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School co-ethnicity and Hispanic parental involvement

Joshua Klugman [a,*,1], Jennifer C. Lee [b,1], Shelley L. Nelson [b]

[a] Department of Sociology, Temple University, 1115 W. Polett Walk, Gladfelter Hall 713, Philadelphia, PA 19122, United States
[b] Indiana University, Bloomington, 1020 E. Kirkwood Ave., Ballantine Hall 744, Bloomington, IN 47405, United States

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ABSTRACT

Scholars of immigration disagree about the role ethnic communities play in immigrant families' engagement in educational institutions. While some researchers argue that the concentration of disadvantaged ethnic groups may prevent meaningful engagement with schools, others argue that ethnic communities can possess resources that help immigrant families be involved in their children's schooling. In this study we use a nationally representative dataset of Hispanic children from the Early Childhood Longitudinal Study, Kindergarten Cohort (ECLS-K) to determine if the relative size of the Hispanic population in the school affects levels of their parents' involvement in their education, as well as parents' perceptions of barriers to their involvement. Our results suggest that a large Hispanic presence in a child's school can help increase immigrant Hispanic parents' involvement in their children's schooling, but there are no benefits for US-born Hispanic parents, indicating that ethnic communities help immigrant families acculturate to American institutions.

1. Introduction

In the past two decades, the percentage of children who are Hispanic has increased dramatically – from 12% in 1990 to 21% in 2006–2008 (US Census Bureau, 1991, 2009). Moreover, the share of Hispanics who are immigrants is substantial and has also grown (albeit slowly) over the past two decades, from 36% to 39% (Gibson and Lennon, 1999; US Census Bureau, 2009). Hispanic families, particularly immigrant ones, face numerous challenges in US educational settings. These include cultural discontinuities between parents and teachers, indifferent or unresponsive school officials, language barriers, and work demands that prevent parents from complying with schools' expectations (Pérez Carreón et al., 2005; Perreira et al., 2006; Suárez-Orozco and Suárez-Orozco, 2001; Tinkler, 2002; Turney and Kao, 2009). Hispanic immigrant parents are less likely than white native-born parents to be involved in their children's schools, and are more likely to cite barriers such as inconvenient meeting times, not feeling welcome, and language problems that prevent them from becoming involved (Turney and Kao, 2009).

Involvement in schooling is a necessary element of parents exercising their voice and gaining full entry into educational institutions (Lareau and Horvat, 1999). Research shows that the quality of life that children of immigrants experience at school can be threatened by problems with peers or teachers (Pérez Carreón et al., 2005; Suárez-Orozco et al., 2008), and parents who will not, or cannot, meet with teachers or principals will be less effective in dealing with such problems (Horvat et al., 2003; Lareau, 2003; Lareau and Horvat, 1999). Perhaps even more importantly, their children will be deprived of models of asserting their interests in dealings with officials representing institutions, educational or otherwise (Lareau, 2003).

In addition, research suggests that the different elements of parental involvement (not just involvement at schools, but also maintaining ties to other parents and home activities to stimulate children's cognitive development) have positive effects for children's academic outcomes (Carbonaro, 1998; Duncan et al., 1994; Epstein, 1987, 1991; Hango, 2007; Kao and Rutherford,

* Corresponding author.
E-mail address: klugman@temple.edu (J. Klugman).
[1] These authors made equal contributions to this article.

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2007; Lee and Bowen, 2006; Muller, 1998; Pong et al., 2005; Raver et al., 2007; Sandefur et al., 2006) including Hispanic children (Goyette and Conchas, 2002; Greenman et al., 2011; Raver et al., 2007) and children of immigrants (Greenman et al., 2011; Lahaie, 2008; Ying and Han, 2008). Sandefur et al. (2006, p. 545), for instance, find that parenting practices such as parent–child discussions of school activities and parents' involvement in their child's school can result in substantially increased chances of high school students enrolling in 4-year colleges, noting that such benefits "reflect cumulative effects over the pre-high school years." Parental involvement in children's schooling has benefits beyond academic achievement. For example, Zick et al. (2001) find that as parental involvement increases, behavioral problems among children decline. Even the few studies that take issue with the conclusion that parental involvement matters for academic achievement still find that it is consequential for a child's behavioral outcomes such as problem behavior, truancy, and school dropout (Domina, 2005; McNeal, 1999).

In this study we look at the parents of Hispanic first-graders and ask if their school involvement is contingent upon the size of the school's Hispanic presence. Since prior research has identified how cultural barriers (i.e. language difficulties) and logistical issues (such as work demands and transportation) make it harder for Hispanic immigrant parents to be involved in their children's schooling (Pérez Carreón et al., 2005; Perreira et al., 2006; Suárez-Orozco and Suárez-Orozco, 2001; Tinkler, 2002; Turney and Kao, 2009), we also examine the extent to which ethnic concentration matters for Hispanic parents' perceptions of these barriers.

Given the fact that Hispanics experience substantial – and growing – segregation in schools (Fry, 2007; Reardon and Yun, 2001) it is important to understand how Hispanic concentration in schools affect parental involvement, which has not been addressed in previous research. We focus on the first grade because the early years in elementary education are a formative and critical period in students' lives, and what happens during that period is consequential for adult status attainment (Entwisle et al., 2005). Since Mexicans make up a substantial proportion of Hispanics in the United States, we also analyze Mexican and non-Mexican families separately to see if the effects of ethnic composition are limited to Mexicans or are truly effects occurring for Hispanics in general; our results suggest that the effect of ethnic concentration is not just limited to Mexican families.

This paper makes a number of important contributions to research on immigration and education. First, we extend the research on parental involvement to determine whether school context, and in particular Hispanic concentration, matters for parents' interventions in their children's schooling. Second, we move the discussion of school racial/ethnic composition beyond the black–white dichotomy by studying Hispanic children and their families. Third, we contribute to the sociology of education research on Hispanics by taking seriously the role of nativity status in moderating the influence of school racial/ethnic composition. Fourth, our study is unique in accounting for ethnic heterogeneity among Hispanics by testing not only the effects of Hispanic concentration in the school, but also the concentration of *co-nationals* (i.e. fellow Mexicans or Salvadoreans) in the school's neighborhood. The ethnic diversity among Hispanic immigrants in the United States is well documented (e.g. Rumbaut and Portes, 2001; Suárez-Orozco et al., 2008) but studies examining contextual effects for Hispanic families and children tend to just examine Hispanic concentration (Eitle et al., 2009; Frost, 2007; Goldsmith, 2003).

2. Background

2.1. The advantages and disadvantages of co-ethnic presence

Because we are interested in generational differences in the influence of ethnic communities on Hispanic parental participation in the education system, we draw upon theories of immigration and assimilation to inform our research questions and hypotheses. The assimilation of immigrants is a multidimensional process, and one of the most important dimensions is "structural assimilation", or the "large scale entrance into the cliques, clubs, and institutions" of the host society (Gordon, 1964, p. 80). Although structural assimilation is most often measured by labor market or civic participation, we suggest that parental involvement in school activities or other activities that are valued by the "mainstream" education system is also an indicator of structural assimilation. Among Hispanics, parental involvement in formal school activities is lower than that of non-Hispanic Whites (Tinkler, 2002; Turney and Kao, 2009). This happens for a couple reasons. First, many immigrant parents in the United States are confronted with expectations of parental involvement that contrast with those in their home countries, where parents are supposed to defer to their children's teachers and not intervene in the schooling process (Suárez-Orozco and Suárez-Orozco, 2001). Parents' involvement may be inhibited by other cultural discontinuities, such as language barriers (Perreira et al., 2006; Turney and Kao, 2009). Second, an unwelcoming school environment may prohibit the formal involvement of Hispanic parents (Pérez Carreón et al., 2005; Tinkler, 2002). Both are often a result of cultural differences or a lack of understanding of the American school system. Thus, involvement in formal school activities such as attending PTO meetings, volunteering in the classroom, attending parent–teacher nights, and maintaining ties to other parents, indicates the social integration of Hispanic parents into the American institution of education. Knowing which activities outside the school are valued by the mainstream education system may also be inhibited by lack of familiarity of American culture, and thus parental involvement in educationally related home activities may also be indicative of structural assimilation even though participation occurs in the home.

What is the role of ethnic community in the involvement of parents in their children's educational activities? Some scholars argue that spatial assimilation facilitates other forms of assimilation (Alba and Nee, 2003; Wiley, 1967); thus full participation in American institutions may be hindered in areas of high co-ethnic concentration, particularly where the aggregated level of human capital is low (Borjas, 1999; Cutler et al., 2008). Since Hispanic newcomers have lower educational attainments than US-born Americans, from this perspective, Hispanic parents' "ethnic capital" – ethnic-specific attitudes, culture,

and economic opportunities – will have deleterious consequences for their children's educational careers and chances for upward social mobility (Borjas, 1999; Wiley, 1967). The implication is that Hispanic parents – both US-born and foreign-born – are less likely to get involved in their children's schooling if they live in predominantly Hispanic communities. Additionally, a school with a larger Hispanic community may be more insulated from educational issues of the mainstream. Informal involvement with the ethnic community may satisfy the instrumental needs of the parents, and thus reduce the need or desire for formal school involvement.

