

Yoshikawa, H., Godfrey, E. B., & Rivera, A. C. (2008). Access to institutional resources as a measure of social exclusion: Relations with family process and cognitive development in the context of immigration. In H. Yoshikawa & N. Way (Eds.), *Beyond the family: Contexts of immigrant children's development*. *New Directions for Child and Adolescent Development*, 121, 63–86.

5

Access to Institutional Resources as a Measure of Social Exclusion: Relations With Family Process and Cognitive Development in the Context of Immigration

Hirokazu Yoshikawa, Erin B. Godfrey, Ann C. Rivera

Abstract

Few studies have examined how experiences associated with being an undocumented immigrant parent affects children's development. In this article, the authors apply social exclusion theory to examine how access to institutional resources that require identification may matter for parents and children in immigrant families. As hypothesized, groups with higher proportions of undocumented parents in New York City (e.g., Mexicans compared to Dominicans) reported lower levels of access to checking accounts, savings accounts, credit, and drivers' licenses. Lack of access to such resources, in turn, was associated with higher economic hardship and psychological distress among parents, and lower levels of cognitive ability in their 24-month-old children. © Wiley Periodicals, Inc.

Little information exists about the developmental status of young children of lower-income immigrants in the United States, despite the fact that children of immigrants are overrepresented among families in and near poverty (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2005). Recent data suggest that some groups are at particular risk. Young children (from newborn to 5 years of age) of immigrants from Mexico, Central America, and the Dominican Republic, for example, are particularly disadvantaged, relative to both other immigrant children and native-born White children, on dimensions of family income, poverty status, parental employment, and parental education (Hernandez, Denton, & McCartney, in press). These all constitute developmental risks for lower levels of health, cognitive ability, and socioemotional competence (Card, 1999; Fuligni & Yoshikawa, 2003; Yeung, Linver, & Brooks-Gunn, 2002). Research conducted with the Early Childhood Longitudinal Study-Kindergarten cohort (ECLS-K) shows that Mexican immigrant parents' relatively low levels of human capital and income appear to only partially explain their children's lower first-grade reading and math scores in comparison to native-born White children (Han, 2006). Other studies show similar results (e.g., Nord & Griffin, 1999).

We posit in this study that social exclusion is a neglected dimension of the experience of some immigrants that may affect family processes and child development, and one that may help explain disparities in cognitive development among different immigrant and native-born groups in the United States. Social exclusion is a major focus of work on disadvantage among immigrants conducted by policy makers and researchers in Europe (Alba, 2005; Burchardt, Le Grand, & Piachaud, 2002; Centre for the Analysis of Social Exclusion, 2005; Glass, 1999; Lenoir, 1974; Saraceno, 2002). The concept of social exclusion was developed to capture dimensions of the experience of immigrants that go beyond poverty to issues of lack of access to political, social, and health systems. Exclusion can occur with reference to public institutions, such as government policies and service systems, as well as social institutions, such as social networks or community organizations. Some have observed that the concept of social exclusion may be useful in the United States as a way to broaden debates beyond poverty as the major source of disadvantage that affects children's prospects (Micklewright, 2002). However, social exclusion has rarely been investigated with relevance to the development of children in the United States, let alone children of immigrants to the United States (Kamerman & Kahn, 2003).

Social exclusion may be particularly relevant for undocumented immigrant parents in the United States. This group is excluded from eligibility from many public institutions and policies, and due to fear of deportation may exclude themselves from others for which they are eligible. Almost no studies have examined the consequences for family process and child development of undocumented status among parents. This is because few developmental researchers ask parents their legal status for ethical and

confidentiality reasons. Social exclusion may provide a theoretical lens through which experiences associated with undocumented status can be studied. Although formal policy exclusion (e.g., ineligibility for benefits) has been examined most often with regard to immigrants (e.g., Capps et al., 2005; Yoshikawa, Lugo-Gil, Chaudry, & Tamis-LeMonda, 2005), other dimensions of social exclusion may be salient for this group.

Access to Institutional Resources That Require or Provide Identification: A Dimension of Social Exclusion

It has been observed anecdotally that many undocumented immigrants are reluctant to engage with institutions that require or provide identification. This is due to fears of deportation and uncertainty about the consequences of engaging governmental or other institutions, fears which have heightened in recent years (James, 2005). In this study, we examine access to such institutional resources—drivers' licenses, savings or checking accounts, and financial credit—as aspects of low-income immigrant parents' experience that may have consequences for their economic hardship or psychological well-being. We chose these particular resources because they are obtained through contact with financial and government institutions that require forms of identification, and may therefore be shunned by undocumented parents.

One salient dimension of social exclusion among low-income immigrant parents may be access to and use of institutions that require or provide formal identification. Banks are one example of such institutions; government institutions such as departments of motor vehicles, which issue drivers' licenses, are another. Access to such institutions and their services, we argue, may be related to both economic and psychological well-being among parents. For example, having a checking or savings account can result in higher assets. Higher household assets, in turn, have been associated with long-term benefits for the life course including higher educational success and attainment among children in the household (Conley, 1999). The benefits of savings behavior for households in poverty are the basis for efforts to increase savings behavior such as Individual Development Account (IDA) programs (Grinstein-Weiss, Wagner, & Ssewamala, 2006; Sherraden, 1991).

Policies about documents required to obtain a driver's license, the most common form of identification in the United States, vary from state to state. Several states have recently made it more difficult for undocumented immigrants to obtain drivers' licenses (Preston, 2007). In New York State, the state of residence for all of the parents in the current sample, a social security card is required, or proof of reason for ineligibility for a social security card. That proof must be provided in the form of a document from the federal Citizenship and Immigration Services (USCIS). It is likely that undocumented parents do not wish to provide such documentation to obtain a drivers' license.

We hypothesize that levels of access to these resources may vary across ethnic and immigrant groups that differ in likelihood of being undocumented (our three groups of interest are low-income Mexican and Dominican immigrant parents, and low-income, U.S.-born African American parents—all from New York City). Among the three groups, we hypothesize that African American parents will have the highest levels of access to our focal institutions because they are all U.S. citizens by virtue of being born in the country. Among our two Latino immigrant groups, Mexicans are more likely to be undocumented; this is a very recent immigrant group to the New York City area, and one with relatively low levels of human capital and less-developed social networks than the Dominicans, who have been emigrating to New York for several decades (Pessar & Graham, 2002; Smith, 2006).

Access to Institutional Resources: Links to Family Processes and Child Development

We also hypothesize in this study that access to institutional resources may affect family processes and children's early cognitive development. We explore three potential mediators of the associations of access with child cognitive development: economic hardship, psychological distress, and cognitive stimulation.

Having access to checking and savings accounts or credit may in the short run be associated with lower economic hardship and higher levels of resources in the family for children. This is because such financial services can provide a "cushion" in times of particular financial need, and therefore mitigate fluctuations in economic stress in the household (Barr, 2004). In addition, such access may reduce worry and psychological distress among parents. A recent study found that higher economic resources in the household were indeed associated with both lower perceived economic hardship and psychological distress among low-income parents (Mistry, Vandewater, Huston, & McLoyd, 2002). Driver's licenses are a commonly requested form of identification for a wide range of resources and jobs. Having access to a driver's license may therefore also be associated with lower economic and psychological distress.

