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## Diverse Experience of Immigrant Children: How Do Separation and Reunification Shape Their Development?

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### Abstract

Although many immigrant children to the U.S. arrive with their parents, a notable proportion are first separated and later reunited with their parents. How do the experiences of separation and reunification shape the well-being of immigrant children? Data were from a national survey of legal adult immigrants and their families, the New Immigrant Survey from 2003–2004 (for academic achievement, age 6–12, N=876; for psychosocial well-being, age 6–17, N=1,084). Results indicated that immigrant children who were once separated from their parents exhibited poorer literacy and higher risk of emotional and behavioral problems than those who migrated with parents. A protracted period of separation and previous undocumented status of parents amplified the disadvantages experienced by these children.

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Children of immigrants, comprised of immigrant children (i.e., foreign-born children of immigrants) and US-born children of immigrants (i.e., the second generation), are one of the fastest growing segments of the U.S. population. Between 1994 and 2014, the growth of total U.S. child population was almost entirely driven by the growth of children of immigrants; by the 2014, they comprised 25% of U.S. children (Child Trends, 2014). Furthermore, 57% of Hispanic and 91% of Asian children came from immigrant families in 2014 (Kid Count Data Center 2017).

Immigrant children accounted for about one fourth of children of immigrants (Child Trends, 2014). Despite their lower SES status, minority background, and experience of acculturation stress, immigrant children often do as well as or exceed native-born children in many dimensions of child development (Driscoll, Russell, & Crockett, 2008; Hirschman, 2001; Kao 2004; Washbrook, Waldfogel, Bradbury, Corak, & Ghanghro, 2012).

One underexplored area of research includes the diverse experience of immigrant children. Traditionally immigrant children studied are those who arrive with their immigrant parents. However, as legal restrictions tighten and the costs of immigration continue to rise,

immigration increasingly takes place in a serial fashion, with one or a few family members migrating first, later followed by others. In this process, children are often the last to move abroad (Orellana, Thorne, Chee, & Lam, 2001). As a result, a notable proportion of immigrant children endure a period of parent-child separation before reuniting with parents (Suárez-Orozco, Todorova, & Louie, 2002; Yoshikawa, 2011).

The present study contributes to a more complete appraisal of immigrant children's development by distinguishing immigrant children who arrive with their parents and those who experience separation and reunification. Using a national sample of immigrants collected in 2003 to 2004, we examined (1) the prevalence of immigrant children who encountered family separation; (2) differences in a range of developmental outcomes among those children who were and were not separated from their parents; and (3) for children who were separated and reunited with parents, the potential moderating effect of duration of separation, the legal status history of immigrant parents, and the children's sex and age at migration.

Drawing on perspectives from family reorganization theory and attachment theory, we proposed a conceptual framework for understanding the distinct challenges facing immigrant children who come with immigrant parents compared to those who are separated and later join their parents. For children migrating with their parents, the process of uprooting and adapting to new social, linguistic, and cultural environments results in disorientation and acculturation stress for both parents and children (Pumariiega & Rothe, 2010; Sciarra, 1999). Family separation and subsequent reunion may heighten such experiences, well beyond those typically faced by immigrant children in general. This further complicates children's adjustment to their families, schools, and communities in the host society.

Little research compares the well-being of immigrant children who undergo family separation and those migrating with parents. Most existing research is based on clinical and qualitative studies of small samples or included only children who sought medical assistance (Adams, 2000; Falicov, 2007; Lashley, 2000). A few notable exceptions exist. Suárez-Orozco and colleagues (Suárez-Orozco, Todorova, & Louie, 2002; Suárez-Orozco, Bang, & Kim, 2011) used a survey of about 400 immigrant children in middle childhood and adolescence who had immigrated to two U.S. cities (San Francisco and Boston) from a few selected countries and regions (China, Central America, Dominican Republic, Haiti, and Mexico). The study found that immigrant children who were once separated from their parents were more likely to report symptoms of anxiety and depression than those who had not experienced separation. This was especially true in the initial years after reunification. Gindling and Poggio (2012) used national data to examine the educational success of immigrant children (aged 6–18) and found that children once separated from parents were more likely to lag behind in school.

Our research extends these studies by focusing on a wider array of developmental outcomes (academic achievement, psychosocial well-being, and health) for a broad age spectrum of immigrant children using national data. Rigorous statistical techniques were used to obtain more accurate estimates of the impact of family separation and reunification on immigrant children. Several moderating mechanisms were examined to understand conditions that

amplify or mitigate the challenges facing immigrant children who were separated from parents.

## Separation and Reunification with Immigrant Parents and Child Development

Family systems perspectives, family reorganization and attachment theory are each relevant to children's separation and reunification with their parents. The family systems perspective views family as comprised of subsystems (e.g., parent-child, marital, sibling) that are embedded within larger systems (Cabrera et al., 2011; Cox & Paley, 1997). Each family member is part of an interactional, interdependent system in which the behavior of each individual or subsystem modifies that of other subsystems. In this view, family reorganization, such as separation and reunification, triggers change at multiple levels of the family system and creates adaptive challenges for all family members (Hetherington, 1992).

Family systems and reorganization have mostly been studied during divorce and remarriage (Fomby & Osborne, 2017; Hetherington, 1992), but are also relevant when children are left behind by parents to circumvent the costs and uncertainty of migration and rejoin parents when parents establish some stability in destination societies (Nobles, 2013). In this process, children experience two sets of family reorganizations: first as they are separated from migrant parents, and second as they reunite with parents while separating from caregivers back home. These alterations lead to changes in family functioning and in multiple relationships-- children and parents, children and other caregivers, parents and other caregivers-- which creates disequilibrium and disruptions in child development. Reorganizations also result in family instability, which in turn is adversely associated with children's development (Wu & Martinson, 1993; Sweeney, 2010). Various types of transitions can lead to instability, including parent and other family member's moves in and out of the household (Mitchell et al., 2015). Separation and reunification from parents is typically not investigated but, as we contend, can lead to a high level of instability as children experience transitions in both family configuration and residence.

Attachment theory highlights the importance of children's attachment to parents and the immediate and long-term negative consequences associated with parent-child separation (Bowlby, 2010; Cassidy & Shaver, 2016). During parent-child separation following migration, children experience disruptions in their attachment figures, which can trigger intense emotional and behavioral distress, even if children are cared for by others (Ainsworth, 1982; Dreby, 2010). There is an "attachment hierarchy" (Ainsworth, 1982): although children may have multiple attachment figures, these are not interchangeable. As such, other attachment figures may not easily compensate for the loss of the principal attachment figures (most often parents). In the context of parental out-migration, children are likely to experience weakened affectional bonds with their parents and problems in emotion regulation. These children may express heightened insecurity and feelings of anxiety, anger, and sadness (Kobak & Madsen, 2008).

