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Migration, Social Organization, and the Sexual Partners of Mexican Men

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Abstract

We build on recent developments in social organization theory to examine the sexual partnering of Mexican men in a new area of immigrant destination. We elaborate on two levels of contextual influence: 1) how differences in social capital between sending and receiving communities affect partner formation and 2) how neighborhood social cohesion influences immigrants' behavior. Data come from an original survey conducted in Durham, NC and migrant sending communities in Mexico. We show dramatic differences in sexual partnering between Mexico and the U.S. that are directly linked to lack of social networks and familial support. Neighborhood level social cohesion in part counteracts those effects. The role of social capital and neighborhoods, however, is highly gendered. The presence of women is a critical dimension of the social organization of immigrant communities and its effect extends beyond mere partner availability.

Keywords

Hispanic; Immigration; Sexuality; Social organization; STI/HIV Risk

Migration between Latin America, particularly Mexico, and the United States has grown dramatically in recent decades; between 1970 and 2010, the number of foreign born Mexicans in the U.S. increased from less than 1 million to 11.4 million. During this time, Hispanic representation in sexually transmitted infections (STIs), including HIV, grew substantially. For instance, while the number of non-Hispanic (NH) whites living with AIDS doubled between 1993 and 2007, it grew more than 3 times among Hispanics. Moreover, in 2009 the rate of new HIV infections among Hispanic men and women was 2.5 and 4.5 times higher than among NH-whites, respectively. In addition, Hispanics are over-represented among other STIs; in 2008 rates of Chlamydia and gonorrhea were 3.4 and 2.5 times higher, respectively, among Hispanics than NH-whites. Hispanics were also more likely than NH-whites to have contracted HIV/AIDS through heterosexual transmission.¹

Numerous studies around the globe suggest that immigration contributes to the spread of HIV, as sexual risk behaviors (particularly commercial sex) are more common among migrant men (Haour-Knipe and Rector 1996; Parrado and Flippen 2010, Strathdee and Magis-Rodriguez 2008; Thomas et al. 2009). There is also evidence that HIV/AIDS is

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¹See CDC – Aids surveillance reports <http://www.cdc.gov/hiv/library/reports/surveillance/>

spreading across migrant sending areas in Mexico. While the HIV/AIDS prevalence is moderate (0.3%) among the general Mexican population it is 3 times higher (1.1%) among former migrants in sending states where as many as 20% of the persons living with HIV/AIDS had prior U.S. migration experience (Kendall and Langer 2006). In these sending areas, the rate of heterosexual transmission is increasing, particularly among women. Because condom use is rare within marriage, married women have been particularly vulnerable to contracting the disease (Hirsch et al. 2007; Kendall and Langer 2006).

Given the size and continuity of Mexican migration to the U.S. understanding its impact on sexual behavior is a topic of both theoretical and policy relevance for immigrants, their partners, and public health on both sides of the border. The issue is especially significant in new areas of Hispanic destination in the U.S., where immigrant populations have grown rapidly since 1990. These “new destinations” lack an established immigrant community and are characterized by highly uneven sex ratios, potentially magnifying the impact of migration on sexual partnering. Despite its significance, the social factors connecting migration and sexual behaviors remain poorly understood. Most studies on the subject rely on data collected exclusively in the U.S., limiting the ability to disentangle the role of personal characteristics from more structural determinants of risk behaviors (Organista et al. 2004). As a result it is unclear whether practices observed in the U.S. are a continuation of behaviors brought by migrants from countries of origin or if they are a product of the migration experience itself, including both the disruptive impact of migration on social networks and the effect of exposure to a different social context. The lack of information on how social context shapes partner choices among immigrants is also a major impediment to the formulation of effective health policy interventions.

Accordingly, the main goal of this paper is to investigate the interactional and contextual mechanisms connecting migration and sexual partnering among immigrant Mexican men to the Durham, Carrboro, and Chapel Hill area of North Carolina (hereafter simply “Durham” where the majority of respondents live), a new Hispanic destination. We take a comparative, cross-national approach. Our main emphasis is on understanding the factors that shape the reconstruction of sexual practices after migration. Our theoretical framework builds on classical and new developments in social organization theory that directly connect differences in individual behaviors to differences in the structure of social support and control between sending and receiving contexts both at the individual and neighborhood level. A central contribution of the study is the incorporation of gender relations as a central aspect of the social organization of immigrant communities. Extending Hagan’s power-control theory (1988), which builds on feminist theories (Ferree 1990; Riesman 2004) to relate differences in risk behaviors between men and women to gender inequities, we investigate how both immigrants’ social capital and neighborhoods vary in their gender composition and what this portends for sexual partnering, providing a social organization explanation of the role of women in emerging Hispanic destinations.

International migration and social organization

Understanding how social structure and context shape individual behavior has long been a cornerstone of sociological inquiry. Classical social (dis)organization theory was formulated

in part to explain changes in these processes among European immigrants to the U.S. In their landmark study of Polish peasants in Europe and the U.S. Thomas and Znaniecki (1920) argued that under certain conditions migration was a highly disorganizing experience. For young, predominantly male, Polish peasants in the U.S. the process of relocation to a foreign environment eroded established channels of social control and support that were forged in communities of origin, altering the group processes that regulate behaviors and putting immigrants at risk for a plethora of negative outcomes.

In the decades that followed, social (dis)organization theory provided much of the foundation for studies connecting context and individual behavior. While early studies tended to frame migration as a universally disorganizing force, subsequent research documented wide variability in adaptation according to immigrants' age, race, gender, social class, and national origin. These studies emphasized that there are different types of immigrants (including labor immigrants, professionals, entrepreneurs, and refugees/asylees) originating in different countries with variable levels of human and social capital. These context-of-origin characteristics interact with the context of reception, which includes government policies, labor market conditions, and the presence or absence of a co-ethnic community. This context can run the gamut from receptive to discriminatory, and vary tremendously in the potential for social mobility and adaptation for newly arriving immigrants (Portes and Rumbaut 2006).

The emphasis on context of origin and reception in the immigrant adaptation literature has been especially useful for understanding variation *across* national origin groups. However, it also contributed to the relative neglect of the interpersonal mechanisms that were the original focus of social organization theory, limiting our ability to understand *within-group* variation. This is particularly problematic in the area of personal relationships where differences in the disruption of interactional and contextual processes could mediate the impact of migration on behavior.

Conceptual framework

To investigate these issues our analysis systematically links personal and neighborhood level social organization to sexual partner behavior (Laumann et al. 1994). The framework is illustrated in Figure 1. The dependent variable distinguishes four types of sexual partners in the previous year: none, stable, casual, and sex worker. These partner types are loosely associated with differential levels of STI risk, and are also important more generally as indicators of well-being. Several studies have shown that stable partnerships are associated with higher levels of well-being, better health outcomes, and greater life satisfaction (Harris 2010). As such, the maintenance and reconstruction of stable sexual relationships after migration, either through family reunification or the formation of new unions in the United States, is a critical indicator of the broader process of immigrant adaptation and adjustment, with important implications for immigrants' health and family processes. We maintain the original emphasis in classical social organization theory of comparing sending and receiving areas to evaluate the impact of migration on behavior (Thomas and Znaniecki 1920). However, building on prior studies, we expect the consequences of migration to be mediated

by four specific domains, namely migration characteristics, social capital, neighborhood context of reception, and gender structures.

