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ABSTRACT

Social contexts are often ignored as a possible explanation for ethnic group differences in reports of family obligation. One reason is that too often, social scientists rely on the false dichotomy between economic versus cultural explanations as the culprit behind ethnic differences in family behavior. This study adds much needed nuance to the literature on family obligation among ethnic minority youth by using data from urban and rural North Carolina and Southern California to investigate how social contexts are associated with family obligation. Using a sample of Latino adolescents we find that attending schools in neighborhoods with higher concentrations of co-ethnics is positively associated with family obligation, as is having a strong sense of ethnic identity. In addition, we find that among adolescents attending schools in neighborhoods with other Hispanics, levels of family obligation are higher for those with a stronger, rather than a weaker sense of ethnic belonging.

Key Words: Hispanic Americans, development, migrant families

Introduction

Family obligation plays an important role in the lives of ethnic minority and immigrant youth. We define family obligation as the extent to which family members feel a sense of duty to assist one another and to take into account the needs and wishes of the family when making decisions. For Latino youth especially, the consequences of family obligation are numerous. Previous research shows that levels of current financial assistance to the family and promises of future support to the family are higher among Latino youth compared to their White peers (Fuligni and Pedersen 2002). In addition, family obligation is strongly tied to academic motivation and academic persistence (Huynh and Fuligni 2008). Scholars often explain the tendency of Latino youth to place importance on family obligation, often to the detriment of their own health and educational pursuits (Fuligni 2001), as an indicator of cultural traditions such as *familismo*.

Yet structural perspectives (Sarkisian et al. 2007) counter the argument that culture is the reason behind high levels of family obligation among Latinos. For example, previous research on middle-age adults suggests that the socioeconomic status of parents and children is strongly correlated with the adult child’s probability of living with or near parents (Jayakody 1998). However, cultural values, such as the frequency of church attendance and gender ideology, are only weakly correlated with such behaviors. Social class indicators such as parents’ education are also negatively correlated with family obligation among adolescents, but such factors do not explain the difference in levels of family obligation between Latino youth and their White peers.

A third consideration, and one that has received less attention in this debate, is the effect that social context may have on family obligation. Certain social contexts may increase family obligation by enforcing cultural norms that some ethnic groups may already be predisposed to.

However, other social contexts may also decrease adolescents' commitments to the family. For example, children exposed to racially/ethnically discriminatory environments may downplay the importance of values associated with family obligation, if indeed adolescents' ethnic identities are in part derived through their families of origin (Umaña-Taylor and Alfaro, 2009; Brown et al. 2007).

This project uses data on Latino youth from three different social contexts - urban Southern California and urban and rural North Carolina - to examine how adolescents' social environments and ethnic identities influence their commitment to future family assistance. Future family assistance is one aspect of family obligation, but is significant given that much of the research on later-life financial assistance to parents neglects how such behaviors are written into the social script early on. Los Angeles and urban and rural North Carolina are chosen as contrasting geographic contexts where Latino youth constitute growing shares of the population yet are faced with very different social environments. For example, adolescents in urban and rural North Carolina –"new" destinations for immigrants – are more exposed to hostile school and neighborhood environments compared to their counterparts in Southern California - with its historic ties to Mexico and well-established Latino population (author removed).

To understand how these factors are associated with family obligation, our paper asks two research questions. First, do endorsements of family obligation differ between Latino youth in the different regions of North Carolina and Southern California? Second, what factors account for the differences in family obligation across these contexts?

Correlates of Family Obligation

Previous research suggests that the strength of intergenerational relationships is closely tied to a child's own characteristics, the characteristics of her/his family, the social context in which the family lives and the perceptions of the child's own ethnic identity. Consequently, we speculate that there are demographic, contextual and psychological correlates that predict adolescents' endorsements of family obligation. The literature review that follows confirms this assumption.

