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Migration timing and parenting practices: Contributions to social development in preschoolers with foreign-born and native-born mothers

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Abstract

Little is known about how key aspects of parental migration or child-rearing history affect social development across children from immigrant families. Relying on data on approximately 6,400 children from the Early Childhood Longitudinal Study – Birth Cohort, analyses assessed the role of mothers' age at migration on children's social development in the United States (sociability and problem behaviors). Consistent with models of divergent adaptation and assimilation, the relationship between age at arrival and children's social development is not linear. Parenting practices, observed when children were approximately 24 months of age, partially mediated the relation between mothers' age at arrival and children's social development reported at approximate age 48 months, particularly in the case of mothers who arrived as adults.

Children of immigrants in the United States are the fastest growing segment of the child population and now account for nearly one quarter of all children under age 8 (Fortuny, Hernandez & Chaudry, 2010; Hernandez, 2004). Research on immigrant families has increased dramatically in recent years. But the challenge of understanding the diverse conditions of immigration and how they may influence children's outcomes remains. Immigrant families originate from all parts of the globe and come to the United States with a wide array of experiences, resources, parenting beliefs and languages. These variations in what immigrant families bring to America help shape the home environments of their young children. Thus, understanding how immigration may play a role in children's outcomes requires considering not only the origins of the parents but their immigration histories as well.

Much of the recent research on children in immigrant families has focused on school aged children, their academic performance and behavioral health (Crosnoe, 2007; Georgiades, Boyle & Duku, 2007; Glick & Hohmann-Marriott, 2007; Palacios, Guttmannova & Chase-Lansdale, 2008; Pong, Hao & Gardner, 2005; Portes & Rumbaut, 2001). The developmental paths for very young children in immigrant families remains poorly characterized. Ecological-developmental models generally recognize that the parents', as well as the child's, experiences help shape the course of social development for young children; but little is known about how key aspects of parental or child-rearing history, including immigration, affect components of social development across children from diverse national origins or racial and ethnic groups (Cabrera, West & Brooks-Gunn, 2006; Lopez, Barrueco & Miles, 2006; Raver, Gershoff & Aber, 2007). The limited information that has been gathered is often focused on specific national origin groups or panethnic groups (Fuller et al., 2009). But there are features of parental immigration that are shared across national origin groups that may influence differential outcomes in early childhood. Here we consider one of these dimensions of immigration, the mother's age at arrival in the United States, and its influence on parenting practice and subsequent child social development.

We take advantage of a national level dataset, with sufficient numbers of young children of immigrants and detailed observational data on parents and children, to examine the relation between mother's age at arrival in the United States and children's social development at approximately 48 months of age. Relying on three waves of the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B), the analyses assess the extent to which origins, resources and parenting when children are approximately 24 months of age, mediate the relation between maternal age at arrival and children's problem behaviors and sociability measured when children are 48 months old.

Family Migration Context

Much of the research on the development of children of immigrants has largely considered the importance of national origins or cultural differences of entire immigrant groups compared to a native born reference group. Most theories of assimilation and acculturation emphasize duration of time spent in the receiving context as an important marker of the opportunity to adapt or reject knowledge, ideas, and norms of the new society (Alba & Nee, 2003; Berry, 2007). These frameworks also address the relations between immigrant parents and their immigrant or US born children and adolescents (Fuligni, 1998; Portes & Rumbaut, 2001). One overlooked consideration is the developmental stage of parents at the time of their own migration. Immigrant parents' own stage of development at the time of immigration sets the stage for their adaptation and may also influence outcomes among the second generation children of immigrants. The timing of events within lives is a defining characteristic of the life course approach (Elder, 1994). Age at arrival, more so than number of years in the United States, reflects not only the family's proximity to the migration experience but the exposure to particular developmental experiences in the United States. By examining the timing of the parents' immigration, we contribute a life course perspective that has been missing from the study of parents' immigration, parenting practices, and child outcomes.

This is also consistent with an ecocultural approach to development that acknowledges the importance of environmental conditions for behavioral development at particular developmental stages. Migration itself creates structural conditions that favor particular developmental paths (see Greenfield et al., 2003; Berry, 2007). The timing of migration determines where these developmental paths are taken. For example, among immigrants who arrived in the United States as young children, all developmental paths in adolescence and adulthood are predicated on experiences in the receiving or destination context. Their formal schooling and peer relationships occur in the United States. However, immigrant parents who arrived in the United States as adolescents will have formed some of their own developmental knowledge and scripts outside the United States. Adolescence is a key developmental period, involving the development of greater autonomy and independence from parents and the need to establish one's identity and fit with social groups outside of the family (Steinberg & Silverberg, 1986).

Immigration at this point in development may be particularly disruptive. Adolescent immigrants must balance the often conflicting expectations of their immigrant parents and the receiving society as they navigate the route to adulthood (Fuligni, 2001). They must accommodate the expectations of immigrant parents and the school and peer environments encountered in the United States (Tillman & Weiss, 2009). Moreover, immigration in adolescence or the early transition to adulthood may impact the development of parenting practices and skills by providing some exposure to both native and US childrearing styles, but without grounding parenting experiences squarely in either culture. Finally, there may be structural disadvantages associated with arriving as an adolescent. Adolescent immigrants may not perform as well in school when compared to those who attend all schooling in the

receiving context, and some adolescent immigrants enter the labor market directly without ever attending school in the United States (Glick & White, 2003; Oropesa & Landale, 2009; Portes & Rumbaut, 2001). Thus, education, economic resources and parenting practices are likely to differ among US born mothers and immigrant mothers who arrive as children versus those arriving in adolescence or adulthood.

