), followed by migrant (15.3%), left-behind (15.8%), and rural (20.1%) children. In addition, math grades significantly differed by children's personal attributes, frequency of parent–child discussion on school life, parents' level of education, household income, neighborhood environment, and region. Those who have high personal attributes, who discuss school life with parents often, whose parents finished high school education or above, who live in high-income households or rich neighborhoods, and who live in east and central China (compared with west China) were more likely to receive excellent grades and less likely to receive poor grades.

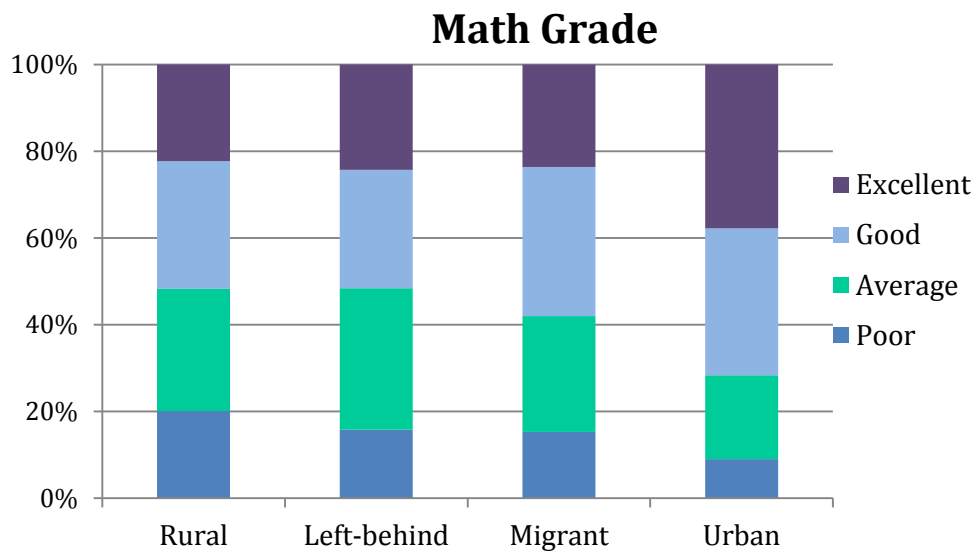


Figure 7. Math grade by type of child

Table 6. Educational achievement by key variables: Math grade

N=1,748	Math Grade			
	Poor	**Average**	**Good**	**Excellent**
All sample	15.85	27.69	30.03	26.43
Type of Child				
Rural	20.09	28.19	29.44	22.27
Left-behind	15.75	32.66	27.30	24.29
Migrant	15.27	26.72	34.35	23.66
Urban	8.99	19.31	33.86	37.83
Chi-square test		61.97***		
Gender				
Female	15.14	27.65	30.87	26.34
Male	16.50	27.72	29.26	26.51
Chi-square test		0.89		
Personal attributes				
Low	18.89	25.96	28.79	26.35
High	13.40	29.07	31.03	26.49
Chi-square test		10.45*		
Frequency of seeing parents per week				
None	12.82	28.21	29.06	29.91
Sometimes	14.91	31.99	31.68	21.43
Everyday	16.35	26.59	29.72	27.35
Chi-square test		8.17		
Frequency of discussing school life with parents				
Never	22.60	30.51	23.16	23.73
Sometimes	18.35	31.43	31.28	18.95
Often	12.69	24.39	30.46	32.45
Chi-square test		51.00***		
Parents' level of education				
Illiterate	20.99	30.86	30.45	17.70
Elementary or middle school graduate	17.47	30.65	29.37	22.51
High school and above	8.50	17.96	31.55	41.99
Chi-square test		89.97***		
ln (Household income last year)				
Low income	17.79	30.96	28.47	22.78
Middle income	16.34	29.41	26.80	27.45
High income	13.41	22.65	35.02	28.92
Chi-square test		23.44**		
Neighborhood environment				
Poor	20.63	30.69	25.40	23.28
Medium	16.28	28.22	29.59	25.90
Rich	7.34	20.34	38.42	33.90
Chi-square test		25.35***		
Region				
East	14.29	24.76	30.88	30.07
Middle	12.73	30.56	31.25	25.46
West	20.14	29.26	28.06	22.55
Chi-square test		22.90**		

Note: Figures in table are percentages.
* p < .05, ** p < .01, *** p < .001

Figures 8–10 and Tables 7–9 show that psychosocial outcomes varied among the child groups. All three outcomes followed the same pattern—urban children had the best outcome, followed by migrant children, then rural children, and last, left-behind children.

Figure 8 and Table 7 show that left-behind children on average reported the highest CES-D score (12.11 points), followed by rural children (12.07 points), migrant children (10.4 points), and urban children (9.9 points). The F-test shows that the difference among these child groups was statistically significant. Also, children who discuss school life with parents more frequently, whose parents had higher levels of education, who live in a richer household or richer neighborhood, and who live in more eastern regions averagely had lower CES-D scores than their counterparts.

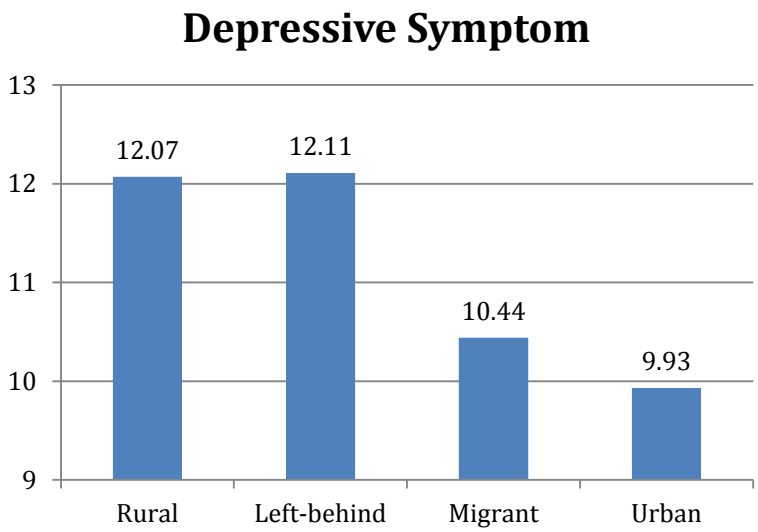


Figure 8. Depressive symptom by type of child

Table 7. Psychosocial outcome by key variables: Depressive symptom

N=1,748	Depressive Symptom
All sample	11.50 (6.61)
Type of Child	
Rural	12.07 (6.65)
Left-behind	12.11 (6.85)
Migrant	10.44 (5.94)
Urban	9.93 (6.09)
F-test	11.67***
Gender	
Female	11.73 (6.65)
Male	11.28 (6.57)
F-test	1.98
Personal attributes	
Low	11.41 (6.29)
High	11.57 (6.86)
F-test	0.28
Frequency of seeing parents per week	
None	11.83 (6.50)
Sometimes	11.71 (6.19)
Everyday	11.42 (6.72)
F-test	0.41
Frequency of discussing school life with parents	
Never	12.31 (6.72)
Sometimes	11.89 (6.52)
Often	11.05 (6.63)
F-test	4.61*
Parents' level of education	
Illiterate	13.51 (6.85)
Elementary or middle school graduate	11.52 (6.62)
High school and above	10.27 (6.14)
F-test	18.78***
ln (Household income last year)	
Low income	12.11 (6.71)
Middle income	11.51 (6.92)
High income	10.89 (6.10)
F-test	4.83**
Neighborhood environment	
Poor	12.67 (6.73)
Medium	11.40 (6.68)
Rich	11.02 (5.77)
F-test	3.58*
Region	
East	10.23 (6.42)
Middle	10.60 (6.04)
West	13.77 (6.68)
F-test	55.12***

Note: Figures in table are means and standard deviations in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 9 and Table 8 show that urban children on average reported higher popularity (7.35 on a 0–10 scale), followed by migrant (7.34), rural (6.99), and left-behind children (6.92). This group difference was statistically significant. Girls, children who talk about school with parents more often, who live in richer neighborhoods, and who live in more eastern regions also rated themselves more popular.

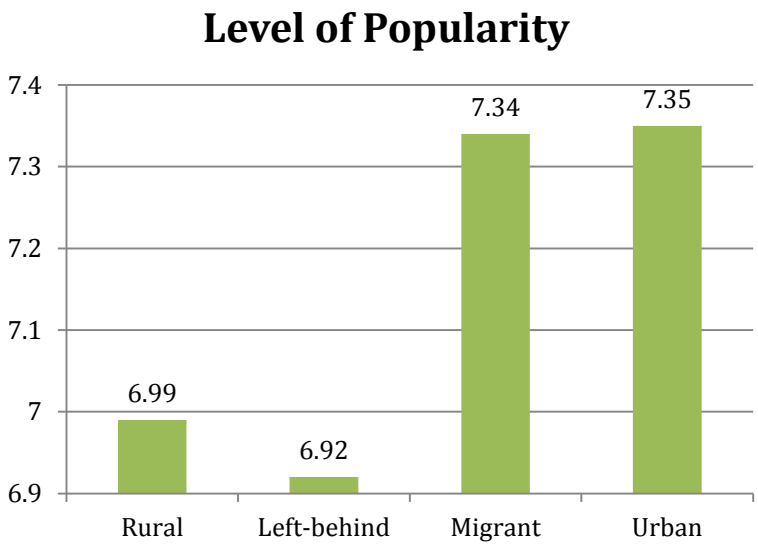


Figure 9. Level of popularity by type of child

Table 8. Psychosocial outcome by key variables: Level of popularity

N=1,748	**Level of Popularity**
All sample	7.07 (2.04)
Type of Child	
Rural	6.99 (2.11)
Left-behind	6.92 (2.08)
Migrant	7.34 (1.99)
Urban	7.35 (1.81)
F-test	4.67**
Gender	
Female	7.18 (1.99)
Male	6.97 (2.07)
F-test	4.53*
Personal attributes	
Low	6.98 (2.01)
High	7.14 (2.05)
F-test	2.46
Frequency of seeing parents per week	
None	6.88 (2.15)
Sometimes	6.94 (1.92)
Everyday	7.12 (2.05)
F-test	1.53
Frequency of discussing school life with parents	
Never	6.93 (2.14)
Sometimes	6.90 (2.09)
Often	7.22 (1.96)
F-test	5.45**
Parents' level of education	
Illiterate	6.95 (2.14)
Elementary or middle school graduate	7.03 (2.07)
High school and above	7.24 (1.87)
F-test	2.05
ln (Household income last year)	
Low income	6.95 (2.12)
Middle income	7.12 (2.01)
High income	7.13 (1.97)
F-test	1.35
Neighborhood environment	
Poor	7.02 (2.18)
Medium	7.03 (2.05)
Rich	7.42 (1.75)
F-test	2.90+
Region	
East	7.22 (2.09)
Middle	7.16 (1.87)
West	6.81 (2.07)
F-test	7.13***

Note: Figures in table are means and standard deviations in parentheses.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Figure 10 and Table 9 show that among children with different migration and residency status, urban children overall felt most confident about their future (8.08 points on a 0–10 scale), followed by migrant (7.82), rural (7.6), and left-behind children (7.57). Children that felt most confident about their future were those who have high personal attributes, who see parents often, whose parents graduated from high school or above, and who live in high-income families.

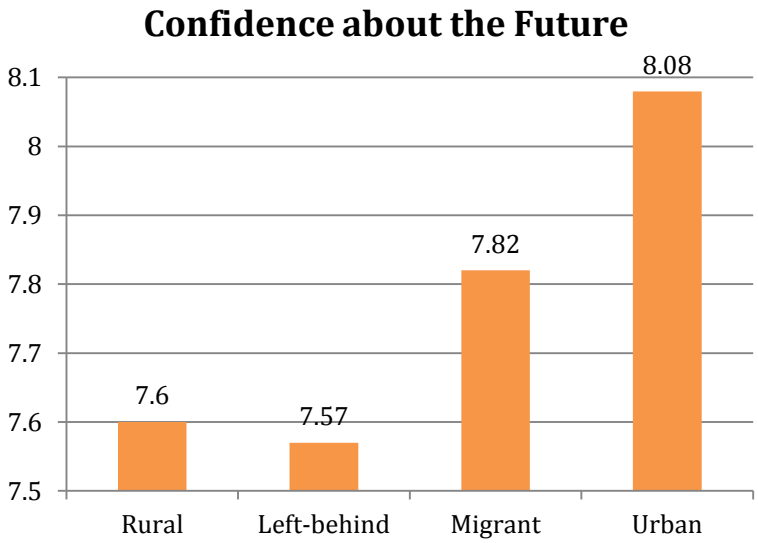


Figure 10. Confidence about the future by type of child

Table 9. Psychosocial outcome by key variables: Confidence about the future

N=1,748	**Confidence about the Future**
All sample	7.71 (2.04)
Type of Child	
Rural	7.60 (2.12)
Left-behind	7.57 (2.11)
Migrant	7.82 (2.01)
Urban	8.08 (1.76)
F-test	5.92***
Gender	
Female	7.73 (1.99)
Male	7.70 (2.09)
F-test	0.07
Personal attributes	
Low	7.55 (2.05)
High	7.84 (2.02)
F-test	8.74**
Frequency of seeing parents per week	
None	7.79 (1.96)
Sometimes	7.55 (1.98)
Everyday	7.75 (2.06)
F-test	1.33
Frequency of discussing school life with parents	
Never	7.50 (2.41)
Sometimes	7.48 (2.05)
Often	7.93 (1.93)
F-test	10.43***
Parents' level of education	
Illiterate	7.49 (2.17)
Elementary or middle school graduate	7.68 (2.04)
High school and above	7.93 (1.95)
F-test	4.10*
ln (Household income last year)	
Low income	7.56 (2.20)
Middle income	7.69 (1.98)
High income	7.89 (1.93)
F-test	3.91*
Neighborhood environment	
Poor	7.44 (2.17)
Medium	7.74 (2.04)
Rich	7.79 (1.93)
F-test	1.88
Region	
East	7.80 (2.15)
Middle	7.69 (1.91)
West	7.62 (2.00)
F-test	1.23

Note: Figures in table are means and standard deviations in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 11 and Table 10 show that children's weight status was not significantly different among migrant, left-behind, rural, and urban children. Instead, it significantly differed by children's gender, personal attributes, frequency of seeing parents, frequency of discussing school life with parents, neighborhood environment, and regions that their families live in. Boys and children with low personal attributes were less likely to be underweight; girls and children with high personal attributes were less likely to be overweight. Those who see or discuss school life with parents sometimes (compared with those who never/often have such experiences), who live in rich neighborhoods, and who live in mid-China were less likely to be underweight or overweight.

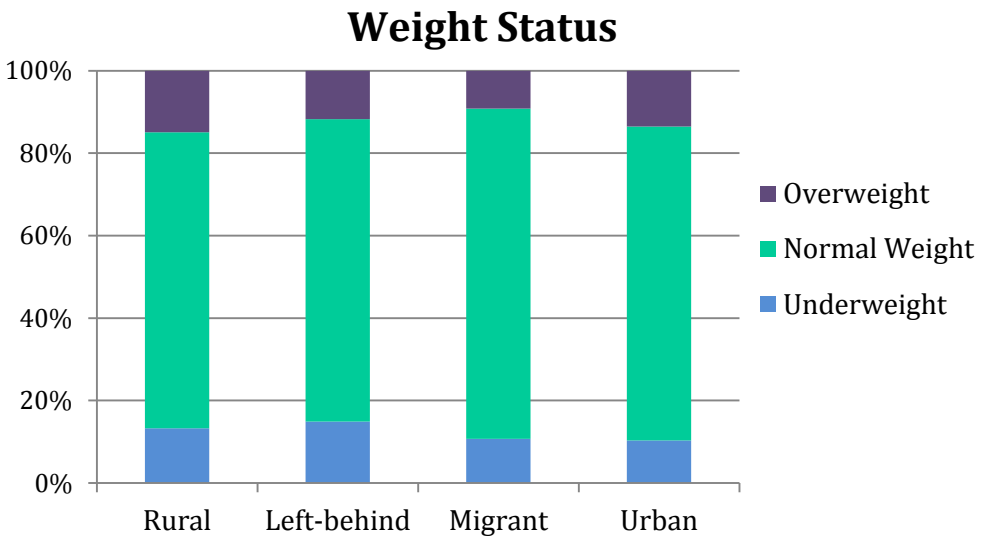


Figure 11. Weight status by type of child

Table 10. Physical health by key variables: Weight status

N=1,748	Weight Status		
	Underweight	Normal Weight	Overweight
All sample	12.99	73.91	13.10
Type of Child			
Rural	13.24	71.81	14.95
Left-behind	14.91	73.37	11.73
Migrant	10.69	80.15	9.16
Urban	10.32	76.19	13.49
Chi-square test		9.84	
Gender			
Female	14.42	75.69	9.89
Male	11.66	72.28	16.06
Chi-square test		15.92***	
Personal attributes			
Low	10.54	74.55	14.91
High	14.95	73.40	11.65
Chi-square test		10.04**	
Frequency of seeing parents per week			
None	15.38	70.94	13.68
Sometimes	11.18	80.75	8.07
Everyday	13.22	72.50	14.29
Chi-square test		11.55*	
Frequency of discussing school life with parents			
Never	12.99	67.80	19.21
Sometimes	12.03	76.39	11.58
Often	13.69	73.29	13.02
Chi-square test		8.53+	
Parents' level of education			
Illiterate	15.23	69.96	14.81
Elementary or middle school graduate	13.45	74.47	12.08
High school and above	10.44	74.76	14.81
Chi-square test		6.12	
ln (Household income last year)			
Low income	13.35	71.17	15.48
Middle income	13.56	75.49	10.95
High income	12.02	74.91	13.07
Chi-square test		6.07	
Neighborhood environment			
Poor	16.40	67.20	16.40
Medium	13.10	73.52	13.39
Rich	8.47	84.18	7.34
Chi-square test		14.33**	
Region			
East	11.43	75.65	12.93
Middle	11.34	77.78	10.88
West	16.18	68.85	14.97
Chi-square test		13.22*	

Note: Figures in table are percentages.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Last, according to Figure 12 and Table 11, urban children on average exercised most often (4.03 out of a 5-point scale). This was followed by migrant children (3.90), left-behind children (3.89), and rural children (3.79). In addition, children's frequency of exercise significantly varied by their frequency of seeing parents, frequency of discussing school life with parents, parents' levels of education, household income, neighborhood environment, and residence region. On average, children that exercised more often were those who see parents sometimes (compared with never/often), who discuss school life with parents often, whose parents graduated from high school or above, who live in high-income families or rich neighborhoods, and who live in east China.