With respect to demographic correlates, we hypothesize that children who are less acculturated to mainstream American society are more likely to endorse higher levels of family obligation than those who are less acculturated. For example, previous research finds that foreign-born adolescents are more likely to agree with their parents about family values than their native-born peers, although this value discrepancy was not found among Mexican-American adolescents living in Los Angeles (Phinney et al. 2000). We also hypothesize that those who speak a non-English language at home are more likely to endorse family obligation at higher levels than English-only speakers given that the ability to speak parents' language may heighten children's awareness of family obligation.

Household and socioeconomic characteristics of the adolescents' family are also likely to be tied to perceptions of future assistance to the family. For example, previous research indicates that increased sibship size decreases the help that middle-age adults provide to older parents, given that the presence of other siblings often decreases each child's "burden" of support (Matthews 2002). Family obligation may also differ depending on whether the child lives in a two-parent biological household or whether the child lives in a one- parent household, with or without a step-parent. Non-traditional family structures may encourage lower endorsements of future family assistance if children feel that their parents have invested less time and resources into their upbringing, as has been suggested from the literature on middle-age adults (Pezzin et al., 2008; Lin, 2008). Parents' socioeconomic resources are also tied to children's willingness to assist. Among adolescents whose parents are highly educated, levels of family obligation are lower than those whose parents are poorly educated (Fuligni and Hardway 2002). Research on the U.S. older population confirms that less well-educated mothers are also more likely to coreside with their adult children than highly-educated mothers (McGarry and Schoeni 2000).

In contrast to the research on demographic correlates, work on the relationship between family obligation and contextual characteristics is less well understood. A summary of this research, however, does suggest that the family norms into which children are socialized differ widely across contexts, even if the reasons for these disparities are not clearly identified (Cook and Furstenburg 2002; Kalmijn and Saraceno 2008; Vedder et al. 2006). The inability to clearly understand how social contexts are related to family obligation is partially due to the reliance on cross-national data. In studies that use countries as predictors, conceptual problems arise because differences in country-level norms and institutional differences are conflated. For example, a study of Turkish-origin children in several Western European countries found that adolescents in Sweden scored higher on levels of family obligation than their peers in Finland and Norway. (Vedder et al. 2006). Although there are few differences in the selection of Turkish immigrants to those countries (the majority are children of labor migrants), the authors are only able to speculate whether it is differences in norms per sé - or differences in institutional support to families that leads to cross-national variation in family obligation (Vedder et al. 2006).

With respect to psycho-social correlates, previous research suggests that ethnic identity is also strongly related to future family support. In a longitudinal study of adolescents, Kiang and Fuligni (2002) found that strong endorsements of ethnic identity in earlier years were significant predictors of family obligation later in youths' lives. However, the reverse did not hold: family obligation in earlier years did not predict ethnic identity in the following years. This remained true even as ethnic identity changed over time.

Substantial evidence also suggests that adolescents' ethnic identities are shaped by their social environments (Portes and Rumbaut 2001; Portes and Zhou 1993; Waters 1999). Waters (1999), for example, finds that the identities of second generation West Indian children are largely influenced by the neighborhoods they live in and the schools they attend. Children growing up in poor households in inner-city neighborhoods are more likely to identify with black American youth than adolescents growing up in middle-class and integrated neighborhoods. The latter are more likely to adopt an identity that highlights the values and virtues of Jamaican or Haitian culture (Waters 1999). Research on second generation Turkish youth in several Western European countries also finds that their identification with the host nationality varies across countries (Vedder et al. 2006). These findings resonate with theories of segmented assimilation, which suggest that children's social contexts are important determinants of how they define themselves (Portes and Rumbaut 2001; Portes and Zhou 1993).

We hypothesize that one mechanism by which contextual characteristics affect adolescent's family obligation is by making the ethnic identities of adolescents more or less salient. This idea originates from previous work confirming the role of families in socializing children into ethnic identities (Brown et al., 2007; Fuligni and Flook 2005; Umaña-Taylor et al., 2009). Given that adolescents develop their ethnic identities in large part through their families of origin, social circumstances that highlight their ethnicity may affect their views of family support. For example, previous research shows that ethnic minority families perceive and experience greater external threats (e.g., discrimination) than Whites (García Coll et al. 1996); adolescents may also be more susceptible to discrimination if they attend schools and live in neighborhoods with fewer co-ethnics. In turn, experiences of discrimination may lead to a questioning of one's own ethnicity and by extension – cultural values.