On the other hand, many sociologists of immigration emphasize the positive benefits of social capital present in ethnic enclaves (Gordon, 1964; Portes and Rumbaut, 2001; Zhou, 1997, 2009). Strong ties to other co-ethnic adults make it easier for immigrant parents to monitor children. Co-ethnic ties can also serve as sources of information and social support, which can increase immigrants' sense of efficacy in institutions in the host society (Fujita and O'Brien, 1985) and facilitate immigrant parents' involvement in their children's schooling. Relatedly, other researchers suggest that a concentration of immigrants can result in a stronger influence of "immigrant optimism" (Kao and Tienda, 1995) on families and children (Frost, 2007; Goldsmith, 2003), which in turn can result in greater parental desire to be involved in their children's schooling. There is evidence that co-ethnic concentration has benefits for Hispanic children: Hispanic children of immigrants are less likely to consume alcohol if they attend schools with a large Hispanic presence (Eitle et al., 2009), and Hispanic children have higher educational expectations and test scores in schools with large Hispanic concentrations than those in schools with fewer Hispanic students (Frost, 2007; Goldsmith, 2003).

A concentration of Hispanics can facilitate the tightly knit ethnic communities that promote social capital among Hispanic immigrant families. For parents, this social capital should be a source of social support and information on how to deal with schools and comply with schools' expectations for parental involvement and thus become more involved in the school and at home. A school with a large Hispanic community should be able to provide more opportunities for immigrant Hispanic parents to interact with each other and talk about their children's schooling, which encourage immigrant parents to be involved in their children's schooling. A large community could also be a source of ties to fellow Hispanics who have the cultural resources to deal with schools, which Martinez-Cosio (2010) points out is crucial for successful negotiations with school officials. Having more social support from co-ethnic parents (especially if it is instrumental) may also allow parents more time and ability to be involved in their children's education at home.

Since US-born Hispanics do not face the same kind of challenges that immigrant Hispanics face (namely language barriers; unfamiliarity with American institutions; and the prospect of "role reversal" where immigrant parents' authority is challenged by their more acculturated children), it is likely that US-born Hispanic parents derive fewer benefits from co-ethnic concentration than do immigrant Hispanic parents. Similarly, other researchers have argued that ethnic communities are vital for immigrants to adjust to the new host society, and the importance of these communities diminish for successive generations as their cultural assimilation increases (Gordon, 1964).

So far, this paper has been arguing that a positive effect of Hispanic concentration on parents' involvement reflects the benefits of social capital inhering in ethnic communities. One possible objection to this interpretation is that it neglects the role of schools in promoting parents' involvement. While researchers argue that schools' and teachers' capacities to help immigrant parents and children is generally poor (e.g. Orellana, 2009; Perreira et al., 2006; Suárez-Orozco and Suárez-Orozco, 2001), it is possible that certain school practices, such as parent-liaisons providing outreach to immigrant parents, translators at school meetings and translated documents sent to parents, special classes for immigrant parents, and childcare services so parents can attend meetings at school are more likely to exist in schools serving a large Hispanic community, and these in turn promote Hispanic parents' involvement. If this alternative interpretation is true, any advantages of Hispanic concentration on parental involvement should weaken after controlling for these school practices.

2.2. Limitations of prior research

Although there has been research on the advantages of Hispanic communities for Hispanic students' outcomes, there are three issues that remain underexplored. First, little research has examined whether there are nativity differences in the influence of Hispanic communities on educational processes and outcomes. Goldsmith (2003) is one exception to this: he tested for nativity differences in the effects of Hispanic concentration on Hispanic adolescents' test scores; while he found none, it is very plausible that interactions between nativity and school racial composition are more important for families of young children. This is especially so since the transition into elementary schools confronts minority families with a potentially large cultural disjuncture between home and school (Entwisle and Alexander, 1993).

Second, prior research has also given scant attention to how school racial composition can affect parental involvement. One exception to this is Kerbow and Bernhardt (1993), whose study found that parental involvement is higher in schools that are heavily black and heavily Hispanic, but they did not break down their analysis by the parents' race (much less nativity status) to show the effects of having children attend schools with a large presence of same-race peers. Crosnoe (2001) also examined the influence of school racial composition on parental involvement, but he looked at school ethnic heterogeneity and percent white in a neighborhood, finding neither mattered for Hispanics. He did not look at the consequences of having a child attend a school with a large presence of Hispanics, nor did he see if the relationships differed by nativity status.

Finally, those studies that are concerned with the influence of co-ethnic concentration for Hispanic educational outcomes tend to assume that a pan-ethnic "Hispanic" category structures social ties among Hispanics (Eitle et al., 2009; Goldsmith, 2003), which is reflected in the focus on Hispanic concentration. However, national categories, such as "Mexican" or "Nic-

araguan", can structure Hispanic identities and social ties as well (López and Stanton-Salazar, 2001; Martinez-Cosio, 2010; Suárez-Orozco et al., 2008). Additionally, immigration research emphasizes the importance of social ties among co-nationals (Portes and Rumbaut, 2001; Smith, 2005; Zhou, 1997). While this study also focuses on the associations between Hispanic concentration and parental involvement, unlike previous research examining co-ethnic context for Hispanic students, we assess whether the influence of the concentration of *co-nationals* on children's educational processes is different from the influence of a pan-ethnic Hispanic concentration.

To summarize, the present study improves upon prior research by assessing whether Hispanic parents' involvement in their children's schooling depends on the concentration of Hispanics in schools and on the concentration of co-nationals in the school community, and if so, whether this influence depends on the parents' nativity status. It also analyzes these effects separately for Mexican and non-Mexican Hispanics, to ensure that they are generalizable beyond Mexicans and Mexican–Americans, who make up over half of the Hispanic population in the United States (Guzmán, 2001).

3. Material and methods

3.1. Data

We use data from the restricted access version of the Early Childhood Longitudinal Study Kindergarten Class of 1998–1999 (ECLS-K). The ECLS-K best suits the purposes of this study because it is one of the few nationally representative datasets on early childhood schooling experiences, and it is the only one large enough to allow an analysis of Hispanic immigrant families with young children. The ECLS-K consists of a nationwide multistage random sample of kindergarteners in the 1998–1999 school year. Investigators sampled schools and then sampled children in those schools. Starting in the fall of the children's kindergarten year, researchers assessed them on a variety of cognitive and behavioral dimensions and interviewed their parents, teachers, and school administrators. Researchers followed-up with the children in first, third, fifth, and eighth grades. Because we are interested in the beginning school transition, we examine parents' involvement when their children were in the first grade.

We limit our analyses to Hispanic children who lived with at least one biological parent and whose parent agreed to be interviewed in the spring of the first grade, leaving us with a sample of 2400 children in 730 schools.[2,3] We dropped cases that transferred during the spring first-grade data collection period, and cases with missing values on our outcomes, resulting in samples varying between 2340 and 2350 children. Multiple imputation routines in Royston et al. (2009) "ice" package for Stata were used to create and analyze 10 imputed datasets to address missing values in predictors.[4]

3.2. Measures

3.2.1. Outcomes

Parental involvement can take on different forms, from participation in formal school activities to engaging in educationally beneficial activities at home. Because we are interested in those activities that indicate social integration with the "mainstream" society, we focus on formal involvement in the school as well as educational activities at home that are valued by the mainstream education system. All continuous outcomes have been *z*-transformed (using the entire ECLS sample) to allow coefficients to be interpreted as standard deviation changes in the dependent variable given a unit change in the predictor (*y*-standardized coefficients).

Formal involvement with the school demonstrates entry into the school institution. *School involvement* is a continuous variable based on parent reports of involvement in the school site – attending back-to-school night, PTA meetings, par-

[2] All reported sample sizes have been rounded to 10's in compliance with NCES requirements for restricted-access data.

[3] One potential issue with studies of Hispanic families is the possibility of obtaining a sample unrepresentative of Hispanics because undocumented parents are possibly more likely to refuse to be interviewed or refuse to have their children be assessed. In the very first wave of data collection, Hispanic children had a completion rate of 89.6%, compared to completion rates of 90.2% and 90.8% for white and black children, respectively. The parents of Hispanic children were less likely to have a completed interviewed (82.7%) than the parents of white and black children (87.8% and 84.3%, respectively), but the difference is small. In the first grade, parents of Hispanic children were more likely to have a completed interview than parents of black children. We also compared our sample of Hispanic children to 2000 Census data on Hispanic children ages 6–9 (using the 5% Integrated Public Use Microdata Series, or IPUMS). The sample from ECLS is similar to Census estimates in terms of nativity status, Hispanic nationality, parents' English ability, and region. The ECLS sample has somewhat higher levels of educational attainment (40% of ECLS Hispanic parents have some kind of tertiary education, compared to only 30% of Hispanic parents in the US census), which we attribute to the fact that the Census measurement is based on the mother's education level, whereas ours is based on the level of the parent with the most educational attainment. We also found that our sample has substantially lower household income than Census estimates ($34,400 compared to $44,100). This could be due to the fact that the ECLS top coded income at $200,000 whereas the Census does not top code income. Even so, the income discrepancy is not problematic for our estimates because household income has significant effects for only two of the four outcomes (perceived barriers and school involvement), but the effects of nativity status and Hispanic concentration are consistent across all four outcomes.

