Mexican-Americans in US Schools

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Abstract

This paper analyzes the impact of 1st and 2nd generation immigrants from Mexico, the largest immigrant group in the US, on both native schoolchildren and the Mexican-Americans themselves. My contributions to the literature are twofold. First, I use self-reported friendship data to show that Mexican-Americans have strongly assortative networks that span grade levels. A number of studies have used intra-school grade-level variations in peer characteristics to identify peer effects, relying on the assumption that classmates are the relevant peer group. My findings demonstrate that, in the case of Mexican-American adolescents, this assumption is invalid. Second, contrary to what we might expect given previous results on immigration, I find little evidence of between- or within-group negative effects of Mexican-American students. My results suggest that having Mexican-American classmates is not significantly correlated with natives' college attendance, or with variables such as engagement in risky behavior, delinquency, or sexual activity. There is also no statistically significant effect of having Mexican-American friends on Mexican-Americans' own long-term academic outcomes.

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1. Introduction

This paper presents evidence of the effect of Mexican-American[1] students, both on their native[2] classmates and on their Mexican-American peers. I begin by exploiting within-school differences in the proportion of Mexican-Americans at the grade level. This approach has been used in a number of studies to examine immigrant and other peer effects and has the advantage of using a plausibly exogenous source of variation while controlling for the most obvious source of selection with school fixed effects. However, it makes a strong assumption about the nature of peer effects. Namely, it assumes that classmates are either the relevant peer group (because peer effects operate only inside the classroom or because friendships are relatively unimportant) or a good proxy for it. Since the most readily identifiable characteristic of immigrants is the language, and culture, they bring with them, it is natural to question this assumption in the context of immigrant peer effects. That is, how important are within-school social interactions between natives and Mexican-Americans and among Mexican-Americans themselves? Can relying on grade-level information alone capture the effect of having Mexican-American friends? Such questions are typically left unanswered due to lack of friendship network data. I use the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative survey in which junior and high school students were asked to name their friends, to address this issue directly. I find that US natives have very limited interactions with Mexican-Americans, on average and in schools where the latter have a strong presence. This suggests that the effect of Mexican-Americans on natives, if it exists, does indeed operate primarily inside the classroom. On the other hand, Mexican-Americans have strongly assortative friendship networks in which differences in grade levels seem to have little influence. Accordingly, I incorporate friendship network information into my analysis of the within-group effects of Mexican-Americans. Although friendships are

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[1] For the purposes of this analysis, "Mexican-Americans" are 1^{st} and 2^{nd} generation immigrants from Mexico, i.e., students who were born in Mexico or who have at least one parent who was.

[2] "Natives," in this paper, are students who identify themselves as either "white" or "black" and do not report having any "Hispanic background." They are restricted to US-born individuals with both parents also born in the US.

obviously endogenous, I use the longitudinal nature of the survey and the availability of an extensive set of academic performance measures to mitigate the selection bias.

I focus on the impact of Mexican-American students because approximately one out of every ten children in US schools is of Mexican ancestry.[3] First generation immigrants constitute about one third of this group and a large proportion (one to two thirds, depending on the data source) of US-born Mexican-ancestry adolescents speak Spanish at home.[4] Mexicans are the largest immigrant group and they dominate the debate on immigration in the US. A number of papers have suggested that immigrants crowd out natives in the market for education and lower natives' academic outcome.[5] Given the relatively low English proficiency and especially the low levels of parental education among Mexican-American children, it is natural to expect the negative results to hold for this group in particular. On the other hand, some studies have called into question the importance of peer effects of immigrants, or ethnic minorities in general, in the context of education. For example, Neymotin (2009) finds that immigration in California and Texas in the 1990s did not have any negative effect on the SAT scores or college applications of natives. Similarly, Angrist and Lang (2004) find that Boston's METCO program (a voluntary desegregation program) has no negative impact on the test scores of white students in the receiving schools. Given the size of the Mexican-ancestry community, determining the magnitude and direction of the within-group effect of immigration is becoming increasingly important as well. How should schools and teachers (and parents) ensure that Mexican-American children take full advantage of American educational opportunities, given the tendency of immigrants and ethnic minorities to form enclaves? The broader literature on enclaves suggests that they result in lower proficiency in the language of the receiving country.[6] However, direct evidence on the effect of enclaves

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[3] Based on the 2000 Census data.

[4] This provides the rationale for analyzing 1st and 2nd generation Mexican immigrants together. In my sample, two thirds of 2nd generation Mexican-ancestry adolescents speak Spanish at home and a significant proportion take English as a Second Language courses in high school.

[5] Betts (1998), Hoxby (1998), Betts and Lofstrom (2000), Betts and Fairlie (2003), Borjas (2004), Gould, Lavy and Paserman (forthcoming)

[6] Lazear (1999), Chiswick and Miller (2005, 2007)

among Mexican-Americans, particularly *inside* schools, is limited. Recent work in this area has produced mixed results: school racial composition appears to have no significant effect on outcomes of Hispanic children[7] while the proportion of immigrants in the school is correlated with higher course failure rates among American-born Mexican-ancestry students but not among 1st generation Mexican immigrants.[8] Because these results are generated at the school level, they do not capture the heterogeneity of within-school enclave-like behavior, i.e., the fact that all children actively choose their friends and that children with similar backgrounds often make very dissimilar choices.

In theory, the sign of the effect of immigrants, on natives or on themselves, is ambiguous. A greater proportion of immigrant students in the classroom may force teachers to tailor the instruction more to their level of English proficiency. Whether this is actually good for immigrants is an open question – they might require the extra attention, but perhaps they would benefit more from a challenge. Natives might become frustrated by the slower pace of instruction. On the other hand, natives with relatively low English proficiency might in fact find the focus on non-native speakers complementary to their own need to catch up. Immigrant share is also likely to have a compositional effect, the direction of which depends on whether immigrants have a higher or lower prevalence of disciplinary problems and, when dealing with less English-intensive subjects, higher or lower level of preparation than the native population. Outside the classroom, social interactions among immigrants have a direct effect on their assimilation process and on their incentives and ability to become proficient in English. Having friends who speak the same language reduces the pressure to learn English and results in less time spent speaking English as well; but the effect may still be positive, since being able to easily ask a question in one's own language helps one keep up with the class no matter the subject. Even among native English speakers, repeated interaction with a non-native speaker may have a negative or a positive effect on an adolescent's language proficiency. Having to interact with a non-native speaker can limit the native speakers' vocabulary, but it can also be a positive

[7] Ryabov and Van Hook (2007)
[8] Crosnoe and Lopez-Gonzalez (2005)

experience in the same way that tutoring can be beneficial to the tutor. Transfer of cultural values or behavioral norms may also play an important role.

Thus, the question of the effect of immigrants in general or of any group in particular is an empirical one. Overall, I find that the hypothesis that Mexican-Americans have no effect on academic outcomes, of native students or within their own community, cannot be rejected. Among native whites, having more Mexican-American classmates is significantly correlated with lower self-reported desire to attend college. There is also some negative correlation with enrollment in advanced science courses and with high school completion rates, but these results are only weakly significant. There is no significant correlation with actual college attendance, change in English proficiency over time, initial math or English grades, or with any number of behavioral variables. Among native black students, the only significant correlation is a positive one with the change in English proficiency. This effect is only marginally significant; the coefficients for high school completion and college attendance regressions are also generally positive, but not statistically significant. All effects on native students are estimated using school fixed effects and thus should not be driven by school selection. I also find that assortative friendships among Mexican-Americans are not significantly correlated with lower achievement, once one controls for the endogeneity of friendship networks. It should be noted that my analysis does not capture any school-wide effects, such as the impact of Mexican-American students on school resources. Yet, conditional on school characteristics, the between- and within-group influence of Mexican-American adolescents appears to not be significant.

The rest of the paper is structured as follows. I summarize relevant literature in Section 2. Section 3 describes the data and my empirical strategy, including identification of the peer group and the steps taken to reduce selection bias. Section 4 presents the results. Section 5 concludes.

2. Literature Review

The economic literature on immigrant *peer* effects, as they relate to academic outcomes, is limited. A number of studies have looked at crowding out effects of immigrants on natives. Betts (1998) finds that a greater proportion of immigrants in the state results in a small increase in the dropout rate among native blacks. Betts and Fairlie (2003) also find that native whites switch to private secondary schools in response to immigrant influx. Betts and Lofstrom (2000) and Hoxby (1998) argue that immigrants reduce college enrollment among native minorities (Hispanics and Asians in the former analysis, blacks in the latter); and Borjas (2004) finds that the proportion of foreign students is negatively correlated with the number of native graduate students, particularly white males in "elite institutions." On the other hand, Neymotin (2009) finds no negative effect of immigration on the SAT scores and propensity to apply to "top schools" among natives.

The identification strategy in the effect-on-natives portion of my study is closest to that of Gould, Lavy and Paserman (2009), who use within-school grade-level variation in the proportion of immigrant students. The authors find a "substantial negative effect" of immigrants on long-term academic outcomes of natives. Since the subject of their study is the massive migration from the former Soviet Union into Israel, the applicability of the results to Mexican-Americans is difficult to gauge. Although some of the issues faced by immigrant families are universal, immigrants from the former Soviet Union are typically highly educated, while the average education of Mexican immigrants is well below that of US citizens. A number of peer effects studies not directly related to immigration have used similar strategies: see, for example, Hanushek, Kain and Rivkin (2009) on effects of racial composition, Lavy and Schlosser (2007) on gender effects, or Hoxby (2000) on the effects of both gender and race. Bifulco, Fletcher and Ross (2008) use the Add Health data to show that parental education of one's classmates has a significant positive effect on high school completion, while proportion of black and Hispanic students in the class has little effect on academic outcomes. Angrist and Lang (2004) analyze the effects of

Boston's METCO program (essentially immigration at the school district level) and find no negative impact on white ("native") students.

Although there is a large body of literature on the labor market effects of immigrant enclaves, within-group immigrant effects in education have received little attention. The most relevant "enclave" findings address the effect of concentration of immigrants in state or county on English fluency – see, for example, Lazear (1999) and Chiswick and Miller (2005, 2007). Related literature on racial peer effects provides some insight into within-group peer effects. For example, Hanushek et al. find large within-group effects of high concentration of black students in the school, while Angrist and Lang find only small negative effects of desegregation on the outcomes of black students in the receiving schools.