Migration characteristics

The first domain includes migration related characteristics, specifically time in the U.S., English language ability, and legal residency. As time in the receiving area grows immigrants are more likely to reconstruct the social relations disrupted by migration and rebuild sexual partnerships in a manner similar to those prevalent in sending communities, where stable partners are the dominant form. While the reconstructive role of time in the U.S. has long been recognized (though not consistently supported empirically) in the immigrant adaptation literature, there is surprisingly little elaboration of the effect of documentation on immigrant health related behaviors. From a social organization perspective, being a legal resident is likely to enhance feelings of belonging and settlement that might discourage actions perceived as detrimental for the community, such as commercial sex, and foster sexual partnerships similar to those prevalent in communities of origin. Similar considerations apply to English language ability, which potentially expands the dating market of immigrant men, facilitating access to non-Spanish speaking partners.

Social capital

The second domain expected to mediate the connection between migration and sexual partners is social capital. Coleman defined social capital as a resource that accrues to persons by virtue of their social ties which can be used to achieve their goals and interests (1988). These resources can be especially consequential for immigrants, as the act of migrating variably disrupts these ties. Prior studies have shown, for instance, that social capital contributes to national origin differences in immigrant adaptation (Nee and Sanders 2001). We expect two types of social ties to be particularly consequential. The first relates to connections with immediate and extended family. It is common in the context of Mexican migration to the U.S. for married men to migrate alone while their wives remain in their communities of origin. In addition, for single men migration frequently coincides with departure from the natal home. Thus, migration often entails separation from both immediate and extended families, significantly reducing the face-to-face contact with relatives that protect against exposure to risk and affect partner formation in communities of origin. In addition to a decline in family contact, U.S. migration also frequently entails increased contact with friends. If these social networks connect individuals to others engaged in casual or commercial sex, they could further discourage the formation of more stable relationships (Haynie 2001).

The second type of social capital expected to affect sexual partnerships relates to involvement in organizations and activities beyond regular work and family life. Community involvement has long been the focus of campaigns intended to reduce risk behaviors among adolescents (UN 2003) and have also been promoted among Hispanic immigrants (Rhodes et al. 2006). For immigrants, participation in sports teams, grass-roots organizations, and religious services provides access to social networks and potentially acts as a form of social capital that facilitates the reconstruction of intimate relationships.

Neighborhood context of reception

There is increasing recognition that in today's era of mass migration the neighborhood context of reception directly affects immigrant adaptation and health risks (Bond Huie, Hummer, and Rogers 2002; Vega et al. 2011). Immigrants are not randomly distributed within metropolitan areas, but rather tend to cluster in well-defined neighborhoods where socioeconomic disadvantages are variably concentrated (Frank, Cerdá, and Rendón 2007). Two main sources of neighborhood effects are particularly salient. The first refers to the structural characteristics of communities, namely poverty, ethnic heterogeneity, and residential instability. They are expected to limit the group-level capacity of communities to generate the formal and informal channels of social support that can help reconstruct sexual partnerships.

Neighborhood economic disadvantage could signal a general inability of the local community to regulate the behavior of its members, including preventing commercial and other temporary sexual relations. At the same time, several studies have highlighted the positive effect of a sizeable and concentrated co-ethnic community on immigrant outcomes (Portes and Rumbaut 2006). Residing in a more homogeneous ethnic environment may reduce the sense of anonymity associated with mobility and enhance the protective mechanisms emanating from interactions with relatives or acquaintances from Mexico. Finally, population turnover often disrupts social relationships. Neighborhoods that concentrate recent arrivals are likely to lack the social networks and sense of belonging necessary to foster more stable sexual relationships. To the extent that there is variation in these structural characteristics across immigrant receiving neighborhoods they are likely to translate into different patterns of partner behavior.

The second source of neighborhood effects refers to collective efficacy. Sampson and colleagues define collective efficacy as communities' capacity to mobilize on behalf of shared goals (Sampson 2012). The concept draws attention to conditions of social cohesion and trust that lead to the mutual engagement of residents in the protection of community members. Collective efficacy can be highly relevant for immigrant adaptation. Especially in new destinations, immigrants tend to reside in conditions with varying degrees of isolation. To the extent that some neighborhoods have more limited social interactions and mutual support, they will undermine the conditions of trust and cohesion necessary to reconstruct more stable sexual relations.

Gender: micro and macro effects

The highly unbalanced sex ratio of Mexican immigration to new destinations also necessitates consideration of the gender dimensions shaping immigrant adaptation. The connection between gender and the social organization of immigrant communities has not received systematic attention in quantitative studies of immigrant adaptation and well-being (Flippen 2013). For the most part, prior elaborations follow the tenets of demographic-opportunity theory (Guttentag and Secord 1983), which argues that the likelihood of forming cross-sex relationships is largely determined by the availability of opposite-sex partners. The overarching expectation is that when the relative number of women is large, men will be less

likely to commit and more likely to engage in multiple and short-term relationships. The converse is expected in contexts of a numerical shortage of women (South and Trent 2010).

From a social organization perspective, however, one problem with the theory is that it focuses almost exclusively on the implications of imbalanced sex ratios for stable unions and number of partners, while neglecting the impact on other partner types. Studies that distinguish between partner types often report results that are at odds with demographic-opportunity theory. For instance, Browning and Olinger-Wilbon (2003) found that Chicago men engaged in more short-term relations in neighborhoods where women are relatively scarce. Similarly, qualitative studies of immigrants suggest that a dearth of women pushes single men into temporary sexual relations, especially with sex workers. Moreover, the focus on stable partner formation fits especially poorly with experience of unaccompanied married men, who already have stable unions in Mexico but may have additional partners in the U.S.

More importantly, from a social organization perspective, women's role might extend beyond that of potential partners. In an early and insightful elaboration of the importance of gender composition for social organization, Kanter (1977) argued that because the extent of contact across social groups is a function of their proportional representation, settings with different compositions differ *qualitatively* from one another. The main implication is that the presence of women can also affect sexual partnerships in immigrant communities through its effect on interaction dynamics and social organization.

Specific expectations can be derived by extending power-control theory (Hagan et al. 1988). Integrating feminist scholarship into theories of risk-taking behavior, Hagan and colleagues argue that there is a gender-based stratification in social relations with women more frequently the instruments and objects of informal social control than men. In patriarchal societies, the historical differentiation between market work as the realm of men and household activities as the domain of women renders surveillance, caring, and other aspects of interpersonal affect primarily the purview of women (Flax 1978; Glenn 1994, 2002; Haug et al. 1999; Marx Ferree 1990; Ruddick 1980). Patriarchal families also exert higher degree of control over daughters than sons which contribute to lower risk preferences among women than men. These tensions have long been recognized in the feminist literature (Flax 1978; Marx Ferree 1990; Ruddick 1980). Especially in the case of mother-daughter relationship scholars have pointed out the conflict between nurturance and autonomy and the difficulties women face in patriarchal families where "the mother is the primary nurturer and the father is the symbol of authority (Flax 1978: 171)."

Most tests of power-control theory have focused on the position of women as *objects* of social control (Grasmick et al. 1996). The *instrumental* role of women as agents of socialization has only been studied as it relates to children, but could be extended further as it likely affects broader processes of male-female interactions (Andersen 2007; Risman 2004). For instance, research in Mexico has documented that women, especially mothers, sisters, and mother-in-laws, are often the moral centers of the family with influence over adult men's behavior (Gutmann 1996). Similarly, ethnographic accounts have emphasized that "decent" women must be shown respect, which includes behaving well around them (Hirsh et al. 2007).