[4] Our multiple imputations are in accordance with the structure of our data. School-level variables were imputed separately in a school-level datafile (individual-level variables were aggregated and used to impute school-level variables). Individual-level variables were imputed in separate data files for Hispanic children of immigrant parents and Hispanic children of US-born parents (school-level variables were also included to impute individual-level variables). Our outcomes were not used to impute predictor variables, and cases with an imputed outcome were dropped from our analyses. We imputed our predictor variables with other predictors, as well as variables capturing neighborhood affluence (such as the poverty rate and the proportion of adults in the respondents' census tract that was college-education), parents' perceptions of neighborhood safety, and teachers' reports of the child's academic abilities and social adjustment. Since the interaction between school proportion Hispanic and nativity is a cross-level interaction, it was constructed after the school- and individual-level data files were imputed.

ent–teacher conferences, and school events, volunteering at the school, and helping at the school fundraiser. We create a summed scale of these items, with a Cronbach's alpha of .59.

Research on parental involvement also suggests that parents' interactions with their children at home is expected by schools and is very consequential for their children's educational success (Epstein, 1987; Lareau, 1989). Therefore, we include a measure of *home activities*, which is a continuous measure based on parent reports in the first grade of engaging in various activities with their child – reading books, telling stories, engaging in arts and crafts, playing games, playing with construction toys, practicing with numbers and letters, and doing science projects. We create a summed scale of these items with a Cronbach's alpha of .75. Researchers analyzing ECLS data have used these same items to construct similar scales (Bodovski and Farkas, 2008; Crosnoe, 2006).[5]

In addition to these activities in and out of school, interaction with other parents can also be viewed as an important indicator of parental involvement. This intergenerational closure plays an important role in theoretical discussions of social capital (Carbonaro, 1998; Coleman, 1988; Horvat et al., 2003), and is theorized to be a necessary condition for other forms of parental involvement like enforcing norms, sharing information, and engaging in collective action. Thus, we also examine *parental ties*, which are measured by parents' reports of the number of parents of children in their child's class that they talk with regularly.

Many immigrant parents may feel like outsiders and thus are hesitant to participate in school activities, or they are unaware of how to become involved. Thus, we also examine *parental perceptions of barriers to school participation*, which is a summed scale of parents' reports of encountering obstacles to getting involved in their children's schooling. These obstacles include inconvenient meeting times, lack of child care, not being able to get off work, safety issues, not feeling welcome by the school, problems with transportation, language problems, and lack of interesting things to be involved with (alpha = .54).[6] We treat this outcome as a continuous variable. Some may object to including barriers that are at first glance outside of schools' control, such as transportation problems or not being able to get off work. While schools may have little ability to overcome these barriers, the social support found in co-ethnic communities may be able to help parents surmount them. Because the reliabilities of these scales fall somewhat short of desired levels, we present models where each item making up the scales used in this study are dependent variables, and the results are presented in Appendix A.

Although we consider parental ties and perceptions of barriers as forms of parental involvement, it can be argued that they are also precursors to formal school involvement and education-related home activities. Because of this, we also treat parental ties and perceptions of barriers as mediating variables in our analyses of school involvement and home activities.

3.2.2. Predictors

3.2.2.1. Parents' nativity status. We classify parents as being either foreign-born or US-born. Parents' nativity is based on the biological mother's nativity status if the child lives with her biological mother, a definition used by previous studies of young children of immigrants and their parents (Kao and Tienda, 1995; Turney and Kao, 2009). If the child does not live with her biological mother but her biological father, nativity status is based on the biological father.[7]

3.2.2.2. Proportion Hispanic. Our key independent variable is the proportion of students in the child's school who are Hispanic. We used information from the Common Core of Data (CCD) and Private School Universe Study (PSS) to obtain information on the racial composition of schools. If CCD or PSS data was not available for a school, we used school administrator reports included in the ECLS instead.[8,9]

3.2.2.3. Proportion co-national. As a proxy for the presence of co-nationals in the school community, data on the presence of Hispanic nationalities (e.g. Mexican, Puerto Rican, Cuban, Dominican, Colombian, etc.) in the schools' five-digit zip codes were extracted from the 2000 decennial census (Summary File 1).[10] For parents who specified a Hispanic nationality, the proportion of individuals in their zip code who shared that nationality was calculated. It is a limitation that we are not able to measure both co-ethnicity and co-nationality at the school level; however, a reasonable comparison between the two analyses can be made because the ethnic makeup of the school should be highly correlated with the ethnic makeup of the neighborhood since parents are more likely than not to send their children to local schools. Furthermore, the correlation between percent Hispanic in the

[5] A limitation of studying these traditional forms of parental involvement in schools may miss some of the types of involvement that these parents may undertake. López (2001), for example, argues that some Hispanic immigrant parents consider stressing the importance of a work ethic and educational success as the most effective kind of involvement they can do. We acknowledge that our measures may not best capture all forms of Hispanic parents' involvement in their children's education, but we suggest that these forms of parental involvement are the ones that are most acknowledged by teachers and school administrators and are indicators and thus are important not only for structural assimilation, but also for their children's educational success.

[6] Because we have a fairly low level of reliability, our results could be interpreted as conservative estimates of the effect of school racial composition on parental perceptions of barriers.

[7] Other researchers classify subjects as "children of immigrants" if either parent is foreign-born (e.g. Eitle et al., 2009). The definition in this study is preferred in order to get at the nativity status of the parent most likely to be involved in their children's schooling.

[8] ECLS reports of school's Hispanic representation are highly correlated with CCD reports ($r = .97$) and PSS reports ($r = .88$).

[9] In analyses not presented here, we tested for quadratic effects of proportion Hispanic and found that the quadratic terms were rarely statistically significant. Hence, in this paper we present only the linear effects of proportion Hispanic.

[10] In analyses not presented, the effect of the presence of co-nationals in respondents' home zip codes was estimated. The effects are almost exactly the same as those presented in the main analyses.

school and percent Hispanic in the school's zip code is 0.89, and in other analyses not shown here, the effects of proportion Hispanic in the zip code on parental involvement are quite similar to the effects of proportion Hispanic in the school.

3.2.2.4. School mediators. To test an alternative hypothesis attributing the influence of Hispanic concentration to school practices, we include various child-level and school-level variables measuring the school's context and practices. We use the surveys of the children's teachers to measure having a *Hispanic teacher* (1 = yes; 0 = no); having a *teacher who uses Spanish* in the classroom (1 = yes, 0 = no); receiving either in-class or out-of-class *ESL instruction* (1 = yes, 0 = no); and *the proportion of Hispanic classmates* in the child's classroom.

We use the administrator survey data to measure the *proportion of teachers who are Hispanic*; *the number of bilingual/ESL faculty*; *services for families* (*z*-transformed scale of indicators for whether or not the school offered parents' education, adult literacy classes, social services, child care for parent meetings, summer child care, orientations for new families; Cronbach's alpha = .61); *school childcare services* before and after school (*z*-transformed; alpha = .77); frequency of *school events* parents are invited to attend (*z*-transformed scale of frequency of school and class programs to which parents are invited; alpha = .61); and finally *school services for limited-English-proficiency* (*LEP*) families (*z*-transformed scale of indicators for having translators for meetings with parents, translations of written documents, home visits, outreach workers assisting in enrollment, and special meetings for LEP parents; alpha = .86). In total, we have nine measures of school context as mediators.

3.2.2.5. Controls. We control for a number of child, parent, and school characteristics.[11] For the child, we control for *gender*, *Hispanic nationality* (Mexican, Puerto Rican, Cuban, Central American, South American, and not specified)[12] and *lagged reading and math scores* to deal with any potential reactivity effects where parents increase their involvement in response to students' poor performance. We use test scores from the spring round of the kindergarten data. For parents, we control for the *education* level of the parent with the most education (high school/GED or less, some college/vocational degree, Bachelors' degree or higher), *logged household income*, *parental educational expectations*, which are measured by whether or not the parent expected their child to earn a baccalaureate degree (*BA*) or a post-baccalaureate degree (*post-BA*), whether or not the child lives with a *single parent*, *logged number of siblings*, the biological parent's *employment status* (if the child is living with both biological parents, then we use the mother's information) and the *English proficiency* of the respondent parent (usually the mother).

At the school level, we control for *school SES* (a scale of the average composite SES of all students in the school sample and the school administrator's report of the percent of students eligible for free and reduced-price lunches, alpha = .82), *community type* (urban/suburb/rural), *school enrollment*, *school sector*, and *region*. We also control for the *proportion of students who are black* and the interaction between nativity status and proportion black.

3.3. Analytic strategy

Because our cases (parents of sampled children) are clustered in schools, we use generalized estimating equations (GEEs) to correct for the problem of correlated residuals.[13] We specify an exchangeable correlation structure for the residuals. Because the GEE routines in Stata (xtgee) do not allow for weights to vary within panels, the data were weighted by taking the cross-sectional parent–child weight C4PW0 (included in the ECLS data) and averaging it at the school level. For the continuous outcomes, we specified the outcome as having a Gaussian distribution and an identity link function; for the count outcome parental ties, we specified the outcome to have a negative binomial distribution and a log link function, and we used the size of the student's first-grade class as the exposure variable.