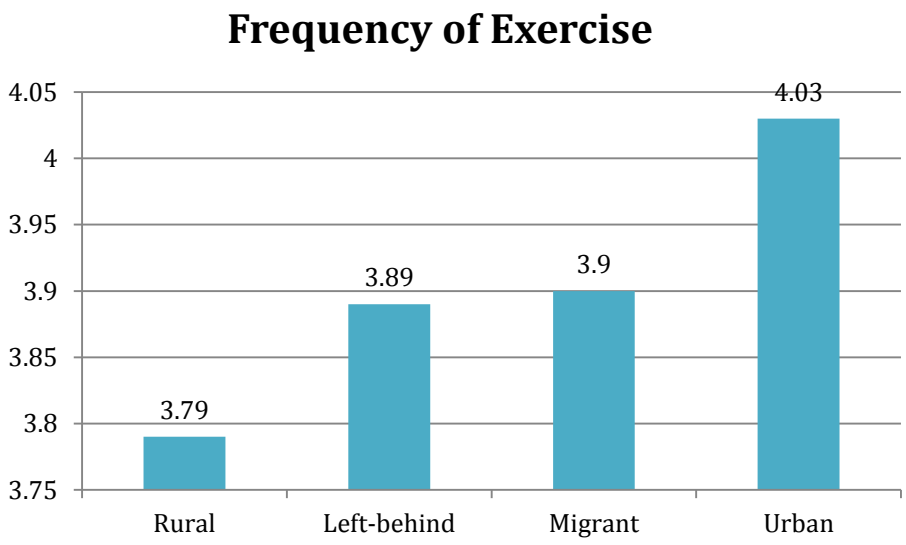


Figure 12. Frequency of exercise by type of child

Table 11. Physical health by key variables: Frequency of exercise

N=1,748	**Frequency of Exercise**
All sample	3.89 (1.15)
Type of Child	
Rural	3.79 (1.22)
Left-behind	3.89 (1.21)
Migrant	3.90 (1.02)
Urban	4.03 (0.97)
F-test	3.57*
Gender	
Female	3.86 (1.15)
Male	3.92 (1.16)
F-test	1.21
Personal attributes	
Low	3.88 (1.18)
High	3.90 (1.13)
F-test	0.12
Frequency of seeing parents per week	
None	3.84 (1.15)
Sometimes	4.03 (1.14)
Everyday	3.86 (1.15)
F-test	3.09*
Frequency of discussing school life with parents	
Never	3.58 (1.36)
Sometimes	3.88 (1.13)
Often	3.95 (1.12)
F-test	7.97***
Parents' level of education	
Illiterate	3.67 (1.29)
Elementary or middle school graduate	3.90 (1.15)
High school and above	3.97 (1.06)
F-test	5.29**
ln (Household income last year)	
Low income	3.78 (1.26)
Middle income	3.87 (1.18)
High income	4.01 (0.99)
F-test	6.01**
Neighborhood environment	
Poor	3.64 (1.40)
Medium	3.90 (1.12)
Rich	4.06 (1.07)
F-test	6.49**
Region	
East	3.96 (1.10)
Middle	3.75 (1.19)
West	3.90 (1.18)
F-test	4.27*

Note: Figures in table are means and standard deviations in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$

Multivariate Results

Tables 12–18 present the results of hierarchical regression analyses. From Model 1 to 5, the main independent variable (*type of child*) and the ecological systems were added in the regression analyses step by step. Model 1 regresses dependent variables on type of child only. Model 2 also controls for microsystem (i.e. children's gender, age, and personal attributes). Model 3 controls for mesosystem (i.e. frequency of seeing parents and frequency of discussing school life with parents) in addition to type of child and microsystem. Model 4 factors in exosystem (i.e. parents' level of education, household income, family social support, and household size). Model 5, the full model, controls for type of child and all ecological systems, including macrosystem (i.e. neighborhood environment and region).

Table 12 presents the estimates of Chinese grade by nested ordered logistic regressions. Model 1 shows that urban children had 2.07 times greater odds of having higher Chinese grades than rural children did. Similarly, migrant children and left-behind children, respectively, had 35% greater odds and 25% greater odds of having better Chinese grades than rural children did. Model 2 shows that these group differences increased after factoring in children's gender, age, and personal attributes, which indicated demographic and personal attribute variations among different child groups in the sample. The differences, however, decreased after controlling for mesosystem (as shown in Model 3). When exosystem (Model 4) and macrosystem (Model 5) were controlled for, there were no longer differences between migrant and rural children and between left-behind and rural children. Urban children, in contrast, consistently showed greater odds of having higher Chinese grades than rural children, although the difference

was substantially reduced when controlling for exo- and macro- system. As shown in Model 5, urban children had 46% greater odds of having higher Chinese grades than did rural children, when holding all variables constant. In addition, the post hoc analysis of mean differences among all child groups, as shown at the bottom of Table 12, indicates that urban children were more likely to have higher Chinese grades than were migrant children and left-behind children, while controlling for micro- and meso- systems. After factoring in exo- and macro- systems, urban children's Chinese grades did not differ from migrant or left-behind children anymore.

These models showed that exosystem (i.e. family environment) largely explained the differences among migrant, left-behind, rural, and urban children. However, urban children still performed better in Chinese grades than rural children even after controlling for all ecological systems. This suggests that the disparity between urban and rural children may result from factors other than individual attributes, family and community environment—such as school environment.

Additionally, factors that were positively associated with Chinese grades included being girls, being younger in age, having greater personal attributes, discussing school life with parents more often, parents graduated from high school and above (compared with parents that are illiterate), living in richer neighborhoods, and living in east China (compared with west China).

Table 12. Regression estimates of educational achievement: Chinese grade

N=1,748	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)	Model 4 OR (95% CI)	Model 5 OR (95% CI)
Type of Child					
Rural	---	---		---	---
Left-behind	1.25*	1.24*	1.14	1.15	1.21
	[1.02, 1.53]	[1.01, 1.53]	[0.90, 1.45]	[0.90, 1.46]	[0.95, 1.54]
Migrant	1.35+	1.45*	1.42*	1.26	1.18
	[0.97, 1.89]	[1.04, 2.03]	[1.02, 2.00]	[0.90, 1.77]	[0.84, 1.67]
Urban	2.07***	2.36***	2.26***	1.55**	1.46**
	[1.64, 2.61]	[1.86, 2.99]	[1.78, 2.88]	[1.18, 2.03]	[1.11, 1.92]
Microsystem					
Male		0.47***	0.47***	0.47***	0.47***
		[0.40, 0.56]	[0.40, 0.56]	[0.39, 0.56]	[0.39, 0.56]
Age		0.93**	0.92**	0.93**	0.93**
		[0.88, 0.98]	[0.87, 0.97]	[0.88, 0.98]	[0.88, 0.98]
Personal attributes		1.12***	1.11***	1.13***	1.13***
		[1.07, 1.16]	[1.07, 1.16]	[1.08, 1.17]	[1.08, 1.18]
Mesosystem					
Frequency of seeing parents per week			0.97	0.97	0.97
			[0.93, 1.01]	[0.93, 1.01]	[0.93, 1.02]
Frequency of discussing school life with parents			1.15***	1.12**	1.12**
			[1.06, 1.25]	[1.04, 1.22]	[1.03, 1.21]
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				1.14	1.00
				[0.87, 1.48]	[0.77, 1.32]
High school and above				2.25***	1.96***
				[1.61, 3.14]	[1.39, 2.75]
ln (Household income last year)				1.05	1.03
				[0.97, 1.14]	[0.95, 1.12]
Family received social support last year				0.86	0.85
				[0.66, 1.11]	[0.66, 1.09]
Household size				0.99	1.00
				[0.94, 1.05]	[0.95, 1.06]
Macrosystem					
Neighborhood environment					1.12**
					[1.04, 1.21]
Region					
East					---
Middle					1.07
					[0.86, 1.34]
West					0.80*
					[0.65, 0.99]
Pseudo R-square	0.01	0.03	0.04	0.05	0.05
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	0.23	0.79	1.39	0.25	0.01
Migrant = Urban	5.52*	7.10**	6.46*	1.22	1.25
Left-behind = Urban	17.83***	26.82***	22.58***	3.70+	1.40

Note: Figures in table are odds ratios (ORs) and 95% confidence intervals (CIs).
+ p< .10, * p < .05, ** p < .01, *** p < .001

Table 13 presents the estimates of math grade by ordered logistic regressions. Model 1 shows that urban children had 2.28 times greater odds of having higher math grades than rural children did. This difference remained significant after controlling for all ecological systems. The difference, however, was substantially narrowed by exosystem. In the full model (Model 5) that controls for all variables, urban children had 56% greater odds of having higher math grades than rural children. The post hoc analysis shows that urban children were more likely to get higher math grades than were migrant children and left-behind children. These differences remained significant across all models. In addition, factors that were associated with higher math grades included: younger in age, greater personal attributes, talking about school life with parents more often, parents graduated from high school and above (compared with parents that are illiterate), living in richer households, and living in richer neighborhoods.

Table 13. Regression estimates of educational achievement: Math grade

N=1,748	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)	Model 4 OR (95% CI)	Model 5 OR (95% CI)
Type of Child					
Rural	---	---		---	---
Left-behind	1.10	1.12	1.02	1.03	1.07
	[0.90, 1.35]	[0.92, 1.38]	[0.81, 1.29]	[0.82, 1.30]	[0.85, 1.35]
Migrant	1.24	1.31	1.25	1.07	1.03
	[0.89, 1.74]	[0.93, 1.83]	[0.89, 1.75]	[0.76, 1.51]	[0.73, 1.46]
Urban	2.28***	2.66***	2.48***	1.62***	1.56**
	[1.81, 2.88]	[2.10, 3.38]	[1.95, 3.16]	[1.23, 2.13]	[1.18, 2.05]
Microsystem					
Male		1.03	1.04	1.06	1.06
		[0.87, 1.22]	[0.88, 1.24]	[0.89, 1.26]	[0.89, 1.26]
Age		0.90***	0.89***	0.90***	0.90***
		[0.86, 0.95]	[0.85, 0.94]	[0.85, 0.95]	[0.85, 0.95]
Personal attributes		1.12***	1.11***	1.13***	1.13***
		[1.08, 1.17]	[1.07, 1.16]	[1.08, 1.17]	[1.08, 1.17]
Mesosystem					
Frequency of seeing parents per week			0.96+	0.97	0.97
			[0.92, 1.00]	[0.93, 1.01]	[0.93, 1.01]
Frequency of discussing school life with parents			1.26***	1.24***	1.23***
			[1.16, 1.36]	[1.14, 1.34]	[1.13, 1.33]
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				1.15	1.06
				[0.89, 1.49]	[0.82, 1.38]
High school and above				2.41***	2.20***
				[1.73, 3.36]	[1.57, 3.09]
ln (Household income last year)				1.09*	1.08+
				[1.01, 1.18]	[0.99, 1.17]
Family received social support last year				0.82	0.82
				[0.63, 1.05]	[0.63, 1.06]
Household size				1.01	1.01
				[0.95, 1.06]	[0.96, 1.07]
Macrosystem					
Neighborhood environment					1.08*
					[1.01, 1.16]
Region					
East					---
Middle					0.92
					[0.74, 1.14]
West					0.84
					[0.68, 1.04]
Pseudo R-square	0.01	0.02	0.03	0.04	0.04
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	0.46	0.75	1.19	0.05	0.03
Migrant = Urban	11.29***	15.12***	13.93***	4.76*	4.66*
Left-behind = Urban	36.94***	49.09***	39.17***	8.41**	5.51*

Note: Figures in table are odds ratios (ORs) and 95% confidence intervals (CIs).
+ p< .10, * p < .05, ** p < .01, *** p < .001

Table 14 presents the estimates of depressive symptoms by ordinary least squares regressions. Model 1 shows that urban children and migrant children, respectively, had 2.14 point and 1.63 points fewer depressive symptoms than did rural children. The post hoc analysis also showed that migrant children had fewer depressive symptoms than left-behind children. These child group differences, however, were mostly explained away by the macrosystem, except that the difference between urban and rural children remained marginally significant after controlling for all variables (when urban children had 0.91 points fewer depressive symptoms than rural children). Additionally, Model 5 shows that boys, children who had greater personal attributes, children who discussed school life with parents more often, children whose parents attained higher levels of education, and children who live in east China (compared with the west) had fewer depressive symptoms.

Table 14. Regression estimates of psychosocial outcome: Depressive symptom

N=1,748	Model 1 B (S. E.)	Model 2 B (S. E.)	Model 3 B (S. E.)	Model 4 B (S. E.)	Model 5 B (S. E.)
Type of Child					
Rural	---	---	---	---	---
Left-behind	0.04	0.06	0.39	0.34	0.04
	(0.37)	(0.37)	(0.43)	(0.42)	(0.42)
Migrant	-1.63**	-1.65**	-1.63**	-1.26*	-0.83
	(0.63)	(0.63)	(0.63)	(0.63)	(0.62)
Urban	-2.14***	-2.27***	-2.20***	-1.48**	-0.91+
	(0.43)	(0.43)	(0.44)	(0.50)	(0.49)
Microsystem					
Male		-0.55+	-0.56+	-0.49	-0.55+
		(0.32)	(0.32)	(0.32)	(0.31)
Age		0.01	0.04	0.03	0.01
		(0.10)	(0.10)	(0.10)	(0.10)
Personal attributes		-0.12	-0.10	-0.14+	-0.13+
		(0.07)	(0.07)	(0.07)	(0.07)
Mesosystem					
Frequency of seeing parents per week			0.13+	0.12	0.07
			(0.08)	(0.08)	(0.08)
Frequency of discussing school life with parents			-0.29*	-0.23	-0.24+
			(0.14)	(0.14)	(0.14)
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				-1.63***	-0.82+
				(0.47)	(0.47)
High school and above				-2.01***	-1.21*
				(0.60)	(0.60)
ln (Household income last year)				-0.27+	-0.18
				(0.15)	(0.14)
Family received social support last year				0.46	0.62
				(0.46)	(0.46)
Household size				0.18+	0.11
				(0.10)	(0.10)
Macrosystem					
Neighborhood environment					-0.08
					(0.13)
Region					
East					---
Middle					0.24
					(0.39)
West					2.98***
					(0.38)
Constant	12.07***	13.43***	13.02***	16.55***	15.05***
	(0.26)	(1.39)	(1.59)	(2.23)	(2.23)
R-square	0.02	0.02	0.03	0.04	0.08
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	6.93**	7.28**	8.98**	5.57*	1.66
Migrant = Urban	0.59	0.86	0.74	0.11	0.01
Left-behind = Urban	25.47***	28.02***	26.26***	10.61**	2.85+

Note: Figures in table are OLS regression coefficients and standard errors.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Table 15 presents the estimates of popularity by ordinary least squares regressions. Model 1 shows that migrant children and urban children both rated themselves 0.36 points more popular than rural children did. Models 2 and 3 show that the difference between migrant and rural children remained stable when controlling for micro- and meso- systems. This difference, however, were largely reduced when adding macrosystem in the analyses. The difference between urban and rural children, similarly, became marginally significant when factoring in exosystem and no longer significant when factoring in macrosystem. These changes suggest that the difference between rural, migrant, and urban children were linked to their broader environments. The post hoc tests among all child groups suggest that urban and migrant children both rated themselves more popular than left-behind children did; these group differences, however, disappeared in the full model. In addition, girls, children with greater personal attributes, children that more often talked about school life with parents, and children that live in east China (compared with the west) rated themselves more popular than did their counterparts.