Moreover, family separation necessarily leads to disruptions in parenting, reducing both the quality and quantity of parental input and supervision critical for child development (Dreby,

2010; Graham & Jordan, 2011; Parreñas, 2005; Toyota, Yeoh & Nguyen, 2007). These disruptions include the lack of parental cognitive stimulation such as involvement in children's learning and help with homework (Ensor & Hughes 2008), as well as supervision for emotional and behavioral regulation (Galambos et al., 2003; Pettit et al., 2001). Parental migration also results in the absence of traditional authority figures and the likelihood of a breakdown of essential social control in the household (Parreñas, 2005). When both parents migrate, children are left in the care of grandparents or other relatives. These extended family members can play an important role in family functioning, but they do not fully substitute for parents (Smeekens et al., 2012). Alternative caregivers may not be as engaged in child rearing as children's biological parents, provide the same standards of care, or create the same enriching home environment.

In the face of migration, the remaining caregivers, whether a parent or extended family member, do not just face additional household responsibilities from childcare and home maintenance; they also bear the social and emotional costs of family reorganization associated with the migration of their loved ones (Lu, 2012). These physical and psychological burdens may impose heightened distress and time constraints on the remaining caregivers. Under these challenges, remaining caregivers may show lower levels of warmth and support and may be more punitive in their interactions with children (Yeung, Linver, & Brooks-Gunn, 2002). Exposure to such rearing practices undermines the social and psychological well-being of the children. The impaired psychological functioning of the caregivers may be inadvertently transferred to children, giving rise to emotional instability and depression (Hammen et al., 2012).

Family reorganization experiences earlier in life shape children's ability to adapt to later family reorganization (Hetherington, 1992). In this respect, the detrimental ramifications of separation for children can carry long-term consequences, even after left-behind children join their migrant parents. Specifically, the weakened parent-child attachment and heightened distress resulting from family separation create a difficult path to restabilization of family relationships and functioning, particularly when children form close attachments with alternative caregivers (Falicov, 2007). Reunification activates a reparative process to restore the attachment bond and rebuild family relationships. This process can be fraught with stress for both the parents and children as they negotiate their new lives together (Landolt & Da, 2005). Qualitative evidence shows that children in reunified families often experience tensions, conflicts, disorientation, or withdrawal (Falicov, 2007; Lashley, 2000; Suárez-Orozco et al., 2002). They miss the caregivers in the home country and re-experience the grief of loss. For parents, disciplining children with whom they have spent little time presents a serious challenge. The difficulties are exacerbated if family reorganization involves a new family constellation, such as stepparents or new siblings. Surely we should not lose sight of the joy and renewed intimacy that family reunification brings, and the fact that for many families, the process is successful. But the heightened stress children experience during separation and reunification, beyond the typical life stressors all immigrant children encounter, can have an adverse effect on their development.

The processes discussed above are summarized in Figure 1. Taken together, immigrant children who experience family reorganizations (i.e., separation and reunification) are likely

to experience multiple sources of stress and greater adjustment difficulties than those who migrated with their parents. This leads us to expect immigrant children once separated from parents to fare worse in academic and psychosocial outcomes than their counterparts (Hypothesis 1).

The impact of separation and reunification varies by the dimension of child development. The effect may be especially detrimental in developmental areas that closely hinge on familial social environment and non-material resources (Yeung et al., 2002), such as psychosocial well-being (Hypothesis 1a). These areas are most severely disrupted during separation and most difficult to mend after reunification. When it comes to children's educational and health outcomes, the impact of separation may be less adverse because these areas are closely tied to family economic resources (Paxson & Schady, 2007; Yeung et al., 2002). Post-migration transition in these areas may be easier for children moving to join parents. Children are brought to reunite with parents usually when immigrant parents are economically stable. These children may thus live in better off families and may receive greater parental support in navigating the new country than children who arrive as a family unit. These conditions may offset some of the negative repercussions of family separation during migration.

The changing family process after migration tends to vary by which parent(s) is absent. Literature on child development demonstrates that children are more adversely affected by maternal absence than by paternal absence, reflecting the traditional role of mothers as primary caregivers and principal attachment figures (Brooks-Gunn, Han, & Waldfogel, 2002). In this respect, a mother's migration is likely to pose a greater social and emotional hardship than the out-migration of fathers (Yeoh & Lam, 2006). It follows that children left behind with no parent may endure the greatest disruptions in parenting practices and be most adversely affected (Hypothesis 1b). This scenario entails the most discontinuity in family arrangements, as neither parent is available to continue their roles as caregivers.

## Moderating Mechanisms

Children's responses to family reorganization may vary depending on the circumstances surrounding separation and reunification, as well as their personal characteristics. We explored several moderating factors. First is the length of reunification--are immigrant families capable of mending the trauma to children caused by years apart in the relatively short term? On the one hand, the period immediately after reunion can be particularly challenging as children begin to rebuild their relationship with parents. The negative ramifications of separation diminish over time as family roles reestablish and parents and children regain close relationships. On the other hand, the reverse could be true, in which time does not fully repair rifts in parent-child relationships. This results in the continuation of initial difficulties and negative cycles long after parents and children are reunited. Overall, we expect the negative impact to subside over time, especially with respect to areas less adversely affected by family separation (e.g., health and education); for psychosocial development, the recovery could take longer (Hypothesis 2a).

The length of separation could be an important factor shaping children's well-being after reunion. Although families commonly expect to reunite within a short period of time, financial or legal obstacles often prolong the separation. Longer separation entails a protracted loss of attachment figures and disrupted parenting, making children more vulnerable to adjustment difficulties and persistent psychosocial problems. It also results in a more estranged parent-child relationship and greater reorientation challenges after reunion (Smith, Lalonde, & Johnson, 2004). We thus expect children who experience longer separations from their parents to be more likely to report psychosocial problems and academic difficulties (Hypothesis 2b).

The experience of immigrant parents may also shape the impact of separation on children. In the U.S., legality represents an important aspect of the immigration experience. Undocumented immigrants, who are under tremendous stress arising from employment uncertainties and illegal status, are less able to maintain contact and provide support to left-behind children; they also face constraints on their physical mobility and are blocked from making regular return visits (Menjívar, 2006). Hence, it is likely that undocumented immigrants are away for protracted periods without seeing or having regular communication with their children. Their precarious socioeconomic conditions often relegate them to insecure and low-paying jobs, making them less capable of providing stable remittances to offset the negative effects of family separation (Capps, Bachmeier, Fix, & Van Hook, 2013). Taken together, these conditions lead to greater disruptions in parenting and economic support during separation. We expect that among children once separated from parents, those whose parents were undocumented during separation face the most challenges in development (Hypothesis 2c).

Children's personal characteristics may matter. Here we do not offer specific hypotheses because the relation is less clear-cut. Previous research on family reorganization highlights vulnerability facing children of both sexes and various age groups, though this may manifest in different ways (Hetherington, 1992). Children's age at migration is potentially associated with the likelihood of successful adjustment. On the one hand, some research shows that parental deprivation in early and middle childhood produces more deleterious impacts than in late childhood and adolescence (Ermisch & Francesconi, 2001). This may be because younger children are more attached to parents and more dependent on resources within their own family. Young children are likely to interpret separation from parents as a complete loss of parents' love and protection. Some young children have little memory of their parents and can experience emotional withdrawal from migrant parents after reunion. In contrast, older children have greater personal and extra-familial resources for coping with their parents' absence. They may better appreciate parents' sacrifice in taking the journey. Thus, young children may face more psychosocial difficulties, which hampers successful reunification and long-term well-being.