Several recent studies have used Add Health to fill the gap in our understanding of within-group immigrant effects. Callahan, Wilkinson and Muller (2008) focus on the effect of English as a Second Language (ESL) instruction. They find that ESL placement improves short-term academic performance of Mexican-American students in schools with many immigrants but has a detrimental effect in schools with few immigrants. Crosnoe and Lopez-Gonzalez (2005) use school-level variation to suggest that a high immigrant share in school increases the probability of academic failure (i.e., failing a course) among 2nd and 3rd generation Mexican-Americans, but not 1st generation ones. Ryabov and Van Hook (2007), on the other hand, find that school racial composition has little impact on the contemporaneous grades and English proficiency of Hispanic students. Using administrative data from Canadian elementary schools, Friesen and Krauth (2008) find that grade-level variation in the proportion of students who do not speak English at home can have a positive or a negative impact on immigrant students, depending on their country of origin.

None of the above studies take into account friendship network composition. Fryer and Torelli (2010) and Echenique, Fryer and Kaufman (2006) use Add Health friendship data to calculate measures of popularity and school segregation, respectively. Echenique et al., for example, find that among Hispanic youths more segregation from other ethnic groups is correlated with lower grades and college attendance. My analysis, however, is the first to directly and systematically address the issue of social interactions among immigrants. This paper also adds to the discussion of the effect of immigrants on natives by analyzing a large array of contemporaneous and long-term outcomes. Being able to control for school selection and use a nationally representative US sample also strengthens the applicability of the results.

3. Data and Empirical Strategy

3.1. Data

Add Health is a survey initially administered at 144 schools to a nationally representative sample of 90,118 students in grades 7-12 during the 1994-95 school year (Wave 1). According to the study's website (www.cpc.unc.edu/projects/addhealth), Add Health is "the largest, most comprehensive longitudinal survey of adolescents ever undertaken." The survey was designed to ensure that the schools were representative with respect to region of country, urbanicity, school size, school type, and ethnicity. A sub-sample of 20,745 students was given an additional in-home interview, and the parents of 17,670 of these students were also interviewed. Students in the in-home sample were re-interviewed in 1996 (14,738 observations; Wave 2), 2001-2 (15,197 observations; Wave 3), and 2007-8 (data not yet available).

In addition to the standard set of socioeconomic and demographic variables, the Add Health study collected an extensive array of data on students' behaviors and attitudes, intra-family interactions, school and community characteristics, and short- and long-run academic outcomes. Of particular importance for a study of peer effects, the in-school survey asked participants to identify their friends; and, of particular importance for a study of immigrants, the in-home survey asked which language the adolescents use at home. Add Health also includes a measure of participants' English proficiency, based on a receptive vocabulary test[9] administered in 1994/5 and then again in 2001/2.

The sample does suffer from a number of missing value problems. Of the roughly 5,800 native non-Hispanic white students and 2,200 black students who participated in both Waves 1 and 3 (and have the general descriptive characteristics necessary for the analysis), only about 4,300 whites and 1,500 blacks have the friendship network data. The study was not specifically designed to analyze the immigrant populations, among whom the missing data problem is even more severe: of the 636 1st and 2nd generation Mexican-Americans who can be analyzed, only 338 have the friendship network data. One can also be concerned about the inability of the survey to follow immigrants who move back to their country of origin. However, temporary migration should be less common among families with children.

All students who took the in-school Add Health survey were asked to name up to ten of their closest friends (five girls and five boys). The students either identified their friends from a roster of students in the school or stated that the particular friend did not go to the school. Because an attempt was made to interview all students in each school, detailed information is available about most within-school friends of each respondent, as well as about their friends, etc. The boundary of an individual's friendship network is somewhat arbitrary – the set can comprise her closest friends, and their friends, and their friends, in perpetuity. I concentrate on the reach 1 network (all students named as friends by the respondent) and the reach 2 network (all students named by the respondent and all students named by those students). The reason I do not limit the analysis to close friends only is that reach 1 networks tend to be more homogenous than reach 2 networks. That is, adolescents with either no or all Mexican-American close friends often have a

[9] The Add Health Picture Vocabulary Test (PVT), an abridged version of the Peabody PVT, which asks respondents to pick illustrations that best fit words read aloud by the interviewer.

heterogeneous mix of "friends of friends."[10] It appears important to distinguish such individuals from those whose friends share their preferences.

For computational simplicity I use a single measure of friendship network composition: a weighted average of the proportion of Mexican-Americans among friends reachable in one and two steps, with weights equal to the inverse of the distance. Thus, the actual formula is 2/3 times the proportion of close friends plus 1/3 times the proportion of friends of friends. This measure gives more weight to close friends to capture the assumption that distance is correlated with frequency of interactions.

3.2. Education Production Function

A number of peer effect studies have made use of the fact that grade composition within any given school is likely to be driven by exogenous factors. While students or their families might actively choose schools, it seems reasonable to assume that most individuals do not anticipate or react to relatively small variations in, in this case, the proportion of Mexican-Americans at the grade level. This approach gives rise to a particular reduced form of an education production function where a student's academic outcome depends on her characteristics, her environment, and the characteristics of her peers:[11]

$$Y_{igst} = \alpha_g + \alpha_s + X'_{igst}\lambda_1 + X'_{(-i)gst}\lambda_2 + \pi P_{gst} + \varepsilon_{igs}, \qquad (1)$$

[10] One could incorporate more extended networks, but the amount of additional information diminishes quickly.

[11] We expect the student's outcome to also depend on the outcomes of her peers. However, due to the well-known reflection problem (Manksi, 1993), these outcomes are typically excluded from peer effects models. It is possible to include them, either directly or using some instrumental variable, e.g., the characteristics of students who are "friends of my friends but who are not my friends." (See De Giorgi, Pellizzari and Redaelli, 2009, for an example of the second approach.) However, this approach would be complicated by the fact that in my analysis all networks are essentially split into two groups: Mexican-Americans and everyone else. Furthermore, the difference between exogenous and endogenous peer effects is not central to whether immigrant peer effects exist. For these reasons, I do not attempt to include peer outcomes in any of my analyses.

where Y_{igst} is the outcome of student *i* in grade *g* and school *s*, α_g and α_s are grade and school fixed effects, respectively; X_{igst} is a vector of student *i*'s and her family's characteristics; $X_{(-i)gst}$ is a vector of characteristics averaged across all members of grade *g* in school *s* excluding student *i*; and P_{gst} is the proportion of Mexican-Americans in student *i*'s school-grade. X_{igst} includes gender, an indicator of any learning disability, parents' education, and dummy variables indicating whether both parents are present, whether at least one parent works, and whether the family receives welfare assistance.[12] Although parents who participated in the survey were asked about their income, the large number of missing observations and their possible non-random nature prohibits the use of this variable. Instead, I use the proportion of the population within the student's census block group who are over 25 and do not have a high school education, as well as the median household income and its standard deviation in the census tract. These variables, taken from the 1990 Census, are included in the Add Health data set and are available for most respondents. The proportion of Hispanics in the census tract controls for neighborhood effects. X_{igst} also includes measures of parents' involvement and their expectations of academic achievement, as reported by the adolescents. Students were asked whether they have (i) talked about their school work or grades, (ii) worked on a project for school, or (iii) talked about other things they are doing in school with their mother and/or father figure in the 4 weeks prior to the interview. I use the total number of affirmative responses as an index of parental involvement. Students were also asked the following question: "On a scale of 1 to 5, where 1 is low and 5 is high, how disappointed would [your mother/farther figure] be if you did not graduate from college?" I use the response to this question as the measure of parents' expectations.[13] $X_{(-i)gst}$ (the average peer group characteristics) is limited to questions asked during the in-school portion of the survey and includes parents' education and the dummies for the presence of both

[12] Due to large number of missing responses, the welfare variable takes on 3 values: no, yes, and missing. It is treated as a categorical variable.

[13] To be precise, I use the responses referring to the mother figure whenever they are available, and responses for the father figure when they are not, for both involvement and expectations. Variables for the mother figure typically have fewer missing observations.

parents and their work status only. School-grade size and its square are also included among the covariates.

3.3. Peer Group Definition

The grade-level variation approach assumes either that the peer effect in question occurs only inside the classroom or that school-grade composition is a good proxy for the composition of the relevant peer group, or both. In some contexts, classmates are the relevant group because they are more influential than friends, e.g., when analyzing gender peer effects. However, the focus of this study is peer effects that operate specifically through language (and possibly social norms and culture). Therefore, it seems much more reasonable to assume that there are two distinct effects: one that works inside the classroom and one that works through social interactions. Thus, the first question that must and, with the Add Health data, can be addressed is whether classmates are indeed a good proxy for the adolescents' social network, in terms of the exposure to Mexican-Americans.

As Table 1 shows, native students have very limited exposure to Mexican-Americans in their schools (less than 2%) and have even fewer Mexican-American friends (0.5%), on average. Despite the fact that natives do have many friends in different grade levels, they clearly do not seek out Mexican-Americans. Over 90% of native students do not have a single 1st or 2nd generation Mexican immigrant friend. These numbers are driven primarily by the fact that most whites and blacks attend schools with no Mexican-American contingent. However, even in the schools where Mexican-Americans are present, whites and blacks under-select them into their friendship networks and their exposure remains limited – under 3%, on average. This suggests that Equation 1 is sufficient to estimate the effect of Mexican-Americans on natives, although I verify this claim empirically. One should also note that, in the context of language and/or behavioral norm peer effects, the "bad apple" model, i.e., the model of disproportionate impact of a single low performer, is much easier to justify inside the classroom than outside of it.

The picture is quite different for Mexican-Americans (Table 2): they have strongly assortative friendship networks, with the proportion of Mexican-Americans in their networks being several times larger than the proportion in their schools, on average. Immigrant generation and the language spoken at home appear to be strongly correlated with the level of social exposure to other Mexican-Americans. First generation Mexican immigrants also reach out beyond their grade more than others, with only 54.5% of their friends belonging to the same grade. However, even 2nd generation Mexican-Americans who speak English at home over-select 2nd generation Mexican immigrant friends.