For immigrants who are adults at the time of their migration, all childhood socialization and the transition to adulthood takes place in a sending context. Parents who arrived in the United States as adults and never attended school in the United States may be unfamiliar with what will be expected of their own children in the United States. In this case, we may expect more differentiation among these immigrant parents when compared to US born parents than we would among those who entered the United States as young children. But, because development itself is not a linear process, it seems likely that parental arrival during adolescence or the transition to adulthood will also be associated with different parenting styles and subsequent developmental outcomes among children in the second generation when compared to children whose parents arrived in the United States either as young children or as an adult.

Social Development and Parenting in Immigrant Families

Extant research on children in immigrant families and the role of immigrants' parenting practices in children's development has focused largely on children's health and cognitive functioning. There has been far less attention to immigrant children's acquisition of social skills. The research that has been done suggests school age children of more recently arrived immigrants displayed fewer externalizing behaviors and had higher school engagement than children in non-immigrant families but this varied by national origins, income status and parental background (Crosnoe, 2007; Galindo & Fuller, 2010; Geogiades, Boyl & Duku, 2007). Adjusting for these characteristics, therefore, will be important for our analyses of preschool age children of immigrants. But we go beyond these characteristics to consider the timing of migration in the mother's own life course and young children's social development. Previous research pointed to varying parenting styles associated with generational status, national origins and language use as well as age at arrival in the United States (Barry, Bernard & Beitel, 2009; Glick, Bates & Yabiku, 2009; Ho, Bluenstein & Jenkins, 2008; Ispa et al., 2004). Mother's age at arrival in the United States may be associated with their own children's social development through the various dimensions of the home environment that contribute to children's social outcomes (Bradley et al., 2001b; Gershoff, 2002; Lansford et al., 2005; Linver, Brooks-Gunn & Kohen, 2002).

In general, parenting interactions that are more positively toned promote adaptive skills and competencies whereas those that are more negatively toned inhibit the development of children's competencies and instead support problem behaviors (Cunningham & Boyle, 2002; Davidov & Grusec, 2006; Eisenberg et al., 1999; Keller, Spieker, & Gilchrist, 2005; Lansford et al., 2005; Olson, Ceballo, & Park, 2002; Spinrad et al., 2007). Some parenting values are, for all intents and purposes, universally shared (e.g., it is a parent's job to assure that children are fed and kept safe, learn the language of the society, and relieve a child's distress – especially a young child's distress). Thus, even though cultures vary in regard to how much parents attend to older children's emotional needs, parents from most societies are reasonably responsive to the basic emotional needs of young children (Bradley, 2009; Quintana, et al., 2006). Other goals for children are not as commonly shared across societies (Bornstein, 1995). For example, in the United States, high value is often placed on academic attainment and self-reliance. Accordingly, many American parents devote considerable energy to stimulating competence, encouraging exploration, and promoting children's

problem solving skills. Less attention is given to those practices in some other societies and in some cultural groups within the US (Bradley, 2009; Bradley et al., 2001a).

Parental age at arrival may matter for child outcomes as a marker of differential exposure to expectations and practices in the receiving and sending communities. For natives in any society there tends to be high consonance in the processes used to accomplish the “established” set of child rearing goals (Bornstein & Cheah, 2006). But for immigrants, matters can become more complicated, especially if their own experiences as children occur in a sending context where expectations for child rearing behaviors and outcomes are disparate from those in the receiving context. Some immigrant families retain the ways of the country of origin, some have a greater tendency to adapt their behaviors and attitudes to match those in the receiving context and yet others end up with a more mixed set of attitudes or behaviors that blend the old and the new (Berry, 2007; Varela, et al., 2004). For parents who arrive in the receiving context in the midst of their own socialization but after sufficient exposure to the sending context, there may be even greater inconsistency in these behaviors and attitudes. This possibility suggests less consistency with US born parents’ parenting practices among immigrants who arrived in adolescence or the transition to adulthood than among immigrants who arrived as young children themselves.

The Present Study

In overview, socioeconomic status and parenting practices are expected to mediate the relation between parent’s own age and developmental stage at immigration and the social development of their own children in the United States. Immigrants arriving at different life stages may come with, and then subsequently accrue different levels of resources in the United States. Adjusting for these differences will be important when accounting for a non-linear relationship between age at arrival and children’s outcomes. In addition, families from different cultures not only have different goals for child rearing but different means of achieving even the same goals (Chao, 1994; Halgunseth, Ipsa & Rudy, 2006; Hui & Triandis, 1985; Laosa, 1979). However, we expect mothers’ age at immigration will be associated with parenting practices and child social development independently of the social context at origin (i.e., the variations in parenting from the sending community). In other words, we expect that migration, and its timing in the parent’s own development, is a transformative event that will be important for children’s own social development net of the parent’s country of origin.

The analyses focused on two basic research questions. First, we examined the extent to which social development exhibited by children at approximately 48 months of age varies by mother’s age at arrival in the United States. Because social development occurs across multiple dimensions, we assessed the relation between mothers’ age at arrival across two different measures: sociability and problem behaviors. The effect of mother’s age at arrival may not be the same across these outcomes. Indeed, social competencies and behavioral problems offer unique glimpses into children’s social functioning. Some sociable children exhibit few behavior problems and others may be socially competent while simultaneously emitting problem behaviors. Still others may be low on both dimensions (e.g., Rodkin et al., 2000).