Economic hardship and psychological distress among parents are, in turn, associated with lower levels of cognitive development in children in many studies (e.g., Gershoff, Aber, Raver, & Lennon, 2007; Jackson, Brooks-Gunn, Huang, & Glassman, 2000; McLoyd, 1990; Mistry et al., 2002; for a review see McLoyd, 1998). Several of these studies show that these factors are associated with less optimal parenting interactions with children, and that these features of parenting may explain effects on children. For example, hardship and distress are both associated with lower levels of cognitive stimulation of children, which, in turn, is associated with lower levels of children's early receptive and productive vocabulary as well as more general cognitive development (Bradley, Corwyn, Burchinal, McAdoo, & Garcia Coll, 2001; Gershoff et al., 2007).

Current Study

The research questions and hypotheses for this study are (a) What levels of access to institutional resources are reported by low-income immigrant and ethnically diverse parents? (b) Is more access to institutional resources related to lower levels of economic hardship and psychological distress, and higher levels of parent cognitive stimulation? (c) Are hardship, distress, and stimulation, in turn, related to indicators of children's early cognitive ability?

We hypothesize that, in our urban, low-income sample, U.S.-born African Americans will report the highest levels of such access, followed by Dominicans and then by Mexicans. We also hypothesize that economic hardship and psychological distress are related to lower levels of cognitive ability, and that cognitive stimulation is related to higher levels of cognitive ability.

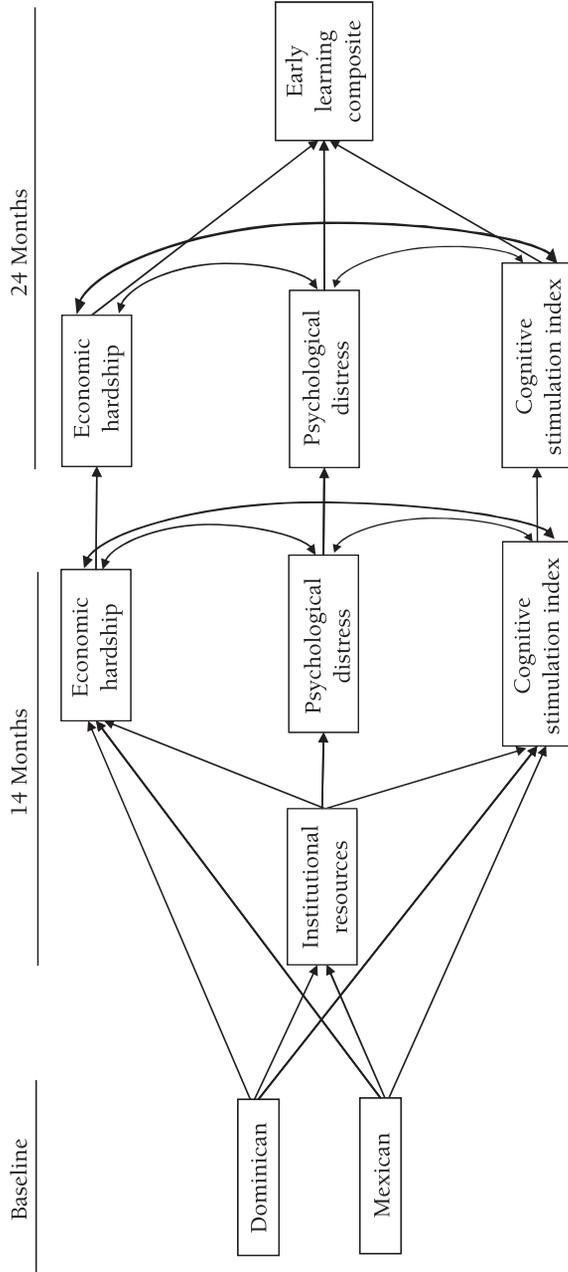
The conceptual models for this study (Figures 5.1 and 5.2) link access to institutional resources that require or provide identification to children's early cognitive and socioemotional development, as mediated by material hardship, psychological distress, and parent engagement in cognitively stimulating learning activities. Figure 5.1 depicts the estimates of differences among all three ethnic groups, with dummy variables for Mexican and Dominican (African American as reference group). Figure 5.2 shows the differences between the two Latino groups (dummy variable for Mexican, with Dominican as the reference group).

Method

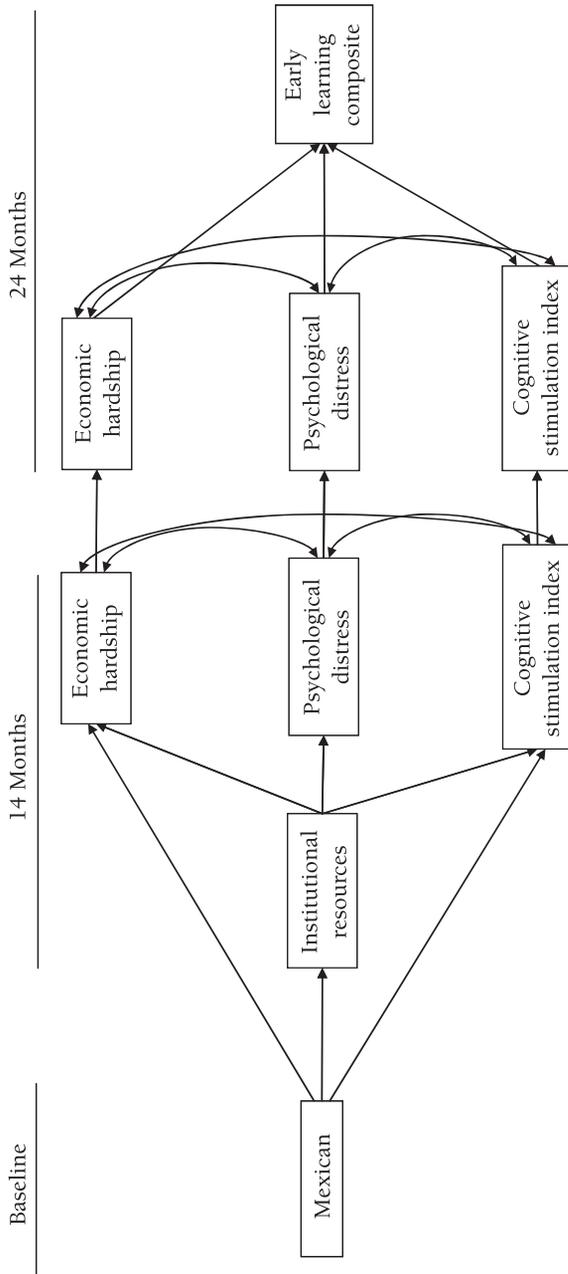
Data for this study came from an ongoing longitudinal study investigating the lives of low-income and immigrant mothers and their newborn children, the Early Childhood Cohort (ECC) of the Center for Research on Culture, Development and Education (CRCDE). Researchers recruited mothers within 2 days after giving birth at postpartum wards in three large New York City hospitals during 2004–2005. These hospitals were selected because they drew patients from low-income neighborhoods with high concentrations of the four target ethnic groups. To participate in the study, mothers had to be over age 18, live in New York City, self-identify as Chinese, Mexican, Dominican, or African American, and have healthy fullterm infants. These ethnic groups were targeted for the study because together they represent over 80% of the population of New York City and include the largest immigrant groups in the city. The initial sample was comprised of 382 mothers recruited from hospital maternity wards shortly after giving birth. Chinese participants were dropped from the study after the 6-month wave because a high number of them sent their infants to China to be raised by relatives. The initial sample of Dominican, Mexican, and African American mothers consisted of 324.