When studying the consequences of school characteristics for educational outcomes, there is always the possibility of endogeneity bias – that a contextual effect represents some unobserved individual-level trait. In this case, it is possible that Hispanic parents who are already predisposed to being involved in their children's schooling strategically choose to send their children to schools based on the size of the Hispanic presence. To the extent that Hispanic parents strategically choose their children's schools based on their academic goals for their child, controlling for their educational expectations and their children's initial test scores should account for this, at least partially. Greenman et al. (2011) used the same strategy in their analysis of neighborhood influences on parenting practices and children's achievement using ECLS-K data.

[11] Due to the large number of control variables in this analysis, the problem of multicollinearity is a potential problem. We reran our results using OLS regression and looked at the diagnostics for multicollinearity. The average variance inflation factor (VIF) is 1.72 and the variable with the highest VIF is proportion Hispanic, with a VIF of 4.10 (the VIF is relatively high because proportion Hispanic is highly collinear with the interaction term between nativity and proportion Hispanic). This is well below the commonly proposed VIF cut-off of 10 (Hocking, 2003), suggesting that multicollinearity is not a problem with these results.

[12] Missing values on Hispanic nationality were not imputed during the multiple imputation process, and lacking a specific Hispanic nationality was treated as a valid response. A substantial proportion (34%) of the US-born Hispanic parent sample did not specify a Hispanic nationality, suggesting that for these parents nationality is quite unimportant for their identities. It would be potentially misleading to treat these responses as "missing" and to be replaced with "valid" nationality categories.

[13] Correlated residuals pose two problems for analyses using regular regression methods: artificially depressed standard errors and inefficient parameter estimates. GEE solves both problems (Ballinger, 2004). GEE is comparable to Hierarchical Linear Modeling (Ballinger, 2004), but is less computationally intensive for the analysis of multiply imputed data. Thus, it has been used in other studies to analyze students in school contexts (Crosnoe, 2001; Doyle and Kao, 2007). Another alternative to GEE for analyzing clustered data is to use traditional regression techniques with Huber–White-corrected standard errors (Rogers, 1993), which will give optimal standard error estimates but the parameters will still be inefficient.

4. Results

We begin by looking at disparities in parental involvement among Hispanic parents. Table 1 presents summary statistics for immigrant and US-born parents. To illustrate the meaning of the *z*-transformed outcomes, consider school involvement. The mean value of school involvement for immigrant Hispanic parents is −.507, meaning this group has less school involvement than the ECLS grand mean by .51 standard deviations, and native-born Hispanics are less involved than the grand mean by .18 standard deviations. Generally speaking, both immigrant and native-born Hispanic parents tend to engage in fewer forms of parental involvement and perceive more barriers to involvement than US parents overall (with the exception of home activities, for which native-born Hispanic parents are exactly average). US-born Hispanic parents tend to have higher levels of parental involvement than their foreign-born counterparts. Immigrant parents report significantly lower levels of school involvement and home activities, and they perceive significantly more barriers to their involvement than their US-born counterparts, as indicated by the "a" superscript. The immigrant disadvantage does not occur for all outcomes, however, immigrant parents report having more ties to other parents than do US-born parents.

In Table 2 we present the results of our GEE analyses. Since the school racial composition variables are centered on the Hispanic means the main effect of the immigrant parent indicator represents the immigrant disadvantage in a school that is typical for a Hispanic child (approximately 49% Hispanic and 12% black). After controlling for individual- and school-level characteristics, we find that in schools of average racial composition, immigrant parents do fewer home activities with their children than their native-born counterparts, but they have roughly the same levels of involvement in parental ties, perceived barriers, and school involvement. These analyses indicate that the differences seen in these outcomes in Table 1 can be explained by family and school socioeconomic and demographic characteristics. We also find that school racial composition (proportion Hispanic and proportion black) moderates the influence of parents' immigrant status on parental ties, perceptions of barriers, school involvement, and home activities.

To illustrate the substantive meaning of our results, we first focus on the results for parental ties. For this outcome, the coefficient of proportion Hispanic on number of parental ties is not statistically significant. Since this variable is interacted with the immigrant parent indicator, the association of proportion Hispanic with parental ties is conditioned on the parent being US-born. In other words, Hispanic concentration in schools has virtually no consequences for US-born Hispanic parents. The main effect of being an immigrant parent is also not significant, suggesting that in schools of average racial composition, there does not seem to be an immigrant disadvantage in the number of parental ties among Hispanics.

Proportion Hispanic has a positive and significant interaction with the immigrant parent indicator, suggesting that as the proportion of Hispanic students in a school increases, the parental ties increase for immigrant parents, but not for US-born parents. Whereas the percentage of Hispanic students in a school does not significantly affect the number of parental ties among US-born parents, the association for immigrant parents is −.29 + .96 = .67. This can be seen in Fig. 1, which depicts the number of parental ties for US-born parents in schools ranging from 2% to 88% Hispanic (the interdecile range for this group) and for immigrant parents in schools ranging from 11% to 96% Hispanic (the interdecile range for this group). The lines represent predicted number of parental ties calculated for two children, one whose parents are US-born, and another whose parents are foreign-born. These predictions are based on the coefficients displayed in Table 2, with all predictors set at the mean levels for Hispanic children, except for percent Hispanic and nativity status. As shown, an increase in Hispanic concentration from the 10th percentile to the 90th percentile results in fairly substantial growth in parental ties for immigrant parents. In fact, in schools with a relatively small proportion of Hispanic students, US-born Hispanic parents have slightly more parental ties than immigrant Hispanic parents. However, the difference between the two decreases until the gap becomes reversed (and immigrant parents have a greater number of parental ties) in schools that are more than 40% Hispanic. Furthermore, immigrant Hispanic parents' ties exceeds the national mean (2.78 ties) when a school exceeds 85% Hispanic – for all other outcomes, Hispanic immigrant parents never meet or exceed the national mean.

We find a similar pattern of results for all of our outcomes (although the positive association between Hispanic concentration and immigrant parents' home activities is only marginally significant). [11] As Fig. 2 shows, as the Hispanic population in a school increases, immigrant parents' perceptions of barriers to school involvement decrease, and US-born parents' perceptions of barriers increase (although this increase is not significant). The "negative" effect for immigrant parents (which is actually a beneficial effect) is significantly different from zero, and is also significantly different from the positive effect for US-born parents. As a school approaches 60% Hispanic, immigrant parents start having comparable levels of perceived barriers to US-born parents.

In the case of school involvement (Fig. 3), the involvement of immigrant parents approaches the national mean, but falls a little short of it. In a school that is 11% Hispanic, immigrant Hispanic parents are more than .5 standard deviations below the national mean; but in a school that is 96% Hispanic, immigrant Hispanic parents are only .18 standard deviations below the national mean. This suggests that Hispanic concentration facilitates immigrant parents' structural assimilation, as measured by formal parental involvement in school, as the extent of their involvement becomes closer to that of the national mean. On the other hand, the figure shows no change in school involvement for US-born Hispanic parents, whose involvement is below the national mean regardless of Hispanic concentration.

Fig. 4 shows that the gap in home activities between US-born and immigrant parents remains quite large until the percentage of Hispanic students reaches almost 90%. The interaction effect of .40 (see Table 2) is also significant, meaning that the changes in the US-born/foreign-born gap in home activities are not likely to be an artifact of sampling variability.

Table 1
Summary statistics for first grade Hispanic respondents by parents' nativity.