We expect the instrumental role of women to operate both at the individual and neighborhood level. At the individual level migration alters not only the availability of social capital between sending and receiving areas but also the gender composition of social interactions. Residence with a non-partner woman, be it a mother, sister, or aunt, is a nearly universal phenomenon among single men in Mexico. Living arrangements in the U.S., however, are markedly different, with multiple men often sharing apartments with no female presence, especially in new destinations. This type of migration-related disruption in living arrangements alters the social organization of communities, with important implications for health behaviors.

The presence (or dearth) of women can also shape immigrant adaptation at the aggregate level. The highly uneven sex ratio in new areas of destination provides a challenge to the entire immigrant community, but because women are unevenly distributed across immigrant neighborhoods this challenge is greater in some areas than in others. From a social organization perspective, having women in the neighborhood can contribute to a greater sense of community. To the extent that the presence of women translates into a neighborhood level dimension of social organization it can prevent the proliferation of what could be regarded as inappropriate behaviors, such as commercial sex, and encourage the formation of more stable partnerships.

Finally, our framework also accounts for the personal gender beliefs that affect sexual relations. Embedded in past interactions and socialization processes, beliefs can be particularly significant for understanding the immigrant experience since norms and ideas brought from communities of origin can affect behaviors in the U.S. While recent studies have challenged the stereotypical representation of Mexican masculine ideology, that emphasizes family responsibility and honor but also domination over women (Gutmann 1996), personal differences in identification with more rigid gender expectations may also shape partner behavior, encouraging in particular casual and commercial encounters.

Data and Setting

We test our framework using original data from the *Gender, Migration, and Health among Hispanics* study. The study collected a community based participatory survey in the Durham, Chapel Hill, and Carrboro metropolitan area of North Carolina (for the sake of expediency referred to as “Durham,” where the majority of respondents lived) and in eight migrant sending communities in Mexico. The survey data was collected in two waves: 2001-2 and 2006-7. The Durham area is a particularly interesting setting for examining the connection between social organization and partner behavior. Hispanic immigrants were drawn to the area in the 1990s in response to the high-tech boom in the nearby research triangle and the concomitant demand for workers in construction and service industries. As a result, the Hispanic population in the area experienced explosive growth, from less than 1 to 12 percent of the total population between 1990 and 2010. The area is part of a larger trend toward increasing Hispanic migration to nontraditional destinations throughout the southeastern U.S. (Flippen and Parrado 2012).

The relatively recent arrival of Durham Hispanics is evident in data from the 2000 Census, which shows that nearly 75% of area Hispanics are foreign born, with more than 85% entering the U.S. after 1990. Not surprisingly, the vast majority of Hispanic immigrants is undocumented, exhibits low levels of English fluency, and is concentrated in low-skill employment with little occupational diversity; more than half of employed immigrant men worked in construction alone (Flippen 2012). Like many new immigrant destinations, the gender composition of the Hispanic population is highly uneven with more than 2 men aged 20 to 29 for every woman in the same age range.

The relatively recent development of the Durham Hispanic community required special considerations to approximate a representative sample. Our study relied heavily on Community Based Participatory Research (CBPR) and included community participants as collaborators in the research process. In our case, a group of 14 Hispanic men and women from the Durham community were directly involved in every stage of the project, including formulation and revision of the questionnaire and identification of survey locales. In addition, the CBPR group was trained in survey methods and conducted all interviews, facilitating entry into the still nascent Hispanic community, helping us achieve a refusal rate of only 10.7 percent, a figure that compares favorably with those reported in other studies of recent immigrants, and generally ensuring the quality of information collected. To enhance the reliability all surveys were conducted by same-sex interviewers. While the interviewers were generally more educated and established than the average Hispanic immigrant in the area, they shared common experiences of migration, including relatively recent arrival. In addition, they were not only fluent in Spanish but also spoke with similar accents and expressions as the interviewees and were sensitive to national and regional origin differences. Most importantly, they were not intimidating and were able to establish an open rapport with interview subjects that enhanced the quality of the survey data collected. Moreover, we continuously monitored the information collected to assess its reliability. Each completed survey was reviewed by an academic member of the team to ensure consistency across interviewers. Finally, throughout the project we maintained monthly meetings where interviewers would share their experiences, discuss difficulties in registering survey information, and compare approaches (Berry et al. 2013).

We followed targeted random sample techniques to approximate a representative sample of the Durham Hispanic community. Based on CBPR discussions and extensive fieldwork in the community, we identified 49 apartment complexes and 13 trailer parks that house large numbers of immigrant Hispanics. We then conducted a census of all housing units in these complexes/trailer parks to construct a sampling frame and randomly selected individual units to be visited by interviewers. Our targeted random sampling procedure resulted in 1,522 face-to-face interviews with immigrant Hispanic men and women between 18 and 49 years of age in the Durham area. For the purposes of this analysis the sample is restricted to the 994 men of Mexican origin in the survey.

Figure 2 maps the distribution of apartment complexes and trailer parks included in our sample across the Durham area together with Census block level information on percent Hispanic. To evaluate potential bias arising from targeted random sampling, we compared our sample with data from the 2000 Census. Block level information shows that over 80% of

Hispanics in the area reside in apartments and blocks similar to those included in our sampling frame and comparison of socio-demographic characteristics such as age, education, employment status, wages, and time in the U.S. show no major differences across data sources (Parrado, McQuiston, and Flippen 2005).

One advantage of our targeted design is that it allowed for the collection of “neighborhood” level information. Researchers have become increasingly interested in strategies to define neighborhoods that reflect the social networks involved in local area interactions (Sampson, Morenoff, and Gannon-Rowley 2002). In that respect, our spatial specification of neighborhoods departs from most studies of “neighborhood-effects” that overwhelmingly rely on geographic boundaries defined by the Census Bureau or other agencies, typically census tracts. In our case, though, we use the apartment complexes and trailer parks used for our sampling frame as proxies for neighborhoods. Even though smaller than census tracts, the apartment complexes more closely approximate theoretical conceptualizations that view neighborhoods as spatially defined subsections of a larger community that work as ecological units where individual interaction is affected by demographic, economic, and cultural characteristics of the area (Sampson, Morenoff, and Gannon-Rowley 2002). Spatially, this is illustrated in Figure 3, which presents aerial views of two typical apartment complexes. The sampling units have clearly defined geographic boundaries that separate them from the larger metropolitan environment and allow their residents to identify them by name. Ranging in size from 42 to 872 units, with 199 units on average, these complexes often contain public spaces such as recreation rooms and laundry facilities, and often even pools or small fields used for impromptu soccer matches. These are the spaces in which residents spend much of their free time, develop friendships, get together to play cards or drink, and recreate during the weekend. Especially for the study of sexual partnering, they comprise a better measure of neighborhood context than larger, administrative divisions such as census tracts, since they more closely reflect the social networks of neighbor interactions (Entwistle 2007). For the analyses of the impact of local conditions on individual behavior we restrict the sample to the 32 apartment complexes with at least 10 male respondents.