Next, we asked whether family background, including national origins and socioeconomic status, and home environment and parenting practices, observed and reported when children were approximately 24 months of age, mediated the relation between mother’s age at arrival in the United States and social development at approximate age of 48 months. The prior literature does not predict which factors will be stronger mediators: parental socioeconomic status or parenting practices and behaviors; They may, in fact, operate in concert (Conger,

Conger & Martin, 2010). It is likely, however, that family socioeconomic status mediates differently across the mother's age at arrival groups. Mothers who arrive as children are unlikely to differ in the route through socioeconomic attainment from US born mothers. The socioeconomic trajectories for mothers who arrived as adolescents or adults may be more disadvantaged. Thus we expect that parental socioeconomic factors may be stronger mediators for explaining differences for mothers who arrived at older ages versus those who arrived as young children.

In addition, immigrant parents may bring parenting practices from the country of origin and engage in different activities or behaviors from those who are born and socialized in the receiving context. But, if this is the case, then differences from parents who are born in the United States should be relatively small for immigrant parents who arrive in the United States as young children (Glick, Bates & Yabiku, 2009). Their parenting practices may also be more consistent with and reinforced by the expectations of other social institutions and actors in the receiving context (Chan et al., 2010). In contrast, migration in mid-stream in the mother's own developmental trajectory, in adolescence or at the transition to adulthood, should be associated with less consistent parenting practices than when migration occurs earlier and mothers receive the majority of their own socialization in the United States. And, parents who arrived in the United States as adults may engage in parenting practices that are characteristic of their own upbringing outside the United States but inconsistent with those practices most strongly predictive of positive outcomes in the receiving context. These variations in parenting practices by mothers' age at arrival can impact the ways in which they socialize their children (Cunningham & Boyle, 2002; Davidov & Grusec, 2006; Eisenberg et al., 1999; Keller, Spieker, & Gilchrist, 2005; Lansford et al., 2005; Olson, Ceballo, & Park, 2002; Spinrad et al., 2007). Because the impact of parenting practices on child outcomes varies for children in different cultural and immigrant groups (e.g., Deater-Deckard & Dodge, 1997; Dodge, Pettit & Bates, 1994; Fagan, 2000; Garcia & Garcia, 2009; Lansford et al., 2005; Whiteside-Mansell, Bradley & McKelvey, 2009), we included interactions of age at arrival and country of origin to test the expectation that age at migration would have some universal impacts regardless of country of origin.

We also attended to the possibility that immigrant parents' interactions with their children may be rated differently by interviewers unfamiliar with the cultural context from which the parents originate and thus there may be differences in self-reported versus observed measures of parenting and the home environment (Chan et al., 2010). To address this, we used multiple measures of parenting practices and assessed whether these differentially mediated mother's age at arrival in the United States and children's social development. We expected to find that these measures would operate in a more consistent manner when we compared US born mothers and mothers who arrived in the United States as young children. But for children whose mothers arrived in the United States as adolescents or adults, parenting practices are likely to be more disparate from their counterparts with US born mothers. However, even if parenting practices vary among mothers with different exposure to the United States, there could still be little difference in children's outcomes if different types of parenting are equally supportive of social well-being. For this reason, it was important to consider multiple measures of parenting rather than rely on a single indicator.

METHOD

Participants

The Early Childhood Longitudinal Study-Birth Cohort (ECLS-B) is a nationally representative longitudinal survey of nearly 11,000 births in 2001 in the United States. The survey included detailed and comprehensive information on young children and their families. The majority of interviews were conducted in English although bilingual

interviewers and translators were available to non-English speakers. Nearly 70% of the non-English interviews were conducted in Spanish. We relied on the first three waves of the ECLS-B when the children were approximately 9, 24 and 48 months of age (NCES, 2007a). We included all children for whom there was a parent and child interview at each of the three waves and for whom there is valid data on the social development variables as well as the observed parent-child interactions. This yields an analytical sample of approximately 6,400 children. In compliance with NCES rules for analyses with restricted ECLS-B data, we report all sample sizes rounded to the nearest 50.

Measures

Social development—The dependent variables for our analyses assess children’s social development in two domains: sociability and problem behaviors. The measures used here were created from the Preschool and Kindergarten Behavior Scales and the Social Skills Rating System (PKBS and SSRS). The ECLS-B includes a subset of the behavior rating scale that assess children’s affect, temperament and sociability (Andreasson & West, 2007). Although no rating system is perfect, the PKBS and SSRS show fairly good reliability across racially diverse groups of children (Edwards et al., 2003; Walthall, Konold & Pianta, 2005). Items were reported for children by their mothers indicating the frequency (1 = rarely; 5 = always) engaged in various activities. As suggested in the ECLS-B documentation, we conducted factor analyses on these items to identify particular constructs of social development (Andreassen & Fletcher, 2007). We relied on two dimensions of social development captured in these items: Problem behaviors ($\alpha = .76$) and Sociability ($\alpha = .74$). Sociability is measured with four items referring to children’s play with others and whether they make friends easily. Problem behaviors were measured with seven items including frequency of physical aggression, impulsivity and displays of anger or frustration. Similar reliabilities were obtained for children with foreign born mothers and children with US born mothers. We standardized each measure to have mean 0 and standard deviation of 1.

Mother’s age at arrival—Many studies of the second generation in the United States compare these children as a group to their counterparts whose parents are born in the United States (i.e. a comparison of the 2nd and 3rd or higher generation). Yet, studies of immigrant children suggest that the age at which the mothers arrived is particularly important for their own adaptation, educational trajectories and well-being (Portes & Rumbaut, 2001). We considered the age at which immigrant mothers arrived in the United States as potentially important for characterizing the familial environment of second generation children. We compared children whose mothers were born in the United States to those whose mothers arrived as children (ages 0–12), those who arrived in adolescence and the early transition to adulthood (13–21 years of age) and those who arrived in adulthood (22 years and older).