On the other hand, older children face distinct challenges specific to their development stage, making adaptation after family reorganization especially difficult. Older children seek autonomy from parents and are more defiant of parents' authority (Schapiro, 2002). This can create significant strains in parent-child relationships after reunion, adding an additional level of stress to the adjustment process (Dreby, 2010). In contrast, younger children are



better able to become reattached to migrant parents and adapt to family reorganization. Also, language and cultural acquisition is typically easier for younger than for older children (Bleakley & Chin, 2010). Some suggest that the best time to acquire a new language is before puberty (Snow & Hoefnagel-Höhle, 1978). The same holds for adjusting to a new school system and establishing new relationships with peers (Clarke, 2016). In this respect, older children may experience greater stressors, particularly in adapting to schools.

Children's sex can be a moderator considering the distinct role of gender in the socialization and adaptation process, including gender-specific affective and behavioral responses to stress incurred during family disruptions. Previous research on the effect of parental divorce shows that boys show more intense and enduring problems in response to family disruptions than girls (Allison & Furstenberg, 1989). With a lack of adequate supervision and strained relationship with parents, boys are more likely to show social and behavioral problems; furthermore, they tend to act out, thus more prone to externalizing behavioral problems (Bertrand & Pan, 2013). Girls, in contrast, are more likely to show protective psychosocial qualities that foster their resilience to family discontinuities. When girls develop reactions to family disruptions, they tend to internalize problems (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999), which may manifest in difficulties in learning.

## METHOD

### Data

This study used data from the New Immigrant Survey (NIS), a survey of new legal immigrants and their families in the United States (Jasso, Massey, Rosenzweig, & Smith, 2005). The NIS is based on a nationally representative sample of the administrative records of adult immigrants (aged 18 and older) who were newly admitted to legal permanent residence between May and November 2003 (a 4% sample of all who received permanent residency during the period). The administrative records were compiled by the U.S. Immigration and Naturalization Service. Data collection was carried out between June 2003 and July 2004. The response rate for the survey was around 70%, yielding a sample of 8,573 immigrant families (Jasso et al., 2005). The sample included both new arrivals to the U.S. (48.7%) and those who had adjusted their immigration status (adjustees) while in the U.S. (51.3%). The immigrants came from a wide range of sending countries and spanned 44 states in the U.S. All respondents were interviewed in the language of their choice (a total of 95 languages). Information on the spouse (if applicable) and co-resident children (up to 2 randomly selected children of the sample adults aged 6–17) was included.

Children's psychosocial well-being and health was reported by parents, usually the mother if she was at the interview. The sample size of children (age 6–17) was 1,084 (from 816 families). Academic achievement was assessed through the Woodcock-Johnson Achievement Tests. By design, the achievement tests were administered to all children aged 3–12 in the household, yielding a sample of 876 children (from 681 families). We conducted sensitivity analyses restricting the analyses of psychosocial well-being and health to the same age range as academic performance (age 6–12). The results were consistent. We thus present results based on the full sample (age 6–17) that offers sufficient sample size for disaggregated analyses.

The NIS provides a unique research opportunity because it is the first national study of immigrants with information on the timing of arrival for adult immigrants and their children. This allowed us to compare immigrant children who came to the U.S. as a family unit and those who were separated and later joined their immigrant parents. Note that the NIS was restricted to legal immigrants and the findings are thus generalizable only to children of legal immigrants. But the information is still useful because children often reunite with parents after their parents obtain legal status. In this respect, undocumented immigrants, which were not included in our sample, are less relevant to the research questions. Between 2007 and 2009, a follow-up survey of the original NIS sample was conducted. We did not use the second wave because only a small proportion of children in the original sample was re-interviewed, leading to a small sample size.

Biological children of adult immigrants who were born outside the U.S. were included in the analysis. Adopted and step children (2.6% of the child sample) were excluded. US-born children to immigrant parents (i.e., the second generation) were excluded from the main analyses (but were included in additional analyses). About 8% of children were from refugee families. We conducted additional analyses restricting the sample to non-refugee children, which led to similar results (Appendix A in online supplement).

### **Outcome Variables**

Academic achievement was assessed for children aged 6 to 12 with Woodcock-Johnson Achievement Tests (WJ-III version Form A; Woodcock & Johnson, 1989). Four tests were given to children: Applied Problems, Letter-Word Identification, Passage Comprehension and Calculation). We studied all 4 tests and restricted the sample to children aged 6–12 who participated in all tests. Population-normed test scores were used (calculated using a procedure that combines features of both area and linear transformations of the distribution scores; McGrew, Woodcock, & Schrank, 2007; WJ Technical Manual).

Emotional and behavioral problems were assessed through parents' report on two questions: "During the past 12 months, has the child seen a psychiatrist, psychologist, or counselor about any behavioral, emotional or mental problem?" and "During the past 12 months, have you felt, or has anyone suggested, that the child needed help for any behavioral, emotional, or mental problem?". We constructed a dichotomous variable indicating if the answer was yes to either question. This variable reflected serious psychosocial malfunctioning that was evident and required medical attention. Child health was based on parents' report: "In general, would you say that the child's health is excellent, very good, good, fair, or poor?" We treated it as a dichotomous variable, with excellent or very good health coded as 1 and 0 otherwise.

### **Immigration Status Variables**

The key predictor was children's immigration status, distinguishing children who experienced separation and reunion and those who immigrated with their parents. This variable was based on the year of arrival for parents and children. For immigrants who had multiple entries to the U.S., the year of the first immigration trip since the child was born was used and compared with the year the child first entered the U.S. This allowed us to



capture any period of separation during a child's life. Children who entered the country a year or more after the parents were considered as having separated and reunited with parents. For the main analysis, we did not distinguish which parent(s) was separated from children due to migration because only a subset of the sample had information on both parents. We conducted additional analyses restricting the sample to children with information on both parents (77% of the children with achievement data and 62% of the children with psychosocial data). We distinguished children who were once separated from mothers only, fathers only, and both parents.

To examine the moderating mechanisms, we first differentiated children once separated from parents by their year since reunification (immigration). We used 2 years as the cutoff point because over half of immigrant children migrated within two years of the survey. We next distinguished immigrant children once separated from parents by duration of separation (for 0–2 years, 3–6 years, and more than 6 years; 6 years was the median duration of separation). We then disaggregated children once separated from parents by parents' previous documentation status--whether parents endured any period of undocumented status before obtaining permanent residency. The information was derived from adults' legal status history section in the NIS.

### Covariates

The independent variables included the following: children's age (and age squared), gender, immigrant children's region of birth (Europe, Latin America, Africa, and Asia), family structure (in two-parent families, with only mother, or with only father), the number of siblings in the household, parents' education (the years of schooling of the better educated parent), parents' and children's length of residence since the first immigration, and home ownership (a measure of living standards, following earlier research using NIS; Jasso et al., 2005). Household income was not used, given large missing data (54%). We also controlled for region of the child's current residence (West, Midwest, Northeast, and South). In an additional analysis, we distinguished the state of residence of immigrant families and the results were consistent (Appendix A).