Figure 1 shows the large degree of variance in the composition of Mexican-American students' networks – while having zero Mexican-American friends is the mode, the entire range of values is well represented and a significant proportion of students has only Mexican-American friends. Many students exhibit a preference for and an ability to seek out Mexican-American friends regardless of their concentration in the school, as can be seen in Figure 2. Even in schools with fewer than 10% of Mexican-Americans, the median value of the proportion of Mexican-American friends is around 20% and a quarter of Mexican-Americans have friendship networks that are majority Mexican-American. In schools where Mexican-Americans constitute more than one tenth of the student body the median values rise to above 50%.

This suggests that the equation for estimating the within-group effect should be modified as follows:

$$Y_{igst} = \alpha_g + \alpha_s + X'_{igst}\lambda_1 + X'_{(-i)st}\lambda_2 + \pi_1 P_{gst} + \pi_2 P_{ist} + \varepsilon_{igs}, \tag{2}$$

where P_{ist} is the proportion of Mexican-Americans in the friendship network and $X_{(-i)st}$ is a vector of characteristics averaged across student *i*'s friends. Immigrant generation and language used at home are added to the X_{igst} vector. In theory, this specification should allow one to estimate both the quality of education effect of having immigrant classmates and the social interaction effect of having friends who are fluent in Spanish. However, because the variance of school-grade composition is relatively small, whereas there is a great deal of within-grade variation in the proportion of Mexican-American friends, π_2 ends up being better identified in practice.

3.4. Controlling for Selection

Using friendship networks to identify peer effects requires dealing with the obviously non-random nature of the choice of friends. The entire analysis is based on exploiting the fact that some Mexican-Americans choose friends based on their fluency in Spanish. However, it seems likely that immigrant students who find it particularly difficult to learn English would be especially prone to form assortative friendships. It may also be true that immigrants who are particularly driven to succeed band together. In other words, the concern is that an immigrant student's choice of friends is simply a proxy for her innate "ability" to learn English or to perform well in general, which we cannot accurately measure. This would bias the analysis, producing spurious evidence of negative or positive peer effects. While I cannot fully eliminate such bias, I take several steps to reduce it.

When analyzing the within-group peer effect, I focus on long-run outcomes, such as the change in English proficiency from 1994/5 to 2001/2 and the education level attained by 2001/2. This allows me to utilize the value-added approach, regressing future outcomes on "initial" levels:

$$Y_{igst+1} = f\left(Y_{igst}\right) + \alpha_g + \alpha_s + X'_{igst}\lambda_1 + X'_{(-i)st}\lambda_2 + \pi_1 P_{gst} + \pi_2 P_{ist} + \varepsilon_{igs}. \qquad (3)$$

$f(Y_{igst})$ is a fourth order polynomial of the Wave 1 PVT score ($PVT_{1994/5}$), and Y_{igst+1} is either the Wave 3 score ($PVT_{2001/2}$) or the education level the student has reached by that time ($EdLvl_{2001/2}$). In this specification, initial English test scores act as indicators of ability. Not surprisingly, they are strongly correlated with $PVT_{2001/2}$ and significantly correlated with $EdLvl_{2001/2}$, for the entire sample of adolescents and for Mexican-Americans (see the first row of Table 3, columns 1-4). In order for any remaining unobserved heterogeneity to bias the results, omitted variables must be correlated with the both Y_{igst+1} and P_{ist}, conditional on initial English proficiency, Y_{igst}. The next step, then, is to identify other variables that predict academic achievement. I examine three sets of variables. The first is grades reported by the student in 1994/5 for English and math. The second variable is the self-reported likelihood of going to college. The last set is a combination of "behavioral variables" – variables reporting student's level of participation in school activities and sports, their attitude towards school, and their engagement in risky, delinquent, and/or violent behavior.[14] Table 3, columns 1-4, shows Wald test results[15] for each set of variables when $PVT_{2001/2}$ and $EdLvl_{2001/2}$ are regressed on all the variables simultaneously, as well as on individual characteristics, grade and school controls, and $PVT_{1994/5}$. Of the three, likelihood of going to college has the strongest correlation with the education level (F-statistic is 166.28 in the overall sample and 5.11 in the Mexican-American sample), but no significant correlation with English proficiency (F-statistics are 1.37 and 0.29, respectively). Initial GPA is significantly correlated with both, with a stronger correlation with the education level. The relationship with the behavioral variables is similar in the overall sample. In the Mexican-American sample, however, behavioral variables are significantly correlated only with $PVT_{2001/2}$ (and only weakly).

Thus, GPA, perceived likelihood of going to college, and student behavior are all important predictors of future academic achievement, even when one controls for initial English proficiency. Regressing P_{ist} on each set of these variables separately, with no additional controls, shows that initial English proficiency and likelihood of college are

[14] Behavioral variables include the number of school activities and sports in which the student participates, a dummy for not participating in any activities, and measures of trouble at school, engagement in risky behaviors, and delinquency. See Appendix for detailed descriptions.
[15] Since I am only interested in the joint significance of sets of variables (a quartic of PVT scores, English and math grades, behavioral variables), I report only the F-statistics from Wald tests, rather than individual coefficients and standard errors.

significantly correlated with friendship network composition among Mexican-Americans, and behavioral variables are marginally significantly correlated (column 5 of Table 3). However, when all controls are included simultaneously, together with individual and school controls, only likelihood of going to college remains significantly correlated with P_{ist} (column 6). This means that selection bias may be a problem when analyzing the within-group peer effect on high school completion and college attendance but is less important when looking at English proficiency, since likelihood of college is not significantly correlated with $PVT_{2001/2}$. True ability may still not be fully captured by these variables. Nonetheless, controlling for initial English proficiency, grades, attitude towards college, and behaviors goes a long way towards reducing the influence of endogenous peer group selection. Accordingly, I will examine the effect of including these "selection controls" in some of my specifications.

4. Results

4.1. Effect of Mexican-Americans on Natives

Table 4 presents the descriptive statistics for Mexican-Americans and for the native, non-Hispanic white and black adolescents.[16] The first section highlights the fact that both whites and blacks have assortative friendships and do not have a high level of exposure to Mexican immigrants inside or outside the classroom. The level of parental education for Mexican-Americans is considerably lower than for white or black students, with only one third having at least one parent who completed high school and only 10% having a parent who completed college. However, in terms of income (based on neighborhood income and government assistance intake) and even grades Mexican-Americans fall in between white and black students. Notably, English proficiency of black adolescents is considerably below that of whites, on average, and lies much closer to the proficiency of

[16] It is important to point out that this portion of the analysis is not driven only by the 338 students who constitute the Mexican-American sample. In order to compute the main explanatory variable, the proportion of Mexican-Americans in each student's school-grade, the entire in-school survey, with its more than 90,000 observations, is used. The native sample is restricted only by the availability of observations with sufficient information on outcomes and covariates among native whites and blacks themselves.

Mexican-Americans. As was pointed out earlier, the majority of whites and blacks attend schools with zero Mexican-American students. Schools with at least some Mexican immigrants (1% or more) are more likely to be located in the western states and in urban areas (see Table 5). Native students in these schools appear to be somewhat better off than the overall sample – levels of parental education, as well as college attendance, especially among black students, are higher, although not significantly (see Table 6).

I analyze the effect of having Mexican-American classmates by estimating Equation 1, using OLS regressions with probability weights and no clustering whenever school fixed effects are included (models with no controls cluster at the school level). The results are shown in Table 7 and Table 8 – a variety of long-term and contemporaneous measures of academic achievement and general behavior are analyzed. All non-binary dependent variables are standardized, as is the proportion of Mexican-Americans in the school-grade. The sample is restricted to grades with at least 5 observations that belong to the group being analyzed and to schools with at least two such grades.

Among native whites, being in a grade with more Mexican-Americans is correlated with higher college attendance and English GPA, but also smaller friendship networks and greater propensity to report disliking or not getting along at school, when no additional controls are used. Adding school fixed effects and individual characteristics[17] makes these correlations not significant, suggesting that they are driven by school selection and observed heterogeneity. On the other hand, there appear to be significant correlations between higher proportion of Mexican-American classmates and lower rates of enrollment in advanced science courses in high school, lower self-reported desire to and estimated likelihood of attending college, and higher dropout rates. These effects are significant in their magnitude as well: increasing the proportion of Mexican-Americans in the school-grade by one standard deviation (about 3%) is correlated with decreasing desire to attend college by about one third of a standard deviation, self-estimated

[17] The regression of $PVT_{2001/2}$ also includes a quartic of $PVT_{1994/5}$. Regressions of sexual activity include a dummy for physical disability and indicators of religious affiliation.

likelihood of going to college by one fifth of a standard deviation, and high school completion rate by 5 percentage points (relative to an average rate of 92%) among native white students. The effect on high school completion is roughly equivalent to half the gap between welfare recipients and those not on government assistance, or to one third of the gap between students who have a parent with at least a high school education and those who do not. However, given how many dependent variables are tested (25 are shown, even more were examined), it is appropriate to wonder whether standard significance thresholds apply: if one assumes the tests are independent, one coefficient with a p-value of 0.05 is likely to be observed simply by chance. One way to deal with this is to apply the Bonferroni adjustment, which can be approximated by dividing the desired alpha by the number of tests, i.e., lowering it from 0.05 to about 0.002. The only regression in which the P_{gst} coefficient is significant at the Bonferroni adjusted level is for the "Want to go to college" variable, since it has a p-value of about 0.001. All other coefficients would not survive the adjustment. The Bonferroni method has been criticized for being overly conservative.[18] Nonetheless, it can serve as a useful rule of thumb for evaluating significance when dealing with multiple tests.

Among native blacks, when no controls are used the correlation between academic outcomes and the proportion of Mexican-American classmates is almost universally positive. Adding school and grade fixed effects and individual characteristics, however, makes the P_{gst} coefficients not significant in all regressions, except for long-term English proficiency, $PVT_{2001/2}$. This effect is quite large – a one standard deviation increase in the proportion of Mexican-Americans in the school-grade is estimated to increase the PVT scores of black students by almost half of a standard deviation – but the correlation is weak (p-value is around 0.052). There are no significant effects on behavioral variables or sexual activity. It should be noted that many of the standard errors of the regression

[18] The Bonferroni method tests for joint significance of all tests, increases the probability of type II error, and relies on a somewhat arbitrary definition of what constitutes a single test. See Perneger (1998), for example, for a more detailed discussion.

coefficients for the black sample are too large to allow me to pick up small effects, in the 0.1 of a standard deviation range.[19]

I run a number of robustness checks to determine the sensitivity of the results.[20] To check the relevance of friendships, I add the proportion of Mexican-American friends, P_{ist}. This does not produce any significant correlations or change the coefficients for school-grade composition, P_{gst}. Because the sample with friendship network data is considerably smaller, the estimates of π_1 are not always consistent with those obtained in the larger sample. However, this is driven by the change in sample composition alone. Adding classmates' characteristics, $X_{(-i)gst}$, does not significantly impact the results for black or white students as well. On the other hand, adding school-specific grade trends or restricting the sample to only those schools in which Mexican-Americans constitute at least one percent of the student population causes the correlation between P_{gst} and high school completion rate among native whites to become not significant and reduces the magnitude of the coefficient.