Mother’s origins and family resources—Immigrants are quite diverse and come to the United States from multiple national origins and ethnic groups. Mexicans represent the largest group but significant numbers also originate in the Philippines, China, Central America, Southeast Asia, and Eastern Europe (Fortuny, Hernandez & Chaudry, 2010). Here we characterize mother’s origins by race and panethnic identifiers except in cases where there were sufficient cases to separate the mothers into national origins. Thus mothers are identified as non-Hispanic Whites (reference group), African American, Mexican origin, other Hispanic, Chinese origin, other Asians or other ethnic origins.

Resources available to children vary considerably by immigrant origins. And, the process by which immigrant mothers may have accrued resources will also vary by age at arrival. Regardless of origins, parents with more education are more likely to report parenting values

that resemble those seen in technologically advanced Western societies to a greater degree (Palacios, Gonzalez, & Moreno, 1992). In other words, the diverse origins of, and resources available to, immigrant parents are likely to be important when accounting for differences in the well-being of children of immigrants in the United States (Garcia, et al., 2002). Here a measure for the mother's education is included: less than a high school education (reference group), mothers with a completed high school education only and mothers who received some college education or more. These categories were chosen after preliminary analyses with more categories suggested little variation in child outcomes among those children whose mothers attended some college versus those who had completed four year degrees and higher levels of education. Family income at wave 1 (measured in quartiles) was also included. Family language use also varies by parental nativity so the models also include an indicator variable for homes in which a non-English language predominates. Most of the non-English homes were identified by the parent themselves. However, a small number of parents who indicated English at home were then administered the two bags task in a language other than English. These are included as non-English homes in the analyses. We also note that immigrant parents vary in regards to their documented status and whether they are citizens of the United States or not. Unfortunately, we cannot determine the mode of entry to the United States (i.e. undocumented, legal immigrants, refugee status) with the ECLS-B. Further, citizenship status is highly correlated with age at arrival and so we do not include it in the models.

Home environment and parenting styles—The next set of variables in our analyses measure several types of parenting. One advantage of the ECLS-B dataset is that there are multiple sources of information and multiple methods used to assess the potential mediators for our models. This is particularly important for the study of immigrant families because self reported measures appear less sensitive to cultural differences than observed measures for some groups (Chan et al., 2010). Measures of parental responsiveness, harshness or supportiveness may not operate in the same manner across all groups (Ho, Bluestein & Jenkins, 2008; Whiteside-Mansell, Bradley & McKelvey, 2009). Therefore, we included a combination of self-reported measures of the home environment, interviewer observed parent-child interactions and additional measures of parent-child interactions that were recorded and coded by others. Parental responsiveness in the ECLS-B is captured by items from the HOME short form. The advantage of this measure is that it includes items completed by the parent as well as items completed by the interviewer (Andreasson & West, 2007). The self-reported items identify the frequency of family involvement with the child in four activities including reading, telling stories, singing songs and going on errands. ($\alpha = .5$). Scores on the family involvement variable ranged from 5 to 16. The interviewer also observed the mothers and children interacting during the home interviews and reported on the mother's responsiveness with six items including whether the mother kept the child in view, verbally responded to the child and otherwise engaged with the child during the observation ($\alpha = .6$). Mother responsiveness scores range from 0 to 6.

Besides these measures taken inside the home, the mothers were asked to engage in a teaching task with their children. The 'Two Bags' task was modified from the 'Three Bags Test' used in the Head Start Evaluation Study. Mothers and children were observed interacting with items including a book and play activity. These interactions were recorded and coded by trained coders who were not present during the interview (Andreassen & Fletcher, 2007). Parents' and children's behaviors were scored across several dimensions. These analyses relied on two measures coded from the parents' behaviors. The first is a measure of parental emotional supportiveness, focused on the parent's emotional and affective presence in the task. The second measure reflects parental negative regard to the child during the task including anger, disapproval or rejection of the child. Parents were rated on a scale of 1 (very low) to 7 (very high) for both dimensions.

Control Variables—We included several controls in the models to guard against spurious associations and to properly specify our model. Characteristics of the child include the child's birth weight, age and gender. Child's birth weight may reflect unreported or unobserved conditions that may be associated with development. This is coded into three categories: very low birth weight (less than 1500 grams at birth), moderately low birth weight (between 1500 and 2500 grams at birth) and normal birth weight (2500 grams or more; reference group). Gender of the child is a dichotomous measure with males as the reference group. We included two measures of the child's age because the mediators based on interactions with the mother and child may be sensitive to the age of the child at the time of the task. Therefore, we include the child's age at assessment in wave 2. Likewise, child's social development, measured at wave 3, may be sensitive to the child's age at the time of the assessment so we include a second indicator to reflect children's age at assessment in wave 3. The age of the mother at wave 1 is included as a continuous variable. And, a variable for family structure (two parents present in the home in wave 1 vs. other family structures) was included because children of immigrants are more likely to be living with two parents than children of US born parents. Of course, family structure can and does change over the course of the study. Therefore, we first examined models with two dummy variables indicating that family structure changed between waves 1 and 2 or between waves 2 and 3. However, most of the families in which a change in family structure occurred were those that were not two parent families at wave 1. Therefore, little added explanatory power was added by the inclusion of measures of family change and the dummy variables were dropped from the final analyses.