Variable	Immigrant parents (N = 1330)		Native-born parents (N = 1030)	
	Mean/proportion	Standard deviation	Mean/proportion	Standard deviation
Dependent variables (centered on mean for students from all ethnic groups)				
Parents' perceptions of barriers (z)	0.443[a]	1.264	0.148	0.996
Inconvenient meeting times (0,1)	0.056	–	0.074	–
No child care (0,1)	0.067	–	0.021	–
Cannot get off from work (0,1)	0.023	–	0.054	–
Safety concerns (0,1)	0.058[a]	–	0.016	–
Do not feel welcome (0,1)	0.060[a]	–	0.009	–
Problems with transportation (0,1)	0.031	–	0.035	–
Language problems (0,1)	0.179[a]	–	−0.021	–
Do not hear of interesting things (0,1)	0.107[a]	–	0.020	–
School involvement (z)	−0.507[a]	1.026	−0.177	0.967
Attend open house (0,1)	−0.142[a]	–	−0.036	–
Attend PTA meeting (0,1)	0.015[a]	–	−0.064	–
Attend parent–teacher conference (0,1)	−0.031[a]	–	0.005	–
Attend school event (0,1)	−0.163[a]	–	−0.024	–
Act as school volunteer (0,1)	−0.275[a]	–	−0.108	–
Participate in fundraiser (0, 1)	−0.243[a]	–	−0.100	–
Parental ties (count; grand mean = 2.779)	−0.386[a]	3.430	−0.723	3.270
Home activities (z)	−0.384[a]	1.108	0.004	1.014
Read books (1–4)	−0.223[a]	0.994	−0.042	0.857
Tell stories (1–4)	−0.110[a]	0.881	0.014	0.889
Sing songs (1–4)	−0.206[a]	1.038	0.070	0.988
Help doing art (1–4)	−0.217[a]	0.872	0.038	0.788
Play games (1–4)	−0.388[a]	0.860	−0.006	0.812
Teach about nature (1–4)	−0.152[a]	0.845	−0.003	0.856
Build things with blocks (1–4)	−0.070[a]	0.863	0.037	0.886
Practice with numbers (1–4)	−0.176[a]	0.873	−0.050	0.729
Independent variables, individual-level				
Immigrant status	1.000	–	0.000	–
Hispanic teacher	0.356[a]	–	0.140	–
Teacher uses Spanish	0.578[a]	–	0.247	–
Student receives ESL instruction	0.464[a]	–	0.081	–
Proportion Hispanic classmates	0.692[a]	0.335	0.359	0.326
Nationality				
South American	0.056[a]	–	0.006	–
Central American	0.137[a]	–	0.006	–
Cuban	0.031	–	0.021	–
Puerto Rican	0.063[a]	–	0.102	–
Mexican	0.690[a]	–	0.525	–
Not specified	0.022[a]	–	0.340	–
Female	0.483	–	0.465	–
Parents' education				
High school or less	0.683[a]	–	0.471	–
Some college	0.211[a]	–	0.380	–
Bachelor's degree or more	0.106[a]	–	0.149	–
Parents' income (logged)	9.930[a]	0.788	10.356	0.816
Single parent	0.195[a]	–	0.280	–
Number of siblings	0.926[a]	0.451	0.844	0.458
Parents' employment status				
Not employed	0.439[a]	–	0.236	–
English proficiency				
Native English speaker	0.066[a]	–	0.466	–
Speaks English well	0.336[a]	–	0.519	–
Does not speak English well	0.597[a]	–	0.015	–
Parents' educational expectations				
Baccalaureate	0.367	–	0.383	–
Post-baccalaureate	0.481[a]	–	0.310	–
Reading test scores	−0.535[a]	0.730	−0.290	0.892
Math test scores	−0.692[a]	0.717	−0.327	0.890
General knowledge test scores	−0.805[a]	0.788	−0.287	0.949
Class size	20.936	4.889	20.403	5.184
Independent variables, school-level				
Proportion Hispanic	0.588[a]	0.310	0.364	0.315
Proportion black	0.121	0.166	0.118	0.170
Proportion co-national	0.327[a]	0.277	0.270	0.253

(*continued on next page*)

Table 1 (*continued*)

Variable	Immigrant parents ($N = 1330$)		Native-born parents ($N = 1030$)	
	Mean/proportion	Standard deviation	Mean/proportion	Standard deviation
Childcare services (z)	−0.143[a]	0.850	0.014	0.867
Events (z)	0.000	1.016	0.073	1.009
Family services (z)	0.433	1.056	0.293	1.049
LEP services (z)	0.993[a]	0.814	0.465	0.994
Proportion Hispanic teachers	0.249[a]	0.235	0.148	0.199
Number of bilingual faculty	6.407[a]	7.991	3.170	5.835
School's urbanicity				
Suburban	0.327[a]	–	0.393	–
Rural	0.060[a]	–	0.151	–
Urban	0.613[a]	–	0.456	–
School socioeconomic status	−0.842[a]	0.884	−0.356	0.932
School enrollment	7.375[a]	3.710	5.747	3.112
School type				
Public	0.938[a]	–	0.887	–
Private, catholic	0.030	–	0.048	–
Private, other	0.032[a]	–	0.065	–
Region				
Northeast	0.134	–	0.107	–
South	0.290	–	0.302	–
Midwest	0.073[a]	–	0.162	–
West	0.503[a]	–	0.429	–

[a] Mean/proportion is significantly different from that of native-born Hispanic parents at $p < .050$ level.

As mentioned earlier, it could be argued that parents who perceive barriers to their school involvement and parents who have fewer ties to other parents should have less access to information about the forms of parental involvement that are rewarded by schools, as well as less social support to facilitate these activities. If so, perceptions of barriers and parental ties should at least partially mediate the observed relationships between school Hispanic concentration and school involvement and home activities. In Table 3, we present results from analyses that address this issue. In Model 1 for each outcome, we present estimates of the effects of proportion Hispanic for both immigrant and US-born parents, and in Model 2, we present the estimates after controlling for perceived barriers and parental ties, both of which are interacted with nativity status.[14]

Our results from these analyses suggest that perceptions of barriers and parental ties at least partially mediate the relationships between school Hispanic concentration and parental involvement. Perceptions of barriers are negatively related to both school involvement and home activities (for immigrant parents), and parental ties have a positive influence on school involvement and home activities. After taking these relationships into account, the positive effect of proportion Hispanic for formal school involvement among children of immigrant parents is smaller (but still statistically significant), and the effect of proportion Hispanic on home activities among children of immigrants is no longer statistically significant. Of course, the findings of this particular analysis should be interpreted with caution, as the influence of parental ties and perceived barriers on school involvement and home activities may not be causal. For example, it could be that school involvement increases opportunities to form more parental ties. It is also plausible that all four forms of parental involvement are indicators of a larger construct of parental involvement.

In general, our analysis of parental involvement shows no support for the argument that a concentration of Hispanics would depress Hispanic parents' involvement in their children's education. While US-born Hispanic parents' levels of involvement are mostly invariant to the presence of Hispanic students in the school, immigrant Hispanic parents perceive significantly fewer barriers, and show significantly higher levels of participation in school activities, and ties with other parents in schools with a large Hispanic presence, and marginally significantly higher levels of home activities. These results are in line with the view that immigrant families tend to be disadvantaged in educational settings (Pérez Carreón et al., 2005; Perreira et al., 2006; Suárez-Orozco and Suárez-Orozco, 2001; Tinkler, 2002; Turney and Kao, 2009), as our descriptive statistics show, but that there are features of Hispanic communities that can ameliorate these vulnerabilities.

Because of the low reliability of the school involvement and perceived barriers scales, in Appendix A we present the coefficients of proportion Hispanic for all of the items making up those scales, as well as the items for home activities. The results show a clear pattern where for most items, proportion Hispanic yields greater benefits for immigrant parents than for native-born parents (although the interactions are significant for only eight out of the 22 items). The only exceptions are for attending a PTA meeting (where the coefficient of proportion Hispanic is significantly positive at the .10 level for both groups, but is somewhat stronger for the native-born parents) and for indicating safety concerns as a barrier to involvement (the coefficient is −.09 for immigrant parents and −.14 for native-born parents; it is insignificant for both groups). The overall uniformity of the pattern suggests that scaling these items is justified.

[14] Both models control for classroom size, since the number of ties to other parents in the child's classroom may be a function of it, and thus the coefficients for proportion Hispanic are slightly different from those presented in Table 2.

Table 2
Multilevel models of first grade parental involvement.