4.2. Within-Group Effect of Mexican-Americans

The Mexican-American sample consists of around 340 students, of whom around 60 are 1st generation immigrants and less than a third speak English at home. Table 9 presents some descriptive statistics for the entire group, as well as by friendship network composition. The strong preference for same-ancestry friends exhibited by many Mexican-American adolescents suggests that using school-grade composition alone, as was done in the previous section, may result in coefficients that suffer from omitted variable bias. Since proportions of Mexican-American classmates and friends are positively correlated, the direction of the bias depends on whether or not the classroom and social interaction effects have the same sign.

[19] See Gibbons and Telhaj (2008) for a partial summary of peer effect magnitudes.
[20] Outcomes are described but not shown.

Table 10 shows coefficients for school-grade proportion in regressions of long-term outcomes: 2001/2 English proficiency scores, high school completion, and college attendance. The first regression for each dependent variable (columns 1, 3, 5, and 7) takes the form of Equation 1, with two modifications. First, I interact all variables except school-grade composition with acculturation, which is a combination of immigrant generation and language spoken at home.[21] This allows me to take into account the fact that recent immigrants may differ from more settled ones, such as 2nd generation Mexican-Americans who speak English at home, for example, in important ways. Second, although Mexican-Americans represent over 30 schools, a number of these schools have only one or two observations, while one large, public, suburban school in a western state accounts for more than half of the sample (around 190 observations). Therefore, I use school characteristics (S_{st}) instead of school fixed effects. The characteristics include the average teacher-student ratio, the proportion of teachers with Masters degrees and the proportion with at least 5 years of tenure, whether the school is public or private, urban, suburban or rural, and the school's geographic region. I also include a dummy for the school with the most Mexican-Americans. As with the sample of native students, all regressions include grade-level fixed effects and school-grade size and its square; the proportion of Mexican-Americans in the school-grade is standardized; and all results are obtained using OLS with probability weights and no clustering.[22] The regression of $PVT_{2001/2}$ uses standardized values of the dependent variable and includes a quartic of $PVT_{1994/5}$.

In this specification, having more Mexican-American classmates is significantly correlated with higher $PVT_{2001/2}$ scores (p-value is about 0.004). The magnitude of the

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[21] 1st and 2nd generation immigrants can be subdivided by whether they speak Spanish or English at home, forming 4 separate acculturation categories in the Mexican-American sample. I also control for whether one or both parents were born outside of US and interact this variable with the dummy for use of English at home. Having only one parent who was born outside of US is rare, except among 2nd generation Mexican-Americans who speak English at home – in this group almost half of the students have one US-born parent.

[22] Even though I do not use school fixed effects in this section, Moulton correction procedure (see Angrist and Pischke 2009) for clustering at the school level reports zero correlation of within school residuals and therefore produces standard errors that are identical to those without clustering.

coefficient is quite large: one standard deviation increase in P_{gst} (about 11%) is correlated with one quarter of a standard deviation increase in test scores. The correlation with high school completion and attending any college is positive but not significant, while the correlation with attending a 4-year college is negative and not significant.

However, adding friendship network composition and size (size of reach 1 and reach 2 networks and a dummy variable for having only one close friend), i.e., estimating Equation 2, noticeably changes the results. The coefficient for P_{ist}, the proportion of Mexican-American friends, is negative for all dependent variables and is marginally significant in the regression of English proficiency. For interpreting magnitudes, it should be noted that, unlike the proportion of classmates, the proportion of friends is not standardized, so the coefficients report the effect of going from having no Mexican-American friends to having only such friends. In the new specification (column 2), the correlation between classroom composition and English proficiency becomes not significant. This is the result not of controlling for the proportion of Mexican-American friends but of controlling for network size. In particular, having only one friend is significantly correlated with having more Mexican-American classmates and with having a higher $PVT_{2001/2}$ score (even after controlling for all other characteristics, including initial PVT scores). In regressions of educational attainment (columns 4, 6, and 8), the coefficients of P_{gst} remain not statistically significant and relatively small, though positive coefficients do increase. Having one friend is not correlated with high school completion or college attendance, so the changes are driven primarily by the addition of friendship network composition.[23]

The results in Table 10 suggest that there is no significant positive or negative correlation between school-grade composition and performance among Mexican-Americans, once

[23] All findings are robust to defining Pist as the number of Mexican-American friends, instead of their proportion. Small networks are more likely to be homogenous, though there is no strong relationship with homophily. It should also be noted that I do not check whether friendships are reciprocated, so having one friend may in fact mean having no friends at all.

one incorporates information about students' friendship networks. The effect of friendship network composition itself, however, requires a closer look, given the endogeneity concerns. Table 11 presents the results of regressing long-term outcomes on P_{ist} and various additional controls, including P_{gst}.[24] Interestingly, even the simple correlation (with an intercept but no controls) between $PVT_{2001/2}$ and P_{ist}, though negative, is not statistically significant.[25] Controlling for acculturation, network size, individual characteristics, school characteristics and school-grade composition (and grade fixed effects and school-grade size), reduces the correlation further.[26] Adding a quartic of the initial PVT scores produces the coefficient reported in Table 10. Its value implies that increasing the proportion of Mexican-American friends by 10 percentage points (or one out of ten friends) is correlated with a 0.036 of a standard deviation decrease in English proficiency, but it is only marginally significant (p-value is about 0.07). Adding the selection controls described earlier (grades, behavioral variables, and likelihood of going to college)[27] causes the coefficient to shrink towards zero and become not significant. Lagged measures ($PVT_{1994/5}$) and predictors (selection controls) of performance may already be determined by previous exposure to Mexican-Americans, so this specification has the potential problem of underestimating the total long-term impact of having Mexican-American friends, even if it is providing an accurate measure of the impact in the last period. From a policy perspective, educators and parents may be interested both in how much students' performance can be improved by effort taken at the very beginning of their schooling (or at the moment of entry into the American education system, in the case of 1st generation immigrants) and in what impact can be made by the time they have reached high school. Nonetheless, the results in column 4 mean the

[24] I do not report the coefficients for the proportion of Mexican-Americans in the school-grade, which is included in all regressions in columns 2-5, for the sake of brevity. The coefficients remain not significant and generally similar to values reported in Table 10.
[25] All models that do not control for school characteristics use clustering at the school level.
[26] This is driven largely by adolescents' level of acculturation – controlling for it alone drives the correlation to near-zero level.
[27] The "$GPA_{1994/5}$" controls include initial math and English grades, as well as dummies for missing observations. "Behavioral vars." includes the number of school activities in which a student participates, and measures of trouble at school, engagement in risky behavior, and delinquency. Adding any of the selection controls individually also causes the coefficient of P_{ist} to become not significant.

hypothesis that the correlation between having Mexican-American friends and having lower $PVT_{2001/2}$ scores is driven by selection rather than by true peer effects cannot be rejected. Adding friends' characteristics, with or without selection controls, also results in coefficients that are not statistically significant.

As with English proficiency, having Mexican-American friends is correlated with lower educational attainment (column 1), but controlling for acculturation, school and individual characteristics, and school-grade composition causes all coefficients to become not significant, although they remain negative. Furthermore, the effect of P_{ist} on college attendance (2- or 4-year) becomes positive when either selection controls or friends' characteristics are included. Controlling for friends' characteristics is problematic for two reasons. First, having Mexican-American friends is strongly correlated with having friends whose parents have low educational attainment. In other words, friends' characteristics may simply be picking up the effect of friendship network composition. Second, the exact mechanism of a peer effect may not matter from a policy perspective. If the effect of Mexican-American friends is positive conditional on their parents' education but negative overall, the overall effect is likely to be of greater interest, since parental education cannot be easily changed. In this case, however, the "overall" coefficient is not statistically significant, so the hypothesis that having Mexican-American friends has no significant effect on high school completion or college attendance cannot be rejected.

I round out the within-group analysis by reporting the correlations between proportion of Mexican-American friends and contemporaneous academic performance, behaviors and attitudes, and sexual activity (Table 12). In the model with no controls, Mexican-Americans with assortative networks appear to be more pessimistic about college attendance, but they are also less prone to dislike school, be exposed to violence, or engage in delinquent behaviors. Of these, only the correlation with lower self-estimated likelihood of attending college remains significant when I add the standard set of controls.

Additionally, there is a significant negative correlation with self-reported math grades. It should be noted that the standard errors of these estimates are generally too large to capture small effects. For example, the smallest effect (of going from none to all Mexican-American friends) on English GPA that I can capture is about two thirds of a standard deviation, even at the 10% significance level. On the other hand, because I have no way to measure or mitigate the selection bias in this setting, the correlations are difficult to interpret.

To summarize, Mexican-American students with assortative friendship networks may experience smaller gains in English proficiency than those who have more native friends. However, one cannot reject the hypothesis that this result is driven by selection. Furthermore, the banding together of Mexican-Americans does not appear to significantly impact educational attainment.

5. Conclusion

While far from resolving the immigration debate, this paper adds to the discussion of the direction and magnitude of immigrant peer effects. The impact of 1st and 2nd generation Mexican immigrants on US schoolchildren appears to be limited. I find that very few native adolescents have immigrant friends, even when such schoolmates are present. Having more Mexican-American classmates is not significantly correlated with lower academic achievement or with negative behaviors among white or black native students. The results are generated by applying the within-school grade-level identification strategy to a nationally representative US sample and a large set of contemporaneous and long-term outcomes. This approach has the advantage of controlling for school selection, though school-wide effects cannot be estimated.