Analytic Strategy

To address our research questions, we relied on linear regression to predict children's social development. Our first model examined the association between mother's nativity and age at arrival and children's sociability and problem behavior while including control variables. This first model establishes variations in children's social outcomes by mother's nativity and age at arrival. In our next models we added blocks of variables indicating mothers' origins and resources and parenting practices and behaviors. Changes in coefficients for the mother's nativity and age at arrival variables in these models are suggestive of mediation. We formally tested for the mediation of specific mother's age at arrival groups by each of our mediator variables (Preacher & Hayes 2008). In our final model, we examined all mediators simultaneously to examine the potential mediating influence of all the variables. We formally tested for mediation as we added blocks of variables representing mothers' origins and resources and parenting practices and behaviors. Finally, because parenting practices in origin communities will have differed, we examined interactions between mother's age at arrival groups and national origins (or panethnic or racial origins for smaller groups).

Our modeling strategy and selection of variables is closely tied to the time ordering of measurement. Parental behaviors may change in response to children's behaviors and outcomes. If both the dependent variable and the mediating variables were measured at the same survey wave, there is a strong possibility that the mediators were endogenous to the children's development. Although issues of endogeneity are impossible to decisively adjudicate in non-experimental research, we lessen these validity threats by making full use of all three waves of our data. Mother's nativity and age at arrival is an exogenous factor prior to the child's birth. The potential parenting mediators, parental responsiveness, interviewer coded parental responsiveness, parental emotional support (two bags) and parental negative regard (two bags), were measured at wave 2—a time that is temporally between mother's nativity and age at arrival and children's social emotional development.

Children's social development was measured at wave 3. All analyses were weighted (NCES, 2007b).

RESULTS

Descriptive statistics for the control variables and variables describing mother's origins and resources are presented in Table 1 by mother's nativity and age at arrival. Overall, there was little variation in children's characteristics by mother's nativity or age at arrival, but there were more differences in the origins and resources of the mothers. For example, a higher proportion of US born mothers had received some college education than the non-US born mothers. Consistent with previous research, mothers who arrived between ages 13 and 21 had the lowest levels of education. They also had the lowest income compared to the other groups. There was a great deal of variation in the ethnic origins of mothers according to their nativity and age at arrival in the United States. For example, there were more Chinese origin mothers in the group of mothers who arrived in the United States as adults than in any of the other groups presented in Table 1. Finally, as expected, there was variation in the language used in the home for children whose mothers arrived in the United States at different ages.

Social Development by Mother's Age at Arrival

Mothers' reports of their children's social behaviors at approximately 48 months of age varied across the domains we identified here: sociability and problem behaviors. Table 2 reports these outcomes by mother's age at arrival. Children whose mothers arrived in the United States between ages 13–21 evidence the lowest levels of sociability followed by those whose mothers arrived as adults. There was no significant variation between the reported levels of sociability among children of US born mothers and mothers who arrived as children. For problem behaviors, children whose mothers arrived as adults were reported to exhibit the lowest levels of problem behaviors than all other groups with no statistically significant variation among children of US born mothers or non-US born mothers who arrived in the United States in childhood or adolescence.

Parenting Behaviors by Mother's Age at Arrival

There was also significant variation in parental responsiveness and supportiveness according to mother's nativity and age at arrival. As shown in Table 3, mothers' own reports of activities with the child varied such that US born mothers reported that children were involved in the greatest number of activities and this was significantly higher than those reported by any of the other groups. However, mothers who arrived between ages 0–12 reported more activities than those who arrived between ages 13–21.

Interviewers' reports of parental responsiveness during the interviews suggested that all immigrant mothers were less responsive than their US born counterparts. Unlike some of the other measures of parenting, the interviewer reports of responsiveness did not vary among the groups of immigrant mothers. The next two measures of parenting came from the 'Two Bags' task that was recorded and coded by individuals who were not present during the interviews. The two items used here represent positive and negative responses on the part of the mothers during the tasks. First, mother's emotional supportiveness during the task varied significantly with age at arrival in the United States. All groups of immigrant mothers were reported as less supportive than their US born counterparts but mothers who arrived between ages 13–21 were reported to exhibit the lowest levels of supportiveness. The level of emotional supportiveness reported for mothers who arrived between ages 13–21 was statistically significantly lower than the emotional supportiveness reported for mothers who arrived in the United States as children (0–12). There was no statistically significant

variation by mother's nativity or age arrival in parental negative regard during the task. Overall levels of negative regard were universally low across the sample.

Multivariate Analyses

The descriptive results presented thus far suggest some significant variation in children's social development at approximately age 48 months according to mother's nativity. Reported sociability and problem behaviors were both lower among children whose mothers arrived in the United States in adolescence or adulthood than among mothers who were born in the United States. Likewise, parenting behaviors differed by mother's age at arrival with mothers who arrived as children exhibiting parenting more similar to US born mothers than the other groups of immigrant mothers. These preliminary analyses do not adjust for the considerable variation in demographic and socioeconomic conditions faced by these children and their families, characteristics which vary considerably with mother's nativity and age at arrival, as shown in Table 1.

Table 4 reports the regression models predicting the child's sociability and problem behaviors at approximately age 48 months (wave 3). All models include controls for child characteristics and mother's age and family composition at wave 1. The first model re-confirms the non-linear association between mother's age at arrival and children's sociability. Mothers who arrived in the middle age group (13–21) reported significantly lower levels of sociability among their children when compared to children with US born mothers. Mothers who arrived in adulthood also reported lower levels of sociability when compared to US born mothers but not as low as the mothers who arrived between ages 13 and 21. The results for the same model predicting problem behaviors (model 3) mirror those for sociability among mothers who arrive as adults but there were no significant differences in problem behaviors among children whose mothers arrived at younger ages and US born mothers. In other words, these first models support the general expectation that there are greater differences in outcomes among children whose mothers arrive later in development as compared to those with US born mothers or mothers who arrive early in development. But the results for sociability also suggest non-linear relationships with age at arrival.