Information from Mexican communities comes from a random community sample of 100 men in each of eight sending municipalities (N=800): two in Guerrero and Michoacán and one each in Guanajuato, Hidalgo, Puebla, and Veracruz. The Mexican communities were purposively selected to represent different areas of out-migration based on the place of origin of the first 200 Mexican interviewees in Durham. The place of birth of the Mexican population in Durham is quite diverse; the survey registered over 250 origin communities. However, traditional sending states account for the majority (62%) of immigrant origins.

Analytic strategy and model estimation

Our analytic strategy is to first compare the sexual partners of immigrant men in Durham to those of their peers in Mexico and then model type of partner in the U.S. We focus on opposite-sex partners; only 1.5% of male respondents reported sex with other men, which is consistent with estimates in Mexico and among migrant farm laborers in California (Pulerwitz et al. 2001). While an important topic in its own right, our sample was too small

to analyze this behavior separately. Our dependent variable is thus reported type of opposite-sex partner in the previous year. Respondents were asked whether they had sex with a sex worker, casual partner, stable partner, or a spouse in the previous year; the reference category is no partner. The descriptive results show that it is almost exclusively unaccompanied men (i.e., single men and married men whose wives continue to reside in Mexico) who report non-stable partners; we therefore restrict the multivariate analyses to unaccompanied men.

Our explanatory variables follow the framework illustrated in Figure 1. Migration characteristics include time in Durham and dummy indicators of legal status and being able to speak at least some English. Social capital is captured by a dummy indicator of spousal separation (i.e., married men unaccompanied by their wives); whether the respondent engages in weekly contact with family; and whether he has weekly contact with friends. We also include dummy variables indicating whether the respondent participates in sports activities, attends church regularly, and participates in a local formal organization. Rigid gender beliefs about sexuality are measured with an index constructed as the sum of agreements with three statements: “It is a good idea for men to have a lot of sexual experience before they get married,” “If a man has an extramarital affair, his wife should just keep quiet and accept it,” and “Women don’t need to have sex as much as men do.” Higher values indicate more traditional attitudes (Pulerwitz, Gortmaker, and DeJong 2000).

We also include three measures of community-level structural conditions. Because the neighborhood unit of analysis in our case is the apartment complex or trailer park, rather than census tract, we are restricted to the data collected in our survey. Our neighborhood measures are thus computed by aggregating the responses of all surveyed residents of a given apartment complex. Economic disadvantage is measured by the share of neighborhood Hispanics earning less than 8 dollars an hour. While we only interviewed Hispanic immigrants, our screening process entailed visiting all randomly selected housing units and noting the race and ethnicity of ineligible residents. By aggregating this information we were able to calculate Blau’s (1977:78) index of neighborhood heterogeneity, which takes into account both the number of groups and the distribution of the population among them. The index is computed as “ $1 - \sum p_i^2$ ”, where p_i is the proportion of the neighborhood population in a given ethno-racial group, in our case white, black, and Hispanic. The index ranges from 0 to 1, with higher values indicating greater heterogeneity. Finally, population turnover is measured by the proportion of Hispanic residents that are recent arrivals, defined as those with less than 3 years in the area. Collective efficacy was measured by averaging the number of times that residents reported having a family member or friend that would listen to or support them; they trust; knows how things work in the U.S.; could help with errands; and could give them a ride if needed. Higher averages indicate greater social trust and support and are expected to positively correlate with more stable partner behavior.

The individual role of women is captured by a dummy variable indicating whether a *non-partner* adult woman resides in the respondent’s household. At the aggregate level, the effect is measured by the neighborhood share of Hispanic households with at least one adult female resident. In addition, the models include controls for social background characteristics, namely age, education, and hourly wages, as well as formative sexual

experiences, specifically age at first sex and initiation with a sex worker, since they have been found to affect partner behavior over the life-course.

Estimation

Since respondents can report more than one type of partner during the past year the categories in our dependent variable are not mutually exclusive. Accordingly, we estimate separate binomial probit models predicting the likelihood of reporting a particular type of partner during the previous year, with the reference category being no partner. The models are estimated separately using only data on individuals reporting one particular type of partner or no partner and ignoring all others, which makes results comparable to multinomial models with a common reference category (Greene 1996).

An important limitation of analyses relying exclusively on U.S. samples is that they cannot control for self-selection into migration; failure to account for unobserved factors affecting both migration decisions and sexual partnering could lead to biased parameter estimates (Jasso et al. 2004). Our binational design allows us to account for selectivity by jointly estimating selection into U.S. residence and partner type. This implies estimating censored probit models of the following form (Greene 1996):

$$z_s = \beta_s' x_s + \varepsilon_s, y_s = 1 \quad \text{if } z_s > 0, y_s = 0 \quad \text{otherwise,} \quad (1)$$

$$\begin{aligned} z_m &= \beta_m' x_m + \varepsilon_m, y_m = 1 \quad \text{if } z_m > 0, y_m = 0 \quad \text{otherwise,} \\ [\varepsilon_s, \varepsilon_m] &\text{bivariate normal } [0, 0, 1, 1, \rho] \\ (y_s, x_s) &\text{is observed only when } y_m = 1 \end{aligned} \quad (2)$$

where y_s indexes three partner types relative to no partner and x_s are explanatory variables. In the selection equation (2), y_m is equal to 1 if the respondent resides in Durham and 0 if he resides in Mexico. Selectivity arises because we only observe y_s when y_m equals 1.

One difficulty in this approach is the need to identify instruments that would affect U.S. residence but not sexual partners. Thus, in addition to common variables included in equation (1) (age and years of education), equation (2) also includes instrumental variables, namely whether the first occupation in Mexico was in either agriculture or construction, whether the respondent was married at time of migration or survey, and whether he had a sibling with migration experience at time of migration or survey. The instruments have been found to affect migration (Massey and Espinosa 1997) but are arguably less likely to affect current sexual partners.² The model assumes the error terms in equations (1) and (2) to

²In practice it is extremely difficult to identify variables that predict migration but *not* partner type. We evaluated the appropriateness of our model specifications following the statistical test proposed by Leung and Yu (1996) and Puhani (2000). They argue that the degree of collinearity between the explanatory regressors predicting partner type and obtained from estimating the likelihood of Durham residence (equation (2)) is the decisive statistical criterion to judge the appropriateness of the model specification since it captures the extent to which the statistical specification separates the two behaviors. Specifically, when the condition number of the matrix of the regressors (the inverse Mills ratio from equation (2) predicting partner type) exceeds 20 then the model is not robust and the instrumental variables are not separating the probability of migration from type of partner. In our case, the condition number (estimated using the “cndnmb3” command in Stata) was found to be 16.7; 17.1; and 16.6 for sex worker, casual, and stable partner, respectively.

follow a bivariate normal distribution with $\rho = \text{cov}[\varepsilon_s, \varepsilon_m]$. Positive ρ indicates that after accounting for observable effects, unobservable characteristics affecting U.S. residence and partner type are positively correlated. Finally, we estimate robust standard errors to correct for the clustering of observations within neighborhoods.