An important determinant of children's language development is parents' English proficiency. Parents who have difficulty with English are less likely to help with children's learning and participate in literacy-related activities with their children (Capps et al., 2013). A variable based on parents' listening and reading skills was constructed: "How well would you say you understand English when someone is speaking to you?"; and "How well would you say you speak English?". We reverse-coded the responses so that higher values indicate greater proficiency (Not at all (1), Not well (2), Well (3), to Very well (4)). We summed the scores from the two questions to create an overall scale. This variable was included in models predicting children's literacy test scores (Letter-Word Identification and Passage Comprehension). For the analysis of children's health, we also controlled for parents' self-rated health, which was a dichotomous variable with "1" indicating excellent or very good health, and 0 otherwise.

In the models of children's WJ test scores, we also controlled for the language of the test. In the NIS, children whose parents were from Spanish-speaking countries and whose first

language was Spanish were randomly assigned to take either the English or Spanish test. The Spanish test was directly comparable to the English version (Schrack, McGrew, Ruef, & Alvarado, 2005). Although a recent study found little bias of test language (Akresh & Akresh, 2011), we included this variable to obtain more accurate results.

In general, the level of missing data was low. The variable with the highest level of missing data (6%) was that indicating whether the child was once separated from their migrant parents. We conducted complete case analysis by dropping 9% of the child sample that had missing data in any of the variables used in the analysis.

## Analysis

We ran simultaneous equation models for achievement test scores, treating immigration status as the endogenous variable. This approach helped address potential selection bias, in which certain unobserved factors leading to parent-child separation during migration also affected children's development. If these factors negatively affected children's well-being, we would underestimate the effect of separation on children, and vice versa. In implementation, the simultaneous equation method estimated a system of equations via three-stage least squares (3SLS) to model the determinants and impacts of the endogenous variable (Wooldridge, 2015). Specifically, we used a three-equation system, in which Letter-Word Identification and Calculation were jointly estimated with an equation predicting the endogenous variable--whether the child was once separated from his or her immigrant parent--based on an array of pre-migration characteristics of the immigrant parent (age, gender, year of education, employment status, and occupation). In a similar vein, the Passage Comprehension and Applied Problems were jointly estimated with an equation predicting the endogenous immigration status variable. The system of equations takes into account selection on unobserved variables by allowing for correlation of disturbances across equations. The models are identified when at least one exogenous exploratory variable, operating analogous to an instrumental variable, is excluded from one equation that appears with a nonzero coefficient in other equations (Wooldridge, 2015). In our analysis, parents' pre-migration characteristics were included in the model predicting children's migration status but excluded in the models predicting literacy and numeracy test scores; and parents' English proficiency was included in the model predicting literacy test scores but excluded in that of numeracy test scores.

For the analysis of children's psychosocial well-being and health, the outcome variables were dichotomous. Accordingly, bivariate probit models were estimated (an extension of simultaneous equations to binary outcomes). These models allow for two probit models with endogenous exploratory variables while accounting for correlated disturbances (Greene, 2012). We included parents' self-reported health in the health equation as an instrumental variable to provide exogenous variation for identifying the model, under the assumption that parents' health directly affected children's health but had no independent impact on their psychosocial outcomes.

In the analysis, we first compared the outcomes of the two groups of immigrant children. We then conducted a series of additional analyses replacing the binary immigration status variable with more detailed categorical variables distinguishing different years since

reunification, different durations of separation, and different documentation status history of parents. We next carried out separate analyses by children's sex and age at migration to examine these factors as potential moderators.

## RESULTS

### Descriptive Results

Descriptive statistics of immigration status variables and covariates are shown in Table 1. Among immigrant children, namely those born outside the U.S., 22% were once separated from parents. We also obtained weighted statistics using the sample weight provided by the NIS, which provided a similar story (25%). Among children who were ever separated and reunited with their parents, about 53% experienced a separation of 6 years or less, with the remaining 47% enduring a separation of more than 6 years. Also, 30% of immigrant children who were separated had parents who were undocumented before legalization. Moreover, separation was most prevalent for immigrant children from Latin America (32%), followed by children from Africa (25%) and Asia (19%). Immigrants from Europe were most likely to migrate as a family.

Additional analysis conducted on a smaller sample of children with migration history information for both parents showed that among children once separated from parents, the majority (62%) were separated from fathers only, followed by those separated from both parents (26%). Separation from mothers alone was least common (12%).

Children's outcomes are presented in Table 2. Without controlling for differences in other characteristics, immigrant children who reunited with their migrant parents scored lower in Letter-Word Identification and Calculation, and higher in Passage Comprehension and Applied Problems, than immigrant children who migrated with parents. Relative to the small differences in other outcomes, there was a substantial gap in emotional and behavioral well-being: children reunited with parents were more than twice as likely to report psychosocial problems.

### Developmental Differences between Children Migrating with and Separated from Their Parents

**Overall Differences**—The regression results provide supportive evidence that immigrant children who were separated from their parents fared worse than their peers who arrived with parents (Hypothesis 1). Table 3 presents models predicting immigrant children's academic achievement. The simultaneous equation predicting children's immigration status is shown in Appendix B. Fathers, less educated parents, parents who were self-employed before migration, and parents who were not in managerial occupations were more likely to leave children behind during migration.

The first two columns in Table 3 show the literacy test results (Only the key independent variable is shown. The full table is presented in Appendix C). Children who reunited with parents scored lower in Letter-Word Identification than those migrating with parents. In Passage Comprehension, they also appeared to have lower scores but the difference was small and not significant. This result is consistent with previous research suggesting that

literacy is a particularly challenging area for immigrant children from countries where the main language is not English (Chiswick & Miller, 2001). In other academic subjects, immigrant children often perform on par with, if not better than, native-born children (Kao, 2004). The difference in the two literacy tests warrants discussion. Letter-Word Identification constitutes an oral test, in which both vocabulary and pronunciation are evaluated. Passage Comprehension evaluates the child's understanding of what was read (silently). The worse outcomes in Letter-Word Identification of children reuniting with parents highlighted the challenges they faced in vocabulary and oral communication skills.

Results of the numeracy tests, presented in the last two columns of Table 3, revealed a different pattern. Immigrant children once separated from parents appeared to fare slightly better in Calculation but the difference was non-significant. In Applied Problems, these children performed better than children who migrated with parents. This difference was marginally significant. This result pointed to their better problem solving skills in the area of numeracy.

Turning to Table 4, results revealed a notable difference in psychosocial well-being between children who experienced family separation and those who did not (Only the key independent variable is shown. The full table is presented in Appendix D). The disadvantages in psychosocial well-being of children who were once separated from parents appeared stronger and more persistent than those in academic achievement (consistent with Hypothesis 1a). Specifically, these children were three times as likely to experience serious emotional or behavioral problems than their comparison group. There was no significant difference in physical health. Hence, the discussion below focuses on children's psychosocial well-being.

### **Separation from Both Parents versus One Parent**

Panel A in Table 3 differentiated children separated from fathers, mothers, and both parents. It suggests that children who were once separated from both parents were disadvantaged in letter word identification. The difference was marginally significant. There were no significant differences in the other literacy test. Children separated from fathers fared worse in Applied Problems. The difference was marginally significant.