I also address the issue of “immigrant enclaves,” in the context of junior and high schools. The consequences of the natural and commonly observed tendency of immigrant adolescents to “stick together” in a school environment have seldom been analyzed. The difficulty lies in identifying the relevant peer group when we know that our subjects are likely to seek out peers based on specific characteristics. Using data that actually provide information about schoolchildren's friendship network, I am able to consider the influence of having immigrant friends, when the student herself is an immigrant, separately from the many other determinants of academic "success," such as the composition of her school and neighborhood, the influence of her family, and her own and her friends' socio-economic status. I show that the approach of using school-grade composition as a proxy for "true" peer group composition is not sufficient when analyzing within-group immigrant peer effects. Although school and friendship network compositions are correlated, immigrant students actively seek out friends with similar backgrounds and do not restrict themselves to students at their own grade level.

I find that, in the case of 1st and 2nd generation immigrants from Mexico, there is a strong tendency to form assortative friendships, but there seem to be no statistically significant effects of this behavior on long-term academic outcomes, such as the change in English proficiency or high school completion and college attendance. The within-group effect of Mexican-American classmates is, likewise, not significant, once one controls friendship information. These findings are particularly important given the size of the Mexican-American population.

As a group, Mexican immigrants share several characteristics that are correlated with lower academic achievement, such as low levels of parental education and low English proficiency. They also tend to not speak English at home and to live in neighborhoods with a large proportion of Spanish-speakers. Given these facts, it may be tempting to think of the estimates derived from the Mexican-American sample as the upper bound on immigrant peer effects in general, a "worst case" scenario. However, not enough is known about the exact mechanisms of immigrant peer effects and their relationship to socio-economic status or cultural variables to make such a claim.

The differences between classmates and within-school friends are of interest beyond the immigration context. Native junior and high school students also appear to have many friends who are not in their own grade, and this behavior is stronger among blacks. The bad news is that school-grades may not be as good of a proxy for "true" peer networks as we would like to assume. The good news is that classroom and social interaction effects are potentially separable.

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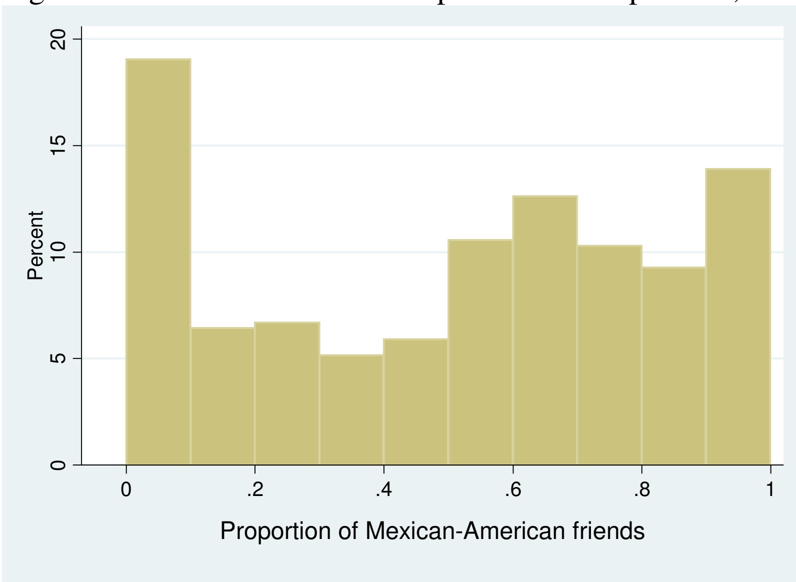
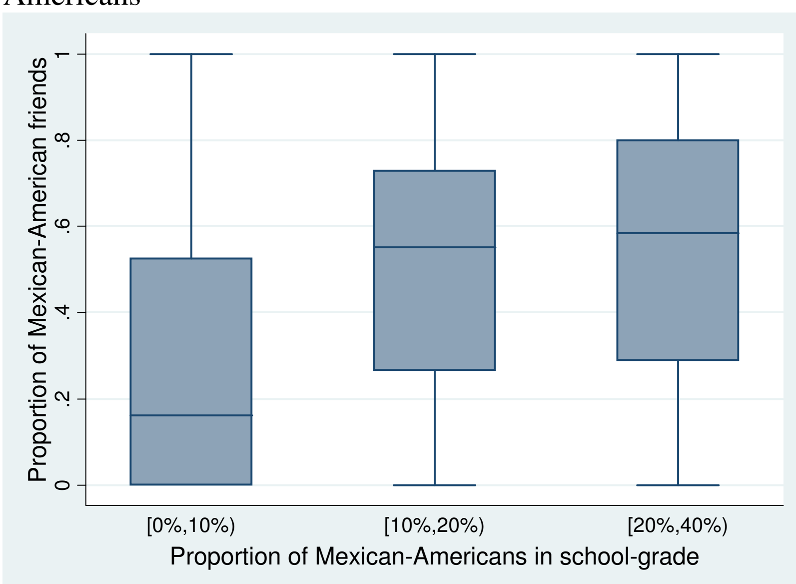
Figure 1. Distribution of friendship network composition, Mexican-Americans



Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

Figure 2. Friendship network composition vs. school-grade composition, Mexican-Americans



The horizontal lines represent the following values, from top to bottom: upper adjacent value, 75th percentile, median, 25th percentile, and lower adjacent value. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

Table 1. School and friendship network composition, natives

Group	Friends in same grade	Proportion of Mexican-American school-mates	Proportion of Mexican-American friends	No Mexican-American friends	Obs.
All Schools					
Black	57.6%	1.4%	0.5%	92.6%	1,575
	(27.2%)	(1.4%)	(0.5%)	(92.6%)	
White	63.9%	0.9%	0.5%	90.9%	4,414
	(25.1%)	(0.9%)	(0.5%)	(90.9%)	
Schools with ≥ 1% Mexican-Americans					
Black	62.5%	7.9%	2.0%	72.7%	424
	(28.0%)	(7.9%)	(2.0%)	(72.7%)	
White	68.8%	6.4%	2.7%	67.0%	600
	(25.5%)	(6.4%)	(2.7%)	(67.0%)	

Standard deviations are in parentheses. Means and standard deviations are weighted. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. "Friends" refers to friends reachable in one or two steps. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance. Native groups are 3rd or higher generation non-Hispanic blacks and whites.

Table 2. School and friendship network composition, Mexican-Americans

	Friends in same grade	Proportion of Mexican-American schoolmates			Proportion of Mexican-American friends			No Mexican-American friends	Obs.
		1st gen.	2nd gen.	Total	1st gen.	2nd gen.	Total		
1st gen.	54.5%	5.9%	12.1%	18.0%	39.7%	18.5%	58.2%	4.1%	79
	(31.4%)	(3.1%)	(7.3%)	(9.7%)	(32.4%)	(19.9%)	(30.9%)	(19.9%)	
2nd gen.	65.8%	4.9%	12.2%	17.2%	21.4%	28.2%	49.5%	7.2%	198
speak Spanish at home	(26.4%)	(3.4%)	(7.4%)	(10.2%)	(27.4%)	(22.8%)	(30.6%)	(26.0%)	
2nd gen.	67.8%	4.5%	10.6%	15.1%	4.2%	18.0%	22.3%	33.7%	111
speak English at home	(32.6%)	(3.6%)	(8.0%)	(11.1%)	(12.1%)	(23.9%)	(27.2%)	(47.5%)	

Standard deviations are in parentheses. Means and standard deviations are weighted. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. "Friends" refers to friends reachable in one or two steps. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

Table 3. Selection controls, Wald test results

	All students		Mexican-Americans			
	Dependent variable:					
Variables Tested	$PVT_{2001/2}$	Education Level	$PVT_{2001/2}$	Education Level	Proportion of Mexican-American friends	
	all controls		all controls		no controls	all controls
$PVT_{1994/5}$	385.83	10.06	18.19	4.03	42.47	1.31
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.27]
$GPA_{1994/5}$	11.86	81.25	2.99	3.75	0.26	0.93
	[0.00]	[0.00]	[0.02]	[0.01]	[0.90]	[0.45]
Likelihood of college	1.37	166.28	0.29	5.11	15.65	9.86
	[0.24]	[0.00]	[0.59]	[0.02]	[0.00]	[0.00]
Behavioral variables	8.80	20.16	2.51	1.02	1.86	0.36
	[0.00]	[0.00]	[0.02]	[0.41]	[0.11]	[0.91]

F-statistics are shown, with p-values in brackets. All regressions estimated using OLS with probability weights. Clustering at the school level is used in the "no controls" regressions. "Education Level" is a discrete measure of educational attainment, with categories being "less that high school," "high school," "2-year college," and "4-year college." $PVT_{1994/5}$ is a quartic of Wave 1 PVT scores. See Appendix for detailed description of $GPA_{1994/5}$, Likelihood of college, and Behavioral variables.
Each column labeled "all controls" represents a single regression (a total of 5 regressions) that includes all 4 sets of variables tested. The column labeled "no controls" represents 4 separate regressions. "All controls" regressions include individual characteristics, grade fixed effects, and either school fixed effects or school characteristics (see Appendix for details). Mexican-American refers to the total of 1^{st} and 2^{nd} generation Mexican-Americans. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