Descriptive results

Table 1 presents descriptive statistics comparing Mexican men's partners and social capital by marital status across contexts. Roughly 39% of men are single in both Mexico and Durham. However, 23% of men are married but unaccompanied by their wives in Durham, a phenomenon that is non-existent in Mexico. As a result, while the vast majority of men in Mexico (63%) are residing with a spouse, only 38% are doing so in Durham. Most of the variation in sexual partnership across contexts occurs within marital status categories. Among single men, Durham residents are less likely to report no partner than in Mexico (28% vs. 45). More importantly, there are dramatic differences in partner type across contexts. Only 5% of single men in Mexico reported a commercial partner compared to a full 38% in Durham. Differences in casual partnerships are less dramatic but likewise show significantly higher incidence in Durham (41%) than Mexico (31%). The largest disparities, however, obtain for stable relationships. The proportion of single men reporting a stable partner is 32% in Mexico compared to a mere 11% in Durham.

The behavior of unaccompanied married immigrants in Durham also has important implications for the process of immigrant adaptation. Results show that these men frequent sex workers at rates comparable to those of single men (33.3 and 37.8 percent, respectively). Unaccompanied married men were less likely, however, to report a casual (22%) or stable partner (6%), relative to single men (41 and 11%, respectively), and were more likely to report no partner (49% vs. 28%). Results also show some differences across contexts in the behavior of married men residing with their wives. However, these are not as pronounced as among single and unaccompanied married men. The multivariate analyses thus focus on these two groups.

Table 1 also describes the independent variables in our analysis. For all men, migration is associated with a steep decline in visits with family; while 48% of single men in Mexico report weekly visits with family, only 32% do so in Durham. For unaccompanied married men, a scant 18% report weekly visits with family in Durham, relative to 45% for accompanied married men in Durham and 53% of married men in Mexico. The importance of friends to social attachment is only slightly weaker among single men in Durham relative to their peers in Mexico (58.0 vs. 61.3%), and actually stronger among married men. While 30% of married men in Mexico report weekly visits with friends, roughly 43% of accompanied and unaccompanied married men in Durham do so. Thus overall we see a dramatic decline in time spent with family, and an increase in the primacy of ties to friends in the Durham context.

At the same time, single men in Durham are much less involved in their local churches than their counterparts in Mexico, 72 relative to 48% among single men. Accompanied married men report the highest, and unaccompanied married men the lowest, rates of church

attendance in Durham. Accompanied married men are also more likely than other men to report involvement in local organizations, though both accompanied and unaccompanied married men are far less likely than single immigrants to participate in soccer leagues. Thus overall, unaccompanied married men are least involved in Durham social networks, while accompanied married men are more involved with church and single men in sports activities.

With respect to immigration characteristics, it is not surprising that accompanied married men average the longest time in Durham, the highest level of English fluency, and highest rates of documentation (still a meager 7%). While unaccompanied married men average 6 months longer residence in Durham than single men, they exhibit the lowest levels of English language ability and documentation.

Arguably, the most dramatic difference across contexts relates to the gender component of personal contacts. Single men in Mexico almost universally (87%) reside with a non-spouse female resident, such as a mother, aunt, or sister, compared to only 35% in Durham. For unaccompanied married men this figure is even lower; a scant 22% reside with a female resident, mainly due to the smaller proportion of unaccompanied married men residing with their mothers as compared to single men. At the same time the share of married men residing with their spouses and an additional female resident (which does not include daughters) is higher in Durham than Mexico, 16 relative to 22%, since in many cases immigrant families accommodate other female relatives or acquaintances from communities of origin. Gender attitudes also differ across contexts; consistent with prior research, men in Durham average stronger patriarchal orientations than their peers in Mexico (Parrado and Flippen 2005).

Neighborhood level variation in social organization

In addition to variation in the disruption of social capital between Mexico to Durham, neighborhood context also varies widely in ways likely to exert an independent effect on partner behavior, as illustrated in Table 2. While on average 45% of Hispanic neighborhood residents in Durham are newly arrived, in some communities a mere 23% are recent arrivals while in others fully 75% have spent less than 3 years in the area. Considerable variation is evidenced for ethnic heterogeneity as well; while on average the Blau index is 0.3, it ranges from almost no heterogeneity (completely Hispanic) in some neighborhoods to 0.5 in others. Likewise, while on average 29% of Hispanic neighborhood residents earn less than \$8 an hour, in some communities as few as 6% do so, while in others as many as 52% report low earnings. With regard to collective efficacy, the neighborhood average on our 5-level indicator of social support is 2.5. Most importantly, neighborhoods exhibit considerable variation in gender composition. In the average neighborhood 61% of all Hispanic housing units contain at least one woman. However, in some neighborhoods just under one-third of Hispanic households contain a female resident, while in others nearly all (94%) do.

Multivariate results

Individual level migration characteristics, social capital, and gender effects

Table 3 reports results from censored probit models predicting the likelihood of having a commercial, casual, or stable partner, relative to no partner, among unaccompanied men in Durham. Estimates show that time in Durham affects partner type in a non-linear manner. Predicted results show that the likelihood of sex worker use is actually lower among men with little experience in Durham, peaks among men with 3 years in the area, and declines among men with longer stays. Casual partners, in contrast, are the most prevalent form of sexual encounter among men that have resided in the area for 8 years or longer. The most dramatic pattern is evidenced for the probability of having a stable partner which increases steadily from 3 to 13% across men with 1 to 10 years in Durham. However, while cross-sectional estimates suggest that time in Durham moves men away from commercial and toward casual and stable relationships, the effect is relatively modest and time in Durham alone seems unlikely to produce the level of stable partners prevalent in Mexico. Results also indicate a very strong relationship between legal status and commercial sex. Predicted probabilities show that for the average immigrant, documentation reduces the likelihood of sex worker use relative to no partner by nearly 40 percentage points, from around 50 to 10%.

Estimates for social capital indicators show that unaccompanied married men are significantly less likely than their single counterparts to report a commercial sex partner (-0.453), largely because they are more likely to report no partner during the previous year. However, the negative effect is more than twice as large on having a casual (-1.045) or stable partner (-1.040) in Durham. The difference in magnitude is consistent with the notion that in the case of family separation married men shun dating even more than commercial sex. In explaining the pattern, our community informants highlighted that for unaccompanied married men commercial sex is not necessarily perceived as “cheating.” Instead, it is commonly justified as the result of biological needs. In contrast, casual, non-commercial relationships are viewed as the first step toward union dissolution and are considered a more serious violation of the fidelity and commitment assumed in marriage.

The effect of friendship networks also varies by partner type. We see no evidence that weekly visits with friends are associated with commercial partners. However, they are a positive force affecting casual (0.233) and stable partners (0.356). Stable partners are the most common type of sexual relations among single men in Mexico, but the least common among men in Durham. It is likely though that the reconstruction of friendship ties and non-commercial partner formation reinforce each other, with friends providing men access to women outside of the commercial sex setting and more stable partners providing men access to a broader pool of potential friends.

Family networks are also related to partner behavior, but the mechanisms operate differently than friendship ties. Weekly visits with family are negatively associated with commercial partners (-0.323); for the average single or unaccompanied married man weekly visits with family reduces the likelihood of visiting sex workers by 12%. The maintenance of family ties appears as a salient form of social capital reducing exposure to commercial sex though

not necessarily expanding the dating market for men. Contrary to expectations, involvement in local organizations, including church and sports, does not predict sexual partnering.