Results from Panel A in Table 4 show that the psychosocial problems were most severe when children experienced separation from both parents. Separating from mothers also produced psychosocial costs, although the coefficient was marginally significant due to the reduced sample size. In contrast, separating from fathers alone did not significantly undermine children's psychosocial development. Overall, these results offer some preliminary support for Hypothesis 1b that immigrant children are most adversely affected when they experience separation from both parents. The difference was especially evident for children's psychosocial outcomes.

### **Moderating Factors**

Results of the moderating factors are displayed from Panel B to F in Table 3 and 4. The role of the length of reunification seems to depend on outcomes. Panel B (Table 3) shows children's academic achievement by time since reunification (equivalent to year since

immigration). As expected, in the short term after reunification (i.e., within two years), immigrant children who were once separated from parents fared poorly in both literacy tests. By comparison, children who reunited with parents were no longer disadvantaged in literacy several years after reunification. This group of children even outperformed their counterparts in Passage Comprehension. With respect to numeracy scores, immigrant children who reunited with parents enjoyed an advantage in Applied Problems after several years in the U.S. This advantage was not evident within the first two years of arrival. These results lend some support to Hypothesis 2a, which predicts improved outcomes over the course of reunification. This, however, was not the story for psychosocial outcomes (Panel B, Table 4). Behavioral and emotional problems were especially evident after two years of reunification. We discuss possible explanations below.

Duration of separation is a strong moderator, consistent with Hypothesis 2b. With respect to academic achievement, a shorter duration of separation was associated with better literacy and numeracy outcomes of immigrant children (Panel C, Table 3). Children who endured a relatively short period of separation ( $\leq 6$  years, especially 0–2 years) were on par with children who migrated with parents in Letter-Word Identification and even outperformed the latter group in the other three tests. Among children who endured a short period of separation, 50% were separated from parents for 1 year or less, and 80% for three years or less. Thus, they endured limited disruptions. In contrast, a longer duration of separation conferred significant academic challenges on immigrant children. This was especially evident for the two literacy tests, which depended heavily on children's social environment. Similar to academic outcomes, children who had undergone a protracted period of separation reported higher levels of emotional and behavioral problems (Panel C, Table 4). Those experiencing a shorter separation ( $< 2$  years) were not significantly worse off than children who arrived with parents.

Results, which were in line with Hypothesis 2c, suggested that undocumented status during migration conferred disadvantages on children. Immigrant children whose parents were ever undocumented during separation performed significantly worse in Letter-Word Identification than their counterparts who migrated with parents (Panel D, Table 3). Children whose parents maintained a legal status during separation also underperformed but their disadvantage was smaller. Panel D in Table 4 further points to an amplified negative consequence of separation when immigrant parents were undocumented. Children of those parents showed a significantly heightened risk of emotional and behavioral problems. In contrast, immigrant children whose parents maintained a legal status, even if having been separated, did not suffer worse psychosocial outcomes than those migrating with family. Note that this analysis controlled for duration of separation. Hence, the disadvantages of children of undocumented immigrant parents were not primarily driven by their longer duration of separation.

### **Children's Age at Immigration and Gender**

Age at migration and gender were important moderators. We used age 5 as the cutoff because it corresponded to the first year of formal schooling in the U.S. The results (Panel E1 and E2 of Table 3) suggested that among children who came to the country at or before

age 5, there was no significant difference in the literacy tests. These children even performed slightly better in Applied Problems than their counterparts who migrated with parents. By contrast, among immigrant children who arrived at an older age, many of whom entered the U.S. school system halfway, the experience of separation took a toll, as indicated by a large negative and significant difference in Letter-Word Identification.

Panels E1 and E2 of Table 4 display the difference in psychosocial well-being by age at immigration. We used age 10 as the cutoff to distinguish children in commonly accepted developmental stages: early and middle childhood, versus late childhood and adolescence. The negative psychosocial impact of separation was particularly salient for children who immigrated at a young age. There was little evidence that separation had a negative impact on children who immigrated at or after age 10. This result suggested that separation and adaptation was more challenging for young children. Although younger children integrated into the school system more easily (Table 3), they endured substantial emotional and behavioral difficulties.

With respect to differences by gender (Panel F1 and F2, Table 3), immigrant girls were more negatively affected academically than boys by the experience of separation. Girls who were once separated from parents scored significantly lower in Letter-Word Identification than their counterparts without such an experience. This was not the case for immigrant boys. By contrast, immigrant boys with family separation experience performed better in Applied Problems than their counterparts who did not endure separation. This was not the case for immigrant girls.

Panels F1 and F2 of Table 4 report a large gender difference in psychosocial well-being. The negative ramifications of family separation were largely borne by boys. Boys who reunited with parents were more likely to develop severe manifestations of psychosocial distress. The difference between girls with and without such experience was small and non-significant.

To place our findings in the broader context of immigrant families, we compared the two groups of immigrant children with native-born children of immigrants (i.e., the second generation). The descriptive statistics and regression results are shown in Appendix E and F.

## DISCUSSION

The present study investigated the impact of family separation and reunification on the well-being of immigrant children. By comparing immigrant children who were once separated from parents and those who migrated with parents as a family unit, we found that the type of immigration experience had implications for children's academic and psychosocial outcomes. Specifically, immigrant children who experienced separation manifested poorer literacy achievement and higher risks of emotional and behavioral problems than children who immigrated with parents. The adverse effect of family separation was especially pronounced for children's psychosocial well-being and for acquisition of English (vs. numeracy skills and physical health), as these dimensions hinged heavily on social environment. During separation, children may suffer from a lack of a stimulating environment and disrupted parenting, which can impede their learning and social



development. The experience of separation further posed substantial adjustment difficulties to children post family reunion, leading to social disruptions and learning difficulties in school. The adjustment challenges they encountered go beyond the general acculturation difficulties all immigrant children face.

It is worth noting that the data used were gathered 14 years ago. The prevalence of the phenomenon and magnitude of the effect of separation and reunification may differ today. Nevertheless, we believe that the results are meaningful in understanding immigrant children in the current context, because the key sending origins of immigrant children have remained relatively stable over the past two decades (Child Trends, 2014) and the underlying processes linking separation and reunification to child development are likely to hold (Figure 1). Also, our data do not include undocumented immigrants and their children, for which the strategy of separation and reunion may be less common. To the extent that we identify parents' documentation status history as an important moderating factor, children of undocumented immigrants may suffer even more adversities from separation.

Immigrant children reuniting with parents did not suffer across the board. They fared similarly in physical health to their counterparts. They even seemed to enjoy a slight advantage in one numeracy test (Applied Problems). The differences between literacy and numeracy results may be partly explained by the numeracy education in children's origin countries, which is sometimes more rigorous than in the U.S. Based on the PISA report, the U.S. fell below the OECD average in mathematics education. The U.S. also lagged behind, or was on par with, a number of less developed countries in Asia and Latin America (The OECD, 2015). Children who were separated from parents were more likely to be exposed to a greater emphasis on numeracy skills in their home countries. The difference between literacy and numeracy tests may also reflect the distinct learning processes involved. Numeracy skill is based largely on quantitative reasoning and more easily transferable across cultures and languages. In contrast, literacy skills are less transferable across countries. For many immigrant children, performance on literacy tests reflects the degree to which they successfully acquire a new language. The acquisition of a new language is closely tied to children's social environment after immigration (Jæger, 2011). A family environment fraught with conflict and stress impedes children's language acquisition.