	Parental ties		Perceptions of barriers		School involvement		Home activities	
	Effect	(*t*-Ratio)	Effect	(*t*-Ratio)	Effect	(*t*-Ratio)	Effect	(*t*-Ratio)
Immigrant parent	0.07	(0.59)	0.06	(0.74)	−0.08	(−1.08)	−0.22	(−2.70)**
Proportion Hispanic	−0.29	(−1.21)[a]	0.17	(1.04)[a]	0.00	(−0.02)[a]	−0.08	(−0.43)[b]
Proportion Hispanic × Immigrant parent	0.96	(3.55)***	−0.68	(−3.41)**	0.40	(2.49)*	0.40	(2.15)*
Control variables – individual								
Nationality (Ref = Mexican)								
Cuban	−0.05	(−0.17)	0.13	(0.75)	0.06	(0.52)	0.23	(1.26)
South American	−0.18	(−1.18)	0.01	(0.09)	0.18	(1.51)	0.29	(1.83)
Central American	−0.08	(−0.58)	0.26	(2.02)*	−0.07	(−0.73)	0.23	(2.25)*
Puerto Rican	−0.46	(−3.38)***	0.12	(1.00)	−0.16	(−1.64)	0.14	(1.21)
Not specified	−0.22	(−2.02)*	−0.03	(−0.46)	−0.07	(−1.03)	0.09	(1.08)
Female	0.01	(0.21)	0.02	(0.35)	0.05	(1.19)	0.00	(−0.01)
Parents' education								
(Ref = high school or less)								
Some college	0.05	(0.50)	−0.01	(−0.08)	0.23	(3.99)***	0.24	(3.92)***
Bachelor's degree or more	0.20	(1.89)+	−0.10	(−0.93)	0.30	(3.97)***	0.21	(2.43)**
Household income (logged)	−0.03	(−0.40)	−0.12	(−2.81)**	0.24	(6.30)***	0.04	(0.92)
Parents' educational expectations								
BA	0.11	(0.89)	0.03	(0.36)	0.21	(3.26)**	0.08	(1.03)
Post-BA	0.14	(1.13)	0.02	(0.29)	0.23	(3.61)***	0.26	(2.93)**
Single parent	−0.18	(−1.59)	−0.08	(−1.06)	0.07	(1.27)	0.08	(1.12)
Number of siblings	−0.19	(−2.38)*	0.18	(2.63)*	−0.05	(−0.87)	−0.01	(−0.12)
Parent not employed	0.22	(2.58)*	−0.32	(−4.86)***	0.05	(0.96)	0.07	(1.29)
Parents' English proficiency								
(Ref = native English speaker)								
Speaks English well	0.14	(1.22)	0.06	(0.86)	−0.03	(−0.39)	0.05	(0.55)
Does not speak English well	0.23	(1.69)+	0.26	(2.46)**	−0.07	(−0.79)	−0.20	(−2.04)*
Reading test score	−0.01	(−0.07)	0.05	(0.96)	−0.04	(−0.93)	0.03	(0.67)
General knowledge test score	0.04	(0.84)	−0.02	(−0.40)	0.02	(0.44)	0.00	(0.00)
Math test score	0.02	(0.24)	−0.14	(−2.78)**	0.09	(2.17)*	0.00	(0.02)
Control variables – school								
Proportion black	−0.94	(−1.71)+[c]	0.01	(0.02)[c]	−0.06	(−0.28)[c]	0.21	(0.88)[c]
Proportion black × immigrant parent	0.94	(1.57)	−0.05	(−0.15)	0.12	(0.47)	−0.14	(−0.47)
School SES	0.18	(2.53)*	0.00	(0.00)	0.10	(2.41)*	0.06	(1.27)
School type (Ref = public)								
Private (catholic)	0.22	(1.51)	−0.41	(−3.95)***	0.37	(3.84)***	−0.13	(−0.94)
Private (other)	−0.09	(−0.45)	−0.19	(−1.31)	0.04	(0.22)	−0.18	(−1.39)
Enrollment	−0.03	(−1.92)+	0.00	(−0.22)	−0.03	(−3.33)**	−0.01	(−1.14)
Urbanicity (Ref = urban)								
Suburban	0.01	(0.07)	0.13	(1.69)+	0.00	(0.00)	0.03	(0.51)
Rural	0.07	(0.43)	−0.02	(−0.16)	0.072	(0.74)	0.10	(0.97)
Region (ref = west)								
Northwest	−0.19	(−1.54)	0.01	(0.06)	−0.15	(−1.56)	0.08	(0.77)
Midwest	−0.26	(−2.27)*	0.13	(1.36)	0.00	(0.04)	0.01	(0.10)
South	−0.32	(−3.07)**	0.12	(1.69)+	−0.05	(−0.71)	−0.01	(−0.17)
Intercept	−2.33	(−25.57)***	0.29	(5.29)***	−0.29	(−5.74)***	−0.09	(−1.61)
N	2350		2340		2340		2340	
Schools	730		720		730		730	

Other than the immigrant parent indicator, all predictors are centered on the mean for Hispanic children. For perceptions of barriers, school involvement, and home activities, GEE models are estimated with a Gaussian distribution and identity link function; for parental ties, a GEE model is estimated with a negative binomial distribution and log link function. For all outcomes, an exchangeable correlation structure is specified.

+ $p < 0.1$.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.
[a] Significant for immigrant parents at .05 level.
[b] Significant for immigrant parents at .10 level.
[c] Non-significant for immigrant parents.

4.1. Examining the influence of school context and practices

The benefits of a large Hispanic presence for immigrant parents' involvement in their children's schooling warrant further investigation. To do this, we started with the models presented in Table 2 and added predictors relating to the school context and practices, which were also interacted with nativity status. Because the influence of proportion Hispanic on school involvement and home activities is arguably through its impact on parental ties and perceived barriers, we only examine the effects of school practices on parental ties and perceived barriers. The results from these analyses are presented in Ta-

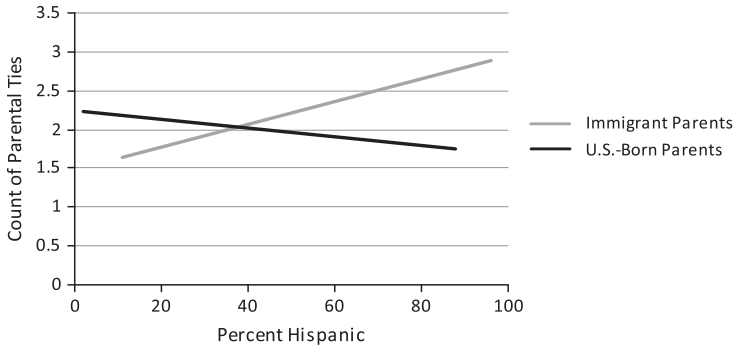

Fig. 1. Effect of Hispanic presence and parents' nativity on parental ties.

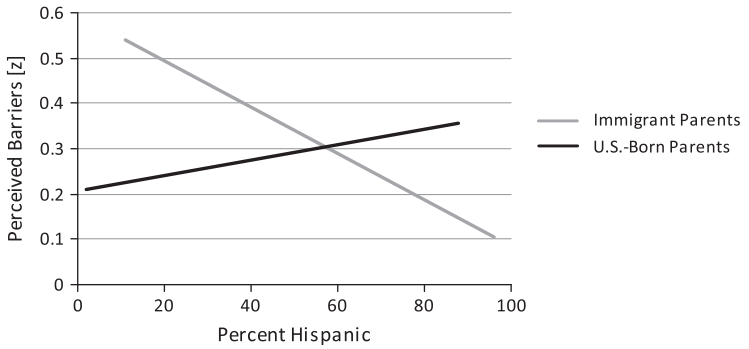

Fig. 2. Effect of Hispanic presence and parents' nativity on perceived barriers.

ble 4. In Model 1 we reproduce the coefficients of Hispanic concentration for both immigrant parents and US-born parents that were seen in Table 2. In Model 2, we add all 10 of our school mediators (as well as interactions with nativity). For ease of presentation, we only present the school mediators with significant coefficients, even though all are present in the models. In analyses not shown, we also controlled for the school context and practices variables one at a time, to ensure that the lack of associations we observed in our analyses was not the product of controlling for so many related school variables all at once. Looking at the association of proportion Hispanic with parental ties and perceived barriers for immigrant parents, we see that more refined measures of school co-ethnicity – such as Hispanic teachers or Hispanic classmates – are beneficial for immigrant parents' ties to other parents, but not for immigrant parents' perceived barriers. We do not see much evidence for the benefits of school adaptations to the presence of immigrant families, such as services for LEP families, ESL instruction, and childcare services. To the extent that these services are influential, they are deleterious (with the exception of Spanish-speaking teachers, which decrease immigrant parents' perceived barriers). Services for LEP families significantly increase immigrant parents' perceptions of barriers; ESL instruction also increases immigrant parents' perceived barriers (significant at the .10 level). We suspect that these relationships may not be causal. While it could be that schools that offer LEP services may not have as many informal mechanisms geared towards increasing school involvement among Hispanic parents, an equally plausible explanation is that students who attend LEP-intensive schools are influenced by unmeasured factors (at the family-, school-, and/or community-level) that cause educational difficulties for Hispanic students and the alienation

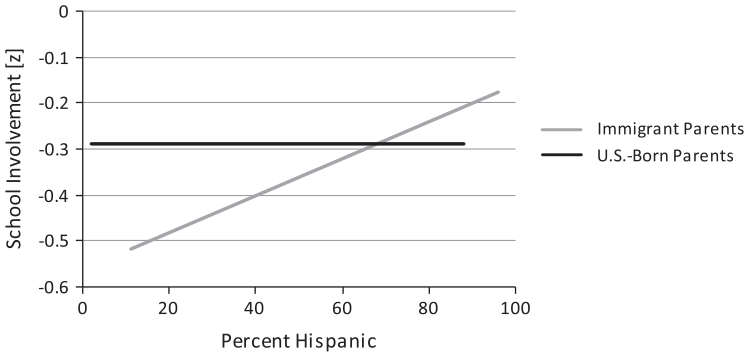

Fig. 3. Effect of Hispanic presence and parents' nativity on school involvement.

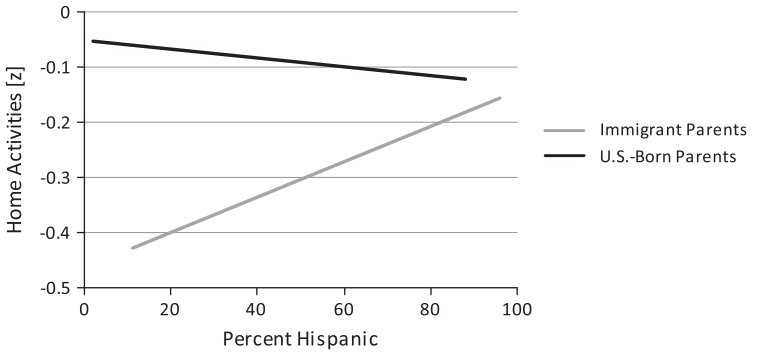

Fig. 4. Effect of Hispanic presence and parents' nativity on home activities.

of their families. For instance, a school with tensions between Hispanic immigrant families and school officials may implement perfunctory LEP services which do not address the source of those tensions.