However, social contexts may also increase adolescents' commitments to the family by providing a normative climate conducive to family obligation. Phinney et al. (2000), for example, found that in a study of multiple ethnic groups in Los Angeles, Mexican-origin adolescents had far fewer intergenerational value discrepancies (i.e., they were more likely to match their parents on family values) compared to their peers of other ethnic origins. In this case, the authors posit that high levels of co-ethnic interaction among Mexican-origin youth lead to less questioning of cultural values associated with family obligation (Phinney et al. 2000).

In addition, one might also hypothesize that the effect of social contexts on adolescent's obligation to the family may vary by their ethnic identity. Previous research has often pitted "structural" versus "cultural" characteristics against one another (Sarkisian and Gerstel 2004; Sarkisian et al. 2007), but it may be that they work together to affect how children think about their families. For example, adolescents with strong ethnic identities may not be influenced by their social environments when thinking about obligations to parents; those with weaker identities, on the other hand, may be more susceptible to social demands to acculturate.

To summarize, adolescents endorse future support to their families based on their own demographic characteristics, the economic and social resources of their families and especially their parents, their identification with their ethnic group and the social contexts in which they live. Our review of the literature suggests that adolescents who are less acculturated, who have poorer socioeconomic backgrounds, yet whose ethnic identities are strong and who reside in areas with greater numbers of other Latinos will have stronger endorsements of family obligation than those children who do not.

Three Social Contexts: Urban North Carolina, Rural North Carolina, and Southern California

In the United States, research on the relationship between social contexts and family relationships among ethnic minority youth is fairly uncommon. One reason is that the heterogeneity of ethnic minorities residing in different regions across the United States often impedes contextual comparisons. Yet the recent migration of Latinos, mostly from Mexico, to the "new" immigrant destinations of North Carolina, Kansas and Iowa, among others, provides new variation in the social contexts this group faces (Lichter and Johnson 2009). North Carolina in particular witnessed exponential growth in the Hispanic population over the past decade, with an increase from 76,700 individuals in 1990 to 378,963 in 2000 (Johnson and Kasarda 2009). Overall, the influx of Latinos into the region is particularly profound given North Carolina's lack of tradition as an immigrant receiving state. Like most "new immigrant" destinations, the context of reception for immigrants has not been particularly positive. In local communities, public discourse focuses on the costs incurred by undocumented migrants and culture clashes over immigrants' use of Spanish and limited knowledge of English (Crowley and Lichter 2009; Lacy and Odem 2009). However, business owners and some local politicians have challenged popular opinion by citing the revitalization of local communities brought about by Latino migration (Johnson-Webb 2002; Lacy and Odem 2009). Furthermore, the context of reception for Latinos in North Carolina may depend on whether they reside in urban or rural areas.

Recent population estimates show that 30% of the Latino population in North Carolina resides in non-metropolitan/rural counties and the remaining 70% live in metropolitan counties (Johnson and Kasarda 2009). Despite the fact that Latinos are more likely to live in urban areas, those that do live in rural areas tend to be highly concentrated. For example, in four rural counties in North Carolina (Duplin, Sampson, Lee and Montgomery), the Hispanic share of the population exceeds 10% (Johnson and Kasarda 2009). This is chiefly due to the concentration of industries that attract immigrant workers, such as the tobacco, greenhouse, nursery, vegetable and fruit industries that have always relied heavily on migrant labor. Jobs in poultry, beef and pork processing plants are perhaps the newest and most recognized occupational niche for immigrants in non-traditional immigrant destinations (Kandel and Parrado 2005).

In urban areas, the need for labor migrants stemmed from the maturation of the Research Triangle Park as a high-technology hub and Charlotte as a major region of financial services during the 1990s. This in turn intensified the demand for housing, schools, and other public infrastructure. The demand for labor was filled in two ways. First, employers formally recruited Latinos from typical gateway states (e.g., Texas and California) and Mexico directly. In addition, large numbers of H2-A agricultural workers have been leaving the fields of North Carolina for better working conditions and better pay in urban areas. They are informed of such opportunities through informal social networks of individuals from the same home town (Johnson-Webb 2002).