Table 15. Regression estimates of psychosocial outcome: Level of popularity

N=1,748	Model 1 B (S. E.)	Model 2 B (S. E.)	Model 3 B (S. E.)	Model 4 B (S. E.)	Model 5 B (S. E.)
Type of Child					
Rural	---	---	---	---	---
Left-behind	-0.07	-0.10	-0.07	-0.07	-0.02
	(0.12)	(0.12)	(0.13)	(0.13)	(0.13)
Migrant	0.36+	0.36+	0.33+	0.30	0.24
	(0.20)	(0.19)	(0.19)	(0.20)	(0.20)
Urban	0.36**	0.40**	0.35**	0.28+	0.21
	(0.13)	(0.13)	(0.14)	(0.16)	(0.16)
Microsystem					
Male		-0.17+	-0.17+	-0.18+	-0.17+
		(0.10)	(0.10)	(0.10)	(0.10)
Age		0.05	0.05	0.05	0.05
		(0.03)	(0.03)	(0.03)	(0.03)
Personal attributes		0.05*	0.05*	0.05*	0.05*
		(0.02)	(0.02)	(0.02)	(0.02)
Mesosystem					
Frequency of seeing parents per week			0.01	0.01	0.01
			(0.02)	(0.02)	(0.02)
Frequency of discussing school life with parents			0.10*	0.09*	0.09*
			(0.04)	(0.05)	(0.05)
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				0.02	-0.08
				(0.15)	(0.15)
High school and above				0.04	-0.07
				(0.19)	(0.19)
ln (Household income last year)				0.05	0.04
				(0.05)	(0.05)
Family received social support last year				-0.12	-0.13
				(0.14)	(0.14)
Household size				-0.04	-0.03
				(0.03)	(0.03)
Macrosystem					
Neighborhood environment					0.05
					(0.04)
Region					
East					---
Middle					0.004
					(0.12)
West					-0.30*
					(0.12)
Constant	6.99***	5.96***	5.64***	5.29***	5.33***
	(0.08)	(0.43)	(0.49)	(0.69)	(0.71)
R-square	0.01	0.02	0.02	0.02	0.03
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	4.69*	5.47*	3.85*	2.98+	1.53
Migrant = Urban	0.00	0.03	0.01	0.01	0.02
Left-behind = Urban	10.50**	13.33***	7.37**	3.96*	1.80

Note: Figures in table are OLS regression coefficients and standard errors.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Table 16 presents estimates of confidence about the future by ordinary least squares regressions. Among the sampled children, urban children were more confident about their future than rural children were, even when all ecological systems were controlled for. This difference was relatively stable across all models. According to Model 5, when holding all ecological systems constant, urban children still felt 0.43 points more confident about their future than rural children did. In addition, the post hoc analysis among other child groups shows that urban children were more confident about their future than left-behind children. Factors associated with greater confidence about the future included being younger in age, having greater personal attributes, talking about school with parents more often, and living in richer families or neighborhoods.

Table 16. Regression estimates of psychosocial outcome: Confidence about the future

N=1,748	Model 1 B (S. E.)	Model 2 B (S. E.)	Model 3 B (S. E.)	Model 4 B (S. E.)	Model 5 B (S. E.)
Type of Child					
Rural	---	---	---	---	---
Left-behind	-0.03	-0.04	-0.09	-0.09	-0.07
	(0.12)	(0.12)	(0.13)	(0.13)	(0.13)
Migrant	0.21	0.24	0.22	0.15	0.14
	(0.20)	(0.19)	(0.19)	(0.20)	(0.20)
Urban	0.48***	0.59***	0.53***	0.43**	0.43**
	(0.13)	(0.13)	(0.14)	(0.15)	(0.16)
Microsystem					
Male		0.04	0.04	0.03	0.02
		(0.10)	(0.10)	(0.10)	(0.10)
Age		-0.05+	-0.06+	-0.05+	-0.05+
		(0.03)	(0.03)	(0.03)	(0.03)
Personal attributes		0.10***	0.09***	0.10***	0.10***
		(0.02)	(0.02)	(0.02)	(0.02)
Mesosystem					
Frequency of seeing parents per week			-0.02	-0.02	-0.02
			(0.02)	(0.02)	(0.02)
Frequency of discussing school life with parents			0.16***	0.16***	0.16***
			(0.04)	(0.05)	(0.05)
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				0.09	0.06
				(0.15)	(0.15)
High school and above				0.08	0.04
				(0.19)	(0.19)
ln (Household income last year)				0.13**	0.12**
				(0.05)	(0.05)
Family received social support last year				-0.12	-0.11
				(0.14)	(0.14)
Household size				-0.02	-0.02
				(0.03)	(0.03)
Macrosystem					
Neighborhood environment					0.07+
					(0.04)
Region					
East					---
Middle					-0.02
					(0.12)
West					0.03
					(0.12)
Constant	7.60***	7.11***	6.87***	5.55***	5.38***
	(0.08)	(0.43)	(0.49)	(0.69)	(0.70)
R-square	0.01	0.02	0.03	0.04	0.04
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	1.57	2.09	2.13	1.29	0.94
Migrant = Urban	1.69	2.84+	2.32	1.67	1.85
Left-behind = Urban	14.76***	21.54***	15.65***	8.77**	7.83**

Note: Figures in table are OLS regression coefficients and standard errors.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Table 17 presents multinomial regression results of child weight status. Across all models, the four child groups did not significantly differ in weight status. The only exception was that migrant children had 44% lower odds of being overweight than normal weight compared with rural children while controlling for microsystem (Model 2) and mesosystem (Model 3), which was possibly due to sample difference between the child groups. In contrast, weight status was more related to children's micro- and macro-systems. With respect to microsystem, Model 1 to 5 consistently showed that girls were less likely to be overweight than normal weight compared with boys; older children were more likely to be normal weight than younger ones. With respect to macrosystem, children from richer neighborhood and those living in the east (compared with the west) were less likely to be underweight than normal weight.

Table 17. Regression estimates of physical health: Weight status

N=1,748	Model 1		Model 2		Model 3		Model 4		Model 5	
	Underweight/ Normal	Overweight/ Normal	Underweight/ Normal	Overweight/ Normal	Underweight/ Normal	Overweight/ Normal	Underweight/ Normal	Overweight/ Normal	Underweight/ Normal	Overweight/ Normal
	RRR [95% Confidence Interval]		RRR [95% Confidence Interval]		RRR [95% Confidence Interval]		RRR [95% Confidence Interval]		RRR [95% Confidence Interval]	
Type of Child										
Migrant	0.72	0.55	0.75	0.56+	0.72	0.56+	0.77	0.58	0.84	0.62
	[0.40, 1.32]	[0.29, 1.04]	[0.41, 1.37]	[0.29, 1.06]	[0.39, 1.32]	[0.29, 1.07]	[0.42, 1.41]	[0.30, 1.11]	[0.45, 1.55]	[0.32, 1.20]
Left-behind	1.10	0.77	1.12	0.86	1.31	0.98	1.29	0.97	1.21	0.93
	[0.80, 1.53]	[0.55, 1.07]	[0.80, 1.55]	[0.61, 1.21]	[0.91, 1.89]	[0.66, 1.44]	[0.89, 1.86]	[0.66, 1.43]	[0.83, 1.76]	[0.63, 1.38]
Rural	---	---	---	---	---	---	---	---	---	---
Urban	0.73	0.85	0.80	0.93	0.75	0.94	0.86	0.92	0.94	0.99
	[0.49, 1.10]	[0.59, 1.23]	[0.53, 1.20]	[0.63, 1.36]	[0.49, 1.14]	[0.64, 1.39]	[0.53, 1.38]	[0.59, 1.44]	[0.58, 1.52]	[0.63, 1.56]
Microsystem										
Male			0.87	1.66***	0.87	1.67***	0.87	1.69***	0.86	1.67***
			[0.65, 1.16]	[1.24, 2.24]	[0.65, 1.15]	[1.24, 2.25]	[0.65, 1.16]	[1.25, 2.28]	[0.64, 1.15]	[1.23, 2.26]
Age			0.92+	0.71***	0.93	0.72***	0.93+	0.72***	0.92+	0.72***
			[0.84, 1.00]	[0.65, 0.78]	[0.85, 1.01]	[0.65, 0.79]	[0.85, 1.01]	[0.65, 0.79]	[0.85, 1.01]	[0.65, 0.79]
Personal Attributes			1.07*	0.98	1.07*	0.99	1.07+	0.99	1.06+	0.98
			[1.00, 1.15]	[0.92, 1.05]	[1.00, 1.15]	[0.93, 1.05]	[1.00, 1.14]	[0.92, 1.05]	[0.99, 1.14]	[0.92, 1.05]
Mesosystem										
Frequency of seeing parents per week					1.06+	1.06	1.06+	1.05	1.05	1.04
					[0.99, 1.14]	[0.98, 1.14]	[0.99, 1.13]	[0.98, 1.13]	[0.98, 1.13]	[0.97, 1.13]
Frequency of discussing school with parents					1.07	0.94	1.08	0.93	1.08	0.94
					[0.94, 1.22]	[0.82, 1.07]	[0.94, 1.23]	[0.82, 1.06]	[0.95, 1.23]	[0.82, 1.07]
Exosystem										
Parents' level of education										
Illiterate							---	---	---	---
Elementary or middle school graduate							0.91	0.76	1.05	0.85
							[0.60, 1.36]	[0.49, 1.16]	[0.69, 1.60]	[0.55, 1.31]
High school and above							0.79	0.95	0.93	1.08
							[0.45, 1.37]	[0.56, 1.63]	[0.53, 1.63]	[0.62, 1.87]
ln (Household income last year)							0.95	0.93	0.97	0.95
							[0.83, 1.08]	[0.82, 1.07]	[0.85, 1.11]	[0.83, 1.09]
Family received social support							1.36	1.06	1.39	1.06
							[0.92, 2.03]	[0.69, 1.62]	[0.93, 2.07]	[0.69, 1.63]
Household size							1.02	1.02	1.01	1.01
							[0.93, 1.12]	[0.93, 1.12]	[0.92, 1.11]	[0.92, 1.12]

Macrosystem										
Neighborhood environment									0.89*	0.91
									[0.79, 1.00]	[0.81, 1.03]
Region										
East									---	---
Middle									0.98	0.85
									[0.67, 1.44]	[0.58, 1.26]
West									1.40+	1.23
									[0.99, 1.98]	[0.87, 1.74]
Constant	0.18***	0.21***	0.27*	11.38***	0.13**	8.28**	0.22	19.67**	0.26	22.18**
	[0.15, 0.23]	[0.17, 0.26]	[0.08, 0.98]	[3.25, 39.86]	[0.03, 0.57]	[1.94, 35.42]	[0.03, 1.70]	[2.46, 157.62]	[0.03, 2.04]	[2.62, 187.55]
Pseudo R-square	0.004		0.03		0.04		0.04		0.05	
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	1.88	1.03	1.70	1.68	3.40+	2.56	2.50	2.11	1.23	1.31
Migrant = Urban	0.00	1.65	0.04	2.15	0.02	2.24	0.10	1.70	0.11	1.71
Left-behind = Urban	3.86*	0.27	2.59	0.12	5.56*	0.03	2.38	0.04	0.89	0.05

Note: Figures in table are relative risk ratios (RRRs) and 95% confidence intervals.
+ p< .10, * p < .05, ** p < .01, *** p < .001

Last, Table 18 presents estimates of frequency of exercise by ordinary least squares regressions. Model 1 shows that urban children exercised 0.24 points more frequently than rural children did. This difference was stable when controlling for micro- and meso- systems but decreased when controlling for exo- and macro- systems. While holding all ecological systems constant (Model 5), urban children still exercised 0.17 points more frequently than rural children did. Migrant children and left-behind children, in contrast, did not differ from rural children across all models. In addition, children that exercised more often were those who were older in age, who talked about school with parents more often, whose parents graduated from elementary or middle school (compared with whose parents were illiterate), who live in richer families or neighborhoods, and who live in east China (compared with those living in mid-China).

Table 18. Regression estimates of physical health: Frequency of exercise

N=1,748	Model 1 B (S. E.)	Model 2 B (S. E.)	Model 3 B (S. E.)	Model 4 B (S. E.)	Model 5 B (S. E.)
Type of Child					
Migrant	0.11	0.10	0.09	0.04	0.05
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Left-behind	0.10	0.08	0.03	0.03	0.04
	(0.07)	(0.07)	(0.08)	(0.07)	(0.08)
Rural	---	---	---	---	---
Urban	0.24**	0.24**	0.22**	0.15+	0.17*
	(0.08)	(0.08)	(0.08)	(0.09)	(0.09)
Microsystem					
Male		0.08	0.08	0.07	0.06
		(0.06)	(0.06)	(0.06)	(0.06)
Age		0.06***	0.06**	0.06***	0.06***
		(0.02)	(0.02)	(0.02)	(0.02)
Personal Attributes		0.01	0.01	0.01	0.01
		(0.01)	(0.01)	(0.01)	(0.01)
Mesosystem					
Frequency of seeing parents per week			-0.02	-0.02	-0.02+
			(0.01)	(0.01)	(0.01)
Frequency of discussing school life with parents			0.07**	0.07**	0.06*
			(0.03)	(0.03)	(0.03)
Exosystem					
Parents' level of education					
Illiterate				---	---
Elementary or middle school graduate				0.18*	0.19*
				(0.08)	(0.08)
High school and above				0.14	0.14
				(0.11)	(0.11)
ln (Household income last year)				0.07**	0.07**
				(0.03)	(0.03)
Family received social support last year				-0.04	-0.04
				(0.08)	(0.08)
Household size				-0.02	-0.02
				(0.02)	(0.02)
Macrosystem					
Neighborhood environment					0.05*
					(0.02)
Region					
East					---
Middle					-0.20**
					(0.07)
West					0.05
					(0.07)
Constant	3.79***	2.91***	2.90***	2.08***	2.00***
	(0.05)	(0.24)	(0.28)	(0.39)	(0.40)
R-square	0.01	0.02	0.02	0.03	0.04
Test (child group x = child group y)	**F ratio**	**F ratio**	**F ratio**	**F ratio**	**F ratio**
Migrant = Left-behind	0.00	0.03	0.25	0.01	0.00
Migrant = Urban	1.31	1.44	1.19	0.78	1.04
Left-behind = Urban	3.43+	4.29*	4.43*	1.4	1.67

Note: Figures in table are OLS regression coefficients and standard errors.
+ p< .10, * p < .05, ** p < .01, *** p < .001

In sum, these analyses suggest significant differences among Chinese migrant, left-behind, rural, and urban children in their educational achievement, psychosocial outcomes, and physical health, except for weight status. In addition, these children's educational achievements significantly differed by their personal attributes, frequency of parent–child discussion on school life, parents' level of education, household income, neighborhood environment, and region that their families live in. All psychosocial outcomes differed by frequency of parent–child discussion on school life. Physical health varied by children's frequency of seeing parents, frequency of discussing school life with parents, neighborhood environment, and region that their families live in.

Discussion and Implications

Effects of migration and residency status. The first model of all analyses suggests that children's migration and residency status attributes to their well-being. As shown in Figure 13, children's migration and residency statuses are defined by their living areas, *hukou* status, parental presence, and migration patterns, all of which jointly influence child well-being.

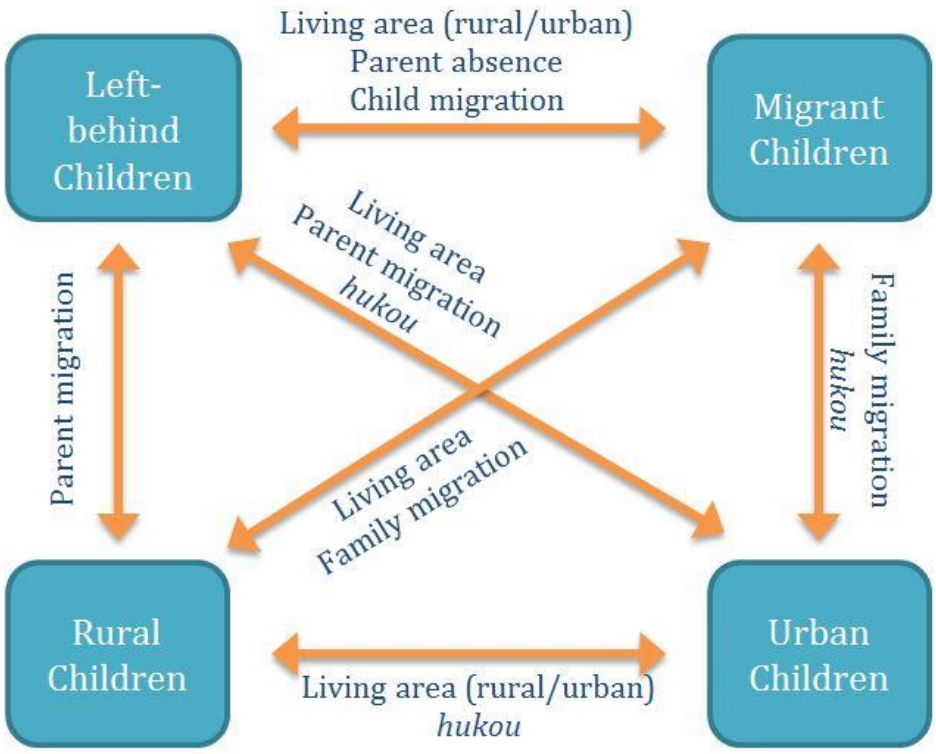


Figure 13. Differences in migration and residency status across child groups

First, with respect to educational achievement, urban children, who live in cities with local *hukou*, had higher Chinese and math grades than did rural children. Migrant children's Chinese grades were also higher than rural children's. In contrast to recent findings that migration disrupts children's schooling (Devine, 2013; Hamilton, 2013), this study did not find that migrant children performed poorer than rural children in school. This suggests that living in urban areas could bring about greater educational achievement. This urban–rural disparity may result from better living environments and educational quality in urban areas overall.

Migrant children, however, had poorer Chinese and math grades than urban children did, although both of them living in urban areas. This suggests that rural *hukou*

and family migration may adversely impact migrant children's schooling. For instance, due to *hukou* restriction, migrant children can hardly enroll in urban public schools and are excluded from many urban educational benefits (Dong, 2010; Wang & Holland, 2011).

Counter to the literature (Lee, 2011; Lu et al., 2016), this study found that left-behind children's Chinese grades were better than rural children's. There are several possible explanations for this result. For example, left-behind children may benefit from migrant parents' remittances, which enable the families to spend more on education. The extended family members may provide adequate kinship care that substitutes for parental care. This finding warrants further exploration of left-behind children's resilience, which allows them to positively adapt within significant adversities.