If school practices succeed in explaining the advantages of proportion Hispanic for immigrant parents, the association should decline in magnitude from Model A to Model B. For example, when parental ties is the outcome, the coefficient for proportion Hispanic for immigrants declines from a .66 to −.25, and is no longer statistically significant. The only significant mediator (at the .10 level) in the final model, however, is the proportion of Hispanic classmates (the proportion of Hispanic teachers, having a teacher who used Spanish, and having a Hispanic teacher also had significant coefficients when those variables were added in separate models, without other school context or practice variables). However, the beneficial effect of Hispanic concentration on immigrant parents' perceived barriers is not explained by our school mediators.[15]

In sum, our results suggest that the positive associations between a large Hispanic presence and immigrant parents' involvement have little to do with school practices and policies. The lack of a role for school policies leads us to tentatively conclude that these benefits of Hispanic communities in schools are results of the social capital or immigrant optimism generated within the communities themselves rather than school practices geared towards immigrant families. For example, these communities may serve as sources of information, which is spread through social ties among Hispanic parents and professionals.

4.2. Co-ethnic or co-national communities?

This study relies on Hispanic presence in schools as a measure of "co-ethnic" community. However, it is arguable that Hispanic communities in the United States are defined by shared national origins rather than a shared pan-ethnic grouping such as "Hispanic." The implication is that the presence of co-nationals in a community is a better measure of co-ethnic community rather than the presence of Hispanics, and that the benefits of co-ethnic communities may be underestimated by measuring them with Hispanic presence, because the true benefits of co-ethnic communities occur in ties among co-nationals.

The ECLS-K data do not include information on the proportion of co-nationals in the school. Therefore, this idea was tested by replicating the models presented in Table 2, but replacing the proportion of Hispanics in a school with the proportion of individuals in the school's zip code who share the same Hispanic nationality as the respondent. Respondents with an unspecified nationality were dropped from these analyses.

The results of the co-nationality analyses are presented in Table 5. The effects of proportion Hispanic in schools are compared with the effect of proportion of co-nationals, in separate models (Models 1 and 2 respectively; note that the coefficients of proportion Hispanic are different from those presented in Table 2 since Hispanics of unknown origin have been dropped from the analyses) and then together in the same model (Model 3).

Comparing the coefficients of co-ethnic community in Models 1 and 2 reveals a striking similarity between the influence of Hispanic presence and co-national presence. For nearly all outcomes, both variables have significant benefits for immigrant parents and weaker influences for US-born parents that are not significant at the .05 level. The results do not provide strong evidence for the view that the presence of co-nationals is a better predictor of parental involvement than the presence of Hispanics in general. Models 1 and 2 show that proportion co-national is a stronger predictor than proportion Hispanic of parental ties for immigrant parents; but proportion Hispanic is a stronger predictor of immigrant parents' perceived barriers. The two predictors have very similar effects for immigrant parents' school involvement and home activities. Practically speaking, when analyzing parents' involvement, our results suggest that Hispanic concentration is a suitable proxy for co-national concentration (although this may not be the case for other outcomes, such as tested ability).

[15] In analyses not presented here, we did the same mediation analysis for school involvement and home activities and found similar findings. The effect of proportion Hispanic on immigrant parents' school involvement was mediated only by the proportion of teachers who were Hispanic and not by any particular school practice or policy. The effect for immigrant parents' home activities was not mediated at all.

Table 3
Analysis of effects of parental ties and perceived barriers on school and home involvement.

Outcome/predictor	Model 1 No mediators		Model 2 mediators	
	Immigrant parents	Native-born parents	Immigrant parents	Native-born parents
Outcome/predictor	Model 1 No mediators		Model 2 mediators	
	Immigrant parents	Native-born parents	Immigrant parents	Native-born parents
School involvement, 1st grade				
School proportion Hispanic	0.399**	−0.005	0.260*	0.072
Parental ties			0.071***	0.057***
Perceived barriers			−0.136***	−0.129***
Home activities, 1st grade				
School proportion Hispanic	0.318+	−0.080	0.208	−0.032
Parental ties			0.057***	0.054***
Perceived barriers			−0.077**	−0.036

Note: All models include controls for class size and all other predictors included in Table 2.
+ $p < 0.1$.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

4.3. Hispanic effects or Mexican effects?

It is important to determine if the consequences of co-ethnic concentration are generalizable to Hispanic parents in general, or are really just a phenomenon limited to Mexican parents, since Mexicans make up over half of the Hispanic population in our sample (and in the United States). To address this, we create subsamples of Mexicans, non-Mexicans with a specified nationality, and non-Mexicans with or without a specified nationality (note the last two subsamples overlap). The influence of school Hispanic and co-national concentration, as well as interactions with parents' nativity, were estimated in separate models for each group. In Model 1 the coefficient for Hispanic school presence was estimated, with all of the control variables included in the regression equation; in Model 2 the coefficient for co-national neighborhood presence was estimated. The results are presented in Table 6.

For all outcomes, there are significant benefits of co-ethnic concentration (either proportion Hispanic or proportion co-ethnic) for Mexican immigrant parents; the coefficients tend to be much less positive for Mexican native-born parents. For most of the models the interactions between nativity and co-ethnic concentration is significant.

If we compare non-Mexican immigrant parents to Mexican immigrant parents, the coefficients tend not to be significant for non-Mexican immigrant parents, most likely because the sample of parents and schools for non-Mexicans is nearly half that of Mexicans. The parameter estimates suggest benefits of co-ethnic concentration (primarily proportion Hispanic) for non-Mexican immigrant parents, and these coefficients are not significantly different from those for Mexican immigrant parents (the only exception is the benefit of proportion Hispanic on school involvement, which is actually stronger for non-Mexican immigrant parents than Mexican immigrant parents).

While the benefits of co-ethnic concentration for immigrant parents appear to be occurring for both Mexican and non-Mexicans, we also need to address if the interaction between nativity and co-ethnic concentration – where immigrant parents derive greater benefits than do native-born parents – occurs for Mexican and non-Mexican families as well. The evidence overall suggests it does. For example, we observe that proportion Hispanic has a negative (beneficial) and significant association with perceived barriers for Mexican immigrant parents ($b = -.536$), and a positive (detrimental) and nonsignificant association for Mexican native-born parents ($b = .397$). We see a similar pattern for non-Mexicans, including or excluding Hispanics of unspecified nationality. There is one potential qualification: this pattern is limited to "Mexicans" for parental ties and school involvement, but only if Hispanics of unspecified nationality are removed from the analysis. When non-Mexican Hispanics include Hispanics of unspecified nationalities, we see that non-Mexican immigrant parents benefit from co-ethnic concentration more than their native-born counterparts for all four outcomes.

5. Discussion

In this paper, we argued that immigrant parents' involvement in their children's schooling can be viewed as one facet of assimilation. We tested hypotheses derived from two theoretical approaches: the ethnic capital perspective, which suggests that a concentration of co-ethnic group members who are low in human and financial capital will block assimilation; and a social capital perspective, which argues that the social capital in co-ethnic communities can facilitate immigrants' ability to deal with and adapt to institutions in the host society. Our results show that Hispanic immigrant parents have higher levels of involvement in schools with a greater co-ethnic concentration, while Hispanic native-born parents' involvement is mostly independent of the proportion of Hispanics or co-nationals. As a school's Hispanic concentration increases, the involvement of immigrant Hispanic parents increases and becomes closer to the national average (and, in the case of parental ties, exceeds it). This is in line with our hypotheses derived from social capital perspectives. We do not find much evidence for the ethnic

Table 4
Analysis of school context and practices.

Outcome/predictor	Model 1 no mechanisms		Model 2 mechanisms	
	Immigrant parents	Native-born parents	Immigrant parents	Native-born parents
Parental ties, 1st grade				
School proportion Hispanic	0.666**	−0.293	−0.249	−0.829
School proportion Hispanic teachers			0.503[a]	0.403
Teacher uses Spanish			0.169[a]	0.111
Hispanic teacher			0.072[a]	0.120
Proportion Hispanic classmates			0.441+	0.472
Perceived barriers, 1st grade				
School proportion Hispanic	−0.515**	0.168	−0.569+	0.205
School LEP services			0.216*	0.007
Hispanic teacher			0.027	−0.428*
Student receives ESL			0.176+	0.214
Teacher uses Spanish			−0.243*	0.150

Note: All models include controls for school childcare services, school events, school family services, school LEP, services, school number of bilingual faculty, school proportion Hispanic teachers, ESL instruction, Hispanic teacher, teacher uses Spanish, proportion Hispanic classmates and all other predictors included in Table 2.

[a] Effect is significant when other school context/practices variables not controlled for.

+ $p < 0.1$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Table 5
Comparison of effects of Hispanic presence and co-national presence.