For the current study, the sample is limited to Dominican, Mexican, and African American mothers who completed the 24-month wave of data

**Figure 5.1. Hypothesized Path Model: Mexicans, Dominicans, and African Americans (Reference).
 Note: All Coefficients Are Standardized**



**Figure 5.2. Hypothesized Path Model: Mexicans and Dominicans (Reference).
 Note: All Coefficients Are Standardized**



**Table 5.1. Participant Characteristics at Baseline:
Survey Sample at 24-Month Follow-Up**

	Full Sample (<i>n</i> = 181)	Mexicans (<i>n</i> = 62)	Dominicans (<i>n</i> = 64)	African Americans (<i>n</i> = 55)
Percentage				
Mother under 18 when 1 st child born	13%	13%	10%	18%
Mother married or cohabiting with partner	67%	85%	61%	53%
Mother has HS degree	37%	40%	31%	40%
Mean (<i>SD</i>)				
Total number of children in household	2.05 (1.19)	2.00 (1.17)	1.73 (0.84)	2.27 (1.84)
Household income in year prior to child's birth	\$20,206 (\$14,423)	\$17,498 (\$11,536)	\$23,192 (\$15,086)	\$19,983 (\$16,436)

collection ($N = 198$). Eighty percent of Dominican mothers and 95% of Mexican mothers were foreign-born; all African American mothers were native-born. We conducted an attrition analysis using a set of baseline covariates to predict nonparticipation at the 24-month wave. Fourteen demographic variables served as predictors in this analysis: racial/ethnic group, maternal age, teen motherhood, maternal and paternal immigrant status, maternal–paternal marital status, maternal cohabiting status, mother has high school degree, mother has higher degree, maternal employment in the prior year, mothers' earnings in the prior year, child age at recruitment, and child gender. Of these, only mother has high school degree was a significant predictor of attrition, $b = -1.00$ (.35), $p = .005$, $OR = .37$, indicating that mothers with a high school degree were significantly less likely to drop out than mothers without a high school degree. Select demographic characteristics of the sample are listed in Table 5.1.

Data used in this study were obtained from assessments at baseline, 14, and 24 months. Trained, bilingual researchers recruited families individually at hospitals shortly after the birth of their children, explaining that the study aimed to learn more about children's early years and about parents' experiences raising their children. After acquiring parents' consent, researchers conducted baseline survey interviews of 30- to 40-minutes duration. When infants were 14 months old, researchers interviewed mothers face-to-face in their homes and completed direct assessments of children's cognitive development.¹ At the 24-month data assessment, survey instruments were

¹For mothers who preferred to be interviewed away from their homes, researchers completed interviews and assessments in a private location on the university's campus.

again administered in person through interview format and a child cognitive assessment was also completed. Trained, bilingual female graduate students collected all data in the mother's preferred language (English or Spanish). Participants were compensated \$25 for the baseline interview, \$50 for the 14-month interview/home visit, and \$75 for the 24-month interview/home visit. The institutional review boards at New York University and the three recruitment hospitals approved all study procedures.

Baseline Covariates. Measures collected at the baseline interview include whether the mother has a high school education (dummy variable); the household's income in the year prior to the child's birth; and whether the father of the child and/or a partner coresided in the mother's home (dummy variable).

Access to Institutional Resources. Household access to institutional resources was assessed through a 4-item index at the 14-month wave. Mothers were asked to indicate (yes/no) whether they or anyone in their household has (a) a checking account, (b) a savings account, (c) a credit card, and (d) a driver's license. These items were then summed to create an index of household access to institutional resources ($M = 2.00$, $SD = 1.50$, range: 0–4).

Economic Hardship. Economic hardship was measured at both the 14- and 24-month waves using a 4-item index assessing whether there has been a time in the past 6 months (yes/no) when they and their family (a) were without telephone service; (b) did not pay the full amount of the rent or mortgage; (c) were evicted from their home or apartment for not paying the rent or mortgage; or (d) lost service from the gas, electric, or oil companies because payments were not made. These items were then summed to create an index of economic hardship (14-month wave: $M = 0.49$, $SD = 0.75$, range: 0–3; 24-month wave: $M = 0.33$, $SD = 0.61$, range: 0–3).

Psychological Distress. Psychological distress was measured at both the 14- and 24-month waves using the K6 (Kessler et al., 2002), a 6-item diagnostic scale measuring general psychological distress including depressive and anxious affect ($\alpha = .80$). Mothers were asked to report on the frequency of feelings of distress in the past 30 days on a 5-point scale ranging from 1 (*none of the time*) to 5 (*all of the time*). Sample items include "During the past 30 days how often did you feel hopeless?" and "About how often in the past 30 days have you felt nervous?" The sample mean of psychological distress is 1.89 ($SD = 0.72$) at the 14-month wave and 1.81 ($SD = 0.70$) at the 24-month wave.

Daily Cognitive Stimulation. Mothers' reports of activities with their child were used to create an index of six cognitively stimulating activities at both the 14- and 24-month waves, including singing songs, reading/looking at books, telling stories, listening or dancing to music, playing games that do not involve toys, and playing with building toys. These include activities that have been reported with moderate frequency among Mexican American and other Latino mothers in the United States (Delgado-Gaitan, 1990; Hammer

& Miccio, 2004). To reduce the possibility of bias due to social desirability, mothers who reported engaging with their child every day in each activity were given a one, those who reported anything less were given a zero. (In a national low-income sample with children of this age, a recent study has found stronger sequelae for later cognitive development of mothers' reports of reading daily when compared to less frequent reading; Raikes et al., 2006.) The six items were then summed to create an index of cognitive stimulation (14-month wave: $M = 2.65$, $SD = 1.39$, range: 0–6; 24-month wave: $M = 2.08$, $SD = 1.40$, range: 0–6).

Child Cognitive Development. The Mullen Scales of Early Learning (MSEL; Mullen, 1995) were used to capture children's cognitive development at the 24-month wave. The MSEL, an interviewer-administered standardized developmental test for children aged 3–60 months, consists of four subscales of cognitive development: visual reception, fine motor skills, receptive language, and expressive language. Scores on each subscale are age-equivalent normed and can be combined to provide an index of overall developmental level, the Early Learning Composite. We report results for both the overall Early Learning Composite and each subscale below. Subscales have a mean of 50 and a standard deviation of 10; the early learning composite has a mean of 100 and a standard deviation of 15. The MSEL correlates highly with other measures of cognitive development in early childhood, including the Bayley Scales of Infant Development (Mullen, 1995). Sample means for each of the scales are 43.4 ($SD = 9.8$) for visual reception; 37.8 ($SD = 12.2$) for fine motor skills; 44.9 ($SD = 9.4$) for receptive language; 37.7 ($SD = 8.0$) for expressive language; and 83.3 ($SD = 13.7$) for the early learning composite.

Results

Structural equation modeling techniques were used to estimate a path model representing the hypothesized set of relationships between institutional exclusion, economic hardship and parenting, and child cognitive development. Structural equation modeling is more flexible in its statistical assumptions than regression, provides indicators of overall model fit, and has the ability to simultaneously estimate paths. Therefore, it is a useful tool for exploring multiple relationships at the same time and is often used to reduce bias in mediation analyses (Kline, 1998; Shrout & Bolger, 2002).

Two a priori path models were conceptualized, one in which African American mothers served as the reference group (see Figure 5.1) and one in which the sample was limited to Mexican and Dominican mothers and Dominican mothers served as the reference group (see Figure 5.2). The first model allows us to examine the hypothesized differences in access to institutional resources between the two immigrant groups (Mexicans and Dominicans) and the U.S.-born group (African Americans). The second model examines the hypothesized difference between the Mexicans and Dominicans. In both models, we included the hardship, distress, and

stimulation constructs at two waves of measurement: 14 months and 24 months.