Table 4. Descriptive statistics by sample

	Mexican-Americans		Native Whites		Native Blacks	
Observations	338		5,560		2,141	
Friendship network composition						
Mexican-American friends	45%	(32%)	0%	(3%)	1%	(3%)
1st gen. friends (any background)	26%	(27%)	2%	(6%)	2%	(6%)
2nd gen. friends (any background)	31%	(23%)	5%	(8%)	4%	(8%)
3rd+ gen. friends (any background)	40%	(29%)	90%	(12%)	91%	(12%)
Hispanic friends	69%	(30%)	6%	(9%)	9%	(12%)
Asian friends	6%	(12%)	2%	(6%)	2%	(5%)
Black friends	5%	(10%)	4%	(9%)	73%	(27%)
White friends	16%	(24%)	81%	(18%)	12%	(21%)
Mexican-Americans in school	17%	(10%)	1%	(3%)	2%	(5%)
Hispanics in census tract	33%	(21%)	3%	(5%)	3%	(8%)
Size of reach 1 network	4.47	(2.48)	5.64	(2.52)	5.06	(2.59)
Size of reach 2 network	18.19	(11.41)	25.85	(13.48)	22.22	(14.08)
Only one close friend	13%	(34%)	5%	(23%)	10%	(30%)
Characteristics						
Female	45%	(50%)	49%	(50%)	51%	(50%)
Grade level	9.20	(1.79)	9.37	(1.71)	9.39	(1.67)
On welfare	11%	(31%)	5%	(22%)	14%	(35%)
Median income in census tract	27,851	(10,738)	30,771	(11,026)	21,351	(10,047)
Both parents present	87%	(33%)	79%	(41%)	48%	(50%)
Working parent	95%	(22%)	96%	(18%)	90%	(30%)
Parent with education ≥ HS	33%	(47%)	88%	(33%)	82%	(39%)
Parent with education ≥ college	10%	(30%)	37%	(48%)	26%	(44%)
Parents disappointed if no college (1-5)	3.77	(1.19)	3.97	(1.23)	4.02	(1.32)
Parents involved (0-3)	1.27	(0.90)	1.28	(1.00)	1.32	(0.98)
Outcomes						
English $GPA_{1994/5}$	2.74	(0.83)	2.90	(0.98)	2.60	(0.89)
Math $GPA_{1994/5}$	2.51	(0.95)	2.77	(1.05)	2.47	(0.98)
Highest level of math taken in HS (0-9)	5.62	(2.31)	6.04	(2.20)	5.27	(2.15)
Highest level of science taken in HS (0-5)	3.61	(1.26)	3.99	(1.23)	3.70	(1.37)
$PVT_{1994/5}$	87.45	(16.13)	104.42	(12.24)	92.32	(13.44)
$PVT_{2001/2}$	92.44	(19.98)	105.11	(11.40)	92.85	(16.68)
$PVT_{2001/2}$ - $PVT_{1994/5}$	6.80	(13.83)	0.80	(10.39)	1.34	(12.77)
Want to go to college (1-5)	4.40	(0.88)	4.45	(1.02)	4.45	(0.97)
Likely to go to college (1-5)	3.77	(1.15)	4.21	(1.14)	4.12	(1.13)
Ed. $Level_{2001/2}$ < HS	16%	(37%)	8%	(27%)	11%	(32%)
Ed. $Level_{2001/2}$ = HS	36%	(48%)	32%	(47%)	38%	(48%)
Ed. $Level_{2001/2}$ = 2yr college	32%	(47%)	24%	(43%)	23%	(42%)
Ed. $Level_{2001/2}$ = 4yr college	16%	(37%)	36%	(48%)	28%	(45%)

Standard deviations are in parentheses. Means and standard deviations are weighted. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. Native groups are 3rd or higher generation non-Hispanic blacks and whites.

Table 5. School statistics, natives

	Native Whites		Native Blacks	
	All	Schools with Mexicans	All	Schools with Mexicans
Observations	5,560	835	2,141	637
Western region	12%	59%	6%	37%
Midwestern region	35%	2%	21%	21%
Southern region	37%	35%	67%	35%
Northeastern region	15%	4%	6%	7%
Urban	18%	42%	28%	47%
Suburban	62%	58%	57%	52%
Rural	20%	0%	14%	1%
Public	94%	96%	96%	91%
Average class size	25.01	28.37	26.64	28.32
	(4.27)	(5.03)	(4.26)	(5.03)
Teachers with 5+ years of tenure	68%	71%	65%	61%
Teachers with MA	52%	55%	49%	52%

Standard deviations are in parentheses. Means and standard deviations are weighted. Native groups are 3rd or higher generation non-Hispanic blacks and whites. Schools with Mexicans are schools in which 1st and 2nd generation Mexican-Americans constitute at least 1% of the student body.

Table 6. Descriptive statistics, natives

	Native Whites				Native Blacks			
	All		Schools with Mexicans		All		Schools with Mexicans	
Observations	5,560		835		2,141		637	
Friendship network composition								
Mexican-American friends	0%	(3%)	3%	(6%)	1%	(3%)	2%	(6%)
1st gen. friends (any background)	2%	(6%)	4%	(7%)	2%	(6%)	4%	(7%)
2nd gen. friends (any background)	5%	(8%)	11%	(13%)	4%	(8%)	10%	(14%)
3rd+ gen. friends (any background)	90%	(12%)	82%	(17%)	91%	(12%)	84%	(18%)
Hispanic friends	6%	(9%)	15%	(16%)	9%	(12%)	12%	(15%)
Asian friends	2%	(6%)	6%	(11%)	2%	(5%)	4%	(9%)
Black friends	4%	(9%)	5%	(11%)	73%	(27%)	70%	(31%)
White friends	81%	(18%)	67%	(25%)	12%	(21%)	10%	(19%)
Mexicans-Americans in school	1%	(3%)	6%	(7%)	2%	(5%)	10%	(10%)
Hispanics in census tract	3%	(5%)	11%	(10%)	3%	(8%)	11%	(13%)
Size of reach 1 network	5.64	(2.52)	5.24	(2.53)	5.06	(2.59)	4.54	(2.53)
Size of reach 2 network	25.85	(13.48)	23.30	(14.11)	22.22	(14.08)	18.93	(13.50)
Only one close friend	5%	(23%)	6%	(25%)	10%	(30%)	12%	(32%)
Characteristics								
Female	49%	(50%)	51%	(50%)	51%	(50%)	57%	(50%)
Grade level	9.37	(1.71)	9.76	(1.63)	9.39	(1.67)	9.92	(1.52)
On welfare	5%	(22%)	4%	(19%)	14%	(35%)	10%	(30%)
Median income in census tract	30,771	(11,026)	35,115	(13,489)	21,351	(10,047)	29,920	(12,595)
Both parents present	79%	(41%)	73%	(44%)	48%	(50%)	48%	(50%)
Working parent	96%	(18%)	97%	(16%)	90%	(30%)	91%	(29%)
Parent with education ≥ HS	88%	(33%)	89%	(31%)	82%	(39%)	89%	(31%)
Parent with education ≥ college	37%	(48%)	45%	(50%)	26%	(44%)	37%	(48%)
Parents disappointed if no college (1-5)	3.97	(1.23)	4.05	(1.16)	4.02	(1.32)	4.20	(1.15)
Parents involved (0-3)	1.28	(1.00)	1.36	(0.99)	1.32	(0.98)	1.42	(0.93)
Outcomes								
English $GPA_{1994/5}$	2.90	(0.98)	2.96	(0.99)	2.60	(0.89)	2.76	(0.91)
Math $GPA_{1994/5}$	2.77	(1.05)	2.75	(1.07)	2.47	(0.98)	2.52	(0.97)
Highest level of math taken in HS (0-9)	6.04	(2.20)	6.16	(2.12)	5.27	(2.15)	6.04	(1.87)
Highest level of science taken in HS (0-5)	3.99	(1.23)	3.98	(1.19)	3.70	(1.37)	4.08	(1.05)
$PVT_{1994/5}$	104.42	(12.24)	105.81	(11.77)	92.32	(13.44)	98.20	(13.48)
$PVT_{2001/2}$	105.11	(11.40)	106.89	(12.20)	92.85	(16.68)	96.42	(21.49)
$PVT_{2001/2}$ - $PVT_{1994/5}$	0.80	(10.39)	1.15	(12.57)	1.34	(12.77)	0.58	(13.61)
Want to go to college (1-5)	4.45	(1.02)	4.49	(0.97)	4.45	(0.97)	4.57	(0.83)
Likely to go to college (1-5)	4.21	(1.14)	4.31	(1.04)	4.12	(1.13)	4.28	(0.98)
Ed. $Level_{2001/2}$ < HS	8%	(27%)	6%	(24%)	11%	(32%)	3%	(18%)
Ed. $Level_{2001/2}$ = HS	32%	(47%)	29%	(45%)	38%	(48%)	30%	(46%)
Ed. $Level_{2001/2}$ = 2yr college	24%	(43%)	28%	(45%)	23%	(42%)	30%	(46%)
Ed. $Level_{2001/2}$ = 4yr college	36%	(48%)	37%	(48%)	28%	(45%)	37%	(48%)

Standard deviations are in parentheses. Means and standard deviations are weighted. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. Native groups are 3rd or higher generation non-Hispanic blacks and whites. Schools with Mexicans are schools in which 1st and 2nd generation Mexican-Americans constitute at least 1% of the student body.

Table 7. Results: Native whites, Explanatory variable = Proportion of Mexican-Americans in school-grade

Dependent Variable		Mean	SD	No controls Coef.	No controls SE	School FEs, X_i Coef.	SE	R2	Students	School-grades	Schools
Completed High School	(0/1)	0.93	(0.26)	0.01	(0.00)	-0.05*	(0.03)	0.19	5,625	322	95
Attended College	(0/1)	0.61	(0.49)	0.03***	(0.01)	-0.01	(0.05)	0.25	5,625	322	95
Attended 4-year College	(0/1)	0.37	(0.48)	0.00	(0.01)	-0.05	(0.05)	0.25	5,625	322	95
Want to go to college	(1-5)	4.45	(1.02)	0.02	(0.02)	-0.32***	(0.10)	0.20	5,620	322	95
Likely to go to college	(1-5)	4.22	(1.13)	0.03	(0.02)	-0.19**	(0.10)	0.27	5,618	322	95
$PVT_{2001/2}$		105.46	(10.67)	0.02	(0.02)	0.07	(0.09)	0.46	5,230	321	95
$PVT_{1994/5}$		104.59	(12.15)	0.02	(0.02)	0.01	(0.11)	0.23	5,402	321	95
English $GPA_{1994/5}$		2.91	(0.98)	0.03*	(0.02)	-0.03	(0.11)	0.20	5,532	321	95
English $GPA_{\text{all HS}}$		2.63	(1.13)	0.06***	(0.02)	-0.17	(0.10)	0.27	4,802	313	94
Math $GPA_{1994/5}$		2.78	(1.04)	-0.01	(0.02)	0.04	(0.12)	0.12	5,257	317	95
Math $GPA_{\text{all HS}}$		2.33	(0.95)	0.02	(0.02)	-0.02	(0.11)	0.20	4,802	313	94
Highest level of math taken in HS	(0-9)	6.06	(2.18)	0.03	(0.02)	0.00	(0.10)	0.33	4,802	313	94
Highest level of science taken in HS	(0-5)	4.01	(1.21)	0.00	(0.02)	-0.18*	(0.10)	0.27	4,802	313	94
Dislike school	(0-10)	5.06	(1.35)	0.05**	(0.02)	0.02	(0.10)	0.13	5,629	322	95
Trouble getting along at school	(0-10)	2.68	(1.81)	0.04*	(0.02)	0.15	(0.11)	0.10	5,629	322	95
Risky behavior	(0-10)	1.53	(1.73)	0.01	(0.02)	0.16	(0.10)	0.08	5,629	322	95
Delinquency	(0-10)	0.87	(1.07)	0.01	(0.02)	0.07	(0.11)	0.10	5,629	322	95
Smoke	(0/1)	0.31	(0.46)	-0.02**	(0.01)	0.04	(0.05)	0.10	5,600	322	95
Drink	(0-10)	1.89	(2.41)	-0.01	(0.02)	0.02	(0.11)	0.17	5,620	322	95
Use Marijuana	(0-10)	0.13	(0.68)	0.02	(0.03)	0.08	(0.06)	0.10	5,563	321	95
Ever had sex (Girls)	(0/1)	0.34	(0.47)	0.01	(0.02)	0.00	(0.07)	0.30	2,733	270	80
Ever had sex (Boys)	(0/1)	0.32	(0.47)	-0.03**	(0.02)	0.03	(0.10)	0.28	2,436	258	77
Ever pregnant (Girls)	(0/1)	0.04	(0.20)	0.01	(0.01)	0.04	(0.03)	0.09	2,733	270	80
Size of reach 1 network		5.66	(2.51)	-0.06**	(0.02)	-0.12	(0.15)	0.14	4,070	291	87
Size of reach 2 network		26.15	(13.40)	-0.08***	(0.02)	-0.17	(0.15)	0.22	4,070	291	87

* indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level. Means and standard deviations are weighted. All regressions are estimated using OLS with probability weights. Clustering at the school level is used in the "no controls" regressions. The explanatory variable and all non-binary dependent variables are standardized. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans.

All regressions labeled "School FEs, Xi" include grade and school fixed effects and control for individual characteristics and size of the school-grade and its square (see Appendix for details). Regression of $PVT_{2001/2}$ also includes a quartic of $PVT_{1994/5}$.

Table 8. Results: Native blacks, Explanatory variable = Proportion of Mexican-Americans in school-grade

				No controls		School FEs, X_i					
Dependent Variable		Mean	SD	Coef.	SE	Coef.	SE	R2	Students	School-grades	Schools
Completed High School	(0/1)	0.88	(0.32)	0.04***	(0.01)	0.09	(0.12)	0.21	1,937	137	43
Attended College	(0/1)	0.50	(0.50)	0.05*	(0.02)	0.17	(0.16)	0.28	1,937	137	43
Attended 4-year College	(0/1)	0.28	(0.45)	0.04**	(0.02)	0.14	(0.15)	0.24	1,937	137	43
Want to go to college	(1-5)	4.46	(0.97)	0.12***	(0.03)	-0.19	(0.34)	0.17	1,942	137	43
Likely to go to college	(1-5)	4.13	(1.13)	0.06	(0.05)	0.43	(0.32)	0.18	1,937	137	43
$PVT_{2001/2}$		93.20	(14.17)	0.18***	(0.04)	0.42*	(0.22)	0.41	1,687	134	42
$PVT_{1994/5}$		91.75	(13.63)	0.07	(0.05)	0.15	(0.28)	0.29	1,853	136	43
English $GPA_{1994/5}$		2.57	(0.88)	0.05	(0.04)	-0.24	(0.37)	0.18	1,914	137	43
English $GPA_{all\ HS}$		1.97	(1.04)	0.16***	(0.05)	-0.06	(0.43)	0.26	1,387	119	38
Math $GPA_{1994/5}$		2.45	(0.96)	0.03	(0.04)	0.02	(0.38)	0.12	1,830	130	41
Math $GPA_{all\ HS}$		1.72	(0.90)	0.09*	(0.05)	-0.22	(0.39)	0.28	1,387	119	38
Highest level of math taken in HS	(0-9)	5.21	(2.17)	0.25***	(0.07)	0.14	(0.35)	0.29	1,387	119	38
Highest level of science taken in HS	(0-5)	3.72	(1.40)	0.19***	(0.06)	0.05	(0.36)	0.33	1,387	119	38
Dislike school	(0-10)	4.91	(1.29)	0.02	(0.04)	-0.15	(0.32)	0.10	1,945	137	43
Trouble getting along at school	(0-10)	2.58	(1.90)	0.05	(0.05)	0.11	(0.40)	0.07	1,945	137	43
Risky behavior	(0-10)	1.11	(1.38)	-0.02	(0.04)	-0.20	(0.37)	0.07	1,945	137	43
Delinquency	(0-10)	0.91	(1.12)	0.02	(0.04)	-0.09	(0.38)	0.14	1,945	137	43
Smoke	(0/1)	0.14	(0.35)	0.00	(0.02)	0.14	(0.14)	0.11	1,930	137	43
Drink	(0-10)	1.52	(2.49)	-0.03	(0.04)	0.37	(0.35)	0.10	1,942	137	43
Use Marijuana	(0-10)	0.15	(0.82)	0.03	(0.03)	0.06	(0.15)	0.11	1,899	136	42
Ever had sex (Girls)	(0/1)	0.51	(0.50)	0.04	(0.04)	0.13	(0.26)	0.25	931	93	29
Ever had sex (Boys)	(0/1)	0.62	(0.49)	-0.03	(0.04)	-0.31	(0.28)	0.31	681	78	28
Ever pregnant (Girls)	(0/1)	0.14	(0.34)	-0.01	(0.03)	-0.04	(0.18)	0.18	931	93	29
Size of reach 1 network		5.14	(2.59)	-0.25***	(0.07)	0.11	(0.47)	0.15	1,182	102	33
Size of reach 2 network		22.92	(14.25)	-0.35***	(0.06)	0.23	(0.46)	0.29	1,183	102	33

* indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level. Means and standard deviations are weighted. All regressions are estimated using OLS with probability weights. Clustering at the school level is used in the "no controls" regressions. The explanatory variable and all non-binary dependent variables are standardized. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans.
All regressions labeled "School FEs, Xi" include grade and school fixed effects and control for individual characteristics and size of the school-grade and its square (see Appendix for details). Regression of $PVT_{2001/2}$ also includes a quartic of $PVT_{1994/5}$.

Table 9. Descriptive statistics, Mexican-Americans

	Proportion of Mexican-American friends						
	[0%,5%)	[5%,25%)	[25%,50%)	[50%,75%)	[75%,100%]	Total	
Observations	56	37	44	105	96	338	
	17%	11%	13%	31%	28%		
Friendship network composition							
Mexican-American friends	1%	13%	34%	59%	90%	45%	(32%)
1st gen. friends (any background)	7%	13%	26%	22%	55%	26%	(27%)
2nd gen. friends (any background)	16%	21%	30%	44%	31%	31%	(23%)
3rd+ gen. friends (any background)	76%	61%	42%	27%	11%	40%	(29%)
Hispanic friends	22%	53%	70%	85%	93%	69%	(30%)
Asian friends	8%	10%	8%	5%	1%	6%	(12%)
Black friends	8%	10%	3%	4%	1%	5%	(10%)
White friends	55%	20%	14%	5%	2%	16%	(24%)
Mexicans-Americans in school	8%	12%	18%	21%	20%	17%	(10%)
Hispanics in census tract	18%	32%	32%	39%	38%	33%	(21%)
Size of reach 1 network	3.91	4.49	5.46	5.04	3.38	4.47	(2.48)
Size of reach 2 network	15.90	19.77	21.15	20.85	12.86	18.19	(11.41)
Only one close friend	15%	12%	5%	0%	36%	13%	(34%)
Characteristics							
2nd gen.	91%	78%	81%	70%	62%	74%	(44%)
Speak English at home	75%	46%	25%	18%	8%	31%	(46%)
Female	29%	37%	68%	42%	49%	45%	(50%)
Grade level	9.35	8.81	9.18	8.88	9.87	9.20	(1.79)
On welfare	1%	4%	33%	10%	7%	11%	(31%)
Median income in census tract	30,545	28,449	27,104	26,350	27,946	27,851	(10,738)
Both parents present	94%	81%	93%	83%	91%	87%	(33%)
Working parent	97%	100%	85%	94%	97%	95%	(22%)
Parent with education ≥ HS	58%	47%	26%	25%	16%	33%	(47%)
Parent with education ≥ college	32%	12%	2%	8%	2%	10%	(30%)
Parents disappointed if no college (1-5)	3.68	3.85	3.71	3.63	4.00	3.77	(1.19)
Parents involved (0-3)	0.89	1.75	0.99	1.30	1.26	1.27	(0.90)
Outcomes							
English $GPA_{1994/5}$	2.66	2.76	2.85	2.76	2.66	2.74	(0.83)
Math $GPA_{1994/5}$	2.36	2.51	2.47	2.59	2.52	2.51	(0.95)
$PVT_{1994/5}$	91.09	89.34	91.23	85.44	83.23	87.45	(16.13)
$PVT_{2001/2}$	100.79	93.18	93.04	87.30	92.75	92.44	(19.98)
$PVT_{2001/2}$ - $PVT_{1994/5}$	5.87	8.50	1.87	6.04	10.40	6.80	(13.83)
Want to go to college (1-5)	4.66	4.68	4.29	4.35	4.13	4.40	(0.88)
Likely to go to college (1-5)	4.12	4.18	3.84	3.68	3.23	3.77	(1.15)
Ed. $Level_{2001/2}$ < HS	9%	10%	15%	18%	23%	16%	(37%)
Ed. $Level_{2001/2}$ = HS	25%	37%	25%	44%	40%	36%	(48%)
Ed. $Level_{2001/2}$ = 2yr college	38%	30%	42%	28%	28%	32%	(47%)
Ed. $Level_{2001/2}$ = 4yr college	28%	24%	19%	9%	9%	16%	(37%)

Standard deviations are in parentheses. Means and standard deviations are weighted. Mexican-American refers to the total of 1st and 2nd generation Mexican-Americans. Proportion of Mexican-American friends is the weighted average of Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

Table 10. Results: Mexican-Americans, Proportion of Mexican-Americans in school-grade vs Proportion of Mexican-American friends

	Dependent Variable							
	$PVT_{2001/2}$		Completed High School		Attended College		Attended 4-year College	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Proportion of Mexican-Americans in school-grade	0.21 **	0.10	0.023	0.064	0.026	0.070	-0.067	-0.019
	(0.09)	(0.09)	(0.049)	(0.057)	(0.066)	(0.071)	(0.043)	(0.047)
Proportion of Mexican-American friends		-0.34 *		-0.086		-0.022		-0.143
		(0.19)		(0.130)		(0.149)		(0.140)
R-squared	0.81	0.84	0.70	0.73	0.69	0.73	0.66	0.68
Students	309	309	357	357	357	357	357	357
School-Grades	70	70	76	76	76	76	76	76
Schools	33	33	36	36	36	36	36	36

* indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level. Robust standard errors are in parentheses. All regressions are estimated using OLS with probability weights. $PVT_{2001/2}$ and proportion of Mexican-Americans in school-grade are standardized. Proportion of Mexican-American friends is the weighted average of 1st and 2nd generation Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

All regressions control for individual characteristics (X_i) , school characteristics (S_s), acculturation, size of the school-grade and its square, and grade fixed effects (see Appendix for details). Regressions that include proportion of Mexican-American friends control for network size. Regression of $PVT_{2001/2}$ include a quartic of $PVT_{1994/5}$. All controls, except the proportion of Mexican-American friends and the proportion of Mexican-Americans in school-grade, are interacted with acculturation.