Second, with respect to psychosocial outcomes, urban children and migrant children reported fewer depressive symptoms and rated themselves more popular than rural children did. This result indicates that living in cities may benefit children's psychosocial development overall. It also suggests that migrating to a better environment—in this case, urban China—can positively influence child development, in contrast to previous studies that found migration causes children more distress and interpersonal problems (Hamilton, 2013; Lu et al., 2016). Based on resilience theory, this positive effect could be a result of migrant children's personal attributes, their social/family support, and the better urban environment in general. These resilience factors were also further examined in my hierarchical regression models.

In addition, migrant children and left-behind children, although both are affected by parental migration, have different psychosocial outcomes. Migrant children reported

fewer depressive symptoms and more popularity than did left-behind children. In line with literature (Hu et al., 2014; Jia & Tian, 2010), this finding confirms that parent-only migration results in more challenges and poorer child psychological outcomes.

Counter to my expectation that living in cities may give migrant children more hope about the future, this study found no difference among migrant, rural, and left-behind children's confidence about their future. Only urban children, who live in cities with local *hukou*, were significantly more confident about their future than were rural children and left-behind children. This finding suggests that migrant children, although living in cities, may still feel uncertain about their future because of their *hukou* status and their disadvantaged social, economic, and policy environments. The qualitative phase further explored this issue through interviews with migrant parents and children.

Last, with respect to physical health, urban children were more likely to be normal weight than underweight than left-behind children. One reason could be that urban families pay more attention to children's nutritional needs than do rural families overall. Urban schools offer more health education—which is usually lacking in rural areas—to improve students' and their parents' awareness and knowledge of fitness, health, and nutrition (Ministry of Education of China, 2012). The disparity between urban children and left-behind children may also result from parental absence. Prior research suggests that the main caregivers of many left-behind children, grandparents or extended family members oftentimes, are unable to provide adequate hygiene and nutrition support (UNICEF, 2010). Parental migration makes families spend less time preparing and cooking food, and therefore, causes lower quality and smaller amounts of left-behind children's food consumption (De Brauw & Mu, 2011).

Urban children also exercised more often than did rural children and left-behind children. On the one hand, this again manifests urban children's greater awareness of physical exercise and health than children living in rural areas. This may be due to the fact that urban schools offer Physical Education classes more regularly (Ministry of Education of China, 2013). On the other hand, this finding could result from children's varied conception of "physical exercise" in answering the survey, which was measured by the question "How frequently did you exercise (including PE class at school) in the past month." Studies show that rural children, especially left-behind children, spend more time on farm work and domestic chores (Chang, Dong, & MacPhail, 2011; International Labour Organization, 2010) than their peers do. These works, although demand physical labor, may not be considered "exercise" by rural children and left-behind children, but more of daily routines to them.

Effects of ecological systems. The results also highlight the relevance of ecological environment to child development. Much of the migration and residency status' association with child well-being is explained by factors within children's ecological systems.

With respect to educational achievement, urban children's advantage in Chinese grades over migrant children, as well as migrant children's advantage over rural children, lose statistical significance when controlling for the exosystem. More specifically, the differences are explained away by parents' levels of education. This indicates that household environment influences children's school performance. Left-behind children's advantage in Chinese grades over rural children also disappear when controlling for the meso-, exo-, and macro- system. This means that the difference between left-behind and

rural children's Chinese grades is actually due to their frequency of discussing school life with parents, parents' education, neighborhood environment, and regions that they live in.

Urban children's Chinese grades, however, remain significantly higher than rural children, even after controlling for all ecological systems. Urban children also constantly hold advantages in math grades over rural, left-behind, and migrant children. This constant significance elucidates that child educational disparity results from factors that are not controlled in this study. One possible explanation is school environment. Chinese governments allocate much more educational resources in urban public schools than in migrant schools and rural schools. Students in rural areas are challenged by lower educational quality and worse school infrastructure than their urban peers (Hu et al., 2014). Due to *hukou* restrictions, migrant children also face substandard school environment as they enroll in urban migrant schools, where teaching quality and school facility are incomparable with public schools (Dong, 2010; Guo et al., 2005).

With respect to psychosocial outcomes, migrant and urban children's advantages in depressive symptoms over rural and left-behind children become less significant when factoring in the exosystem and lose significance or become marginally significant when factoring in the macrosystem. Therefore, migration and residency status' positive association with child psychosocial outcome is driven by children's broader household, neighborhood, and social environment. Similarly, migrant and urban children's higher popularity, compared with rural and left-behind children's, is explained by their exo- and macro- system. But none of the ecological systems explain the association of child type with confidence about the future. Urban children are constantly more confident about

their future than are rural and left-behind children. The unmeasured school environment and other urban–rural inequalities, again, may play an important role in this result.

Last, in terms of physical health, child weight status is largely associated with ecological systems, particularly the micro- and macro- system—in this study, children's own characteristics, their neighborhood environment, and geographic location. The exosystem narrows the difference between urban and left-behind children's frequency of exercise, which suggests that household environment plays an important role in child health. Ecological systems, however, do not mitigate the difference between urban and non-left-behind rural children's frequency of exercise. Urban children exercise more often than rural children do, even when controlling for ecological systems. This unexplained difference, again, may result from the urban–rural disparity in health education and children's varied conception of "physical exercise."

Risk/resilience factors in ecological systems. Individuals' developmental outcomes are largely determined by the interplay of adverse (i.e. risk) and protective (i.e. resilience) factors. These factors may derive from individual themselves, interpersonal and social relationship, and environment (Graham & Yeoh, 2013; Jenson & Fraser, 2010; Luthar et al., 2000). In this study, I examined children's risk and resilience within each of their ecological subsystems.

Microsystem. In the microsystem, gender has mixed effects on child well-being. Being a girl is associated with higher Chinese grades, more popularity, and less likelihood to be overweight. Girls, however, are at higher risk of depressive symptoms. This suggests that girls may handle better in schooling, peer relationship, and nutritional balance. But girls may internalize negative emotions more than boys do. Girls—and those

experienced family/parental migration in particular—could be more emotionally vulnerable and therefore need more psychological comfort. Prior research shows that boys may exhibit more externalizing problems, such as conduct problems and hyperactivity (Hu et al., 2014). Given that this study only measures internal psychosocial problem, the gender differences in child psychosocial outcomes warrant further examination.

Age could also be either a risk or resilience factor for different well-being dimensions. On the one hand, the findings suggest that younger in age is related to higher Chinese and math grades, which may be due to the fact that Chinese and math tests get more difficult in higher grades. Younger in age also indicates more confidence about the future. This may suggest that older children have more concern about their future as they have more life experiences. On the other hand, younger children are more likely to be overweight and exercise less often. In line with previous research (De Brauw & Mu, 2011; Lu et al., 2016; Monda & Popkin, 2005), families, especially rural families, may take care of younger children more often while sometimes ask older children to take on household chores, which could cause older children's more physical work and nutritional consumption.

Positive personal attribute is overall a protective factor for child well-being. Higher personal attributes are associated with better Chinese and math grades, fewer depressive symptoms, more popularity, and more confidence about the future. In this study, personal attribute, measured by ability to concentrate, complete tasks, and organize, embodies the concept "Executive Function," which means a set of cognitive control processes that regulate one's thoughts and behaviors (Miyake & Friedman, 2012).

Executive Functions involve ability to control attention and inhibit irrelevant information, task initiation and shift, planning, and organization of materials (Miyake & Friedman, 2012; Titz & Karbach, 2014). Studies show that Executive Function training can improve academic and psychological outcomes (Blair & Razza, 2007; Titz & Karbach, 2014).

In accordance, this study confirms that children's high personal attributes, which exemplify their Executive Functions, are linked to better academic and psychosocial outcomes. This finding illuminates the importance of building resilience within children themselves. It particularly calls for the Chinese governments, schools, and social service agencies to provide targeted programs/services for the vulnerable child groups—migrant and left-behind children. Potential programs/services can involve developing coping strategy for daily-life challenges, Executive Function trainings, and mindfulness cognitive training (Titz & Karbach, 2014). Finally, there remains a puzzling finding that high personal attributes is linked to more likelihood of underweight. Given that little research has discussed the relationship between Chinese children's personal attributes and weight status, this relation warrants future exploration.

Mesosystem. In this study, the mesosystem includes frequency of seeing parents, which indicates *quantity* of parent–child interaction, and frequency of discussing school life with parents, which indicates *quality* of parent–child interaction. The findings suggest that quantity of parent–child interaction is not associated with child well-being; but quality of parent–child interaction is an important protective factor for child well-being. Higher quantity is only marginally related to lower frequency of exercise; higher quality of parent–child interaction is associated with better Chinese and math grades, fewer depressive symptoms, more popularity, more confidence about the future, and more

physical exercise. In other words, parental involvement in child school life improves child developmental outcomes.

This finding supports the argument that interpersonal and social protective factors for children include strong attachment to parents and harmonious family relationship (Bowlby, 1969; Daniel & Wassell, 2002; Jenson & Fraser, 2010). The amount of time parents spend with their children is less important than the extent of communication and bonding between them. This finding is particularly relevant for left-behind children and their families. Even though their parents cannot visit home often, parents can be more attentive to child emotional and social development when chatting over the phone or Internet to improve children's academic, psychosocial, and health outcomes.

Exosystem. In the exosystem, higher parent education predicts children's higher Chinese and math grades (the link is particularly evident between children whose parents graduated from high school or above and those whose parents are illiterate), fewer depressive symptoms, and more physical exercise (comparing those whose parents graduated from elementary/middle school to those whose parents are illiterate). Higher household income also predicts children's better math grades, more confidence about the future, and more physical exercise. Family social support and household size, however, do not significantly impacts child well-being.

These findings suggest that parental human capital (i.e. parents' knowledge and skills) impacts child development. High parent socioeconomic status, which involves parent education and income, is an important resilience factor for child well-being. Rural parents may migrate to cities for better jobs and interests for their families. But they often turn out to work in poor conditions (Wang, 2014), hold low-income, low-skill jobs (Li &

Li, 2007), work for longer hours (Li & Li, 2007; UNICEF, 2010), and receive few public and employment benefits (Wong et al., 2007; Xu et al., 2011). This could be due to rural migrants' poorer educational background; but more importantly, the migrants' job opportunities and benefits are much limited by their *hukou* restrictions (Wong et al., 2007).

Consequently, migrant parents' poorer educational background and lower income put them in a disadvantaged socioeconomic status in urban areas. The parents' disadvantages limit their children's economic capital (e.g. household income), cultural capital (e.g. educational quality), and social capital (e.g. social network and social support; Bourdieu, 1986).

These findings highlight the importance of improving migrant workers' human capital and socioeconomic status. This can be achieved in several ways. For instance, governments should entitle migrant workers to equal employment rights and benefits as urban workers. Social service agencies (both public and private ones) can provide job skill training and continuing education for migrant workers.

Macrosystem. In the macrosystem, richer neighborhood environment is a protective factor that links to higher Chinese and math grades, more confidence about the future, less likelihood of underweight, and more physical exercise. As extensively discussed in previous literature, neighborhood poverty is a risk factor for child outcomes and neighborhood affluence is a protective factor (for example, Leventhal & Brooks-Gunn, 2000). Richer neighborhoods positively influence child outcomes in several ways. They provide better learning and social environments, such as parks and community centers (Jencks & Mayer, 1990). They also allow more resources to flow within the

community network (Wu et al., 2014) and provide greater social capital for individual growth (Bourdieu, 1986).

This study affirms that developing neighborhood environments improves child academic, psychosocial, and health outcomes. A better neighborhood involves two aspects: neighborhood physical environment and community social capital. Local governments should input more resources in neighborhood physical environment, for example, building community reading room, playground, community center, fitness equipment, and daycare center. This is particularly helpful for children living in rural neighborhoods, where infrastructure development is much lagging. Meanwhile, community organizations and families can focus on developing community social capital, which involves building community norms and sense of belonging. The neighborhood may also collectively function for child supervision. For example, community centers could organize afterschool activities and homework tutor sessions. This will be especially meaningful for migrant and left-behind children, whose parents are often not available.

Another macrosystem factor, family geographic region, also makes a difference. As a protective factor, living in east China predicts higher Chinese grades, fewer depressive symptoms, more popularity, and less likelihood of underweight, compared with those living in west China. Living in the east is also linked to more frequent exercise than living in mid-China. This regional disparity could result from China's long-standing socioeconomic inequality across the east, mid, and west. Based on China's official regional division (National Bureau of Statistics of China, 2011), the east (the more coastal, plain terrain) is in the best economic condition, followed by the mid, and then, the west (the more inland, mountainous area).

Regional economic conditions determine families' access to educational resources. In mid and west China—particularly in rural, remote, poor areas—middle school dropout rates are much higher than that in east China (Ministry of Education of China, 2013). The dropouts are explained by multiple reasons. To name a few, parental migration causes child frequent move among schools and disrupts child school attendance. Schools are too far from home in certain remote areas, which discourages younger students to continue attending school. Students lack interest in studying because of low teaching quality. Parents think that children quit school to work is financially more beneficial for the family (Ministry of Education of China, 2013).

Families' access to nutrition and healthcare resources also varies by regional socioeconomic status. West China has the highest infant and maternal mortality and the lowest vaccination coverage, followed by central regions; the east is doing the best. In addition, water supply and sanitation facilities in the western and central regions lag behind the east (UNICEF, 2010). The regional socioeconomic status disparity could also lead to more psychosocial problems for children living in the west and central China.

The regional disparity in child well-being has three implications. First, it is urgent for local governments in the mid and west China to improve education quality and offer more healthcare resources. Second, while local governments in these regions may lack funding due to their economic conditions, the Chinese central government should allocate more resources in these provinces for a more balanced regional development. Last, in addition to governments' efforts, the nonprofit sector can also play an important role. Nonprofits can deliver more services/programs in the mid and west China, especially for the vulnerable populations in these regions, including migrant and left-behind children.

Summary

In sum, the quantitative analyses show that child well-being is associated with child migration and residency status. In general, living in urban areas benefits children's educational achievement and psychosocial development. Migrant children, however, perform poorer in school grades than urban children, even though they both live in urban areas. This difference suggests that family migration and *hukou* status may adversely impact child education. In addition, parent-only migration imposes more challenges for the psychosocial development of left-behind children. This suggests the relevance of parental involvement in child development.

Much of these child group differences, however, are explained away by children's ecological systems, particularly the exosystem (i.e. parent educational background and household income) and macrosystem (i.e. neighborhood environment and geographic location). This finding suggests that the broader household, neighborhood, and social environments largely influence child well-being.

There are, however, group differences that cannot be explained by child migration and residency status or ecological systems. Urban children constantly perform better in most well-being measures than do rural children, even when controlling for all ecological systems. This robust group difference may result from China's long-standing rural–urban inequality, which is embodied in urban areas' better school environment, higher educational quality, better economic condition, and more healthcare resources.

The findings also illuminate how ecological systems influence child well-being. More specifically, within each subsystem, which factors adversely and which ones positively impact children. In the microsystem, age and gender show mixed effects,

which warrant further exploration. Positive personal attribute is overall a protective factor for child well-being through the mechanisms of Executive Function. In the mesosystem, child well-being is not linked to the quantity of seeing parents; instead, it is the quality of parent–child communication that makes a difference. In the exosystem, higher parent education and household income predict better child developmental outcomes. In the macrosystem, living in better neighborhoods (i.e. where families have more educational/healthcare/social resources) and living in east China (i.e. the coastal, more economically developed regions) predict better child well-being.

All these findings call for the governments' and social organizations' (such as nonprofits) intervention through child ecological systems to improve migrant and left-behind children's well-being. These interventions may include improving migrant and left-behind children's coping skills and cognitive function, increasing parental involvement in child life, enhancing migrant families' socioeconomic status, improving migrant schools and rural schools' environment, developing migrant families' neighborhood environment, reducing regional inequalities, and most importantly, reforming the *hukou*-based public resource provisions.

Limitations

There are several limitations to the quantitative study. First, the unclear temporal sequence of certain measures makes it possible to establish only correlation, not causation. For instance, child personal attributes might have led to more depressive symptoms; but the presence of depressive symptoms might also affect child personal attributes. Although the China Family Panel Studies (CFPS) is a longitudinal survey, certain measures (e.g. the full CES-D scale) in the second wave (in the year of 2012)

were not included in the first wave (in the year of 2010, baseline, pilot survey). As a result, this dissertation only uses CFPS as cross-sectional data. Future analyses can identify direction of the associations when more waves are available.

Second, the measure choices are limited by the existing dataset. For example, child temperament is an important personal attribute that influences child development (Rush, Lengua, & Colder, 2010). The proximal measures in the CFPS data, however, were child's ability to concentrate ("the child can concentrate when he/she is working on something"), complete tasks ("the child always completes things once he/she starts"), and organize ("the child likes to arrange his/her things in order"). This study combines these three items into a personal attribute scale, which has moderate reliability (Cronbach's alpha=0.64). Future studies can employ more reliable measures upon data availability. In this dissertation, this limitation is addressed by using qualitative interviews to identify migrant children's individual strengths and weaknesses that may influence their development. The qualitative findings are discussed in the next chapter.

Third, among the 2,287 children, missing cases for all variables totaled 539. As shown in Table 1, the variables with most missing cases were child weight status (247 missing) and parents' level of education (138 missing). The original data did not explain reasons for the missing. One possible explanation is that the final sample underrepresents the migrant population that move frequently and other vulnerable populations that are hard to reach. As shown in Figure 3, migrant children accounted for 7.49% of the sample, which was lower than the national average (12.9%). Consequently, the current study could underestimate the problem. Further analyses may use statistical methods, such as

multiple imputation, to address this limitation. More complete information in future waves of the CFPS data will also make the findings more generalizable.