Both models were estimated using the sample covariance matrix and maximum likelihood estimation. Full information maximum likelihood was used using the Amos 6.0 statistical package to model and estimate all parameters (Arbuckle, 2005). Amos uses full information maximum likelihood estimates in the presence of missing data, a strategy that yields efficient and consistent estimates in the presence of data that are either missing completely at random or missing at random and produces least biased estimates in the case of non-ignorable missing data (Schafer & Graham, 2002).

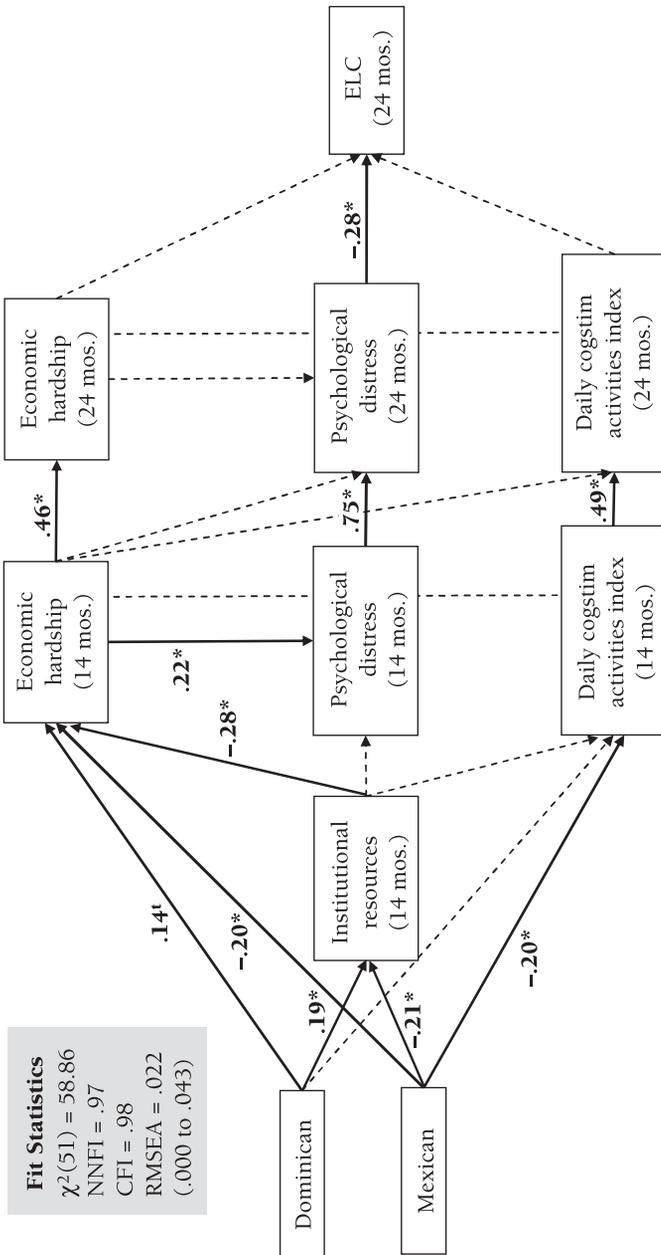
As recommended by Hu and Bentler (1995) and Kline (1998), models were evaluated using several indices of overall fit. These include the comparative fit index (CFI; adequate fit $>.90$), the non-normed fit index (NNFI; adequate fit $>.90$), and the root-mean-square-error of approximation (RMSEA; adequate fit $<.05$). We also report 90% confidence intervals (CI) for the RMSEA statistic. In addition, as recommended by Kline (1998), the residual correlation matrices were inspected for residuals over $.10$, which indicate a poorer fit for that portion of the model. Although the overall chi square is reported in this paper, it is only used to create the chi square difference test which compares the fit of one model to a nested model.² Direct paths between the baseline covariates and both the principal predictor (institutional resources) and child outcomes were estimated, along with covariances among the covariates and between each covariate and racial/ethnic group membership. Comparisons of models with and without additional covariates (including employment, number of children in household, and child gender) indicated few differences in obtained path coefficients; for reasons of statistical power, analyses with the reduced set of covariates are reported.

As suggested when testing structural equation models (Kline, 1998), alternative models were also examined. Analyses began by estimating the hypothesized models presented in Figures 5.1 and 5.2 and examining the fit statistics, residual correlation matrices, and measurement equations. The hypothesized models were then trimmed on both theoretical and empirical grounds and the $\chi^2\Delta$ statistic was used to evaluate changes in model fit.

The finalized path model for our institutional resource model with the full sample of Mexicans, Dominicans, and African Americans is presented in Figure 5.3. In this analysis, African American mothers served as the reference group. The model was overidentified with degrees of freedom (df) = 51 and fit statistics indicated a good fit for the data: $\chi^2(51) = 58.86$, NNFI = 0.97, CFI = 0.98, RMSEA = .022 (90% CI = .000–.043). Mexican mothers reported lower access to institutional resources, $b = -.69$ (0.25), $p < .01$, $\beta = -.21$, and lower economic hardship, $b = -.33$ (0.13), $p = .01$, $\beta = -.20$, than African American mothers. In addition, Dominican mothers

²The χ^2 test evaluates whether the fit of the simplified model is different from the fit of the saturated model. It is not often used as a fit measure because of its dependence on sample size.

Figure 5.3. Institutional Resources Model: Full Sample



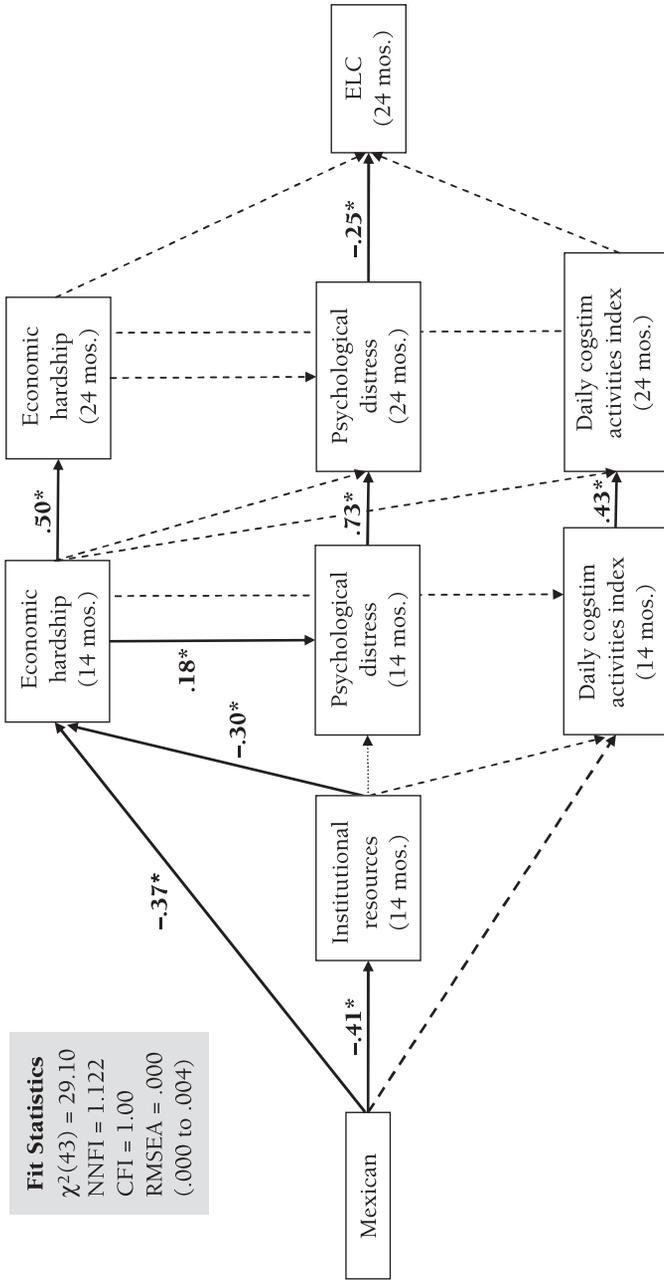
Note: Paths in bold are statistically significant
 Numbers in diagram are standardized path coefficients
 Covariates include: mom has HS degree; mom cohabiting w/partner; hhld income in prior yr
 Model estimated: all covariances between exogenous variables and direct paths between covariates, institutional resources, and child outcomes