Beyond occupational differences, several demographic traits also distinguish Latinos living in urban areas from those living in rural areas. On average, Latinos in urban areas tend to be better educated, speak better English, and if foreign born, are less likely to have arrived in the country recently than those in rural areas with a rapidly growing share of Hispanics (Kandel and Cromartie 2004:2). Despite this, Latinos living in rural areas may face a more positive reception compared to those living in urban areas. One reason is that Latinos are part of a demographic change that reverses decades of population decline in many rural communities. Although established residents may be weary of the cultural changes that are part of the demographic change, there is also recognition that Latinos have revitalized otherwise dying rural communities (Lichter and Johnson 2009). By contrast, the influx of Latinos to urban centers in North Carolina also occurred rapidly, but in tandem with overall population growth in urban areas throughout the state (Johnson and Kasarda 2009).

The position of Latinos in Los Angeles lies in stark contrast to urban or rural areas of North Carolina. Although Los Angeles only emerged as a major immigrant destination in the 1970s, it is currently home to one of the largest foreign-born populations in the country (American Community Survey 2006-2008 3-Year Estimates). Compared to the "new" immigrant destinations in the U.S. South, the concentration of Latinos in Los Angeles translates to a less hostile social and political environment. This is confirmed by other scholars, who found that perceived and experienced levels of discrimination among Latino youth are higher in North Carolina than in Southern California (author removed).

Although the discussion thus far has focused on contextual differences between North Carolina and Los Angeles, there are obvious differences between the Latino populations that live there as well. Latinos living in California are more likely to be native born compared to Latinos in North Carolina, who are more likely to be first generation immigrants (2006-08 American Community Survey Estimates). Tied to this are differences in the legal status of first generation immigrants. According to 2005 data from the Pew Hispanic Center, the foreign born in North Carolina are about twice as likely as those in California to be undocumented (Passel 2005). Separate estimates by Potochnick and Perreira (2010) using data from the Latino Adolescent Migration, Health, and Adaptation Project in North Carolina also suggest that among foreign-born youth ages 12 to 18, 70% are likely to be undocumented. The percentage of youth who are undocumented is likely smaller in Los Angeles, where they are overall far less likely to be foreign born. Occupations of adult Latinos also differ across contexts. Adult Latinos in North Carolina are concentrated in occupations related to construction (for men) and service (for women) (2006-08 American Community Survey Estimates), yet those in Los Angeles are employed in a much wider variety of sectors under more diverse occupations. All of these factors reflect the "new" destination of North Carolina for first generation immigrants and their families, compared to Los Angeles, where individuals and families have deeper roots.

Study Significance and Hypotheses

This study contributes to the existing literature on family obligation in the following three ways. First, in contrast to previous research that ignores the relationship between social contexts and family obligation, our research examines how endorsements of family obligation differ across three distinct social contexts – urban North Carolina, rural North Carolina and Southern California. We focus on Latinos only, which allows us to hold constant the effects of ethnicity. Second, although the bulk of previous research on intergenerational support focuses on middle-aged and older adults, our research examines how attitudes towards future family assistance are perceived among adolescents. Research at this life stage is particularly important given that attitudes formed during adolescence may frame the social script for family norms that is carried through to adulthood. Third, previous research typically sets structural arguments in opposition to cultural explanations when discussing the root cause of family assistance. In this study, by contrast, we examine how the relationship between social context, which we define as potential and actual social contact with co-ethnics and non-co-ethnics, and family obligation differ by the strength of adolescent's ethnic identities. We suggest that the relationship between structure, culture and family assistance may not be so simple.