Not all children who had experienced family separation faced the same degree of developmental deficits. Immigrant children who were separated from both parents were most disadvantaged in academic and psychosocial well-being. In some cases, separation from mothers also led to psychosocial costs. These results, however, should be considered preliminary because of small sample sizes. In addition, there was a difference by duration of reunification. The academic disadvantages experienced by immigrant children who were once separated with parents subsided a few years after reunification. But the detrimental psychosocial consequences were not short lived. Because our analysis did not follow immigrant children over time, this result provided only suggestive evidence that the emotional trauma caused by years apart was not easily mended after reunion. This result could be interpreted in two ways. First, the initial reunification may be characterized as a honeymoon period. Over the longer term, the cumulative stressors during separation and after reunion may lead to manifestations of psychosocial problems. Second, the result may

also reflect the greater likelihood of diagnosis associated with longer durations of stay and greater utilization of health services, as immigrants, especially shortly after arrival, may have limited contact with the health system. But even if this were the case, it still suggested that the persistence of initial emotional difficulties.

The study identified several important moderating factors, namely length of separation and parents' documentation status. A protracted period of separation and an episode of undocumented status of parents created especially adverse circumstances for immigrant children. Across both academic and psychosocial outcomes, these conditions amplified the disadvantages faced by children who were once separated from parents. Prolonged separation entails greater disruptions in family relationships and functioning, hence greater reorientation post reunion. Undocumented immigrant parents were less able to maintain social and economic linkages with children during separation, leading to heightened family disruptions even among children of immigrants who eventually obtained legal status.

The results also pointed to some differences by age at migration and gender of children but their role differed for distinct dimensions of development. Among children who endured separation and reunification, those who arrived at an older age faced particular challenges in language acquisition. This was consistent with earlier research showing that for immigrant children who entered the country at an older age, adapting to the U.S. school system was more challenging (Hirschman, 2001). Immigrant children who arrived at a younger age seemed to be better able to adapt to the school system. However, for these young children, the experience of separation had a more adverse impact on their emotional and behavioral well-being, suggesting that they were more prone to developing psychosocial responses to separation from parents. With respect to gender differences, separation due to migration appeared to affect girls in academic performance, whereas boys were especially vulnerable to psychosocial disorders. Boys were more likely to develop externalizing behavioral problems that were severe and more easily detected (Leadbeater et al., 1999). Girls, on the other hand, tend to develop internalizing emotional responses, which interfered with learning can be manifested in school difficulties.

Overall, our study demonstrates the importance of understanding immigrant children's diverse experiences during migration. Drawing on a national sample of legal immigrants and their children, we found that every year close to a quarter of immigrant children came to the country to reunite with their parents. Immigrant children from Latin American countries were most likely to endure such an experience. These children faced distinct academic and social challenges as they integrated into the host society. Results of this study are generally consistent with previous studies based on qualitative evidence or smaller samples. Some difference from previous research should be noted. For example, Suárez-Orozco et al. (2011) reported a higher rate of immigrant children who were once separated from parents. This may partly reflect their sample composition, which included a disproportionate number of children from Latin America.

This study contributed to our understanding of the processes and consequences of family reorganization in family systems and attachment processes. We added to the existing knowledge derived largely from marital processes (divorce and remarriage) to the context of

migration, an increasingly prominent phenomenon that has changed the family landscape worldwide. We contend that migration represents a distinct form of family reorganization, which can complicate and disrupt family relationships and functioning when parent-child separation is involved. In this scenario, children undergo a series of family reorganizations coupled with disruptions in attachment relationships and parenting practices. They are first separated from parents, and then from the caregivers to whom they have become attached during the parent-child separation. The first stage of separation triggers adjustment challenges in different family subsystems (between parents and children, between migrant parents and other caregivers, etc.). Negative experiences in the first stage can undermine children's ability to adapt to the second stage of family reorganization after reunion. Taken together, these processes shape the development of immigrant children in the host society. By considering the experience of separation and reunification, we move beyond the focus on acculturative stress and on immigrant children's experience since arrival to incorporate the added stress stemming from changes in the family system both before and after children's migration.

The findings provide insights into the vulnerabilities immigrant children bring with them to a new country. The experience of separation and reunification can impose unique challenges for children's integration into their families, schools, communities, and society at large. Given rising immigration costs, as well as the increasing number of adult immigrants who engage in long-term migration, this phenomenon is likely to persist. The findings help educators and social workers to be more sensitive to the unique challenges facing immigrant children who underwent separation and reunification. It is also useful to raise immigrant parents' awareness, who may not be fully aware of the psychological ramifications of separation. Parents may expect children to be happy and appreciative after reunification. In the absence of such behaviors, they may feel disappointed, further exacerbating family tensions and impeding children's healthy transitions.

Several policy implications warrant discussion. Unlike family reorganization due to divorce, family reorganization due to migration is partly shaped by institutional factors such as immigration and integration policies. Current U.S. immigration policy determines who can move to the country legally and when they may do so. Despite following principles that support family reunification, the policy sometimes ends up separating rather than reunifying families. Legal restrictions often prevent parents and children from migrating to the U.S. together, as the regulations stipulate that during the immigration petition, families must remain outside the United States. Thus, it is not uncommon for legal immigrants to wait several years, under long backlogs and annual numerical limits, before their spouses and children can legally join them. In 2006, a spouse or a minor child sponsored by a legal immigrant waited on average six years between application and admission, and the wait was longer for groups who applied in large numbers (i.e., Mexicans; Hatch, 2010). Based on our results, prolonged wait times can carry detrimental ramifications for child well-being, making adapting to a new life more challenging. Policies of family reunification that shorten the duration of separation for immediate family members of legal immigrants or provide means for applying family members to join the immigrants would help mitigate the adverse effects.

Several limitations of this study warrant discussion. First, we were not able to incorporate longitudinal data because of sample size constraints. We thus could not examine the longer-term effects of separation and reunification. In addition, the measure of psychosocial well-being through parents' report is less than ideal, because immigrants, especially those of low socioeconomic status or new arrivals, tend to have limited interaction with the health system. Although we adjusted for a range of background variables and adopted statistical methods to reduce potential endogeneity, we could not evaluate the degree of underestimation. Also, we did not have a sufficiently large sample size to make further distinctions by, for example, children's country of origin and state of residence. The study thus cannot speak to how cultural background in the context of origin and reception shapes the experience of different groups of immigrant children. The same holds for the analysis by separation from mothers, fathers, or both parents because only a subsample had migration information from both parents. Moreover, we were not able to explicitly test for the mediating mechanisms laid out in Figure 1, because the data do not provide information on family circumstances and care arrangements during separation.