reported significantly higher access to institutional resources, $b = .60$ (0.23), $p < .05$, $\beta = -0.19$, and higher economic hardship, $b = 0.21$ (0.12), $p < .10$, $\beta = 0.14$, than African American mothers, although the difference for hardship was of marginal significance. Mexican mothers also reported fewer daily cognitively stimulating activities, $b = -.62$ (0.25), $p < .05$, $\beta = -0.20$, than their African American counterparts. Higher access to institutional resources, in turn, predicted lower levels of economic hardship, $b = -0.14$ (0.04), $p < .001$, $\beta = -0.28$, and lower economic hardship was related to lower psychological distress, $b = 0.20$ (0.07), $p < .01$, $\beta = 0.22$. We found moderate to high stability in our mediator constructs, with standardized coefficients of .46, .75, and .49 for economic hardship, psychological distress, and cognitive stimulation, respectively (all significant at the .05 level).

Finally, psychological distress was associated with lower scores on the Mullen Early Learning Composite, $b = -5.55$ (1.48), $p < .001$, $\beta = -0.28$. In the subscale-specific analyses (available from the authors), psychological distress was negatively related to visual reception ($b = -2.09$ (1.04), $p < .05$; $\beta = -0.15$, fine motor skills, $b = -2.93$ (1.31), $p < .05$, $\beta = -0.17$, receptive language, $b = -2.16$ (1.03), $p < .05$; $\beta = -0.16$, and expressive language, $b = -2.56$ (0.88), $p < .01$, $\beta = -0.22$). In addition, a significant negative association was found for economic hardship with visual reception, $b = -2.32$ (1.19), $p < .05$, $\beta = -0.14$.

The finalized path model for Mexicans and Dominicans is presented in Figure 5.4. In this analysis, Dominican mothers now served as the reference group. This model was also overidentified ($df = 43$), and fit statistics indicated an adequate fit for the data: $\chi^2(43) = 29.10$, NNFI = 1.12, CFI = 1.00, RMSEA = .000 (CI = .000 to .004). Fit statistics were somewhat better for this model without covariates, but we report the model with covariates; there was little substantive difference in the pattern or magnitude of path coefficients. In this model, Mexican mothers reported lower access to institutional resources than Dominican mothers, $b = -1.25$ (0.25), $p < .001$, $\beta = -0.41$, as well as lower economic hardship, $b = -0.55$ (0.14), $p < .001$, $\beta = -0.37$. Higher access to institutional resources again predicted lower reports of economic hardship, $b = -0.14$ (0.05), $p < .01$, $\beta = -0.30$, and lower economic hardship was related to lower psychological distress, $b = 0.18$ (0.08), $p < .05$, $\beta = 0.18$. Compared to the model with the full sample, the relationship between psychological distress and child cognitive development was in the same direction and of similar magnitude, $b = -4.62$ (1.61), $p < .01$, $\beta = -0.25$. In the subscale-specific analyses, more psychological distress predicted lower scores on all subscales of the MSEL except for receptive language: visual reception, $b = -2.09$ (1.04); $p < .05$, $\beta = -0.19$, fine motor skills, $b = -2.93$ (1.31), $p < .05$, $\beta = -0.22$, and expressive language, $b = -2.56$ (0.88), $p < .01$, $\beta = -0.16$. In this analysis, the association between economic hardship and the visual reception subscale was no longer significant. However, daily cognitively stimulating activities did predict higher scores on the visual reception scale, $b = 0.21$ (0.10), $p < .05$, $\beta = 0.18$.

Figure 5.4. Institutional Resources Models: Mexicans and Dominicans



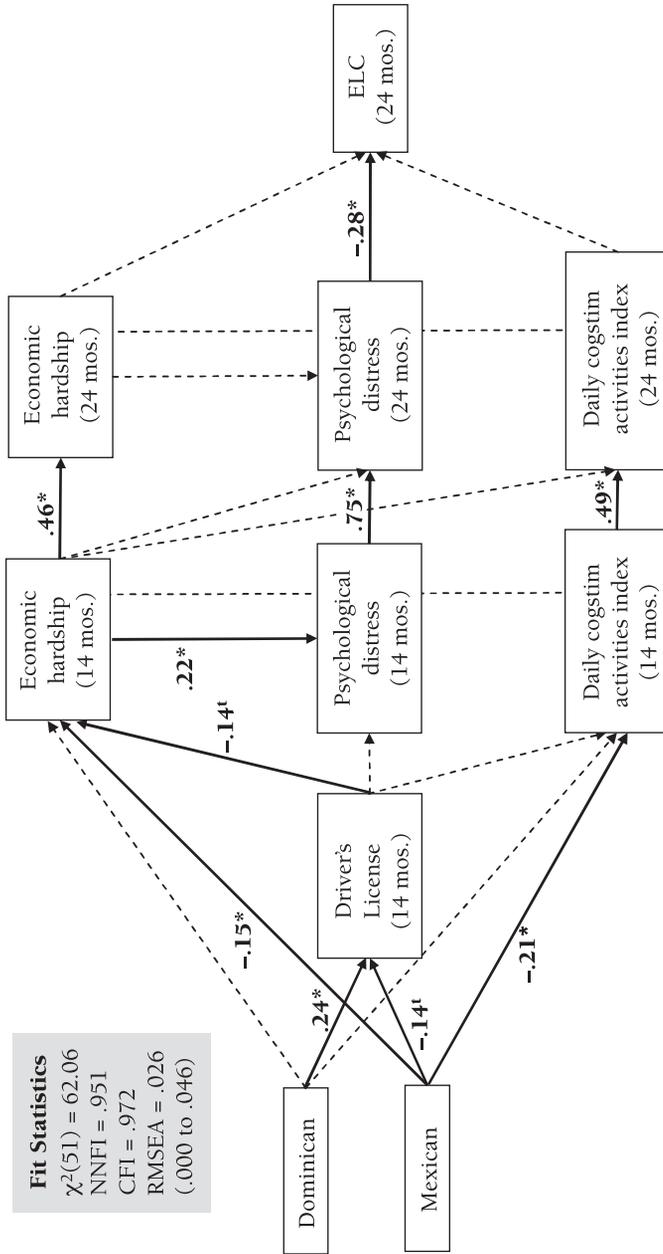
Note: Paths in bold are statistically significant
 Numbers in diagram are standardized path coefficients
 Covariates include: mom has HS degree; mom cohabiting w/partner; hhld income in prior yr
 Model estimated: all covariances between exogenous variables and direct paths between covariates, institutional resources and child outcomes