Last, this study is unable to test a number of other possible explanations, which are important areas for future research. Based on the CFPS data, this study did not include school environment and urban–rural disparity, both of which could significantly impact child well-being. The robust differences between urban and rural children's well-being in this study warrant further research. This study also did not include parent marital status, an important indicator for child well-being in the western literature. This is because a very small percentage of the parent sample (2% fathers and 1.48% mothers) were not married. This small percentage is also true to China's national statistics. In 2014, China's official national crude divorce rate is 0.27% (Ministry of Civil Affairs of China, 2015). Given that China's divorce rate has been increasing over the past few years, future studies can also include this factor into consideration.

All of the findings in the quantitative phase highlight the importance of systematically exploring the ecological systems and identifying risk/resilience factors within each system. This study contributes to a growing body of literature confirming the importance of individual, social, and environmental factors. It highlights that individual resilience, positive family, neighborhood, and policy context can mitigate migration and residency status' negative effects on child well-being.

CHAPTER VI: QUALITATIVE FINDINGS AND IMPLICATIONS

This chapter discusses the second phase of the dissertation, qualitative research findings and their implications. Focusing on migrant children, the qualitative phase answers two questions: how do Chinese migrant children experience their lives in urban areas? How do risk and resilience factors—on the individual level, the interpersonal and social level, and the environmental level—influence their well-being? Through interviews with ten migrant children in Beijing and their parents and teachers, this qualitative phase identifies risk and resilience factors for migrant children.

This chapter first presents the interviewees' demographic characteristics, and then discusses risk and resilience factors on different levels: individual, interpersonal and social, and environmental. Respectively, these three levels correspond to Bronfenbrenner's (1986 & 1994) definition of microsystem, mesosystem, and exosystem/macrosystem. By identifying risk and resilience factors within child ecological systems, these findings provide policy and practice suggestions for improving Chinese migrant children's well-being.

Interviewees' Demographic Characteristics

Table 19 presents demographic information of the children and parents interviewed in this study. Half of the child interviewees are girls. All child interviewees are between 11 and 13 years old. Five of them come from mid-China (e.g. Henan and Hubei); three of them are from the east (e.g. Shandong and Hebei); and two of them are from the northeast (e.g. Heilongjiang). The majority of these children moved to Beijing when they were very young (aged 1–5), while two of them were born in Beijing. Two children came to Beijing when they were relatively older (aged 8 and 10). Seven of the ten children transferred at

least once among different schools before they came to the BS School. Four children are the only child in their families; the others have one or two siblings. All of them are living with parents and siblings (if not only-child family) in Beijing. Three children also live with grandparents. Except in one family, the child is currently living with grandparents only, since her parents left for Zhejiang Province for business several months before the time of interview.

With respect to the parents, all of them are around 30–40 years in age. The majority of them graduated from elementary school or middle school; only in two families, one or both of the parents have an associate degree. Almost all of the parents have been living in Beijing for 10 years or longer. The majority are running small family businesses or working as street vendors. All of them either work for over 10 hours every day without weekends or holidays off, or work on unstable/unpredicted hours that depend on customers' orders. In the only family where both parents hold associate degrees, the parents have formal employment in industries associated with their educational background. These two parents work on regular shift (i.e. 8 hours a day, 5 days a week) but commute for 3–4 hours every day as they live in a remote area.

Table 19. Demographic characteristics of child and parent interviewees

	Gender	Age	Hometown	When came to Beijing	Transfer among schools	Siblings	Living with	Parent age (Mom/Dad)	Parent educ (Mom/Dad)	Parents in Beijing (years)	Parent occupation (Mom/Dad)	Parent work hour (Mom/Dad)
Feng+	M	12	Shandong	Born	0	1	Parents, grandparents, brother	34 36	Elementary school (incomplete) Associate degree	14	Family business: construction material retail/wholesale	14 hrs/day; no weekend/holiday
Guang	M	11	Henan	Age 5	2	0	Parents, grandparents	27 32	Elementary school Middle school	10	Department store sales Rockery retail	9 hr/day; 6 days/wk Unstable, no weekend/holiday
Jing+	F	11	Hebei	Born	0	2	Parents, brother, sister	33 34	Middle school Middle school	18	Family business: TV retail/wholesale	11-14 hrs/day; no weekend/holiday
Tian	M	12	Heilongjiang	Age 3	0	0	Parents	32 36	Middle school Middle school	8	Housewife Truck driver	N/A Unstable, half away & half home
Xiao	F	11	Henan	Age 3	2	0	Parents	36 37	Associate degree Associate degree	10	Cosmetics tech reporter Pharmaceutical retail	8 hrs/day + 3-4 hrs commute; 5 days/wk
Xin	F	11	Heilongjiang	Age 1	1	0	Grandparents (Parents left 2015)	32 35	Middle school Middle school	10	Family business: clothing wholesale	Unstable, depends on orders
Yang+	M	11	Henan	Age 1	1	1	Parents, sister	36 37	Elementary school Elementary school	11 12	Street vendor: sale vegetables	11hrs/day; no weekend/holiday
Yi	F	11	Hubei	Age 10	2	1	Parents, brother	34 40	Middle school Middle school	13 18	Family business: engraving & printing	Unstable, depends on orders
Zheng+	M	13	Hebei	Age 8	2	1	Parents, brother	35 35	Elementary school Middle school	12	Housewife Family business: furniture retail	N/A Unstable, depends on orders
Han	F	11	Henan	Age 3	2	2	Parents, brothers	39 41	Elementary school Elementary school	9	Street vendor: sale vegetables	10 hrs/day; no weekend/holiday

Note: + Children who are now back in hometown at the time of writing the qualitative findings. All child names are pseudonym.

Risk/Resilience Factors

As listed in Table 20, on the individual level, the risk factor is stress from studying; the resilience factors include child independence, personal growth from new life experiences, and positive future aspirations. On the interpersonal and social level, the risk factors include insufficient parental supervision and company and loss of meaningful relationship; the resilience factors are parental emotional/financial/daily-life support, caring relationship with siblings, extended family support, and peer support. On the environmental level, the risk factors include poor housing condition and neighborhood environment, educational deprivation, and low economic opportunity; the resilience factors include better environment/infrastructure in urban areas overall, support from social organizations (such as nonprofit services), better school experiences (than that in hometown), and higher family income and greater material support (than that in hometown). Next, these factors are discussed individually.

Table 20. Risk and resilience factors for Chinese migrant children's well-being

	Risk Factor	Resilience Factor
Individual Level (Correspond to *microsystem*)	Stress of study	Independence
		Personal growth from new life experiences
		Future aspiration
Interpersonal & Social Level (Correspond to *mesosystem*)	Insufficient parental company & supervision	Parental emotional/financial/daily-life support
		Caring relationship with siblings
	Loss of meaningful relationship	Extended family support
		Peer support
Environmental Level (Correspond to *exosystem* & *macrosystem*)	Poor housing condition / neighborhood environment	Better urban infrastructure / environment overall (compared with rural areas)
	Educational deprivation (compared with urban children)	Better school experiences (compared with hometown)
	Low economic opportunity (compared with urban children)	Higher family income; greater material support (compared with hometown)
		Support from social organizations (e.g. nonprofit services)

The individual level:

Independence. The ten migrant children show great independence in their daily lives. They take care of themselves when necessary—finish homework with minimum parental supervision, go to school (by taking a bus or walking) by themselves, wash their own clothes and shoes, prepare their own breakfast, and cook dinner for themselves. They also help with household chores, such as sweep and mop the floor, wash dishes

after dinner, and organize the rooms. Some also help parents with their businesses, such as watch the store and collect customers' payment and give changes. The parents are also confident that their children are capable to take care of themselves. They believe that their children are able to handle things well even if they are not around, which they appreciate. *"He takes care of all his stuff,"* said one parent, *"Like wash his lunchbox, do his homework, and sometimes wash his own socks. When I go to wash dishes after dinner, he would clean the leftovers and the table."*

Personal growth from new life experiences. Migrating to cities can also be a life experience that facilitates child personal growth in two ways. First, parents observed that their children become more sociable after migrating to urban areas, where children interact with more people and involve more in social life. Three parents mentioned that their children are not shy anymore and are much more sociable than other children in their hometown. One child was *"scared to cross the street"* and the other was *"too shy to say hi to others"* when they first came to Beijing; now they walk to school by themselves and greet people naturally. A parent recalled that her child was invited to a local TV show and was *"even more eloquent than me."*

Second, migrating to cities is also an eye-opening experience for children. It allows them to see and explore more of the world and exposes them to more diverse cultures. These children make friends that come from all different provinces; they learn about dietary habits, dialects, and local customs across China from each other; they are more aware of social etiquette through respecting others' cultural and social norms. As one parent stated: *"Because we live in Beijing, we get to know many different people, no matter they are migrant workers or local people. Because her [the child's] friends come*

from all different places, she learned to speak a little Jiangxi dialect and a little Sichuan dialect."

Future aspiration. Migrating to cities exposes children to a more colorful, wealthy world. It builds their hope and gives them positive future aspirations. They want to be a fashion designer, a physical education teacher, a school principal, a doctor, a writer, or an astronaut. They want to *"be a big boss," "make a lot of money,"* and *"make my parents/grandparents live a good life"*—goals that, as a parent said, might be *"too far for kids in the hometown."* Higher education is considered the best approach to achieve these goals. Half of these children stressed that they will definitely go to a good college or graduate school, get a good job, and begin to make money right after. The majority of parents also expect their children to attain at least a college degree.

Stress of study. A risk factor for migrant children is their stress of study. Migrant children bear parents' high expectations and their own ambitious aspirations. The high value of education sometimes turned out to be a stressor for them. For example, one child mentioned that he *"did not do well in a recent exam,"* in which he obtained over 90 points out of 100; to him, a good grade means 100 points. Another child was upset for a week because she got the second highest test score in her class (contains about 50 students). She felt that she disappointed her mom, who anticipated her to be the first. A boy who was planning to go to hometown for middle school recalled that he was extremely nervous when he went to hometown school to take the middle school enrollment exam last month: *"I was so afraid that I would fail. My dad said that if I pass, I can continue going to school; if I fail, he will find me some middle school in Beijing and*

then go to work right after middle school… I was thrilled when they announced my admission."

The interpersonal and social level:

Parental emotional/financial/daily-life support. The migrant parents provide their children with daily care, financial support, and emotional support as much as they can. These supports are important resilience factors for child development. Before the parents go to work in the morning and come home after work, they prepare meals, wash clothes, supervise children doing homework, supervise children watching TV, and talk about school life with children. As Feng's mother said:

> *I get up around 5am, make breakfast, walk kids to school, and then open our store at 6. When I get home around 8pm, I cook dinner, we eat together, and this takes about an hour. After dinner, I ask the two kids to shower, while I wash their clothes in the yard. They watch TV for a little bit, and go to bed after I finish cleaning tables and everything. I go to bed 10–11pm. A year of 365 days, almost every day is like this when their school is in session.*

The parents also try their best to support children financially. They spare every dollar in their own expense but generously spend on their children. They spend CNY 150 a month for child afterschool tutoring sessions (e.g. Chinese, math, and English). One parent negotiates for every dime and dollar with her customers, but bought her children a laptop for over CNY 3,000. One parent set up a small educational fund for her child for future educational expense.

The parents also care about children's emotional status. They often ask children about their experiences and feelings—are they happy at school? Is everything ok with friends? How do teachers comment on their school behavior? Anything new happened at school lately? Some parents encourage children to participate in school and classroom activities. Some encourage children to express their thoughts and share their feelings. In

addition, most of the parents highlight the importance of exploration and entertainment for child development. Whenever the parents have a free day during weekends or holidays, they usually take children out to a park, a library, a restaurant, a movie, or a mountain nearby.

Insufficient parental company and supervision. Despite the parents' efforts to support their children, their ability to accompany and supervise children is quite limited. First, parents' long work hours and unstable schedule severely limit their time to spend with children. As one parent that runs a family business in TV retail said: *"There's no weekend for our job. She [the child] does her homework at home on weekends, sometime watches TV or plays with her friends. But we could rarely take her out for a walk or short trip."* As a result, some of the children barely see parents during weekends; some already fall asleep when parents get off work; some do not get to talk with parents anymore since they started a new job. Most of the children are "latchkey kids," who do not see parents until 8pm or later—except for the two families where mothers are housewives. Even in these two families, the children only see their mothers on a daily basis since their fathers travel frequently.

Insufficient parental company challenges these children emotionally. Some feel lonely in weekends because parents have to work. Some wish parents could spend more time with them. Some miss parents when they are not around. As one mother recalled, *"Sometimes when his dad travels, he thinks of dad when he's doing homework. Then he tears up right away…."*

Second, the majority of the parents are incapable of tutoring children's homework due to their limited education. Except for the two families where parents have associate

degrees (who are the only ones able to tutor their children), all the other parents state that they cannot help with children's homework now. *"We can't tutor his homework anymore. When he was in 2nd, 3rd grade, we could do it. Now it's all by himself. He can only ask his teachers or classmates when he has questions,"* said one parent who is elementary school graduated. When the children have problems in study, they either solve by looking up textbook, dictionary, or the Internet, or ask their older siblings and more senior students in the neighborhood, or simply leave the question open until they talk to teachers or classmates the next day.

Caring relationship with siblings. The insufficient parental company is partially remedied three ways: caring relationship with siblings, extended family support, and peer support. First, strong caring relationship with siblings shows as an important resilience factor for the six child interviewees who have siblings. The older siblings often tutor younger ones' homework and take care of younger ones' daily life (e.g. cook, prepare water for bath), which somewhat offsets the absent parental role. As one boy said, *"When our grandparents and parents are busy, I cook some dishes for myself and my younger brother, sometimes fried rice, sometimes steam buns."* For siblings at similar ages, they are often the closest friends to each other. They walk to school and come home together, do homework together, play together after school and during weekends—they keep each other company.

Extended family support. Second, extended family—usually grandparents, sometimes also parents' cousins—provide emotional and social support for these migrant children. This is an important resilience factor particularly for the children whose parents are often unavailable. Although inadequate attachment with parents adversely impacts

child development, children can develop attachment with multiple surrogate caregivers, such as extended family members, in the case of parental absence. These attachments increase children's sense of security and psychological resilience (Ainsworth, 1985; Bowlby, 1969). In this study, half of the children were entrusted to their extended family members (e.g. grandparents, aunt, and uncle) at hometown in their younger years. Even when the children moved to cities, they still have strong attachment to their extended family members. Some children chat with their aunt, or grandma, or cousin regularly online or on the phone. Some often visit their extended family members that live around Beijing on weekends. For the three families that currently live with grandparents, the grandparents also help with taking care of the children and running family businesses. They cook for the children, walk the children to school, deliver lunch box to the children, watch the store, organize the storage racks in the store, and sometimes replenish goods when the parents are too busy. *"I watch TV with my grandma all the time. When I'm hungry, she cooks for me,"* said one child.

Peer support. Peer support is another relevant resilience factor that mitigates child emotional and social difficulties. For the Chinese migrant children, the support usually comes from their classmates, other students from the same school, and children at similar ages in the neighborhood. As social beings, children establish cooperative, reciprocal, and mutually trusting relationships with their peers (Ainsworth, 1985). The interviews suggest that peer support provides migrant children with secure attachments, which strengthen their psychological resilience.

Peers give children psychosocial support. They keep each other company at school, after school, on weekends, and when the school is in recess. They play games and

walk to school together. They share their secrets and feelings with each other. They also do homework, solve homework problems, and prepare for exams together. For these children, their friends are as important as families. *"I like Beijing better than hometown, because I have more friends here,"* said one child.

Peers also help migrant children adjust to a new environment. As one child recalled: *"When I first came to this school, my deskmate [who is assigned to sit next to a child in classroom] helped me study. The classes were a little difficult for me to follow because Beijing's curricular is different from my hometown. But with her help, I pretty much caught up in a week."* Several other children also had similar experiences—their classmates helped them with studying and learning about school rules. They felt welcomed by their classmates and soon established friendships at school. One girl recalled, *"I felt like I was an extra when I first came to the school. I didn't know anyone. Our teacher put me and another two girls in a study group. We played together, got to know each other, and then we became the closest friends in a week."*

Loss of meaningful relationship. While extended family support and peer support protect child well-being, the migrant children are at risk of losing these meaningful relationships. When they moved to Beijing, they gradually lost touch with old friends in hometown. Some do not have friends' phone number; some gradually forget what their friends looked like because they migrated long before. Some have friends' QQ [a live chat software] ID but fail to keep in touch because they do not have access to computers often or their friends are usually offline.

After moving away from hometown, the migrant children also see their grandparents or other extended family members less often. Even though some children

visit hometown once or twice a year, usually 1–2 weeks during the Spring Festival or summer/winter breaks, they have little time to spend with their old friends and extended family members, who they used to have strong attachment to. These losses often make the children miss hometown, and sometimes, make them regret not being able to spend more time with the people they love. *"I want to make money when I grow up, so that my parents can live with me,"* said a boy who was raised by his grandfather before he moved to Beijing at age eight, *"Because my grandpa died at home [in the hometown village] alone. My aunt [who lives in the same village] did not find out until the next afternoon. When my aunt stopped by my grandpa's house, his body was already cold…"*

Migrant children also face separation with the new friends they have made in the city. One reason is that these children migrate frequently as their parents' jobs change. As one boy said, *"I transferred to a new school almost every grade."* The other reason is that many migrant families choose to send their children back to hometown for further education (i.e. middle school and high school) because their *hukou* status barely grants them access to urban elementary schools. The frequent separation with classmates, teachers, and friends creates emotional distress for these children. For example, one child has *"mixed feelings"* when thinking about leaving for a middle school in hometown soon, *"I'm excited about seeing my old friends; but I feel sad for leaving friends here and my teachers."* This is a common experience for most of the children. As one child described: *"Two of my four best friends are leaving for their hometown next semester. The other two are not sure yet."* When asked whether they would keep in touch, the child was certain: *"Of course. We have each other's phone number and QQ ID. We made a deal. We will*

meet in Beijing every summer break." These children have great hope for maintaining their relationships; but in reality, this is probably not feasible when they drift apart.