Arguably the most salient form of social capital affecting partner behavior stems from the presence of women at the household level. For instance, unaccompanied men are 15% less likely to report a commercial partner if an adult (non-partner) woman resides in the household (-0.399). Similar to the impact of regular visits with family, female residents constrain commercial partners but do not automatically expand the casual or stable partners of Mexican men. It is worth emphasizing that it would be relatively easy for men to visit sex workers outside the household by going to a friends' house or brothel. Thus women's influence extends beyond the mere dyadic relationship. Consistent with the instrumental expectations embedded in power-control theories, CBPR discussions indicated that men feel the need to show respect for "decent" women and also report feelings of embarrassment from participating in what are perceived as inappropriate behaviors. The end result is that the unbalanced gender context in the U.S. undermines an important source of social capital and accentuates commercial sex among single and unaccompanied men. There is no evidence, however, that behaviors are driven by gender ideology, which shows no relationship with partner behavior.

Estimates from our selection equation (bottom panel Table 3) show that our instruments are strong predictors of Durham residence. Compared to non-migrants, those in Durham are more likely to be among the least educated, come from an agricultural or construction background, be single, and have a sibling with prior migration experience. Considering the effects of the two regressions jointly shows that even though higher education does not seem to move men away from commercial sex and into stable partnerships, the effect is indirect through the negative effect of education on the likelihood of residing in Durham. The correlation between the error terms across the two equations (ρ) indicates that the correction for selection is in fact statistically significant in the case of commercial and stable partners, which validates the need for models that account for omitted variables affecting both migration and partner type. The direction of ρ varies across type of partner. It is negative for commercial but positive for stable partners. Substantively this implies that after accounting for observed covariates, the unobserved characteristics associated with selection into Durham residence would make Mexican men *less likely* to have a commercial partner and *more likely* to have a stable partner. One possibility is that omitted variables might include orientations and preferences not captured in our covariates. The over-representation of rural and less educated men among Durham residents relative to the general population in Mexican sending communities could make them more conservative in terms of partnering behaviors. Regardless, the direction of ρ across partner types reinforces the image that it is context and not personal orientations that drives partner behavior.

"Neighborhood-level" effects

Table 4 reports results of censored probit models similar to those estimated above but that also include neighborhood level characteristics as predictors. Since the individual-level and selection effects are similar to those obtained in the previous analysis we report only the neighborhood level indicators. Table 4 reports 2 columns of results for each behavioral

outcome. Since neighborhood predictors are likely to be correlated, the first column for each behavior (columns 1, 3, and 5) presents a summary of estimates obtained from 5 separate models including one predictor at a time. Columns 2, 4, and 6 report estimates from full models. The final column (7) further investigates the pattern of association between collective efficacy and gender conditions in affecting stable partnerships.

Results show that neighborhood characteristics do correlate with sexual partners in a manner consistent with our social organization model. With respect to structural disadvantages, both population turnover and ethnic heterogeneity affect partner behavior. Specifically, in neighborhoods where a greater share of Hispanic men is recently arrived, the likelihood of having a stable relationship is diminished. If we apply the extremes of our distribution of recent arrivals, the predicted probability of having a stable partner is 11% in neighborhoods where only one-quarter of residents are recent arrivals, compared to a scant 1% in neighborhoods where 75% of immigrants are newcomers to Durham. Results also show that unaccompanied men are more likely to engage in commercial or casual sex in neighborhoods that are more ethnically heterogeneous. Collective efficacy, in contrast, reduces the likelihood of casual partners. Thus, higher levels of heterogeneity and lower collective efficacy appear to enhance anonymity and inhibit the development of conditions that reduce commercial and casual partners.

The most salient impact of neighborhood context on sexual partners, however, relates to the gender composition of the community, which affects both commercial and stable partners. Predicted results from column 2 show that for the average unaccompanied man, the likelihood of sex worker use in neighborhoods where 30% of Hispanic households have a female resident is 42%, relative to only 27% in neighborhoods where 90% contain a woman. The CBPR group related this finding to men's perception that commercial sex is not appropriate in areas where "respectable" women and families reside but also to the behavior of sex workers themselves. Sex workers tend to avoid neighborhoods with women and families, mainly because they provide fewer avenues for the trade and represent greater threat of public censure. Regardless, unaccompanied men residing in more balanced gender environments do not seem to seek out commercial partners outside the neighborhood, which again highlights both the importance of context and the centrality of women's presence to social organization.

Gender composition is also associated with stable partnerships. If we take the 2 extremes observed in Durham, the predicted probability of having a stable partner in neighborhoods where women are represented in only 30% of housing units is a mere 8%, compared to 30%, for men living in neighborhoods in which 90% of households contain women. While this is a powerful effect, it is reduced to non-significance in the final model when all neighborhood effects are included simultaneously. To investigate the pattern of association column 7 documents the salience of both population turnover and collective efficacy for stable partner formation. Results show that after accounting for the share of immigrants who are recently arrived, the higher the level of collective efficacy in the neighborhood the greater the likelihood of having a stable partner. Population turnover and the presence of women are in fact strongly and negatively correlated (Pearson coefficient -0.43) suggesting that the neighborhoods that concentrate recent arrivals also suffer a dearth of women with direct

implications for understanding the concentration of disadvantages across immigrant neighborhoods.

A note on neighborhood sorting

One concern in analyses of neighborhood effects is that unobserved factors such as personality or preferences could shape both the sorting of individuals into neighborhoods and the outcomes under consideration (Sampson and Sharkey 2008). To address this concern we investigated the sources of uneven neighborhood conditions. The emergence of male dominated areas in Durham occurred simultaneously with the sudden inflow of immigrants. Of the 75 census tracts in Durham and Orange counties in NC, only 11 had a sex ratio of over 105 men per 100 women aged 16 to 34 in 1990. By 2000, in contrast, 32 tracts were this uneven, 10 had ratios in excess of 120:100, and two exceeded 200:100. Areas with such a high degree of male dominance were non-existent both in Durham before migration inflows and in Mexican sending communities. Even if all immigrant men had a strong preference for balanced neighborhoods they are statistically impossible to attain given the composition of the migration flow.

In addition, immigrants' initial place of settlement is often not under their direct control, but rather is determined by social networks. We asked respondents if they had friends or family when they first arrived to the Durham area. Estimates show that 55% of unaccompanied men with only relatives upon arrival were living in neighborhoods with a relatively high female presence (defined as those where at least 55% of Hispanic households contained a female resident, which encompasses 75% of neighborhoods) at time of the survey compared to 43% of those who had only friends (difference statistically significant at $p < .10$). For those with less than 2 years in Durham the differences are even wider, with 63% of those with only family and 49% of those with only friends living in neighborhoods with relatively high female presence.

Regardless, it is possible that unobserved personality or other traits could affect results; especially since immigrants are theorized to possess a risk-tolerant personality (Boneva and Frieze 2001). We investigated the connection between migration and personality traits along several factors, namely risk orientation, sociability, fatalism, and depression.³ If psychological orientations undergird residential location we would expect systematic differences in these dimensions among single men residing in Durham neighborhoods with high and low female presence.