Due to the policy relevance of access to driver's licenses, we examined the models with just that item, separate from the savings, checking, and credit items. These models are presented in Figures 5.5 and 5.6. In the finalized path model for our driver's license model with the full sample of Mexicans, Dominicans, and African Americans (Figure 5.5), African American mothers served as the reference group. The model was overidentified with $df = 51$, and fit statistics indicated a good fit for the data: $\chi^2(51) = 62.06$, NNFI = 0.95, CFI = 0.97, RMSEA = .026, 90% CI = .000–.046. The paths between mother's ethnicity and the mediators were the same, except that the difference between Dominican and African American mothers' reports of economic hardship was no longer significant. In this model, access to a driver's license again predicted lower reports of economic hardship, but only at a marginal significance level, $b = -0.21$ (0.12), $p < .10$, $\beta = -0.14$, and economic hardship again predicted psychological distress, $b = 0.20$ (0.07), $p < .01$, $\beta = 0.22$. As in the institutional resources model with the full sample, psychological distress predicted child cognitive development (standardized coefficient of $-.28$). In the subscale-specific analyses, the paths between psychological distress and all four scales of the MSEL were in the same direction and of similar magnitude compared to the institutional resources model; higher psychological distress predicted lower scores on the visual reception, $b = -2.09$ (1.04), $p < .05$, $\beta = -0.15$, fine motor skills, $b = -2.93$ (1.31), $p < .05$, $\beta = -0.16$, receptive language, $b = -2.16$ (1.03), $p < .05$, $\beta = -0.16$, and expressive language, $b = -2.55$ (0.88), $p < .01$, $\beta = -0.22$, subscales of the MSEL. The path between economic hardship and the visual reception subscale was also similar in magnitude, when compared to the institutional resources model, $b = -2.32$ (1.19), $p = .05$, $\beta = -0.14$.

In the finalized driver's license model with the Mexicans and Dominicans (Figure 5.6), Dominican mothers served as the reference group. The model was overidentified with $df = 43$, and fit statistics indicated a good fit for the data: $\chi^2(43) = 38.82$, NNFI = 1.04, CFI = 1.00, RMSEA = .000, 90% CI = .000–.032. As in the institutional resources model with the reduced sample, economic hardship predicted psychological distress at a marginally significant level, $b = 0.15$ (0.08), $p < .10$, $\beta = 0.16$, and distress significantly predicted child cognitive development, $b = -4.61$ (1.61), $p < .01$, $\beta = -0.25$. In the subscale-specific analyses, the paths between psychological distress and the subscales of the MSEL were in the same direction and of similar magnitude as in the institutional resources model with the equivalent sample. Again, the path coefficient between daily cognitively stimulating activities and the visual reception scale of the MSEL was significant, $b = 1.04$ (0.58), $p < .10$, $\beta = 0.16$, though at a marginal level of significance.

Finally, a multisample path analysis was run to evaluate whether the relationships between the endogenous variables in the model differed by racial/ethnic group. In this analysis, racial/ethnic group was no longer used to predict the system of relationships. Instead, the system of relationships was

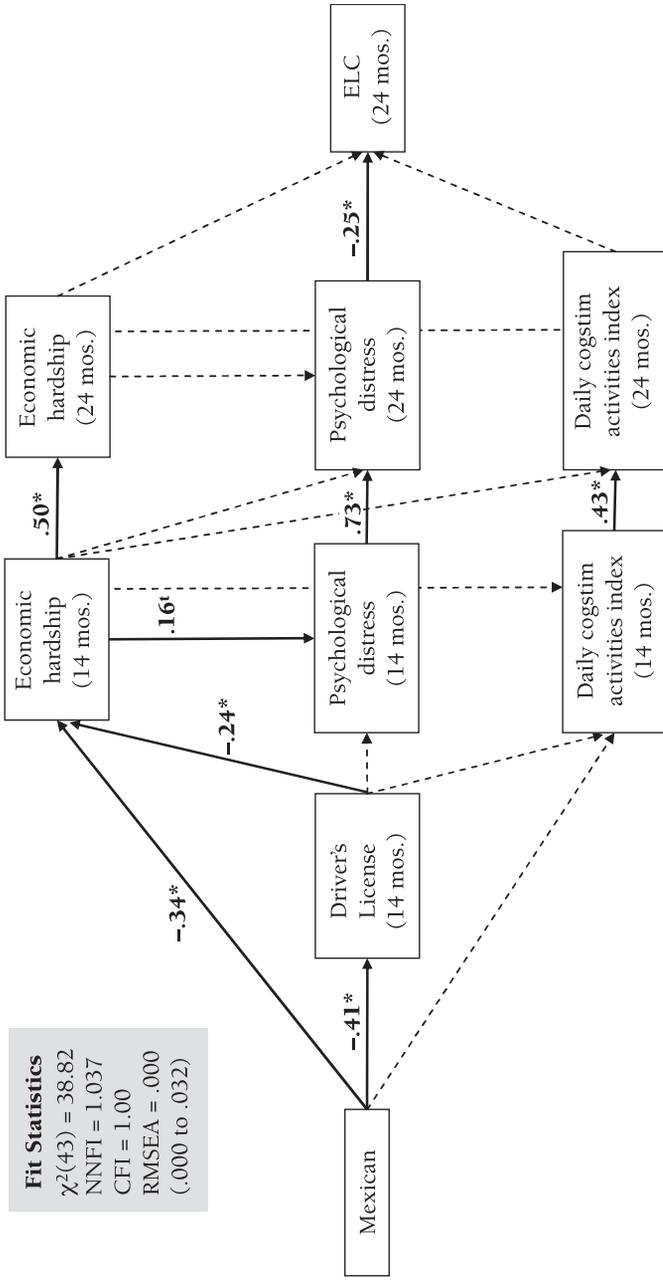
Figure 5.5. Driver's License Model: Full Sample



Fit Statistics
 $\chi^2(51) = 62.06$
 NNFI = .951
 CFI = .972
 RMSEA = .026
 (.000 to .046)

Note: Paths in bold are statistically significant
 Numbers in diagram are standardized path coefficients
 Covariates include: mom has HS degree; mom cohabiting w/partner; hhld income in prior yr
 Model estimated: all covariances between exogenous variables and direct paths between covariates, institutional resources and child outcomes

Figure 5.6. Driver's License Model: Mexicans and Dominicans



Note: Paths in bold are statistically significant
 Numbers in diagram are standardized path coefficients
 Covariates include: mom has HS degree; mom cohabiting w/partner; hhld income in prior yr
 Model estimated: all covariances between exogenous variables and direct paths between covariates, institutional resources and child outcomes

compared across the Mexican, Dominican, and African American samples to determine whether the structural paths differed or remained the same across groups. A model in which all parameters was allowed to vary across groups was compared to models in which parameters were constrained to be equal across. Both the overall fit indices and $\chi^2\Delta$ statistics for these models indicated that the relationships between variables do not vary across racial/ethnic group.

Discussion

This study aimed to explore implications of social exclusion theory for the experience of low-income immigrant parents with young children in the United States. Social exclusion is a construct applied (primarily in work outside the United States) to capture dimensions of disadvantage that standard economic constructs such as poverty or hardship do not capture (Burchardt et al., 2002). We applied social exclusion theory to the experiences of exclusion that might be related to undocumented status among low-income immigrants. Few studies have explored the ramifications for children of parents' undocumented status, because of difficulty in directly assessing legal status. Social exclusion provides a theory that can help us pinpoint the multiple experiences associated with this status.