Model 2 adds the independent variables measuring the origins and resources of the mothers and their parenting practices in the ECLS-B. For sociability, we observed some variation by mother's ethnicity and national origins such that children of Chinese origin mothers were reported to have lower sociability compared to children of non-Hispanic white mothers, and children of non-Hispanic black mothers had higher sociability. There was also variation by mother's education and family income suggesting that mothers with more resources had children who scored higher on sociability compared to mothers with fewer resources. Parental responsiveness and positive emotional support were positively associated with sociability. In other words, children with mothers who engaged in more activities with their children, who were observed to engage more directly with their children during the interview and who demonstrated emotional supportiveness during the two bags task at approximately 24 months all had higher reported sociability at 48 months when compared to children's whose mother's exhibit less responsiveness or supportiveness. As evidence of non-linear associations, note that the coefficient for children whose mothers arrived in the United States during adolescence or the transition to adulthood (ages 13–21) remained lower than children of US born mothers even with parenting measures in the model as significant mediators.

The coefficients for mother's age at arrival changed between model 1 and model 2 such that mothers who arrived as adults were no longer significantly different on sociability from those who were born in the United States. In models not shown, we formally tested (Preacher & Hayes 2008) how much of these reductions were due to mediation by the

mother's origins and resources block, including socioeconomic status, and how much was due to mediation by the parenting practices and behaviors. The coefficient for mother's arrival between the ages of 13–21 was significantly mediated by mother's Chinese origin, college education, and the third and fourth quartile of family income. Similarly, the effect of mother's arrival in adulthood (over age 21) was also significantly mediated through Chinese origin, college education, and the third and fourth quartile of family income. Thus, socioeconomic status appears to partially mediate the relationship for adolescent and adult migrant mothers. Parenting practices were also mediators of the coefficient for mothers who arrived as adults (over age 21). All of the parenting variables with the exception of the measure of negative regard during the two bags task were significant mediators.

In model 4 predicting problem behaviors, the background measures produce little change in the mother's age at arrival coefficients except some reduction in the lower report of problem behaviors by mothers who arrived as adults (over age 21). Overall, there were few differences in reported problem behaviors by national origins or race or ethnicity with the exception of fewer problems reported by African American mothers. Once again, more resources (i.e., higher mother's education and family income) appear associated with positive outcomes (i.e. fewer problems). Although it was not significant in models predicting sociability, non-English dominant homes were associated with reports of fewer behavior problems. Parental responsiveness and emotional support were associated with fewer reported behavior problems among the children. Formal tests showed that significant mediation of the arrival over age 21 coefficient was through mother's non-Hispanic Black origin, college education, the third and fourth quartile of family income, and non-English home language.

One remaining question is whether the association between mother's age at arrival and children's social development is consistent across national origin groups. In other words, is the developmental stage at migration a more important factor in parenting and children's subsequent social development for some groups than others? To test this, the final models were run with interaction terms for national origins and age at arrival. The models, not shown, indicate that there were no significant interactions of mother's age at arrival and national origin group. The lower sociability among children whose mothers arrived in the United States as adolescents and adults and the lower problem behaviors reported for children whose mothers arrived as adults appear to be relatively consistent across the groups we are able to identify here.

DISCUSSION

There is comparatively little known about the process of immigration as a contributor to parenting practices and the social well-being of children born to immigrants in the United States. Immigrant parents come from diverse national origins but they also vary with respect to the stage of their own development at the time of immigration and their socialization for parenthood. Theoretical models of assimilation and acculturation point to differential adaptation among immigrants from different countries of origin. Here we examined the possibility that arriving in the United States at different developmental stages is also associated with divergent outcomes.

We hypothesized that there would be little variation among parents who immigrated at an early age and were exposed to many of the same socialization experiences as peers born in the United States. But parents who came to the United States in adolescence or adulthood experienced their own socialization in a different context from that in which they are now raising their own children. We hypothesized that age at arrival would not operate in a linear fashion so that immigrant parents who themselves arrived in the midst of their own

adolescence or transition to adulthood would adopt different parenting practices than those who arrive as young children or those who arrive as adults. We further hypothesized that adjusting for differences in parenting practices would also explain some of the variation by mother's age at arrival when predicting children's social development.

The analyses took advantage of a large, longitudinal and nationally representative dataset to examine two different measures of social development among children of immigrants and children of US born mothers. We found that national origins and family resources accounted for some of the variations in their own children's social outcomes consistent with prior research on children's cognitive development and social development among school age children (Crosnoe, 2007; Bradley et al., 2001b). But we also found, as we hypothesized, variation in these outcomes according to the mother's own age at arrival.

Mothers' Age at Arrival and Young Children's Social Development

Parenting practices partially mediated the relation between mother's age at arrival and children's social outcomes with the effect mostly observed for children whose mothers arrived in adolescence or adulthood. The mothers in the ECLS-B varied in their parenting practices. Parents who migrated to the United States as young children exhibited smaller differences in parenting practices when compared to mothers born in the United States. Mothers who arrived after these ages exhibited lower levels of emotional supportiveness and responsiveness than those who were born in the United States, albeit, the latter may partly reflect the failure of immigrant mothers to display forms of responsiveness that are more characteristically American (i.e., praising the child and being attentive to child interruptions when guest adults are present). In other words, immigrant mothers respond more like American mothers if they spent their own childhoods in the United States. This is particularly the case for those areas that are most typically found among American parents – stimulation and proactive emotional responsiveness. Critically, there were no differences in the frequency with which mothers expressed negative regard for their children. These differences in parenting practices, in turn, explained some of the differences in child outcomes. Sociability, for example, was lower among children whose mothers arrived in adolescence and adulthood than among children of US born mothers. But adjusting for parenting practices reduced this variation. Similarly, problem behaviors were even lower among children of immigrants once parenting practices were in the models.