The environmental level:

Better urban infrastructure/environment overall. Compared with rural areas, Beijing is a city with better infrastructure and environment overall. Most of the children listed this as a reason why they like Beijing better than hometown. The transportation, for instance, is much more convenient—they can take bus and subway almost anywhere; their parents can drive cars on wider streets. In contrast, transportation in hometown usually relies on riding mopeds, motorcycles, and pedicabs on unsurfaced roads. Beijing also has more modernized buildings and cleaner streets. *"The least thing I like about my hometown is the river in our village," said one boy, "It got full of garbage since it dried up. It smells so bad when we walk next to it."* Some parents also think that Beijing has better security and more organized neighborhoods. The convenience stores and local markets also make grocery shopping much easier. As one parent commented: *"We can get any food we want every day; in our hometown, the farmer's market only gathers every 3–4 days."* In addition, the urban infrastructure benefits child educational and social development. The children mentioned that they like to go to libraries, parks, zoos, and museums, which cannot be found in their hometown. Beijing, in particular, is a city with many cultural sites, such as the Great Wall, the Forbidden City, and the Tiananmen Square. Most of the children like to explore the city when their parents have free time and consider these cultural explorations part of their most precious memories.

Poor housing condition and neighborhood environment. Although Beijing's broader environment benefits child development than does their hometown, migrant

families' poor housing condition and neighborhood environment may adversely impact child development. Among the ten interviewed families, nine of them live in rental places; one family live in a self-built home (that is made of titanium plates) in a local market where the family sells rockery. None of the ten families have permanent residence in Beijing. Seven of them had moved at least two times. As one child said: *"My dad built our house. It's a cuboid, mobile room. It's not grounded on the floor, so it's easier for us to move."*

In terms of location, the migrant families all live in remote areas (Rings 5 and 6) of Beijing. These places are the cheapest ones at the bottom end of Beijing's rented housing market. The rent, mostly around CNY 1,000 (approximately USD 150) per month, ranges from CNY 500 to 2,000, depending on location and size.

A common feature for these places is their small space and poor facility. Most of the families live in a bedsit that is around 200 square feet. Some have a curtain or cloth hanging on a wire across the room to divide parents' and children's beds to give somewhat privacy. Seven of the families do not have private bathrooms; they either use public bathrooms in the neighborhood or build a temporary bathroom on their own. Some families do have fine appliances, such as fridge, television, washer, air conditioner, radiator, and computer or laptop. But their house interior is shoddy—peeling wall, unfurnished floor, dim light bulb, etc. As one parent described:

> *Talking about housing, our hometown is definitely better. You see, our room is small, and the rent is not cheap. We share a public kitchen with neighbors, but we need to pay extra for the water and electric bills. This place is better than our last one though; at least we have a bathroom now. The rent is a little more expensive than the last one, but it's closer to his [the child] school. In hometown, we have our own house and a big yard.*

Figure 14. The home of a family interviewed, rent CNY 1,100 (USD 165)/month

Figure 15. The living room/kitchen of a family interviewed, rent CNY 1,000 (USD 150)/month

The neighborhood environment is also poor—no playgrounds or fitness facilities, trash here and there. This may create safety and health problems for the children. As the children described: *"Our neighbors' houses have many mice. They squeak in the night;"*

"There's a restaurant next to our house. A lot of smoke comes out of its kitchen vent pipe every day;" "The storms flooded our home last summer. Our bed legs were half in the water. The yard is flooded too. The water covered our shin when we walked out;" "There used to be buildings in this area. Now most were torn down. It's all debris."

Figure 16. Boys playing on debris in a neighborhood of an interviewed family

Better school experiences. With respect to education, these children have better school experiences in the BS School compared with schools in their hometown. Their curricular is more diverse—English, art, music, and reading, which are rarely offered in rural schools. The BS School also offers more afterschool activities, such as football,

violin, basketball, taekwondo, and martial art. The children can also participate in more extracurricular activities—field trips, reading festivals, and sport competitions. Some of these activities are provided by the school itself; some are provided by the local nonprofit organization. Schools in their hometown, in contrast, mostly solely focus on Chinese and math grades. In addition, most parents spoke highly of the BS School's teaching quality. The teachers, according to the parents, are more professional and responsible, which significantly improved their children's academic performance.

Educational deprivation. Migrant children may enjoy better school experiences than their rural peers; but they are facing educational deprivation compared with urban children. This deprivation distinctively embodies in migrant children's limited choices in pursuing education.

First, all of the parents encountered difficulties when they tried to apply for public elementary schools for their children. While the Chinese central government stated that migrant children in cities should enjoy the same compulsory education benefits as urban children do (The National People's Congress of China, 2013), few migrant children receive public education in the city due mainly to urban public schools' extra charges or residency requirements (Dong, 2010; Wang & Holland, 2011; Wong et al., 2007). As a parent who works as a street vendor stated:

> *Sigh… I just want to say it's too hard for us migrant workers to send kids to school. Private schools' degrees are not acknowledged; public schools' thresholds are too high. Although public schools claim to open to migrant students, but it's not the actual situation. Especially for us low-income families, they ask for this document, that document: temporary residence permit, proof of social security… To be honest, we can only get one or two documents. For migrant workers like us, how many have social security?*

Consequently, migrant families turn to private migrant schools like BS. However, with little information, the parents can hardly make calculated choices. Some chose BS because it is closer to their neighborhoods; some heard about BS from neighbors or extended family members who sent their children there; some randomly past by BS and found the school looked ok. But the parents are satisfied that their children are in a school with relatively good teachers and educational quality.

After finishing primary education, these migrant children face challenges of pursuing further education in Beijing. Chinese high schools and colleges require students to take the enrollment exams at their *hukou* registration area. Beijing's middle school curriculum also differs from that in the hometown. Therefore, most parents choose to have their children go to middle schools in the hometown to make the transition from middle school to high school easier. Forcing children to transit between different educational systems, school locations, and curriculum design may disrupt their education and lower their academic performance. Some parents are worried that *"The curriculum in hometown is harder. People in our village always say that kids who come back from Beijing won't do well."*

After middle school (i.e. the last three years covered by compulsory education), migrant children again fall in a dilemma. Attending private high schools with good educational quality is way too expensive; taking a job with a middle-school degree is disadvantageous. Attending high schools in hometown seems an option; but it may be a problem for migrant children because of insufficient parental supervision and even greater stress of study. Some migrant students may go to vocational schools; yet that probably ends their path of pursuing higher education (Ling, 2015).

Higher family income and greater material support. Working in urban areas brings the migrant parents higher income and more job opportunities than that in hometown. Most parents commented that there is no job except for farming in rural villages that they came from, while in Beijing, they have more options. The parents all mentioned that income from farming barely sustains a family, whereas income in urban areas is considerable.

These financial gains allow the parents to provide children with greater material support. One parent bought a house in Hebei province; six of the families have a computer or laptop. *"If we were still in hometown, I wouldn't be able to afford anything my kids want; although we don't make much money here, at least we can buy kids something nice,"* said one parent that runs a family business.

Low economic opportunity. Migrant workers may make more money in cities than they do in the rural hometown. Their economic conditions, however, are much poorer than local urban residents'. Migrant children also have much fewer economic opportunities than their urban peers.

First, many migrant parents are self-employed in the informal economy or work at low-wage, low-skill jobs (Ling, 2015). This may be due to their rural, non-local *hukou* status, their low educational background, and low job skills. Among the ten families, most parents run small family businesses or work as street vendors. These parents suffer from economic distress. To them, Beijing is a city they cannot afford to live in. As one parent commented: *"Living in Beijing is very stressful. Even if you don't make money that day, you have to pay for something. Our job isn't as secure as those with regular wages. You don't work hard for one day, you lose money. This makes me mentally tired."*

Furthermore, the large amount of living cost and child educational expense leave the families little disposable income. Every nickel and dime counts. The children have also learned the value of money even though they are young. As a parent recalled:

> *He [the child] envies his friends who have a computer at home. We can't afford it. So he's trying to save money to buy a computer by himself. On weekends, he sometimes collects recyclable materials [e.g. bottles, boxes, papers] in the neighborhood to sell for some money. Sometimes we give him 3 yuan for breakfast, he only uses 1 yuan and saves the rest.*

Second, despite the families' future aspirations, migrant children's economic opportunities are restricted. During the interviews, all the parents mentioned that they hope their children do not follow their steps to take low-income jobs in cities, because their life is already hard enough. They do not want their children to go back to the rural hometown either, because *"it's just too poor."* Instead, they want their children to take a "decent job"—such as a doctor, a lawyer, or a manager—some indoor job that does not require much physical labor and *"makes easier money."*

Their children also carry these aspirations. They want to make lots of money, provide a better life for their parents and grandparents, work indoor, and attain higher positions. And the key step to achieve these goals is often "go to college," which symbolizes a higher socioeconomic status to these families. As an old Chinese saying goes, *"Knowledge changes your fate"*—a statement that the migrant children and their parents all believe in.

Yet the reality is that these children can barely pursue further education in the city. Their future remains uncertain as their life choices are largely determined by the state policy. Within China's current *hukou* system, they are unlikely to cross the rural–urban, local–outsider boundary. As Ling (2015) argued, these policy restrictions indicate

the Chinese state's intention of reproducing a second-generation migrant worker class, in which the migrant children can *"provide cheap labor for the lower rungs of the labor market."*

Support from social organizations. Another environmental resilience factor for migrant children is support that they receive from social organizations in Beijing, such as nonprofit services that are provided by NC. Among the ten children, five have participated in NC activities, such as planting seeds, cleaning campus, organizing small-group field trips, visiting kindergartens and nursing homes, expressing gratitude to parents, and participating in group work that is led by social workers. These activities positively influence them in several ways. These activities develop their compassion, improve their leadership, enhance their social skills, encourage them to express themselves, help them work toward a goal, encourage them to explore the city, give them opportunities to make a change in their communities, and increase their sense of belonging to their communities. More importantly, NC's staff and social workers keep the children company and provide emotional support through these activities.

The impact of these nonprofit services, however, is limited for three reasons. First, nonprofit organizations lack resources to sustain their service continuity. Currently, NC only has one full-time staff in its social work department, who takes charge of supervising agency social work interns' field placement, coordinating projects with funders and schools, and implementing programs such as field trips. As one of the social work interns mentioned: "*Sometimes we really got too much on our plate. I feel that many nonprofits are in the same situation. I've participated many agencies' programs.*

They all have great mission and vision; but the implementation is not ideal. They simply don't have enough people."

As a result, NC mainly relies on social work undergraduate/graduate students to provide school social work services as their field placement. This means that these students' turnover rate is very high; they work in NC for one semester and then shift to other agencies. These social work interns, usually 3–4 are assigned to one school, work with children once or twice a week for about four months. Excluding time for establishing and terminating relationship with the children, they have only 11–12 weeks to work in the school. *"We had so many ideas at the beginning," said a social work intern, "but we had to stop because of our tight schedule. We really can't discover their needs and potentially deep issues. We didn't get time to."* Furthermore, due to time and manpower limit, they are usually able to work with only 1–2 classes (about 100–120 students in total, usually selected from 4^{th} or 5^{th} graders). In other words, the nonprofit organization's support only covers a very small portion of students in migrant schools.

Second, as shown in Figure 17, the nonprofit organization lacks coordination with school and family, the two important sectors within child developmental environment. On the one hand, the social work interns feel lack of support from the school—the hours they can work with children are often restricted by school and sometimes are changed without notice; some teachers do not welcome or support their programs. On the other hand, the teachers lack understanding of the social work programs/services. They see some social work interns come to their classes every week but do not know exactly what they are doing with their students. In addition, the parents rarely interact with the school or the nonprofit organization due to their busy schedule. For example, some parents may

recall that their children participated in planting something but do not understand the goals or progress of the activity.

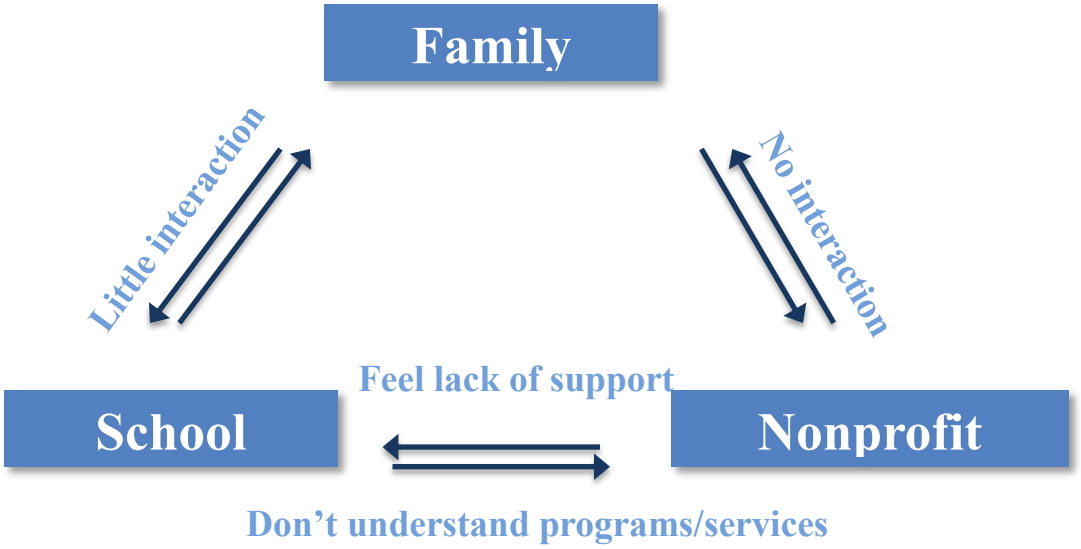


Figure 17. Support network for migrant children

Last, nonprofit organizations are unable to tackle the fundamental problem. Although the nonprofit services bring these children emotional support and cognitive and behavioral improvements, they cannot solve the fundamental problem—the institutional inequality brought by *hukou* system. As the Executive Director of NC concluded:

> *I think the whole education issue for migrant children is related to China's restriction on population migration. So this is not a problem that can be solved by a single agency. This also involves migrant families' housing, healthcare, education, family planning, etc. How to address these problems? This is a comprehensive issue… One day, when there's no 'hukou,' the problems of migrant children will be naturally solved.*

Summary

In sum, migrating to urban areas can be both empowering and disenfranchising for migrant children (Ling, 2015). This life experience opens a window for migrant children

to experience the world, builds their aspirations of the future, gives them better school experiences, and forms better social environments for them to grow up.

Migrant children, however, are at risk of insufficient support from families and the society. Although migrant parents are supporting children as much as they can, their time and contribution are limited by their low educational background and low-income yet long-hour jobs. As a supplement, siblings, extended families, and peers play important roles in emotionally supporting and accompanying migrant children in their daily lives. As migrant children leave Beijing for further education, however, they are at risk of losing these meaningful relationships. Furthermore, even though increasing nonprofit organizations are providing services and programs for migrant children, these organizations have their own limitations and cannot tackle the fundamental problem.

The educational and economic deprivation indicates the institutional marginalization of migrant children in China. Although the migrant parents have been living in Beijing for a long time, they still struggle daily. To them, Beijing is a temporary home, a city they cannot afford to settle down in. Even though the children have been here since very young or are even born here, they may have to leave for the rural hometown due to state restrictions on their access to public education and higher education.

These migrant children all have great aspirations for the future. They want to be successful and affluent. They want to give their parents and grandparents a better life because they have witnessed their families' hardships even when they are still young. They study hard to achieve these goals. They are hoping for social mobility as they dream

about breaking the poverty cycle. But among such a large migrant child population in cities, not so many of them are likely to make it within China's current policy context.

By the time of writing this chapter, four of the ten children already left Beijing for hometown middle schools that acknowledge their *hukou* status; five other children also plan to go back after finishing the sixth grade. As Ling (2015) claimed, under China's resilient *hukou* system and intensified labor market competition, these migrant children may "follow their parents in becoming an underclass of China's citizenship regime."

Limitations

There are three limitations to the qualitative phase. First, all interviews were conducted in one migrant school in Beijing due to resource restraint. This limits the transferability of the research findings. Future research may include more participants from multiple communities and geographic areas. However, given the resource limit, selecting Beijing as the research site is the best choice for two reasons. First, as the capital city, Beijing is one of the metropolises with the largest and most diverse migrant populations, who come from various provinces across the country. Conducting interviews in Beijing potentially exposes me to migrant families with the most diverse cultures and backgrounds. Second, as the capital city, Beijing is directly governed by the Chinese central government and is at the forefront of China's political and economic policies. Thus, among all regions, study in Beijing can provide the foremost policy implications for migrant families in China.

Another limitation to the qualitative phase is that all interviews are conducted in Chinese while the final research findings are presented in English. This carries a potential risk of losing nuances in conversations and misinterpretation in translation. To minimize these limitations, I paid special attention to clarification during interviews. In addition,

my previous interactions with the migrant school teachers, students, and the nonprofit agency staff may bring potential biases in my interviews. However, it was also these previous interactions that gave me access to the research sites and familiarized me with the research subjects' cultural norms, which allowed me to build mutual trust with the interviewees and gain richer information from them.