Specifically, this study is the first to link institutional dimensions of social exclusion among immigrant parents to their family processes and children's development. We posited that low-income immigrant parents, due in part to variation in their legal status, might vary in their likelihood to access resources that require them to show identification. Thus, we sought to explore institutional access as one indicator of social exclusion that goes beyond the usual poverty-based definitions of exclusion.

In our models, we examined how access to institutions that require forms of identification (savings accounts and checking accounts, credit cards, and driver's licenses) related to economic hardship, psychological distress, and cognitive stimulation of children. We further examined how these three factors were related to a standardized assessment of children's cognitive abilities at 24 months.

In brief, our findings supported much of our theoretical model linking institutional access to children's development through our hypothesized mediators. Household-level access to institutional resources was associated with lower economic hardship, which, in turn, was associated with higher psychological distress over time and lower levels of cognitive ability (see Figure 5.3). We had hypothesized that having access to checking or savings accounts and credit might provide a financial cushion during times of economic hardship. This appears to be reflected in our data, with a moderate negative relationship (standardized coefficient of $-.28$; Figure 5.3) between access to institutional resources and economic hardship (as represented by items such as having phone service cut off or not being able to meet bill

deadlines). We also hypothesized that the process of saving for the future, together with the higher economic resources such savings bring, would predict higher levels of resource-dependent investments in children, such as reading books for children or other forms of cognitive stimulation. This part of the model, however, was not supported.

Mexicans consistently reported lower levels of daily cognitive stimulation with their children than Dominicans or African Americans; however, the measure of daily cognitive stimulation was not associated with the total score on our cognitive assessment.

In analyses separating our standardized assessment into its four component subscales (visual reception, fine motor skills, expressive language, and receptive language) we found some different patterns, depending on the particular predictor being examined. Economic hardship appeared to be most strongly related to visual reception, and less so to the other subscales. Psychological distress was related to all four subscales in the predicted direction (higher distress associated with lower levels of the particular ability). Finally, daily cognitive stimulation was related to higher visual perception, but not the other subscales. These differences are somewhat difficult to interpret, partly because the cognitive measure is taken quite early in early childhood (in the midst of the first vocabulary “spurt” that children experience), with still a bit of “noise” in these subscale measures. This is reflected in the fact that the associations of distress with these subscales were quite a bit weaker (standardized coefficients ranging from $-.15$ to $-.22$) than with the entire scale as a whole (standardized coefficient of $-.28$).

We were also interested in variation among our sample of Mexicans, Dominicans, and African Americans in institutional resources and the other constructs in our model. Although our groups were fairly similar in class (all being of low incomes), they varied in degree of political incorporation. The Mexican mothers were all first generation; about 80% of the Dominicans were first generation. These differences, together with the fact that the Mexican group were by far the lowest in terms of parental human capital and income, drove our hypotheses that the Mexicans were likely to have the highest proportion of undocumented parents, followed by the Dominicans, and then of course no parents of undocumented status among the African Americans. We therefore predicted that the Mexicans would report the lowest levels of institutional resources, followed by the Dominicans and then the African Americans. This hypothesis was only partially supported. That is, Dominican parents reported higher levels of household access to these resources than African American parents. Mexicans, as hypothesized, did report the lowest levels of these resources.

Why did Dominican parents report higher levels of financial banking resources and driver’s licenses than African American parents? One reason may be the higher rates of young motherhood and single parenthood among

the African American parents. This group was more likely to be living with grandmothers. Our qualitative data, for example, suggest that some of the younger African American single mothers in our sample left the financial responsibilities in the household to the grandparents (Lugo-Gil, Yoshikawa, & Tamis-LeMonda, 2006). Another possibility is that the Dominican families may have had more extensive social networks. This possibility is now being explored through data we are collecting on social network size, availability, and support.

We also included paths in our model from ethnic group directly to economic hardship. Here again, we encountered a somewhat counterintuitive finding: The Mexicans reported lower levels of economic hardship than both the African Americans and the Dominicans. This occurred despite their lower incomes and lower levels of human capital. Why did the poorest among our groups report the least hardship? Two principal reasons may explain this puzzling finding. First, as work by the Suárez-Orozcos (Suárez-Orozco, 1989; Suárez-Orozco & Suárez-Orozco, 2001) and others indicates, immigrants often evince a "dual frame of reference" in their experience, one relevant to their context of reception and one relevant to their sending context. Our Mexican sample comes from a particularly poor state in Mexico, Puebla (Yoshikawa et al., 2008). These parents, in our qualitative study, reported more extreme reports of hardship in Puebla than our Dominican parents did when talking about sending contexts in the Dominican Republic. The Mexicans also described government and public support for families in their home country as sparse and unreliable (Yoshikawa et al., 2005). Second, data from some of our other studies suggest that the Mexicans use a variety of survival strategies to live in New York City while managing to make ends meet as well as sending remittances back to Mexico. These include doubling up in apartments (they have higher numbers of people in the home than our Dominicans or African Americans), and participating in informal lending pools (Yoshikawa & Rivera, 2007). These (sometimes called *tanda*) involve regular small deposits to a kitty of money that a group of relatives and friends pitch into, with access to relatively large sums on occasion to take care of big-ticket expenses or debts.

Driver's licenses are currently the focus of much debate and new legislation. Questions being discussed in state legislatures include whether undocumented immigrants should be allowed to have driver's licenses, and what kinds of information (e.g., checks with the federal immigration service or with national terrorist databases) should be required in applications for licenses. We analyzed our models replacing the overall institutional resources measure with the item specific to whether anyone in the household had a driver's license. We found that much of the original model was also supported for the item tapping access to a driver's license in the household. That is, Mexicans reported the lowest likelihood of having a license in the household (Dominicans and African Americans did not

significantly differ on this likelihood). Having a driver's license, in turn, was associated with lower perceived economic hardship, which, in turn, related to higher psychological distress and lower scores on the cognitive Mullen assessment.

Several limitations of this study should be noted. First, does institutional access represent a causal influence on parenting and child development, or is it simply a marker of other kinds of disadvantage that undocumented immigrants experience? In our study, due to the lack of a direct measure of legal status, we cannot compare the relative associations of our measure of access with undocumented status itself. Although we controlled for a range of household factors, including prior education, family structure, and income, there exist other family-level factors that might have influenced our results. We did run expanded models with a larger set of covariates, and results were very similar with regard to principal path coefficients, although significance levels were lower. In future work, to address issues of omitted-variables bias, we plan to assess institutional resources again at 36 months. This will allow for individual fixed-effects analyses that predict change in children's outcomes from change in levels of access, an analysis approach that better adjusts for unobserved selection factors that are stable over time and could be responsible for the links between access, family processes, and the child outcomes.

Second, although we began our study with a low-income immigrant Chinese sample in addition to the three groups reported on here, we were unable to continue to follow up that group due to high rates of sending infants back to China. Future work on institutional resources should include this important and largest Asian immigrant group.

Despite these limitations, this study represents a step forward in extending the social science literature on the experience of low-income and undocumented immigrants beyond notions of poverty and economic disadvantage. We believe that studies examining the usual correlates of disadvantage in the United States—income, education, and occupation—do not fully represent the kinds of disadvantage that affect parents' well-being, parenting, and child development in undocumented immigrant families. We demonstrate that institutional access and exclusion, as reflected in this study by household-level access to financial services and drivers' licenses, may be an important, but overlooked influence on family life and child development.