Based on previous research and our understanding of how social context shapes adolescent's ethnic identity and endorsements of family obligation, we hypothesize that: H1) adolescents in North Carolina will endorse higher levels of family obligation than those in Los Angeles, and that this difference will be greatest between Angelenos and their peers who reside in urban North Carolina. H2) We posit that a large share of the variation in family obligation between these groups will be explained by student's own acculturative traits (e.g., language spoken at home) and family characteristics (e.g. parents' education). However, we also propose that social contact factors, such as the density of other Hispanics living in the area, will also be related to family obligation. H3) Furthermore, we hypothesize that the relationship between social contact measures and family obligation will vary by the strength of the adolescent's ethnic identity.

METHOD

Sample

We use data from the Los Angeles Social Identification and Academic Adaptation study (LA-SIAA) and the North Carolina Southern Immigrant Academic Adaptation study (NC-SIAA). NC-SIAA survey instruments are based on the original LA-SIAA questionnaires and are identical in almost all respects. The combined sample consists of 557 Latino adolescents: 318 reside in Los Angeles and 239 reside in North Carolina. After case-wise deletion of 85 adolescents with no values for family obligation and key independent variables, we are left with an analytical sample of 472 Latinos: 220 adolescents in North Carolina and 252 in Los Angeles. Additional analyses (not shown here) suggest that the analytical sample is not substantially different from the full sample of 557 students with respect to sex, nativity status and parents' socioeconomic status. Approximately 60% of the Latino youth in our sample indicate a Mexican background. Other backgrounds chosen by the respondents include Central-American, Chicano/a, Salvadoran, Guatemalan, Latin American.

This project uses a cross-section of the LA-SIAA data collected in 2002-03, when participants were enrolled in 9th grade. The LA study specifically sampled youth from three high schools with high proportions of Latino adolescents, although in no school was there a dominant Latino population. Comparisons with a representative sample from the Los Angeles Family and Neighborhood Study (LA FANS), a representative study of all neighborhoods and households in L.A. county suggests that the LA-SIAA sample of Latino students is similar on several demographic characteristics. For example, LA FANS children who were enrolled in the 9th grade in 2000 were as likely to be female, as likely to be foreign born and as likely to live with both biological parents as respondents in the LA-SIAA sample. However, children in the LA FANS sample were more likely to have mothers who had never graduated from high school, compared to the LA-SIAA sample. One reason for this may be that LA FANs oversampled low-income families and families living in low-income neighborhoods (calculations not shown here but available from the author).

In North Carolina, a stratified cluster design was used to sample Latino youth enrolled in 9th grade in nine public high schools located in high-density, high-growth Latino immigrant receiving communities throughout North Carolina. The study was conducted in 2006-7 and captures a diverse population of rural and urban residents. Because the samples studied here include Latino (and predominantly Mexican) youth only, differences in ethnic beliefs, traditions, or values that may differentiate some ethnic groups from others is partially controlled by the study design (Phinney 1990). Those cultural differences that remain reflect differences within the Latino population.

Measures

Future Family Obligation. The dependent variable of interest measures adolescents' feelings of future obligations towards the family. The measure is based on a 5-point, 6-item scale with includes items such as "Help parents financially in the future", "Live at home with parents until married" or "Have parents live with you when they get older." The question asks adolescents to determine the importance of each item on a five-point scale ranging from *Not At All Important* to *Very Important.* Higher scores reflect higher family obligation. The scale is found to be significantly reliable in prior work (Fuligni et al. 1999, Fuligni and Pedersen 2002). In this sample, the internal consistencies for rural North Carolina (α=0.76), urban North Carolina (α= 0.70) and Los Angeles (α=0.80) are very good. More detail for this variable can be found in Appendix A.

Demographic Traits. To control for differences in the population composition between adolescents in North Carolina and Los Angeles, we control for sex, age, foreign-born status, language spoken at home and family-level variables, such as whether the child is living with both biological parents and the number of siblings currently living in the household. To capture parent's socioeconomic status, we include a dummy variable indicating whether at least one parent has a high school degree. If parent's education is missing, we imputed for missing values using the modal category from the mother or father's country of origin, respectively. Initially, we also included an indicator for parent's employment status, but found very little variation on this variable and thus exclude it from our models. Ninety-six percent of students lived in households where at least one parent was employed.