Results are reported in Table 5; the last column tests for differences between those residing in apartments with high and low female presence. Only two traits register significant differences across neighborhood types, and when they do, it is in the opposite direction that one would expect if unobserved factors were driving the association between neighborhood characteristics and partner behavior. For instance, 14% of unaccompanied men in

³We asked respondents the extent to which they agreed with the following: I like to play it safe instead of experimenting with things; I like to take the initiative to meet new people instead of always being with the same acquaintances; and there is no use in planning for the future because most things depend on good or bad luck anyway. Answers were recorded on a 4-point scale ranging from very true to not at all true. Depression was assessed using the 10-item CES-D screening instrument.

apartments with a high female presence reported that it was not at all true that they prefer to play it safe, compared to a significantly lower 8% in apartments with relatively few women. Likewise, unaccompanied men in neighborhoods with fewer women reported being less interested in meeting new people (63%) than those in environments with a higher female presence (73%). There are no differences in terms of fatalism or depression.

The main personality differences are between those residing in Mexico and the U.S., which is accounted for in our statistical model. While there are few differences with respect to risk aversion, larger differences are evident in terms of sociability and fatalism, and most notably for depression, which is far more common among immigrants than residents of Mexico. Overall, we find no evidence that personality traits undergird neighborhood selection within the U.S., reinforcing the importance of context over unobserved individual characteristics in affecting sexual relations.

Conclusions

This study formulates and empirically tests a social organization model of immigrant adaptation to better understand how social context shapes the sexual partnering of Mexican men in new areas of destination. Given the centrality of intimate relationships to personal well-being and the massive scale of immigration worldwide, this is a pressing social concern. We consider two levels of contextual influence: differences in social organization between sending and receiving communities and variation across immigrant-receiving neighborhoods.

Results document dramatically higher sex worker use and fewer stable partnerships in Durham relative to Mexican sending communities, which has direct implications not only for immigrant's overall well-being and adjustment, but also for the transmission of STIs, including HIV, both in the U.S. and internationally (Haour-Knipe and Rector 1996; Thomas et al. 2009). However, there is considerable variation in partner behavior among Mexican immigrant men, and results demonstrate the importance of social organization to this variability. In particular we find that immigrants' social capital in the U.S., especially contacts with family and friends, decrease commercial sex and increase stable, longer term partnerships. While some forms of community attachment, such as participation in formal organizations including the church, did not impact sexual adaptation, others more directly connected with immigration policies, particularly legal status, exhibit a negative association with commercial sex.

We also show the importance of neighborhood context of reception in mediating the disruptive effect of migration on intimate relationships. For unaccompanied men, residing in areas that have more ethnic homogeneity, fewer new arrivals, and greater collective efficacy decreases exposure to commercial sex and increases the likelihood of forming stable relationships. These patterns offer contrasting implications for the impact of spatial assimilation. On the one hand, as men achieve greater residential integration with the native born they are increasingly insulated from the commercial sex that is more common in male-dominated immigrant enclaves. On the other hand, the greater anonymity associated with

living in more heterogeneous areas undermine some of the benefits of moving to more advantaged environments.

The most salient and consistent finding of the study, though, relates to the role of gender in structuring the sexual partnering of immigrant men in new areas of Mexican destination. Extending power-control theory (Hagan 1988), which builds on feminist scholarship (Ferree 1990; Riesman 2004) to relate differences in risk behaviors between men and women to gender inequities, the analysis provides consistent evidence both at the individual and neighborhood level for the role of women in social organization. At the micro level, residence with a non-partner woman is the most prominent factor reducing commercial partners. At the macro level, neighborhoods with a more balanced gender composition exhibit lower rates of sex worker use and higher rates of stable partnerships than male-dominated environments. Most studies on the subject follow expectations from demographic-opportunity theory which focuses almost exclusively on stable union formation and limits women's role to potential sexual partners. In its simplest form, this perspective would expect that a shortage of women would reduce men's casual partnering and enhance stable unions. We find the opposite pattern, suggesting that women's role in the social organization of immigrant communities extends beyond simple imbalances in partner availability.

An important limitation of attempts to assess contextual influences on behavior is the potential for unobserved characteristics to bias results. Our cross-national design allowed us to formulate statistical models that control for the role of unobserved traits in affecting migration and sexual partnering behavior. Results show that if anything migrants' unobserved characteristics make them *less* inclined to commercial and *more* inclined to stable partners. Thus self-selection into migration is not driving the association between Durham context and commercial and casual relationships. We also show that psychological traits do not correlate with residential location in a manner that would produce the neighborhood effects that we report. Overall, the findings highlight the salience of context over cultural preferences and personality traits in undergirding immigrant adaptation in new destinations.

These results offer several suggestions for public health initiatives aimed at immigrant communities. Considerable effort has been invested in reducing sexual risk behavior among immigrant populations, which is viewed as critical to preventing the transmission of HIV and other STIs among immigrant men and their partners (Herbst et al. 2006; Rhodes, et al. 2006). Our findings suggest that the socio-psychological dimensions that can be easily targeted with localized interventions, such as HIV risk perceptions and participation in formal organizations, though important, are not necessarily the central dimensions affecting health risks. Instead, the centrality of social organization points to more difficult to affect mechanisms connected with the dynamics of migration, such as gender imbalances and legal status. Some of these processes could, however, be affected through immigration policies. While politically contentious, to the extent that they contribute to a more balanced gender composition, family reunification policies and legalization are likely to promote more stable relationships and immigrant adaptation more generally.

Finally, while we apply our theoretical framework to men's sexual behavior, the model can easily be extended to other areas of immigrant health and well-being, including mental health, alcohol abuse, and domestic violence. The challenge is to move away from a focus on whether migration results in negative or positive outcomes to a more direct elaboration of the mechanisms hindering or facilitating healthy adaptation. An updated social organization framework has much to offer in that regard.

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Figure 1.
Conceptual Framework

Figure 2.
Distribution of apartment complexes/blocks in the Durham area and percent Hispanic by
2000 Census Block

Figure 3.
Aerial view of two apartment complex neighborhoods

Table 1

Sexual behavior and social capital of Mexican men across contexts

	Durham, NC			Mexico			
	Single	Married		Single	Married		
	(1)	Unaccompanied (2)	Accompanied ^I (3)	(4)	(b)	(5)	(c)
Percent	38.8		22.9		38.2	37.5	62.5
Sexual Partner in Previous Year							
No Partner	27.7	49.1 **	--	44.9 **	--		
Sex Worker	37.8	33.3	3.2	5.4 **		6.8 **	
Casual Partner	41.4	21.5 **	5.3	30.7 **		13.6 **	
Stable Partner ^I	11.1	5.7 **	0.2	32.4 **		3.8	
Migration characteristics							
Years in Durham	3.7	4.2	6.0				
Speaks some English	58.2	48.2 **	70.5				
Documentation	3.9	3.5	7.1				
Social Capital							
Visits friends once/week	58.0	44.3 **	42.9	61.3		30.0 **	
Visits family once/week	31.6	18.0 **	45.0	47.7 **		53.0 **	
Attends Church regularly	48.4	45.6	62.3	71.7 **		77.4 **	
Member of formal organization	2.1	2.6	4.2				
Belongs to soccer league	39.9	28.9 **	26.1	44.0		23.8	
Gender							
Female resident	34.7	22.4 **	22.1	87.0 **		15.6 **	
Gender attitudes	1.1	0.9	0.8	0.5 **		0.5 **	
N	386	228	380	300		500	

(a) Difference between single and unaccompanied married men

(b) Difference between single men in the U.S. and Mexico

(c) Difference between accompanied married men in the U.S. and Mexico

**
difference statistically significant at p<.05^I
For accompanied married men this is in addition to sexual relations with their wives

Table 2

Durham neighborhood level variation in social organization

	Mean	Standard Deviation	Minimum	Maximum
Structural disadvantages				
Recent arrival (%)	45.4	(12.0)	23.1	75.0
Ethnic heterogeneity	0.3	(0.2)	0.1	0.5
Low income (%)	29.4	(11.8)	5.6	52.8
Collective efficacy				
Mean social trust and support	2.5	(0.4)	1.7	3.3
Gender balance				
Households with female residents (%)	61.0	(15.6)	31.6	94.4
N	32			

Table 3

Censored probit models predicting type of partner in the previous year among unaccompanied Mexican men in Durham, NC.