References

- Alba, R. (2005). Bright vs. blurred boundaries: Second-generation assimilation and exclusion in France, Germany, and the United States. *Ethnic and Racial Studies*, 28, 20–49.
- Arbuckle, J. L. (2005). *Amos 6.0 User's Guide*. Chicago, IL: SPSS.
- Barr, M. S. (2004). Banking the poor. *Yale Journal on Regulation*, 21, 121–237.

- Bradley, R. H., Corwyn, R. F., Burchinal, M., McAdoo, H., & Garcia Coll, C. (2001). The home environments of children in the United States. Part II: Relations with behavioral development through age thirteen. *Child Development, 72*, 1868–1886.
- Burchardt, T., Le Grand, J., & Piachaud, D. (2002). (Eds.). *Understanding social exclusion* (pp. 1–12). Oxford: Oxford University Press.
- Capps, R., Fix, M., Ost, J., Reardon-Anderson, J., & Passel, J. (2005). *The health and well-being of young children of immigrants*. Washington, DC: The Urban Institute.
- Card, D. (1999). The causal effect of education on earnings. In D. T. Mortensen, C. A. Pissarides, O. Ashenfelter, & D. Card (Eds.), *Handbook of labor economics* (Vol. 3, pp. 1801–1863). Amsterdam: North Holland.
- Centre for the Analysis of Social Exclusion. (2005). *Annual report: 2004*. London: London School of Economics.
- Conley, D. (1999). *Being Black, living in the red: Race, wealth and social policy in America*. Berkeley: University of California Press.
- Delgado-Gaitan, C. (1990). *Literacy for empowerment: The role of parents in children's education*. New York: Falmer.
- Fuligni, A. J., & Yoshikawa, H. (2003). Socioeconomic resources, parenting, and child development among immigrant families. In M. Bornstein & R. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 107–124). Mahwah, NJ: Erlbaum.
- Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2007). Income is not enough: Incorporating material hardship into models of income associations with parent mediators and child outcomes. *Child Development, 78*, 70–95.
- Glass, N. (1999). Sure Start: The development of an early intervention programme for young children in the United Kingdom. *Children and Society, 13*, 242–256.
- Grinstein-Weiss, M., Wagner, K., & Ssewamala, F. M. (2006). Saving and asset accumulation among low-income families with children in IDA's. *Children and Youth Services Review, 28*, 193–211.
- Hammer, C. S., & Miccio, A. W. (2004). Home literacy experiences of Latino families. In B. Wasik (Ed.), *Handbook of family literacy* (pp. 305–328). Mahwah, NJ: Erlbaum.
- Han, W. (2006). Academic achievements of children in immigrant families. *Educational Research and Reviews, 1*(8), 286–318.
- Hernandez, D., Denton, N. A., & McCartney, S. E. (in press). Early education programs: Differential access among young children in newcomer and native families. In M. Waters & R. Alba (Eds.), *The next generation: Immigrant youth and families in comparative perspective*. Ithaca, NY: Cornell University Press.
- Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). London: Sage.
- Jackson, A. P., Brooks-Gunn, J., Huang, C., & Glassman, M. (2000). Single mothers in low-wage jobs: Financial strain, parenting, and preschoolers' outcomes. *Child Development, 71*, 1409–1423.
- James, S. D. (2005, June 19). For illegal immigrants, a harsh lesson. *The New York Times*, Section 14NJ, p. 1.
- Kamerman, S. B., & Kahn, A. J. (2003). *Beyond child poverty: The social exclusion of children*. Issue Brief of the Clearinghouse on International Developments in Child, Youth, and Family Policies. New York: Columbia University.
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L. T., et al. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine, 32*, 959–976.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Lenoir, R. (1974). *Les Exclus: Un Français sur dix [The excluded: One in ten French]*. Paris: Le Seuil.

- Lugo-Gil, J., Yoshikawa, H., & Tamis-LeMonda, C. S. (2006). Assessing expenditures on children among low-income, immigrant and ethnically diverse families (Working Paper 06-36). Ann Arbor, MI: University of Michigan, National Poverty Center. Retrieved June 13, 2008, from http://npc.umich.edu/publications/u/working_paper06-36.pdf
- McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*, 311–346.
- McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 5*, 185–204.
- Micklewright, J. (2002). *Social exclusion and children: A European view for a U.S. debate*. Innocenti Centre Working Paper No. 90. Florence, Italy: UNICEF Innocenti Research Centre. Retrieved June 13, 2008, from <http://www.unicef-icdc.org/publications/pdf/iwp90.pdf>
- Mistry, R., Vandewater, E., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73*, 935–951.
- Mullen, E. (1995). *Mullen Scales of Early Learning*. Circle Pines, MN: American Guidance Society.
- Nord, C. W., & Griffin, J. A. (1999). Educational profile of 3- to 8-year old children of immigrants. In D. Hernandez (Ed.), *Children of immigrants: Health, adjustment, and public assistance* (pp. 348–387). Washington, DC: National Academy Press.
- Pessar, P. R., & Graham, P. M. (2002). Dominicans: Transnational identities and local politics. In N. Foner (Ed.), *New immigrants in New York* (pp. 251–273). New York: Russell Sage Foundation.
- Preston, J. (2007, August 6). Immigration is at center of new laws around U.S. *The New York Times*, Section A, p. 12.
- Raikes, H., Pan, B. A., Luze, G., Tamis-LeMonda, C. S., Brooks-Gunn, J., Constantine, J., et al. (2006). Mothers' bookreading in low-income families: Correlates and outcomes during the first three years of life. *Child Development, 77*, 924–953.
- Saraceno, C. (Ed.). (2002). *Social assistance dynamics in Europe: National and local welfare regimes*. Bristol, UK: Policy Press.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*, 147–177.
- Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk, NY: M. E. Sharpe.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422–445.
- Smith, R. C. (2006). *Mexican New York: Transnational lives of new immigrants*. Berkeley, CA: University of California Press.
- Suárez-Orozco, C. S., & Suárez-Orozco, M. M. (2001). *Children of immigration*. Cambridge, MA: Harvard University Press.
- Suárez-Orozco, M. M. (1989). *Central American refugees and U.S. high schools: A psychosocial study of motivation and achievement*. Palo Alto, CA: Stanford University Press.
- Way, N., Gingold, R., Rotenberg, M., & Kuriakose, G. (2005). Close friendships among urban, ethnic-minority adolescents. *New Directions in Child and Adolescent Development, 107*, 41–59.
- Yeung, J., Linver, M. R., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child Development, 73*, 1861–1879.
- Yoshikawa, H., Lugo-Gil, J., Chaudry, A., & Tamis-LeMonda, C. S. (2005, April). How lower-income immigrant families in New York City learn about and navigate U.S. programs and policies for families and children. Paper presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.

- Yoshikawa, H., McCartney, K., Myers, R., Bub, K., Lugo-Gil, J., Knaul, F., et al. (2008). Early childhood education in Mexico: Expansion, quality improvement, and curricular reform (UNICEF Innocenti Research Centre Working Paper 07/40). Florence, Italy: UNICEF Innocenti Research Centre. Retrieved June 13, 2008, from http://www.unicef-irc.org/publications/pdf/iwp_2007_03.pdf
- Yoshikawa, H., & Rivera, A. C. (2007). Data on hardship and survival strategies among lower-income immigrant parents. Unpublished data, New York University, New York, NY.

HIROKAZU YOSHIKAWA is a professor of education at the Harvard Graduate School of Education.

ERIN B. GODFREY is a doctoral candidate in Community Psychology at New York University.

ANN C. RIVERA received her doctorate in Community Psychology from New York University and is currently a Society for Research in Child Development Public Policy Fellow.