Social Contexts. The independent variable assessing broad-level social context is region of residence. Region of residence is measured using a categorical variable indicating whether the adolescent resides in Los Angeles (which is by default urban), urban North Carolina or rural

North Carolina. Urban areas are defined as counties where at least 50% of the residents live in Census-defined "urbanized areas" according to Census 2000 definitions (U.S. Census Bureau 2002). By contrast, rural areas are defined as those counties where less than 50 percent of the residents live in "urbanized areas" (Census Bureau 2002). We also assess two important aspects of the social environment: 1) the potential for social contact with other co-ethnics, measured as the share of Hispanic residents in the adolescent's school census tract and 2) the positive and negative environment for Latinos at school, measured by the average daily ethnic treatment reported by other Latino adolescents at the respondent's school.

The percent of Hispanic individuals residing in the school census tract is measured using a continuous variable. We use the percent of Hispanic respondents in the school census tract as a proxy for potential contact with other Latinos. We also measure the net positive ethnic treatment of Latino adolescents at the school level. The LA-SIAA and the NC-SIAA studies ask students to record experiences of positive and negative ethnic treatment experienced over a 14 day period. The measure used in this study is the 14-day average of whether an adolescent reported positive ethnic treatment minus the 14-day average of whether s/he reported negative ethnic treatment, aggregated to the school level. Questions are worded as "Did something bad happen to you or you were treated poorly because of your race or ethnicity?" and "Did something good happen to you or you were treated poorly because of your race or ethnicity?" We include this measure to assess the social climate towards Latinos in the school.

Ethnic Identity. The LA-SIAA and NC-SIAA surveys include two measures of ethnic identification that have been validated in previous studies. The first measure assesses ethnic belonging and is derived from the Multigroup Ethnic Identity Measure developed by Phinney (1992). It includes questions such as "I am happy that I am a member of the ethnic group I belong to" and "I have a lot of pride in my ethnic group and its accomplishments." A second measure asks adolescents about the centrality of their ethnic identity, which is derived from the Multidimensional Model of Racial Identity developed by Sellers et al. (1998). The measure includes questions such as "In general, being a member of an ethnic group is an important reflection of who I am" and "In general, being a member of my ethnic group is an important part of my self-image." All items are scored on a five point scale ranging from *Strongly Disagree* to *Strongly Agree* with higher scores reflecting stronger ethnic belonging and centrality. In our study, the internal consistency of ethnic belonging (α=.87) and ethnic centrality (α=.70) are good. We mean centered the ethnic identity variables in the analysis.

Analytic Strategy

The analysis consists of two parts. First, we describe the sample and test for differences across contexts without controlling for potentially confounding or mediating factors. We use Wald statistics to test for differences across regions, which are derived from regressions of the variable in question on the main independent variable of interest: region of residence. Second, we use ordinary least squares regression to examine the association between social contexts and adolescents' reports of family obligation. Pooling the two sources of data together, we first run a baseline model that examines the association between region of residence and reported levels of family obligation. The second model includes controls for participant's individual characteristics such as sex, age and nativity status. Family-level characteristics include whether the respondent is living with both biological parents and the number of siblings living at home. We also include parental education as a proxy for parents' socioeconomic standing. The third model adds in indicators of the school's social environment and the average daily diary reports of net positive ethnic treatment experienced by adolescents over a 14 day period, aggregated at the school level.

In the fourth model, we include participant's own sense of ethnic identity to test whether the association between contextual factors and family obligation is in fact mediated by the strength of adolescents' ethnic identity. Finally, in the fifth model, we include an interaction between ethnic identity measures and social context indicators to see how the effect of cultural measures on family obligation (i.e., ethnic identity) may vary by one's social environment.

RESULTS

Table 1 presents descriptive results of mean and proportional differences between Latino adolescents in urban and rural North Carolina and Los Angeles. It is clear that on average, adolescents in North Carolina feel more obligated towards their families than adolescents living in Los Angeles. Results from Table 2 show that average levels of family obligation are highest among Latino adolescents residing in urban North Carolina (3.81) and lowest among their Los Angeles peers (3.46). The difference in mean levels of family obligation is statistically significant at $p<0.01$.