Other measures were also important to account for variations in children's social development. Most notably, mothers with lower levels of education had children with lower levels of sociability and higher levels of problem behaviors. Similar findings pertain to family income. And, socioeconomic status is an important mediator for mother's age at arrival and children's social development suggesting that some of the poorer outcomes for children of mothers who arrive in adolescence or adulthood are accounted for by the lower levels of socioeconomic attainment among these mothers. A task for future research is to understand why socioeconomic status and parenting practices mediate differently across the life course. Although important for mothers who arrived both as adolescents and adults, socioeconomic status and parenting practices were stronger mediators for the mothers who arrived as adults (over age 21).

There were modest differences in social development based on the mother's ethnic or national origins. There were no differences in the social measures for children of Mexican or other Hispanic origin mothers compared to non-Hispanic white mothers. African American mothers reported fewer problem behaviors but no differences in sociability compared to non-Hispanic white mothers. There were, however, considerable differences in two of the measures of social development among children of Chinese origin and other Asian mothers when compared to non-Hispanic white mothers. This suggests that there are important

differences in child behaviors that are not completely accounted for by the nativity, education or even parenting practices evidenced by mothers in this study. What is not fully clear is whether the findings related to national origin might also reflect differences in how mothers from different ethnic groups interpreted some of items used to measure behavior. Nonetheless, the interactions between mothers' age at arrival and national origins (or panethnic origins) were not significant. The importance of mother's age at arrival for child outcomes is not contingent on specific cultural or national origins. Rather, the patterns observed by mother's age at arrival in the United States were remarkably similar across these groups.

A Developmental Perspective

Importantly, the findings of this study highlight the significance of developmental processes and the impact that they may have across generations. Mothers' own age of arrival in the United States impacted their parenting styles and, subsequently, their children's own social behaviors in early childhood. That is, later arrival had a greater impact on social functioning than earlier arrival, but this impact also depended upon the outcome of interest. Mothers who arrived in the US as adolescents had young children who were less sociable, although the children did not exhibit more problem behavior. The relations between sociability and problem behaviors (in this sample and as reported in other research; Rodkin, Farber, Pearl, & Van Acker, 2000) are modest at best and each indicator of social functioning represents a different aspect of social development.

Those mothers who immigrated to the US during adolescence, at a time in their own development when concerns about the social connections with peers were particularly heightened; may have greater difficulty than their US born counterparts and those who immigrate either earlier or later in development in developing and negotiating connections with peers. This may make them less effective in managing and supporting their own children's peer interactions. In other words, mothers' peer socialization in the US during adolescence may be a sensitive period for developing the parenting skills that underlie their future management of their children's peer relations in the US. The fact that mothers' immigration to the US in adolescence did not negatively impact children's problem behaviors may mean that the disruption to mothers' own developmental trajectories has limited effects on their children's social development. Alternatively, effects on children's problem behaviors may be evident if children were studied at a later developmental period (e.g., adolescence)

Mothers' arrival in adulthood had a different, and more positive impact on children's social functioning as shown by the negative effect on problem behaviors. Perhaps this reflects greater exposure to parenting styles in their country of origin. Alternatively, mothers who arrive in adulthood are more cognitively developed upon migration than those who arrive earlier. This may enable them to better differentiate the nuances in parenting that vary from culture to culture. Regardless of the underlying mechanisms, the children of these mothers fared better than their peers whose mothers were US born or immigrated earlier in development. Again, further analyses that explore these relations among children at later developmental periods (middle childhood and adolescence) will help to elucidate whether the positive impacts that are seen early in childhood are sustained over time.

Future Directions

There are several next steps that could help elucidate the origins of these differences. To begin with, it would probably be useful to broaden the array of indicators used to measure parenting, as parents from different cultures have somewhat different goals for their children and may use somewhat different kinds of parenting practices to achieve even goals they

share with parents born in the receiving context (Bornstein, 1995). Likewise, it may be helpful to consider the role of other important adults in the care and socialization of children from all groups. Chinese immigrant mothers, for example, may rely on other related caregivers more than mothers from other groups. Consideration of entrance to non-familial care may also help elucidate how children of immigrants' care differs from children of US born mothers, as children from some immigrant groups are far less likely to use certain forms of non-parental care. Unfortunately, measures of the exact type of care children experience and the amount of time spent in such arrangements before 24 months is not available in the ECLS-B.

Another important step is to look further down the road in children's development because the relation between parenting and resources may be different at different points in children's developmental trajectories (Bradley, 2009). Thus, an important next step will be to explore the extent to which these children's social and emotional behavioral orientations change as they age and move into formal schooling. The next wave of the ECLS-B capturing children's transition into kindergarten could be employed for this task.