Model/predictor	Parental ties		Perceived barriers		School involvement		Home activities	
	Native-born	Immigrant	Native-born	Immigrant	Native-Born	Immigrant	Native-Born	Immigrant
Model 1								
Proportion Hispanic in school	−0.311[a]	0.702**	0.345+[a]	−0.518*	−0.011[a]	0.401**	0.125	0.404*
Model 2								
Proportion co-nationals in 5-digit zip code	0.058[a]	0.862***	0.358[a]	−0.427+	0.116	0.419*	0.214	0.426*
Model 3								
Proportion Hispanic in school	−0.766+[a]	0.359	0.332[a]	−0.475+	−0.188	0.290	−0.035	0.270
Proportion co-nationals in 5-digit zip code	0.761	0.588+	0.020	−0.073	0.317	0.204	0.282	0.234
N	680	1300	680	1290	680	1290	680	1290
Schools	380	410	380	410	380	410	380	410

Note: All models include all predictors included in Table 2.

[a] Effect for immigrant parents significantly different from that for native-born parents at .05 level.

+ $p < 0.1$.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

capital view, which assumes that for Hispanics being part of a large co-ethnic community blocks the path to successful incorporation into the "mainstream." Hispanic immigrant parents do not suffer, and can actually benefit, from large co-ethnic communities.

We also tested an alternative explanation for the benefits of Hispanic concentration: schools with many Hispanic students will provide more outreach and services that immigrant parents will find helpful, and thus increase their involvement. By and large, we did not find support for this explanation. The school characteristics that best mediate the influence of proportion Hispanic were other aspects of co-ethnic concentration, such as the proportion of Hispanic teachers and the proportion of the child's classmates who are Hispanic.

These findings are suggestive that in the absence of a large Hispanic community, Hispanic immigrant parents may have less access to social capital or to sources of immigrant optimism and will curtail their involvement in their children's schooling. This could be problematic especially if the children acculturate at a faster rate than their parents. Since the parents will have less access to information about their child from school officials and from other parents, they will have less capacity to monitor their children or to advocate on behalf of them with school officials, which have implications for their children's quality of life and educational success.

On the other hand, Hispanic native-born parents' involvement tends to have little to no association with co-ethnic concentration. We argued that this can be attributed to the fact that these parents are much more likely to speak English and to

Table 6
Comparison of effects of Hispanic presence and co-national presence for Mexican and non-Mexican families.

Model/predictor	Parental ties		Perceived barriers		School involvement		Home activities	
	Native-born	Immigrant	Native-born	Immigrant	Native-born	Immigrant	Native-born	Immigrant
Panel A Mexicans								
Model 1								
Proportion Hispanic in school	−0.548[+a]	0.871[**]	0.397[a]	−0.536[*]	−0.166[a]	0.316[+]	0.026[b]	0.477[*]
Model 2								
Proportion co-nationals in 5-digit zip code	−0.036[a]	0.962[***]	0.400[a]	−0.430[+]	0.051	0.483[**]	0.018	0.457[*]
N	530	910	520	900	520	900	530	890
Schools	230	280	280	280	290	280	290	280
Panel B non-Mexicans (excluding Hispanics of unspecified nationality)								
Model 1								
Proportion Hispanic in school	0.714[c]	0.406	0.519[a]	−0.520	0.760[*c]	0.822[**d]	0.035	0.271
Model 2								
Proportion co-nationals in 5-digit zip code	1.204[+]	−0.170	1.116[+a]	−0.388	0.453	0.489	0.238	0.873
N	150	400	150	400	150	390	150	390
Schools	110	190	110	190	110	190	110	180
Panel C non-Mexicans (including Hispanics of unspecified nationality)								
Model 1								
Proportion Hispanic in school	−0.012	0.245	−0.003	−0.472	0.272	0.618[**]	−0.346	0.188
N	510	420	500	420	500	410	510	410
Schools	380	200	370	200	370	200	380	200

Note: All models include all predictors included in Table 2.
[a] Effect for immigrant parents significantly different from that for native-born parents at .05 level.
[b] Effect for immigrant parents significantly different from that for native-born parents at. 10 level.
[c] Effect is significantly different from effect for Mexicans at .05 level.
[d] Effect is significantly different from effect for Mexicans at. 10 level.
[+] $p < 0.1$.
[*] $p < 0.05$.
[**] $p < 0.01$.
[***] $p < 0.001$.

have more familiarity with the US school system. Any benefits of co-ethnic community would be redundant for such parents. This is in line with Gordon's (1964) argument that co-ethnic communities are important for the first generation to adjust to life in the host society but becomes less important for subsequent generations, who are already assimilating culturally. Our finding that ethnic enclaves have substantially disparate consequences for parents depending on nativity-status serves as a potentially important qualifier to other studies examining how co-ethnic concentration matters for wages (Borjas, 1999; Cutler et al., 2008) or academic performance (Portes and Hao, 2004). This is a topic that future research should address.

It is possible that, contrary to our story of school co-ethnicity positively affecting Hispanic immigrant parents' involvement, parental involvement is part of a general disposition that affects the kind of communities in which Hispanic parents choose to settle. In other words, highly-involved immigrant Hispanic parents may choose to settle in areas with lots of other Hispanics or send their children to schools with a concentration of Hispanics. When studying the effects of school context, it is difficult to completely rule out this possibility. As Goldsmith (2009) points out, however, regression analyses with an extensive set of controls have more or less been able to account for selection bias in the estimates of the effect of school racial composition. In addition, we control for children's lagged test scores and parental expectations, which Greenman et al. (2011) suggest can account for most or all of this selection effect. Finally, we observe that qualitative studies have documented immigrant parents changing their school-related behaviors as a consequence of interactions with other immigrants (Delgado-Gaitan, 1991; Pérez Carreón et al., 2005), and these studies suggest that there is a causal effect of school racial composition.

Despite these limitations our study contributes to research on education and immigration in a number of important ways. First, we extend the parental involvement literature to examine the role of school context. Research on parental involvement tends to focus on the family, but we suggest that resources beyond the family impact parent–child relationships. Second, we extend research on school racial composition beyond the black–white dichotomy often found in current research. The Hispanic population is rapidly growing and becoming increasingly segregated in most regions of the United States (Orfield and Lee, 2006), so understanding the implications of large co-ethnic communities for children of immigrants is necessary. Third, we demonstrate that school context has different influences for families headed by US-born parents and families headed by immigrant parents, which has been overlooked by previous studies of the effects of school context on Hispanic educational processes (Eitle et al., 2009; Frost, 2007). Fourth, we compare the influence of Hispanic concentration to that of conational

concentration. By and large, we found these effects to be roughly similar, even though national identities and categories can be important for Hispanic immigrants and their children (López and Stanton-Salazar, 2001; Martinez-Cosio, 2010; Suárez-Orozco et al., 2008). Examining how these influences may differ for other outcomes, such as children's academic performance, is an issue warranting more study.

While we find evidence that co-ethnic communities offer benefits to Hispanic immigrant families, our results should not be used to support indifference to Hispanic residential and school segregation (Fry, 2007; Iceland et al., 2002; Lichter et al., 2010; Reardon and Yun, 2001). Labor market economists have made a convincing case that co-ethnic concentration can be harmful to the economic livelihoods of Hispanic immigrants (Borjas, 1999; Cutler et al., 2008). Instead, more research needs to be done on how schools can *effectively* serve limited-English-proficient parents – especially those who do not enjoy the benefits of living in a co-ethnic community, since our results suggest on average that services targeting limited-English-proficiency families are not promoting Hispanic immigrants' involvement in their children's schooling. School policy should focus on building and maintaining strong co-ethnic networks among parents and children to create meaningful opportunities to engage with the formal education system.

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Appendix A

See Table A1.

Table A1
Models for individual items making up scales.

Outcome	Effect of proportion Hispanic For immigrant parents	Effect of proportion Hispanic for native-born parents	Interaction
Barriers to involvement			
Inconvenient meeting times (0,1)	−0.41	−0.04	
No child care (0,1)	−0.57	0.71^{+}	**
Cannot get off from work (0,1)	−0.21	−0.03	
Safety concerns (0,1)	−0.09	−0.14	
Do not feel welcome (0,1)	−0.06	0.60	
Problems with transportation (0,1)	−1.67**	−0.35	*
Language problems (0,1)	−2.36***	0.23	**
Do not hear of interesting things (0,1)	−0.08	1.41**	**
School involvement			
Attend open house (0,1)	1.02*	−0.02	*
Attend PTA meeting (0,1)	0.64^{+}	0.88*	
Attend parent–teacher conference (0,1)	0.37	0.2	
Attend school event (0,1)	0.43	−0.61	*
Act as volunteer (0,1)	0.53	−0.47	*
Participate in fundraiser (0,1)	0.48	−0.09	
Home activities			
Read books (1–4)	0.15	−0.08	
Tell stories (1–4)	0.35*	0.23	
Sing songs (1–4)	0.19	0.00	
Help doing art (1–4)	0.14	−0.25^{+}	*
Play games (1–4)	0.14	−0.09	
Teach about nature (1–4)	0.05	−0.06	
Build things with blocks (1–4)	0.05	−0.19	
Practice with numbers (1–4)	0.22	0.14	

All models include predictors presented in Table 2. For home activities, GEE models were estimated with a Gaussian distribution and identity link function; for school involvement and barriers to involvement, GEE models were estimated with a binomial distribution and logit link function. For all outcomes, an exchangeable correlation structure was specified.

$^{+}$ $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

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