Table 11. Results: Mexican-Americans, Long-term outcomes
Explanatory variable = Proportion of Mexican-American friends

	(1)	(2)	(3)	(4)	(5)
Dependent Variable = $PVT_{2001/2}$					
Coefficient	-0.33	-0.22	-0.34 *	-0.07	-0.41
SE	(0.26)	(0.28)	(0.19)	(0.19)	(0.26)
R-squared	0.02	0.65	0.84	0.92	0.86
Students	356	328	309	308	309
School-Grades	75	73	70	70	70
Schools	37	35	33	33	33
Dependent Variable = Completed High School					
Coefficient	-0.144	-0.086	-0.130	-0.150	-0.032
SE	(0.108)	(0.130)	(0.153)	(0.187)	(0.174)
R-squared	0.02	0.73	0.79	0.82	0.82
Dependent Variable = Attended College					
Coefficient	-0.307 ***	-0.022	-0.104	0.038	0.027
SE	(0.105)	(0.149)	(0.149)	(0.169)	(0.169)
R-squared	0.04	0.73	0.83	0.87	0.84
Dependent Variable = Attended 4-year College					
Coefficient	-0.239 ***	-0.143	-0.185	-0.032	-0.041
SE	(0.091)	(0.140)	(0.154)	(0.148)	(0.158)
R-squared	0.05	0.68	0.73	0.82	0.76
Students	386	357	336	335	336
School-Grades	78	76	73	73	73
Schools	38	36	34	34	34
Controls:		Accult., X_i, S_s, P_g	Accult., X_i, S_s, P_g, $PVT_{1994/5}$	Accult., X_i, S_s, P_g, $PVT_{1994/5}$, $GPA_{1994/5}$, Behavioral vars., Likely colllege	Accult., X_i, S_s, P_g, $PVT_{1994/5}$, $X_{(-i)}$

* indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level. Robust standard errors are in parentheses. All regressions are estimated using OLS with probability weights. Clustering at the school level is used in column 1. $PVT_{2001/2}$ is standardized. Proportion of Mexican-American friends is the weighted average of 1st and 2nd generation Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.
Regressions in columns 2-5 control for network size, size of the school-grade and its square, and grade fixed effects. P_g is the proportion of Mexican-Americans in the school-grade. $PVT_{1994/5}$ is a quartic of initial PVT scores. S_s, X_i, and $X_{(-i)}$ are school, individual and friends' characteristics, respectively. See Appendix for details. All controls, except the proportion of Mexican-American friends and the proportion of Mexican-Americans in school-grade, are interacted with acculturation (Accult.).

Table 12. Results: Mexican-Americans, Contemporaneous outcomes
Explanatory variable = Proportion of Mexican-American friends

Dependent Variable		Mean	SD	No controls Coef.	No controls SE	"All" controls Coef.	"All" controls SE
$PVT_{1994/5}$		87.45	(16.13)	-0.51	(0.32)	0.23	(0.26)
English $GPA_{1994/5}$		2.75	(0.82)	0.03	(0.25)	-0.12	(0.32)
Math $GPA_{1994/5}$		2.55	(0.95)	0.15	(0.27)	-1.03***	(0.34)
Want to go to college	(1-5)	4.39	(0.89)	-0.37*	(0.21)	-0.14	(0.25)
Likely to go to college	(1-5)	3.74	(1.16)	-0.82***	(0.26)	-0.74**	(0.34)
N. of School Activities		0.74	(1.19)	0.19	(0.37)	-0.43	(0.44)
N. of School Sports		0.91	(1.21)	-0.48	(0.32)	0.09	(0.33)
Dislike school	(0-10)	4.82	(1.26)	-0.68***	(0.26)	-0.19	(0.31)
Trouble getting along at school	(0-10)	2.38	(1.65)	-0.26	(0.17)	-0.15	(0.26)
Risky behavior	(0-10)	1.51	(1.50)	0.04	(0.31)	-0.01	(0.35)
Delinquency	(0-10)	1.04	(1.06)	-0.40*	(0.23)	-0.35	(0.35)
Exposure to violence	(0-10)	0.72	(1.09)	-0.47**	(0.19)	-0.22	(0.23)
Smoke	(0/1)	0.16	(0.36)	-0.02	(0.10)	0.01	(0.12)
Drink	(0-10)	1.43	(2.03)	-0.27	(0.19)	-0.43	(0.29)
Use Marijuana	(0-10)	0.55	(4.37)	0.18	(0.17)	-0.17	(0.15)
Ever had sex (Girls)	(0/1)	0.21	(0.41)	0.00	(0.11)	-0.10	(0.20)
Ever had sex (Boys)	(0/1)	0.29	(0.46)	0.19	(0.14)	0.24	(0.27)
Ever pregnant (Girls)	(0/1)	0.01	(0.09)	0.05	(0.06)	-0.14	(0.09)

* indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level. Means and standard deviations are weighted. All regressions are estimated using OLS with probability weights. All non-binary dependent variables are standardized. Proportion of Mexican-American friends is the weighted average of 1st and 2nd generation Mexican-American friends reachable in one or two steps, with weights equal to the inverse of the distance.

"All" controls regressions control for individual characteristics, school characteristics, acculturation, network size, proportion of Mexican-Americans in the school-grade, size of the school-grade and its square, and grade fixed effects (see Appendix for details). All controls, except the proportion of Mexican-American friends and the proportion of Mexican-Americans in school-grade, are interacted with acculturation.

Appendix – Variable Definitions and Notes

Acculturation: acculturation level (immigrant generation and language used at home), number of parents born outside US.

Behavioral vars.: number of school activities in which a student participates, measures of trouble at school, engagement in risky behavior, and delinquency (see below for details).

Friends' or classmates' characteristics ($X_{(-i)st}$ or $X_{(-i)gst}$): parents' education and dummies for presence of both parents and their work status.

$GPA_{1994/5}$: initial math and English grades, dummies for missing observations.

Individual characteristics (X_{igst}): gender, learning disability, parents' education, dummies for "both parents present," "a parent works" and "on welfare," median and standard deviation of household income in census tract, proportion of adults without high school education in block group, proportion of Hispanics in tract, parents' involvement in child's school activities, parents expectations about child's college attendance. Physical disability and religious affiliation are also included when dependent variable is sexual activity.

Likelihood of college: students' response to the following question: "On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?"

Network size: number of friends in reach 1 and reach 2 networks, dummy variable for having only one close friend.

$PVT_{2001/2}$: PVT scores obtained during Wave 3 of the survey have a high incidence of very low values. These low scores do not seem to be correlated with low $PVT_{1994/5}$ scores or with immigration status. I, therefore, assume that these scores are the result of human or computer error and exclude all observations with scores of 11 or below.

School characteristics (S_s): average teacher-student ratio, proportion of teachers with MAs, proportion with at least 5 years of tenure, whether the school is public or private, urban, suburban or rural, school's geographic region, dummy for the school with most Mexican-Americans.

Behavioral variables

"Delinquency" is composed of answers to the following questions: "In the past 12 months, how often did you

- paint graffiti or signs on someone else's property or in a public place?
- deliberately damage property that didn't belong to you?
- lie to your parents or guardians about where you had been or whom you were with?
- take something from a store without paying for it?

- get into a serious physical fight?
- hurt someone badly enough to need bandages or care from a doctor or nurse?
- run away from home?
- drive a car without its owner's permission?
- steal something worth more than $50?
- go into a house or building to steal something?
- use or threaten to use a weapon to get something from someone?
- sell marijuana or other drugs?
- steal something worth less than $50?
- take part in a fight where a group of your friends was against another group?
- act loud, rowdy, or unruly in a public place?"

"Dislike school" is composed of answers to the following questions: "How much do you agree or disagree with the following statements:
- You feel close to people at your school
- You feel like you are part of your school
- Students at your school are prejudiced
- You are happy to be at your school
- The teachers at your school treat students fairly
- You feel safe in your school"

"Exposure to violence" is composed of answers to the following questions: "During the past 12 months, how often did each of the following things happen?
- You saw someone shoot or stab another person
- Someone pulled a knife or gun on you
- Someone shot you
- Someone cut or stabbed you
- You got into a physical fight
- You were jumped
- You pulled a knife or gun on someone
- You shot or stabbed someone"

"Number of school activities" is based on the answer to the following question: "Here is a list of clubs, organizations, and teams found at many schools. Darken the oval next to any of them that you are participating in this year, or that you plan to participate in later in the school year." There are a total of 21 possible activities. Examples include French club, band, yearbook, etc.

"Number of school sports" is based on the answer to the same question as school activities. There are a total of 12 possible sports.

"Risky behavior" is composed of answers to the following questions: "During the past twelve months, how often did you
- smoke cigarettes?
- drink beer, wine, or liquor?
- get drunk?

- race on a bike, on a skateboard or roller blades, or in a boat or car?
- do something dangerous because you were dared to?
- lie to your parents or guardians?
- skip school without an excuse?"

"Trouble at school" is composed of answers to the following questions: "Since school started this year, how often have you had trouble

- getting along with your teachers?
- paying attention in school?
- getting your homework done?
- getting along with other students?"