	Sex Worker (1)		Casual Partner (2)		Stable Partner (3)	
Constant	1.679 **	(0.547)	1.044 *	(0.593)	0.417	(0.820)
<i>Migration Characteristics</i>						
Years in Durham	0.409 **	(0.103)	0.174 **	(0.052)	0.241 **	(0.083)
Years in Durham (squared)	-0.056 **	(0.018)	-0.009 **	(0.004)	-0.015 **	(0.006)
Years in Durham (cubic)	0.002 **	(0.001)				
Speaks some English	-0.084	(0.134)	-0.092	(0.143)	0.098	(0.196)
Documentation	-1.086 **	(0.478)	-0.391	(0.348)	-0.147	(0.461)
Social Capital/Bonds						
Married, unaccompanied	-0.453 **	(0.211)	-1.045 **	(0.205)	-1.040 **	(0.225)
Visits friends once/week	0.085	(0.134)	0.223 *	(0.139)	0.356 *	(0.199)
Visits family once/week	-0.323 **	(0.154)	-0.080	(0.150)	0.091	(0.187)
Attends church regularly	-0.126	(0.128)	-0.094	(0.131)	0.063	(0.173)
Member of formal organization	0.094	(0.466)	0.761	(0.469)	-0.073	(0.656)
Belongs to soccer league	-0.005	(0.137)	0.041	(0.136)	-0.055	(0.182)
Gender						
Female resident	-0.399 **	(0.143)	-0.227	(0.139)	-0.340	(0.196)
Gender attitudes	0.061	(0.071)	0.036	(0.074)	0.014	(0.102)
Social Background Characteristics						
Age	0.007	(0.010)	0.011	(0.011)	-0.004	(0.013)
Years of education	0.014	(0.030)	0.012	(0.028)	-0.040	(0.034)
Hourly wages	0.002	(0.022)	0.027	(0.022)	0.039 **	(0.024)
Age at sexual initiation	-0.115 **	(0.023)	-0.115 **	(0.024)	-0.132 **	(0.042)
Sexual initiation with a sex worker	0.911 **	(0.185)	-0.052	(0.244)	-0.222	(0.313)
Uncensored observations	441		428		275	
Selection equation predicting residence in Durham/Carrboro						
Constant	-0.055	(0.229)	-0.351	(0.232)	-0.419 *	(0.251)
Age	-0.003	(0.005)	-0.001	(0.005)	-0.002	(0.006)
Years of education	-0.097 **	(0.013)	-0.074 **	(0.013)	-0.081 **	(0.014)
First occupation in agriculture	0.592 **	(0.110)	0.606 **	(0.113)	0.559 **	(0.123)
First occupation in construction	0.423 **	(0.134)	0.247 *	(0.142)	0.193	(0.158)
Single	0.634 **	(0.095)	0.758 **	(0.096)	0.579 **	(0.105)
Sibling migrated to the U.S. before	0.760 **	(0.093)	0.652 **	(0.095)	0.689 **	(0.104)
ρ	-0.420 **	(0.219)	0.230	(0.268)	0.722 **	(0.216)

	Sex Worker (1)	Casual Partner (2)	Stable Partner (3)
Total observations	1241	1228	1075
Wald Chi-Square	79.28	86.04	40.7

(reference= no partner)

*
p<.10

**
p<.05

Table 4

Censored probit models estimating the role of neighborhood social organization on type of partner among unaccompanied Mexican men in Durham, NC

	Sex Worker		Casual Partner		Stable Partner		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Structural							
Recent arrival (%)	0.003 (0.005)	-0.009 (0.007)	-0.001 (0.007)	-0.003 (0.009)	-0.017 ** (0.007)	-0.010 (0.012)	-0.020 ** (0.006)
Ethnic heterogeneity	0.221 (0.442)	1.594 ** (0.716)	0.938 * (0.568)	0.838 (0.912)	-0.540 (0.744)	-0.911 (1.052)	-0.437 (0.712)
Low income (%)	-0.004 (0.007)	-0.004 (0.007)	-0.011 (0.007)	-0.007 (0.008)	0.006 (0.011)	0.007 (0.011)	0.014 (0.013)
Collective efficacy							
Mean social trust and support	0.066 (0.151)	0.356 (0.221)	-0.241 * (0.157)	-0.044 (0.210)	0.060 (0.229)	-0.102 (0.266)	0.410 ** (0.240)
Gender balance							
Households with female residents (%)	-0.007 ** (0.004)	-0.015 ** (0.006)	0.002 (0.006)	-0.004 (0.008)	0.010 ** (0.005)	0.008 (0.010)	---

Note: Models estimated including individual level controls as well as a measure of apartment complex size.

*
p<.10

**
p<.05

Table 5

Psychological and personality traits by place of residence among single/unaccompanied men

	Mexico	Durham		Statistical significance:		
		Female presence		Comparison group		
		High	Low	1-2	1-3	2-3
	(1)	(>55%) (2)	(<55%) (3)			
Personality traits (Cronbach Alpha: 0.30)						
I like to play it safe instead of experimenting with things						
Very true	46.6	47.6	55.9		**	
Somewhat true	32.2	28.3	30.9			
Not very true	14.9	10.0	5.9		**	
Not at all true	6.3	14.1	7.5	**		**
I like to take the initiative to meet new people instead of always being with the same acquaintances						
Very true	33.9	72.8	63.3	**	**	**
Somewhat true	35.1	19.9	19.7	**	**	
Not very true	23.6	3.1	9.6	**	**	**
Not at all true	7.5	4.2	7.5			
There's no use in planning for the future because most things depend on good or bad luck anyway						
Very true	15.5	31.9	36.2	**	**	
Somewhat true	24.1	21.5	18.1			
Not very true	25.9	14.1	10.6	**	**	
Not at all true	34.5	32.5	35.1			
N	174	191	188			
Depressive symptoms (Cronbach Alpha: 0.78)						
In the past month have you:						
(% agreeing)						
felt depressed?	34.3	51.9	49.4	**	**	
felt that everything you did was an effort?	25.7	55.3	54.7	**	**	
felt that your sleep was restless?	37.0	42.7	37.9			
been a happy person?	84.7	67.1	67.5	**	**	
felt lonely?	35.0	70.8	63.8	**	**	*
felt that people were unfriendly?	10.0	31.5	28.0	**	**	
enjoyed life?	90.0	71.6	71.6	**	**	
felt sad?	49.3	70.2	64.2	**	**	
felt that people disliked you?	16.7	20.1	25.5		**	
felt that you could not get going?	8.0	14.3	23.9	**	**	**
Average depression	2.5	4.2	4.1	**	**	
s.d.	(2.4)	(2.6)	(2.5)			
N	300	349	243			

(reference= no partner)

*
p<10

**
p<.05

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