Last, due to time and resource limits, I did not interview left-behind children in rural China in this dissertation. For the next stage of my research, I will explore the experiences of left-behind children in rural areas, another important sub-population affected by parental migration.

CHAPTER VII: CONCLUSION

Nearly forty years of industrialization has created a mass laborer migration from rural to urban China. Despite their contribution to the urban economy, these migrant workers face various challenges in cities due to China's *hukou*-based institutional inequalities. This mass rural-to-urban migration profoundly impacts children from migrant families, including the ones who migrate with their parents and the ones that are left behind in their hometown.

Literature shows that family migration impacts child well-being in various ways (Devine, 2013; Hamilton, 2013). And much has particularly discussed the impact of China's family migration on child well-being (Hu et al., 2014; Lee, 2011; Lu et al., 2016). There are, however, several limitations to the existing literature. In terms of topic, the research has mostly focused on certain aspects of migrant and left-behind children's well-being, such as education or mental health outcomes. Methodologically, most studies employ either quantitative surveys or qualitative interviews. In terms of implications, much discussion is around the Chinese government's roles in this issue; the roles of social organizations are rarely discussed, despite the fact that the emerging Chinese civil society is providing increasing support for migrant families. To fill these gaps, this dissertation employs a mixed-methods design to explore multiple dimensions of child well-being—education, psychosocial development, and physical health. The dissertation not only examines the roles of public policy in migrant and left-behind children's well-being, but also discusses the effects and challenges of nonprofit services for migrant children.

This dissertation answers four research questions. First, to what extent does migration and residency status influence child well-being, with respect to educational achievement, psychosocial development, and physical health? Second, what roles do children's ecological systems—micro-, meso-, exo-, and macro- system—play in their well-being? Third, how do migrant children experience life in urban areas? And finally, how do they experience risk and resilience factors on the individual level, the interpersonal/social level, and the environmental level?

Through a person-in-environment perspective, this dissertation applies Bronfenbrenner's Bioecological Theory and the Risk/Resilience Theory to look at how individual characteristics and the broader context shape child development. As a synthesis of these two theories, this dissertation identifies the risk and resilience factors within migrant and left-behind children's each ecological system.

The dissertation involves a quantitative phase and a qualitative phase. The quantitative phase answers the first two research questions through cross-sectional data analysis of the 2012 China Family Panel Studies. This phase compares the well-being of migrant, left-behind, rural, and urban children and explains the group differences by family migration, residency status, and ecological systems. The qualitative phase answers the latter two research questions through in-depth interviews with Beijing-resided migrant children, their parents, and their teachers. This phase focuses solely on children migrated to cities with their parents and identifies the risk and resilience factors on the individual level, the interpersonal/social level, and the environmental level.

The quantitative phase shows that child well-being is associated with child migration and residency status. Urban and migrant children perform better in most well-

being measures than do rural and left-behind children. Comparing migrant and left-behind children, parent-only migration is more challenging for child development. Much of these group differences, however, are explained away by children's ecological systems, particularly the exosystem and macrosystem. Yet the group differences between urban and rural children remain unexplained by child migration and residency status and ecological systems, which could result from China's long-standing rural–urban inequality. In addition, this phase shows that positive personal attributes, higher quality of parent–child communication, higher family socioeconomic status, better neighborhood environments, and better regional economic conditions are linked to greater child well-being.

The qualitative phase shows that individual attributes, interpersonal relations, and the broader environments may all protect or endanger Chinese migrant children's development in certain way. On the individual level, migrant children's resilience involves their independence, personal growth from migrating to urban areas, and future aspirations. Stress of study, however, could put them at risk of poor well-being. On the interpersonal and social level, migrant children's well-being is protected by the supports from their parents, siblings, extended families, and peers. On the contrary, insufficient parental supervision and company and loss of meaningful relationships may adversely impact child well-being. On the environmental level, migrant children benefit from the better urban infrastructure and environment, better school experiences, higher family income and greater material support, and greater support from social organizations than that in hometown. These positive effects, however, may be compromised by their poor

housing condition and neighborhood environment, educational deprivation, and few economic opportunities.

The quantitative and qualitative phase both suggest that living in cities overall benefits child well-being. These positive effects may result from more resilient child attributes, greater material support, and better neighborhood environment in urban areas. But migrant children have poorer well-being than do urban children, even though both of them live in cities. This disparity mainly results from interpersonal and environmental factors, such as parent–child interaction, family socioeconomic status, and *hukou*-based institutional inequality.

The findings suggest that the macrosystem influences child well-being through all other subsystems. The effects of broader political, social, and cultural contexts on children are embodied in the microsystem, mesosystem, and exosystem. Improving Chinese migrant and left-behind children's well-being requires multi-level interventions that reduce risks and build resilience in each ecological subsystem, especially the macrosystem.

Microsystem Intervention

In the microsystem, schools and social organizations can collaboratively reinforce migrant and left-behind children's psychological resilience through trainings and group work. Potential topics may involve distress tolerance, stress reduction, and social skills. Building psychological resilience can help children deal with emotional difficulties when their parents migrate or when themselves leave hometown and move to cities. It protects children from school- or family- related anxieties. It will help children build healthy bonding with others, which helps with their sense of security and personality

development (Ainsworth, 1985; Bowlby, 1969). Possible intervention approaches include Dialectical Behavior Therapy (DBT), Mindfulness-based Stress Reduction (MBSR), and Mentalization-based Treatment (MBT; Bateman & Fonagy, 2013).

Mesosystem Intervention

Given the importance of parent–child interaction in child development (Bowlby, 1969), parenting workshops are to be provided to migrant parents. The workshops can focus on building secure attachment with child (Ainsworth, 1985) and developing mentalization skills through reflective parenting (Bateman & Fonagy, 2013). This intervention will be particularly relevant to left-behind children, whose parents usually are physically absent. Furthermore, nonprofits and other social organizations can expand social work services in rural and migrant schools. These services could emotionally support migrant and left-behind children, enhance their social skills, and help them process losses of meaningful relationships.

Exosystem Intervention

Higher parent education and family income predict greater child well-being; but migrant families are at risk of low economic opportunity. This finding suggests the importance of building migrant workers' human capital, which can be achieved through continuing education and job training. Accumulating more knowledge and job skills will give migrant workers more job opportunities that generate higher income, and therefore, move migrant families to upper rungs of the labor market. In addition, legislations should clarify migrant workers' equal employment benefits as local workers, which include minimum wage, maximum work hours, and unemployment insurance.

Macrosystem Intervention

The findings call for three aspects of macrosystem intervention—regional development in rural areas and central and west China, sustainable planning and community development in urban areas, and radical reform of the *hukou* system and welfare provisions.

First, given that China's rural–urban disparity and regional inequality significantly impact child development, the Chinese central government needs to allocate substantial resources to the economically less developed areas. In addition to economic development, these areas are also in need of: infrastructure development, such as transportation tools, roads, libraries, and public spaces; educational resources, such as school buildings, classroom facilities, and qualified teachers; healthcare resources, such as qualified hospitals or clinics, nutritional and physical education, and health insurance; and community development, such as community centers, recreation facilities, and garbage disposal system.

Second, China needs more sustainable urban planning to accommodate the needs of its growing urban population. While China's urban economy has greatly expanded in the past decades, its urban planning is much lagging. This creates problems for cities—such as traffic, housing, water and air pollution, and inadequate social infrastructure (hospitals, schools, etc.)—problems that are especially striking in metropolises like Beijing and Shanghai. Migrant families, due to their few resources in urban areas, are more vulnerable to these problems. This calls for more rational development of urban infrastructure and neighborhoods, especially migrant families' neighborhoods—which are often "villages in the city" (De Meulder, Lin, & Shannon, 2014).

In addition to improving migrant families' living conditions, more community support should also be provided. As discussed in Chapter 5, a neighborhood may collectively function for child supervision. For example, community centers could organize afterschool/weekend activities and homework tutor sessions. These services will be especially relevant to migrant and left-behind children, whose parents are often not available to accompany their children or not competent to supervise children's schoolwork.

Last and most importantly, although schools, communities, and social organizations can provide the interventions mentioned above, solving the problems facing migrant families eventually relies on policy change. More specifically, it requires the Chinese central government's radical reforms of the *hukou* system and *hukou*-based public resource allocation. Only through these reforms, will migrant and left-behind children break the institutional marginalization, maintain family unification, and have equal educational and economic opportunities as their peers do.

In July 2014, the State Council of China published the *Opinion on Further Promoting the Household Registration System Reform*, a document that declares the central government's vision of reforming the *hukou* system. The document claims that the governments will continue reforming the *hukou* system to facilitate urbanization. One of the reform principles, as stated in this document, is to "respecting urban and rural residents' individual choices in residence areas" (The State Council of China, 2014).

To achieve this vision, cities will accept migrants' *hukou* applications to certain extents. Small cities and townships (county-level municipalities) will completely open to all *hukou* applicants; medium cities (with 500,000–1 million urban residents) will

gradually open to more *hukou* applicants; large cities (with 1–5 million urban residents) will discretionally open to certain qualified *hukou* applicants; metropolises (with over 5 million urban residents) will strictly limit the population size and will only accept *hukou* applications that meets all thresholds.

The central government also claims to replace the *agricultural/non-agricultural hukou* types with a new type for all citizens—the *resident hukou*. In addition, the non-locals who live in a place for over six months can apply for a *residence permit*. Local governments will provide equal benefits to all temporary residents with a residence permit as local residents. Examples of these benefits include employment, public education, and basic healthcare. Migrant children, for instance, will be provided with universal preschool education and tuition-free vocational school education after middle school.

The document also stipulates that local governments will reform the *hukou* system based on their local contexts. The central government and local governments will jointly fund the reforms. The goal of the reform, according to this document, is to have 100 million rural migrants and other temporary residents settle down in cities with a local *hukou* by the year of 2020 (The State Council of China, 2014).

This so-called *hukou* reform has several merits. First, the philosophy of respecting citizens' individual choice embodies the trend of promoting civil rights. Second, abolishing the *agricultural/non-agricultural hukou* types may reduce the cultural and social division between rural and urban residents. Third, expanding welfare provisions to temporary residents may increase migrant families' access to public resources.

There are, however, fallacies in this reform. First, migrating to small cities is encouraged; but migrating to metropolises, such as Beijing and Shanghai, is inhibited. However, these large cities usually have the densest migrant population because of their advanced economic development and public resources. This restriction will inevitably force metropolis-resided migrant families to leave for their original hometown or smaller cities. Second, the *agricultural/non-agricultural* distinction is abolished; but the *local/non-local* disparity is not yet addressed. For rural migrant families, to obtain a temporary residence permit and then a local *hukou* is still a long shot.

Third, the Chinese central government's 2014 document is merely a guideline that states broad goals and philosophies. It has no specific procedures or measures on how to enforce the reform. Furthermore, it heavily relies on local governments to define their own reform procedures. The local governments, however, are likely to protect local residents' interests and discriminate migrant population. Although the central government claims to jointly fund the reform with local governments, there is no detailed information on how and what proportion will the central government contribute.

Last, the reform envisions settling down 100 million temporary residents (including both rural migrants and others) in cities; yet this goal is incomparable with the country's migrant population. In 2015, migrant workers have already reached 277 million and the number is expected to continue growing in the following years. On the one hand, the 100-million goal cannot cover half of the current migrant population; on the other hand, rural migrants, compared to other non-local temporary residents with more resources, are likely to represent a smaller proportion among the 100 million.

In sum, the *hukou* reform will not work without specifying implementation procedures. The reform cannot be done on the local level, but requires the central government's coordination with local governments. Moreover, reforming the *hukou* system involves reforms of a series of related systems—labor rights, employment benefits, housing, education, and rural land rights. All these reforms call for changes in policies and legislations on the central level.

Summary

China's internal migration problem is a distinctive one from other countries. It is a phenomenon that is socially constructed. The key of defining "migrants" in China is not whether they move from one place to another, but whether they have the local *hukou.* The problems facing this mass migrant population are largely caused by governments' *hukou* restrictions (Guan, 2014).

Under the *hukou* system, China has created a welfare state that favors urban residents. A local, urban *hukou* is linked to over 20 types of public services that are not available to rural migrants or temporary residents (Ge, 2016). It involves employment, education, social security, and healthcare. Due to the many direct and indirect *hukou*-based benefits, a local, urban *hukou* usually symbolizes dignity and higher socioeconomic status.

The *hukou* system also inhibits social mobility. For migrant and left-behind children, not only they cannot choose their *hukou* when they are born, but they may also not be able to change their *hukou* status/location throughout their entire lives (Guan, 2014). With these restrictions, they own little economic capital because of their families' low income; they own little cultural capital due to their limited schooling options and

substandard educational quality; they also own little social capital as they are usually marginalized by both urban and rural communities. Altogether, the *hukou* system is reproducing a new generation of second-class citizens with little capital in all forms.

While increasing voices are calling for *hukou* reform, it remains an unbreakable hurdle for migrant families (Xinhua Net, 2013). This is a consequence of social discrimination and government choice. Urban local governments may not want to relinquish their established interests. Certain *hukou*-holders may not want to share their resources with the non-locals. *Hukou* becomes a door between rural and urban China. The outsiders want to push the door to get in to cities, whereas the insiders clench their fingers on the doorknob (Xinhua Net, 2013). In addition, some argue that the Chinese governments intend to reproduce a social hierarchy in which migrant children could provide cheap labor for low-skilled industries (Ling, 2015). This is exemplified by the fact that the governments provide migrant children with free vocational school education but not free public elementary school education and not allow them to take college entrance exams in the receiving city.

Under the *hukou* system, migrant and left-behind children's interests are sacrificed for the development of urban areas and national economy. To them, China is not a free labor market. Based on China's current policies, the *hukou* restrictions are likely to persist in the recent future. To promote migrant families' well-being, schools, communities, and social organizations can intervene in the micro-, meso-, and exo- level. However, with the increasing tension between individual choice and state intention, the ultimate solutions to migrant and left-behind children's problems lie in the macro policy reforms.

Future Research Directions

This dissertation warrants three future research directions. First, longitudinal analysis can be conducted when more waves of the China Family Panel Studies data become available. Following the cross-sectional analysis of the 2012 data, combining the 2012 and 2014 data will examine children's developmental patterns and identify factors that influence their development. These further analyses will provide Chinese policymakers with more implications to promote migrant and left-behind children's well-being.

Second, further qualitative research can focus on left-behind children in rural China, another child group that is affected by parental migration. Potential research questions include the experiences of living in rural areas without parental care, personal attributes, peer relationships, extended family care, and social support from nonprofit organizations and communities. These research questions will explore how parent-only migration affects child well-being for those living in rural China, where the economic and cultural environment is quite different from urban areas. By comparing the research findings between migrant children and left-behind children, future studies can also explain the puzzling results in this quantitative research; that is, why left-behind children perform better in certain well-being measures than do migrant children.

Third, future intervention research may examine the effects of possible intervention strategies with children from migrant families. For example, how school-based mindfulness training influences child cognitive development, behavioral outcome, and academic performance; how parenting workshops affect child–parent bonding and how these attachments influence child development; how social skill training affects children's interpersonal relationship and their emotions and behaviors.

Finally, this research informs comparative studies of families relocated for various reasons on a global scope. The current internal migration issues in China, a country with decades' urbanization, mirrors western societies' historical migration tensions.

As Piven and Cloward (1993) stated, public welfare mainly serves to regulate labor and uphold social and economic arrangements. In the early European capitalist societies and modern U.S., welfare had been adopted as a means of social control and economic productivity. Similarly, China's welfare system resembles the western corporatist-conservative regime, where welfare provisions are primarily based on job type and occupation (Esping-Andersen, 1990). The current Chinese welfare provisions for migrant families manifest the western ideology of using welfare to maintain economic and social order as it is contingent on people "behave in certain ways and, most important, on condition that they work" (Piven & Cloward, 1993, p. 22). Furthermore, the facts that Chinese migrant workers were excluded from social insurance until mid-1990s, that today merely one fifth of them have health insurance and pension, that one tenth of them have unemployment insurance, and that few receive social assistance, pinpoint a startling gap in China's welfare system. Within this system, welfare provisions are subordinate to economic development (London, 2009), and inequalities are intensified among rural, migrant, and urban families (Lu et al., 2016).

On the other hand, China is also a laboratory setting that showcases contemporary migration issues in globalization. With migrant crises emerging in many regions such as the U.S. and Europe, many local governments have not yet included migrant populations in their development planning (International Organization for Migration, 2015). Although

inter- and intra- national migration have different causes and consequences, there are potential benefits of all forms of population migration for urban development (International Organization for Migration, 2015). Sustainable urban development will foster social and economic advancement, such as poverty alleviation and more work and educational opportunities for women (UN-Habitat, 2016).

In this case, the multi-level intervention strategies proposed in this dissertation can be applied to other countries. The Chinese case, therefore, serve as a starting point for future cross-national studies to identify strategies for more sustainable urbanization and healthier development of children affected by migration/immigration in a broader context.

APPENDIX 1: INTERVIEW GUIDE

Child Interview

Background information

1. How old are you?

2. Where are you from?

3. When did you come to Beijing?

4. Who did you come here with?

5. Who are you living here with?

School life

6. Tell me about a typical day after school when you were in your hometown. What did you do?

7. Tell me about a typical day after school here. What do you do?

8. Tell me a story about your first day of school here.

9. Did you meet any difficulties in school when you first came here? Could you give me an example?

10. What do you like most about school? What do you like least?

Peer interaction

11. Who do you play with most often? What do you usually play together?

12. How are you getting along with your classmates? What do you usually do together?

Family life

13. Who do you consider your family?

14. What kinds of things (e.g. eating, playing, working, etc.) do you do with each of the individuals drawn (on weekdays/weekends)?