Despite these limitations, this study provides a glimpse into a less-understood family process affecting many immigrant families in our country. Future studies will benefit from large-scale national longitudinal data that collect detailed information on family environment before and after migration to unpack the short- and long-term impact of family separation and the mediating and moderating mechanisms.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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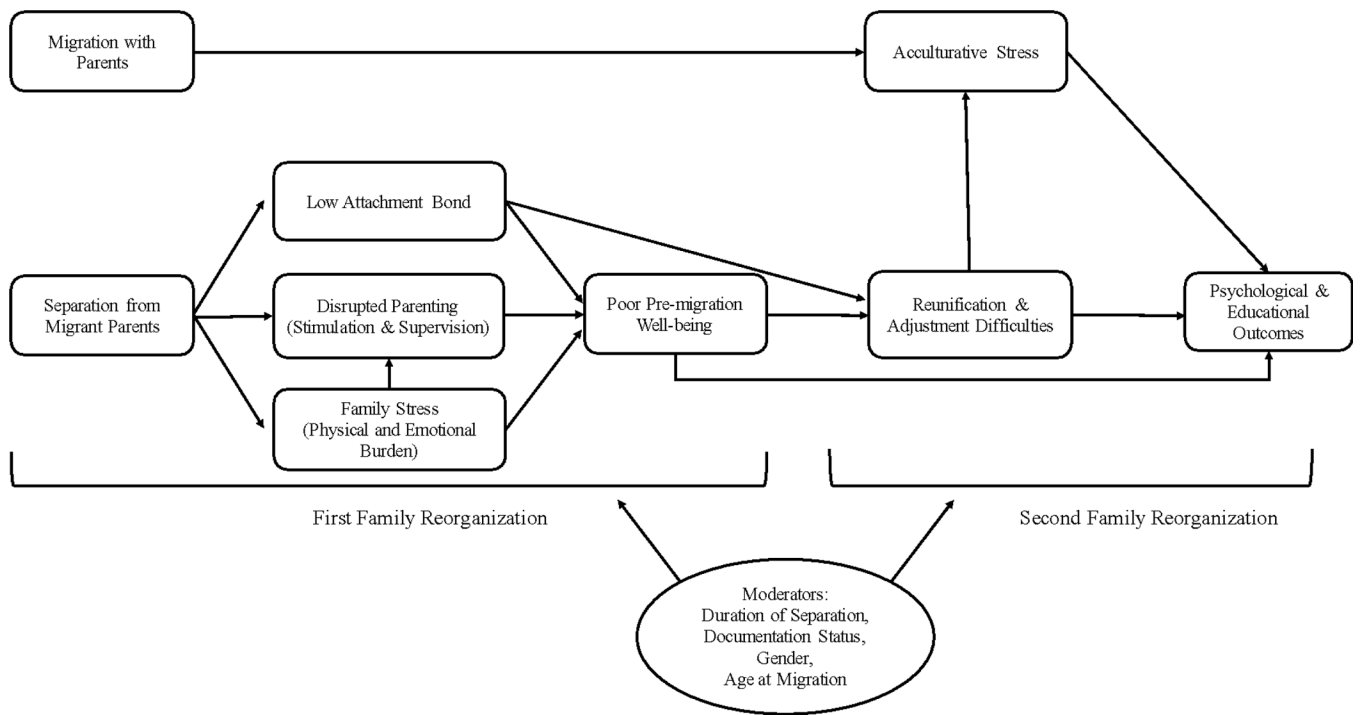
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**Figure 1.**  
Conceptual Framework

**Table 1.**

Descriptive Statistics for Explanatory Variables, the New Immigrant Survey 2003 (N=876).

Percentage or Mean	All Children (N=876)	Children Reunited with Migrant Parents (N=192)	Children Migrating with Parents (N=684)
<u>Immigration experience</u>			
Child immigration experience <sup>a</sup>	100.0%	21.9%	78.1%
By year since immigration (YSI)			
Child migrating with parents	78.1%	0.0%	100.0%
Child reunited with migrant parents, YSI 0~2 years	13.0%	59.4%	0.0%
Child reunited with migrant parents, YSI 3~6 years	7.2%	32.8%	0.0%
Child reunited with migrant parents, YSI 6+ years	1.7%	7.8%	0.0%
By duration of separation			
Child migrating with parents	78.08%	0%	100%
Child reunited with migrant parents, years of separation 0~2 years	7.31%	33.33%	0%
Child reunited with migrant parents, years of separation 2+ years	14.61%	66.67%	0%
By parent's documentation status			
Child migrating with parents	78.4%	0.0%	100.0%
Child reunited with migrant parents who were ever undocumented	6.5%	30.2%	0.0%
Child reunited with migrant parents who were documented	15.1%	69.8%	0.0%
<u>Controls</u>			
Age	9.2 (2.0)	9.3 (2.0)	9.1 (2.0)
Male	49.9%	48.4%	50.3%
Sending regions			
Europe	22.3%	11.3%	88.7%
Latin America	32.4%	31.7%	68.3%
Asia	34.1%	18.7%	81.3%
Africa	11.2%	24.5%	75.5%
Family structure			
Both parents present in the household at the time of the survey	82.9%	20.5%	79.5%
Only biological mother present	12.8%	25.0%	75.0%
Only biological father present	4.3%	39.5%	60.5%
Sibship size	2.8 (1.5)	3.3 (1.8)	2.6 (1.4)
Years of completed education	4.0 (2.0)	4.3 (1.8)	4.0 (2.1)
Parent years of education	13.2 (3.4)	12.6 (4.1)	13.3 (3.2)
Parent years since arrival	5.1 (7.2)	11.8 (7.5)	3.3 (5.8)
Child years since arrival	1.8 (2.6)	2.3 (2.9)	1.7 (2.6)
Home ownership	23.5%	31.3%	21.4%

Percentage or Mean	All Children (N=876)	Children Reunited with Migrant Parents (N=192)	Children Migrating with Parents (N=684)
Parent English proficiency (Not at all=2 to Very well=8)	5.0 (2.0)	5.5 (1.8)	4.8 (2.0)
Test language is English	87.7%	80.7%	89.6%
Parent self-rated health (% with excellent/very good health) <sup>b</sup>	59.8%	57.5%	60.3%
Region of residence			
West	28.5%	17.2%	82.8%
Midwest	13.0%	23.7%	76.3%
Northeastern	34.7%	24.7%	75.3%
South	23.7%	22.6%	77.4%

Notes:

<sup>a</sup> Among the 674 children with valid migration history for both parents, 62.2% were not ever separated from parents, 4.6% were separated from mother only, 23.4% were separated from father only, and 9.8% were separated from both parents.

<sup>b</sup> The sample size is based on Table 4 (N=1,084).

Standard deviations in parentheses

**Table 2.**

Descriptive Statistics for Outcome Variables, the New Immigrant Survey 2003 (N=876).

<b>Percentage or Mean</b>	<b>All Children (N=876)</b>	<b>Children Reunited with Migrant Parents (N=192)</b>	<b>Children Migrating with Parents (N=684)</b>
<u>Outcomes</u>			
Letter Word Identification score	101.7 (26.9)	100.5 (30.2)	102.0 (25.9)
Passage Comprehension score	86.0 (24.3)	86.5 (25.7)	85.8 (23.9)
Calculation score	108.1 (20.8)	107.8 (22.7)	108.2 (20.2)
Applied Problems score	91.2 (29.3)	94.8 (27.3)	90.2 (29.8)
Emotional or behavioral problem <sup>a</sup>	1.9%	3.7%	1.5%
Health (% with excellent/very good health) <sup>a</sup>	83.4%	85.5%	82.9%

<sup>a</sup>The sample size is based on Table 4 (N=1,084).