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Table 1

Summary Statistics for Child Characteristics and Mother's Origins and Resources by Mother's Age at Arrival

	US born mothers	Immigrant Mothers		
		Arrived age 0–12	Arrived age 13–21	Arrived over age 21
Child Characteristics				
Age in months at assessment (wave 2)	24.34	24.41	24.41	24.31
Age in months at assessment (wave 3)	52.37	53.08	53.22	53.06
Male (vs. Female)	50.9%	53.2%	54.3%	54.9%
Birth weight				
Normal birth weight	92.6%	92.4%	94.2%	92.4%
Moderately Low	6.1%	6.3%	4.9%	6.6%
Very Low	1.2%	1.3%	1.0%	1.0%
Two parent family (wave 1) (vs. other family form)	74.1%	78.1%	86.0%	92.1%
Mother's Origins and Resources				
Mother's age	28.08	26.31	26.93	31.98
Mother's education				
Less than high school	14.2%	31.7%	41.5%	26.9%
High School Graduate	29.0%	25.6%	34.1%	29.8%
Some college or more	56.8%	42.7%	24.4%	43.4%
Race/panethnicity				
Non-Hispanic White	70.1%	15.9%	8.2%	11.2%
Black	15.9%	7.0%	5.1%	7.7%
Mexican	6.9%	34.7%	52.3%	42.7%
Other Hispanic	3.2%	23.4%	22.7%	17.4%
Chinese	0.1%	2.7%	1.4%	6.0%
Other Asian	1.1%	11.5%	7.6%	13.5%
Native Americans	2.4%	1.0%	1.9%	0.9%
Other	0.4%	3.7%	0.8%	0.5%
Family Income				
Lowest quartile	30.6%	31.7%	53.8%	43.8%
Second quartile	19.9%	29.6%	25.6%	23.2%
Third quartile	26.6%	23.2%	15.2%	16.9%
Fourth quartile	22.9%	15.5%	5.4%	16.2%
Non-English home language (vs. English only)	3.8%	55.5%	87.9%	89.0%

Source: Early childhood Longitudinal Study - Birth Cohort (n ~ 6,400)

Table 2

Social Emotional Development by Mother's Age at Arrival in the United States, ECLS-B, Wave 3

	US born mothers	Immigrant Mothers		
		Arrived age 0–12	Arrived age 13–21	Arrived over age 21
Sociability	0.15 ^{cd}	0.12 ^c	-0.11 ^{ab}	0.01 ^a
Problem Behaviors	-0.01 ^d	0.00 ^d	-0.06 ^d	-0.35 ^{abc}

Source: Early Childhood Longitudinal Study - Birth Cohort ($n \sim 6,400$)

Note.

^aSignificant difference from children of US born mothers ($p < .01$);^bSignificant difference from those who arrived age 0–12 ($p < .01$);^cSignificant difference from those who arrived age 13–21 ($p < .01$);^dSignificant difference from those who arrived over age 21 ($p < .01$);F statistics: Sociability ($F(3, \sim 6,400) = 6.53$; $p < .01$) and Problem Behaviors ($F(3, \sim 6,400) = 13.95$; $p < .01$)

Table 3

Parenting Behaviors by Mother's Age at Arrival in the United States, ECLS-B, Waves 1–3

	US born mothers	Immigrant Mothers		
		Arrived age 0–12	Arrived age 13–21	Arrived over age 21
Activities with child (mother reported)	13.03 ^{bcd}	12.46 ^{ac}	12.04 ^{ab}	12.20 ^a
Parental Responsiveness (interviewer reported)	5.61 ^{bcd}	5.37 ^a	5.47 ^a	5.49 ^a
Emotional Supportiveness (observed)	4.87 ^{bcd}	4.59 ^{ac}	4.20 ^{ab}	4.33 ^a
Negative Regard (observed)	1.12	1.07	1.13	1.11

Source: Early Childhood Longitudinal Study - Birth Cohort ($n \sim 6,400$)

Note.

^aSignificant difference from children of US born mothers ($p < .01$);^bSignificant difference from those who arrived age 0–12 ($p < .01$);^cSignificant difference from those who arrived age 13–21 ($p < .01$);^dSignificant difference from those who arrived over age 21 ($p < .01$);F statistics: Activities with child ($F(3, \sim 6,400) = 25.37, p < .01$), Parental Responsiveness ($F(3, \sim 6,400) = 8.51, p < .01$), Emotional Supportiveness ($F(3, \sim 6,400) = 54.7, p < .01$), Negative Regard ($F(3, \sim 6,400) = 1.82, p < .10$).

Table 4

Regression Models Predicting Social Emotional Development, ECLS-B Waves 1–3

	<u>Sociability</u>		<u>Problem Behaviors</u>	
	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
Mother's age at arrival in U.S. (vs. US born)				
Arrived age 0–12	–0.04	–0.01	0.01	0.09
Arrived age 13–21	–0.27 ^{***}	–0.18 [*]	–0.04	0.04
Arrived over age 21	–0.16 ^{**}	–0.04	–0.31 ^{***}	–0.22 ^{**}
Mother's Origins and Resources				
Race/panethnicity (vs. non-Hispanic white)				
non-Hispanic Black		0.09 [*]		–0.26 ^{***}
Mexican origin		0.01		–0.08
Other Hispanic		0.06		–0.07
Chinese origin		–0.35 ^{***}		–0.05
Other Asian		–0.09		0.01
Native American		0.01		0.01
Other ethnic origins		0.19		0.11
Mother's education (vs. less than high school)				
High School Graduate		0.09		–0.11 [*]
Some college or more		0.12 [*]		–0.11 [*]
Family Income (vs. lowest quartile)				
Second quartile		0.00		–0.05
Third quartile		0.04		–0.11 [*]
Fourth quartile		0.17 ^{***}		–0.14 [*]
Non-English home language (vs. English only)		0.10		–0.24 ^{**}
Parenting Practices and Behaviors				
Activities with child (mother reported)		0.07 ^{***}		–0.05 ^{***}
Parental Responsiveness (interviewer)		0.04 [*]		–0.02
Emotional Supportiveness (two bags)		0.07 ^{***}		–0.04 [*]
Negative Regard (two bags)		0.02		0.07

Source: Early Childhood Longitudinal Study - Birth Cohort (n ~ 6,400)

Note: All models include controls for child's age, birthweight, gender, mother's age and family structure at wave 1.***
p<.001,**
p<.01,*
p<.05, and^a
p<.10