Family–school interaction

15. Do your parents ask you about your school day? What do you talk about? Could you give me some examples?

16. How often do your parents talk to your teacher? For what reasons?

17. How often do your parents supervise/tutor your homework? How helpful are they in tutoring your homework?

Neighborhood environment

18. Draw a picture of your house and neighborhood in your hometown. What did you like most about your hometown? Least?

19. When was the last time you went to your hometown? Were you excited? Why?

20. Draw a picture of your home and neighborhood in Beijing. What do you like most about Beijing? Least?

21. How is your life different here from that in your hometown? Which one do you like better? Why?

Effects of nonprofit services (for children receiving/received NC services)

22. What kind of activities have you done in the NC program?

23. What have you gained from the activities?

24. What do you like most about the activities? What do you like least?

Future outlook

25. What's your plan after graduating from elementary school?

26. What's your vision of yourself in future? What do you want to do when you grow up?

Draw a tree house, where:

The foundation is the thing that you value the most;

The pillars are the most important people to you;

The yard grows things you want to have;

The chimney let out things you don’t want;

The door hides things you want other people to find out about you.

Parent Interview

Background information

1. How old are you?

2. When did you come to Beijing?

3. What is your family's current Household Registration (*hukou*) Status?

4. What degree did you graduate with?

5. Are you currently employed? What kind of job do you have?

6. How many hours do you work every day? How many days do you work every week?

Family life of the child

7. What is X (the child) like at home?

8. Did you see any changes in X after your family moved to Beijing? What are some examples?

9. What are X's strengths (or some good qualities)? What are some examples?

10. What are X's weaknesses (or something he/she could improve)? What are some examples?

11. How much time do you spend with X every day? What do you usually do together (on weekdays/weekends)?

Family–school interaction

12. How did X come to this school? Did you try to apply for public schools for him/her? What was that experience like?

13. How often do you talk with X about his/her school life? Could you give me some examples of what you talk about?

14. How often do you talk with X's teacher? Could you give me some examples of what you talk about?

15. X mentioned that he/she met this problem in school when he/she first came here. Do you know about it? How did you help him/her deal with it?

Family, working, and community environment

16. How would you compare your working conditions (wage, work hour, benefits) here with that in your hometown?

17. How would you compare the neighborhood you are living in here with that in your hometown?

18. Who own your current housing property in Beijing? (fully own the property, paying loan, renting, public housing, living with friends/ relatives, etc.)

19. How would you describe your family's economic condition?

20. What's your vision of yourself and your family?

Effects of nonprofit service (for children receiving/received NC services)

21. Do you know that X is/was in Y program?

22. Have you seen any changes in X before and after he/she joined the program? Could you give me an example?

23. What suggestions or concerns do you have about Y program?

Teacher Interview

School life of the child

1. How did X (the child) come to this school?

2. What is X like at school?

3. What are X's strengths? What are some examples?

4. What are X's weaknesses? What are some examples?

5. Does X present any problems in school?

6. How well does X get along with his/her schoolmates?

7. X mentioned that he/she met this problem in school when he/she first came here. Do you know about it? How did you help him/her deal with it?

Family–school interaction

8. Have you ever talked with X about his/her family? Could you give me an example?

9. How often do you talk with X's parents about his/her school life? What do you talk about?

Effects of nonprofit service (for children receiving/received NC services)

10. Do you know that X is/was in Y program?

11. Have you seen any changes in X before and after he/she joined the program? Could you give me an example?

12. What suggestions or concerns do you have for Y program?

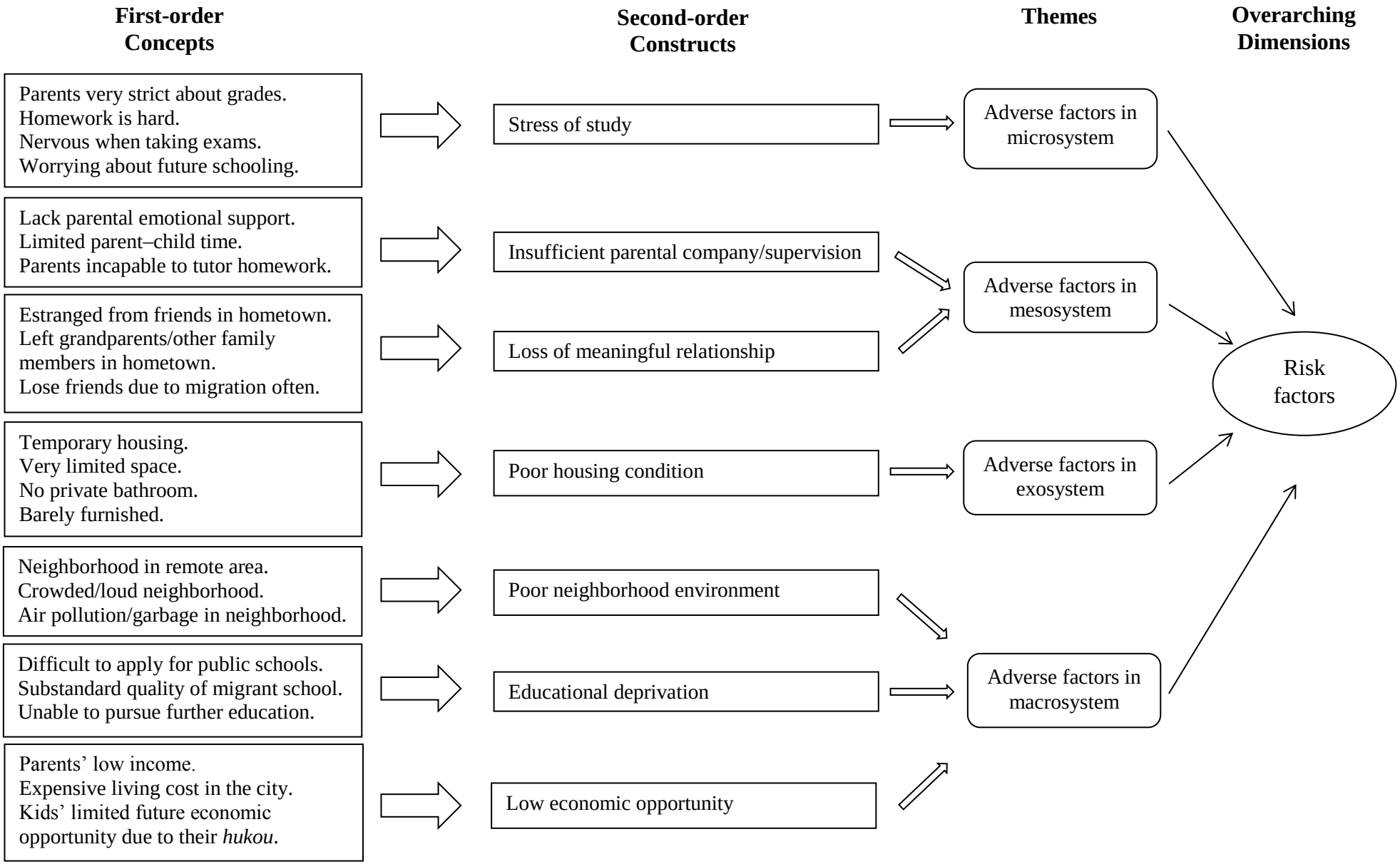
Social Work Intern Interview

1. Why did you choose NC?
2. How did you get started working with the BS School? When?
3. What programs/activities have you led in the BS School? What did you do?
4. How are the activities/topics chosen?
5. Who are your clients? What are the criteria of selecting clients?
6. How does your work influence the children?
7. How does your work influence yourself?
8. Have you met any challenges/barriers?
9. How is your supervision conducted?
10. How often do you contact with parents and teachers?
11. If you were organizing NC social work program, what would you do differently?

Nonprofit Agency Leader & Full-time Staff Interview

1. What is your job title? Job responsibility?
2. What made you begin to work with NC?
3. What are the goals of your organization?
4. What kind of support have you received in your work?
5. How does your work influence children, their families, and their schools?
6. How did you choose which schools to work with?
7. Were there any changes/transitions in NC?
8. Have you met any challenges/barriers in your work?
9. What is NC's role in the entire nonprofit sector that works with migrant children in China?
10. What is your vision of NC? What is your vision of the nonprofit sector in China in general?

APPENDIX 2: QUALITATIVE ANALYTIC APPROACH



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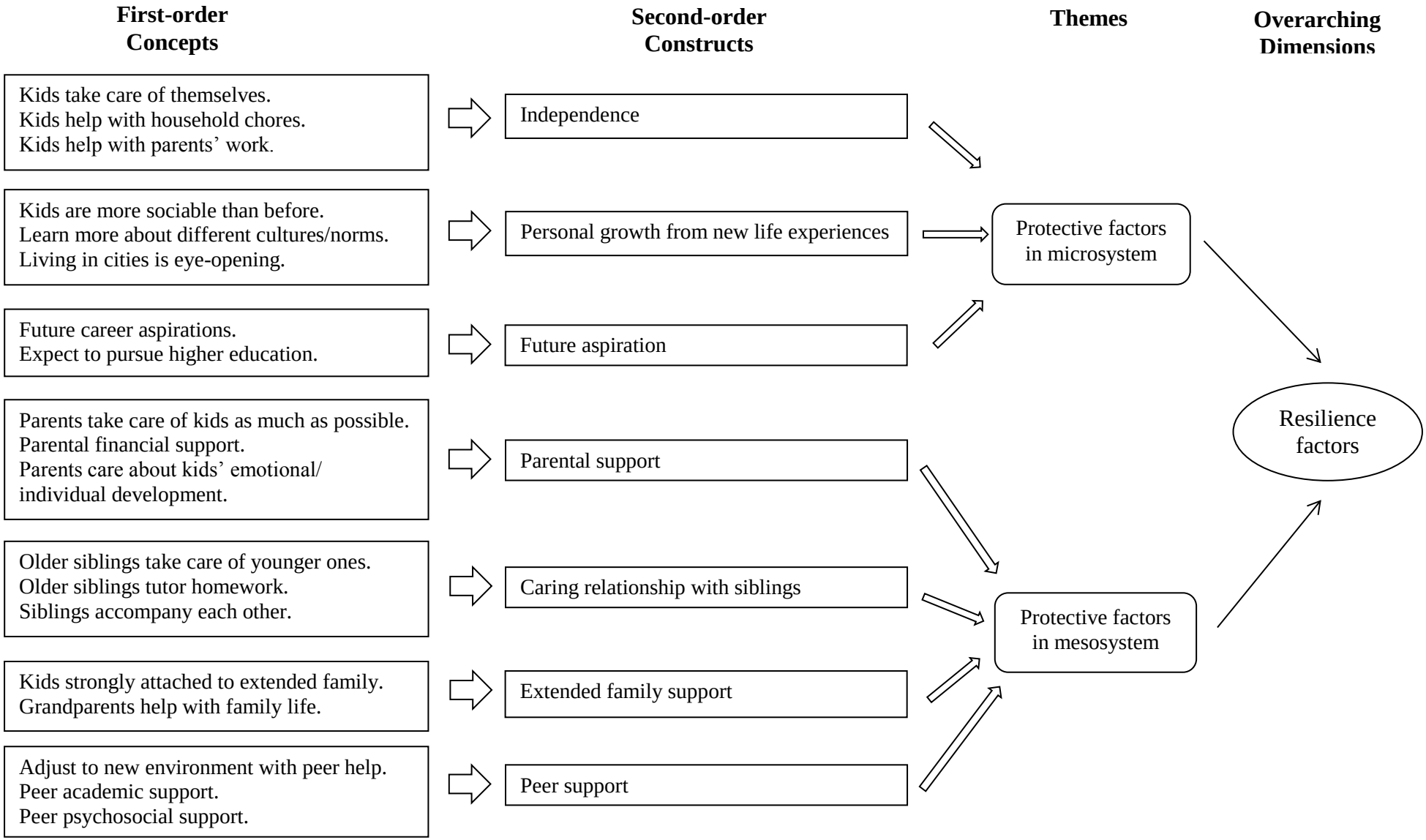
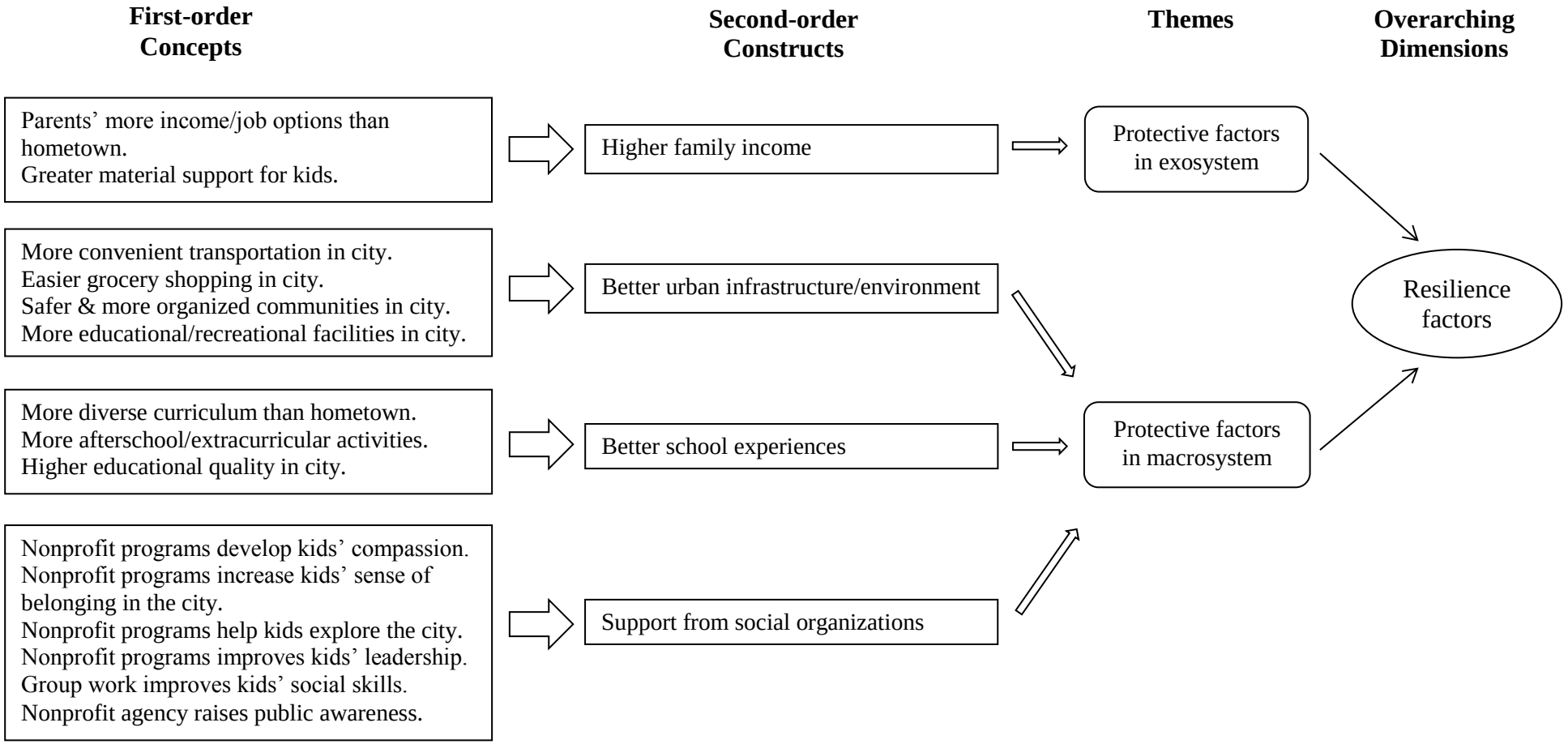

First-order Concepts
Second-order Constructs
Themes
Overarching Dimensions
Kids take care of themselves.
Kids help with household chores.
Kids help with parents' work.
Independence
Kids are more sociable than before.
Learn more about different cultures/norms.
Living in cities is eye-opening.
Personal growth from new life experiences
Protective factors in microsystem
Future career aspirations.
Expect to pursue higher education.
Future aspiration
Parents take care of kids as much as possible.
Parental financial support.
Parents care about kids' emotional/ individual development.
Parental support
Resilience factors
Older siblings take care of younger ones.
Older siblings tutor homework.
Siblings accompany each other.
Caring relationship with siblings
Protective factors in mesosystem
Kids strongly attached to extended family.
Grandparents help with family life.
Extended family support
Adjust to new environment with peer help.
Peer academic support.
Peer psychosocial support.
Peer support

(Continued)


First-order Concepts
Second-order Constructs
Themes
Overarching Dimensions
Parents' more income/job options than hometown.
Greater material support for kids.
Higher family income
Protective factors in exosystem
More convenient transportation in city.
Easier grocery shopping in city.
Safer & more organized communities in city.
More educational/recreational facilities in city.
Better urban infrastructure/environment
Resilience factors
More diverse curriculum than hometown.
More afterschool/extracurricular activities.
Higher educational quality in city.
Better school experiences
Protective factors in macrosystem
Nonprofit programs develop kids' compassion.
Nonprofit programs increase kids' sense of belonging in the city.
Nonprofit programs help kids explore the city.
Nonprofit programs improves kids' leadership.
Group work improves kids' social skills.
Nonprofit agency raises public awareness.
Support from social organizations

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