**Table 3.**

Academic Achievement of Immigrant Children (Age 6–12), Normed WJ-III Scores, the New Immigrant Survey 2003 (N=876).

	Letter Word Identification	Passage Comprehension	Calculation	Applied Problems
Child immigration experience (ref.=child migrating with parents)				
Child reuniting with migrant parents	-5.651* (2.251)	-1.653 (2.021)	1.653 (1.842)	4.650 <sup>+</sup> (2.580)
<b>Panel A:</b> By separation from which parent(s) (N=674 for restricted sample)				
Child immigration experience (ref.=child migrating with parents)				
Child reuniting with migrant parents, separated from mother only	1.674 (4.188)	-2.208 (3.816)	-2.103 (3.287)	-4.329 (5.116)
Child reuniting with migrant parents, separated from father only	-3.126 (2.784)	-3.555 (2.538)	-0.153 (2.187)	-6.221 <sup>+</sup> (3.405)
Child reuniting with migrant parents, separated from both parents	-6.150 <sup>+</sup> (3.651)	0.615 (3.326)	1.630 (2.865)	1.457 (4.460)
<b>Panel B:</b> By year since immigration (N=876)				
Child immigration experience (ref.=child migrating with parents)				
Child reuniting with migrant parents in < 2 years	-10.514*** (2.758)	-10.718*** (2.505)	-1.164 (2.256)	-4.869 (3.220)
Child reuniting with migrant parents in 2+ years	-0.483 (2.900)	6.881*** (2.633)	3.878 (2.370)	12.964*** (3.382)
<b>Panel C:</b> By duration of separation (N=876)				
Child immigration experience (ref.=child migrating with parents)				
Child reuniting with migrant parents, years of separation 0~2 years	0.997 (3.126)	5.298* (2.793)	5.473** (2.594)	11.431*** (3.587)
Child reuniting with migrant parents, years of separation 3~6 years	-1.135 (3.912)	4.171 (3.495)	2.760 (3.245)	8.709* (4.489)
Child reuniting with migrant parents, years of separation 6+ years	-13.504*** (3.331)	-10.504*** (2.960)	-3.563 (2.730)	-3.411 (3.776)
<b>Panel D:</b> By parent's documentation status (N=873)				
Child immigration experience (ref.=child migrating with parents)				
Child reuniting with migrant parents who were ever undocumented	-17.577*** (4.240)	-12.947*** (3.792)	-2.474 (3.479)	-3.179 (4.866)
Child reuniting with migrant parents who were documented	-13.321*** (3.629)	-10.038*** (3.245)	-4.645 (2.976)	-4.670 (4.163)
<b>Panel E1:</b> Age at immigration, 5 and younger (N=205)				
Child reuniting with migrant parents (ref.=child migrating with parents)	-1.191 (3.831)	4.840 (3.539)	3.550 (3.588)	7.638 <sup>+</sup> (4.248)
<b>Panel E2:</b> Age at immigration, older than 5 (N=671)				
Child reuniting with migrant parents (ref.=child migrating with parents)	-6.212* (2.635)	-3.002 (2.366)	0.225 (2.170)	4.228 (3.147)
<b>Panel F1:</b> Female children (N=439)				
Child reuniting with migrant parents (ref.=child migrating with parents)	-7.356* (3.267)	-3.878 (2.661)	-2.262 (2.528)	1.948 (3.518)
<b>Panel F2:</b> Male children (N=437)				



	Letter Word Identification	Passage Comprehension	Calculation	Applied Problems
Child reuniting with migrant parents (ref.=child migrating with parents)	-3.991 (3.076)	1.310 (3.022)	4.150 (2.632)	8.378* (3.696)

Note: Results are from linear simultaneous equation models. The equation predicting child immigration experience is shown in Appendix B. Only the coefficient of immigration status is shown. The full table is in Appendix C.

\*\*\*  
p<0.001,

\*\*  
p<0.01,

\*  
p<0.05,

+  
p<0.10; Standard errors in parentheses

**Table 4.**

Psychosocial Problems and Self-rated Health of Immigrant Children (Age 6–17), the New Immigrant Survey 2003 (N=1084).

	Emotional or behavioral problems	Excellent or very good health
Child immigration experience (ref.=child migrating with parents)		
Child reuniting with migrant parents	0.468 <sup>*</sup>	0.074
<b>Panel A:</b> By separation from which parent(s) (N=674 for restricted sample)		
Child immigration experience (ref.=child migrating with parents)		
Child reuniting with migrant parents, separated from mother only	0.821 <sup>+</sup> (0.469)	-0.123 (0.362)
Child reuniting with migrant parents, separated from father only	-0.376 (0.560)	-0.025 (0.225)
Child reuniting with migrant parents, separated from both parents	0.887 <sup>*</sup> (0.379)	0.434 (0.302)
<b>Panel B:</b> By year since migration (N=1,084)		
Child immigration experience (ref.=child migrating with parents)		
Child reuniting with migrant parents in < 2 years	0.044 (0.288)	0.048 (0.212)
Child reuniting with migrant parents in 2+ years	0.635 <sup>**</sup> (0.219)	0.170 (0.202)
<b>Panel C:</b> By duration of separation: at most 6 years vs. over 6 years (N=1,084)		
Child immigration experience (ref.=child migrating with parents)		
Child reuniting with migrant parents, years of separation 0~2 years	0.221 (0.310)	0.056 (0.233)
Child reuniting with migrant parents, years of separation 3~6 years	0.636 <sup>+</sup> (0.332)	0.326 (0.324)
Child reuniting with migrant parents, years of separation 6+ years	0.643 <sup>**</sup> (0.233)	-0.050 (0.231)
<b>Panel D:</b> By parent's documentation status (N=1,081)		
Child immigration experience (ref.=child migrating with parents)		
Child reuniting with migrant parents who were ever undocumented	1.098 <sup>***</sup> (0.314)	-0.083 (0.264)
Child reuniting with migrant parents who were documented	0.268 (0.326)	0.060 (0.255)
<b>Panel E1:</b> Age at immigration, 9 and younger (N=506)		
Child reuniting with migrant parents (ref.=child migrating with parents)	0.870 <sup>***</sup> (0.249)	0.242 (0.230)
<b>Panel E2:</b> Age at immigration, 10 and older (N=578)		
Child reuniting with migrant parents (ref.=child migrating with parents)	-0.017 (0.315)	-0.031 (0.222)
<b>Panel F1:</b> Female children (N=529)		
Child reuniting with migrant parents (ref.=child migrating with parents)	0.160 (0.311)	-0.012 (0.228)
<b>Panel F2:</b> Male children (N=555)		
Child reuniting with migrant parents (ref.=child migrating with parents)	0.749 <sup>**</sup> (0.246)	0.157 (0.214)

Note: Results are from bivariate probit models. Only the coefficient of immigration status is shown. The full table is in Appendix D.

\*\*\*  
p<0.001,

\*\*  
p<0.01,

\*  
p<0.05,

<sup>+</sup>  
p<0.10; Standard errors in parentheses

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