A large portion of this difference could be due to demographic differences between the two groups and specifically, the selection of new immigrants to North Carolina. For example, a significantly larger share of adolescents in North Carolina are foreign born (61% in rural areas and 75% in urban areas) compared to Los Angeles (17.1%). This is also reflected in the share of adolescents who speak a non-English language at home, with a smaller percentage in Los Angeles (44.4%) speaking a non-English language compared to rural (85.2%) and urban North Carolina (81.5%). Household and parents' characteristics also differ between the two groups. Latino adolescents in Los Angeles have on average fewer siblings (1.4) than those in rural (2.0) and urban North Carolina (1.7). Parents of adolescents in rural North Carolina were the least educated: approximately 63% had parents who never attained a high school degree. By contrast, 22% of adolescents in Los Angeles have parents who never graduated from high school. These figures confirm findings from nationally representative data that show clear differences in the socioeconomic characteristics of Latinos living in urban versus rural areas (Kandel and Cromartie 2004).

With respect to social environment differences, there is also clear variation between Los Angeles in rural and urban areas of North Carolina. The average percentage of Latinos in the school census tract is highest in Los Angeles (24%) compared to rural North Carolina (14%) and is lowest among those who live in urban areas in North Carolina (4%). This is not surprising given the long history of Latinos in California compared to the recent arrival of Latino immigrants in North Carolina. In North Carolina, we also see patterns that other researchers have noted; namely, in rural areas Latinos are more likely to be highly concentrated (Johnson and Kasarda 2009). Yet given the larger share of co-ethnics in the community, it is surprising that overall, the level of net positive ethnic treatment aggregated at the school level is lowest in Los Angeles (.01) and higher among those living in urban North Carolina (.09) and rural North Carolina (.05). These differences are statistically significant at the $p<0.01$ level. That is, those adolescents in urban North Carolina experience on average the most positive level of ethnic treatment compared to their peers in rural North Carolina and Los Angeles. However, previous research using the same variables found that when examining both reports of positive and negative ethnic treatment, adolescents in North Carolina reported more positive *and* negative ethnic treatment than those in Los Angeles (author removed). The results are suggestive that ethnic treatment may be more salient in North Carolina compared to Los Angeles simply because ethnicity is more salient in the former location compared to the latter.

Perceptions of ethnic belonging and ethnic centrality are strongest in urban North Carolina (4.59) compared to peers in rural areas (4.44) and in Los Angeles (3.96). Similar results are found for ethnic centrality. Wald tests confirm that these differences are statistically significant at the p<0.01 level. These findings partially confirm Fuligni and Flook's (2005) hypothesis that in social contexts where ethnic groups are in the minority (i.e., urban North Carolina), ethnic identity and family obligation will also be stronger. However, the stronger endorsements of ethnic identity in urban versus rural North Carolina could also be due to the larger share of foreign-born adolescents in the former location compared to the latter.

Table 2 presents results from the multivariate analysis, where variables are entered into the model piece-wise to examine how demographic characteristics, social context measures and strength of adolescent's ethnic identity explain the difference in family obligation between adolescents in rural and urban North Carolina and Los Angeles. We take account of school clustering and adjust the standard errors accordingly.

Model 1 confirms results from the descriptive analysis that adolescents in North Carolina have significantly greater endorsements of family obligation than their Angeleno peers (.28, p<.05 for rural NC residents, .34, p<.01 for urban NC residents). Additional tests (not shown here) suggest that there is no significant difference between adolescents from rural and urban North Carolina (F= 0.26, p=0.62). When demographic characteristics are added in model 2, region of residence is no longer statistically significant. What appears to explain most of this difference is variation in the educational attainment of parents and language spoken at home. Adolescents who speak a non-English language at home have greater levels of predicted future family obligation (.19, p<.05) and those who have no parents with a high school degree also have greater predicted levels of future support (.31, p<.01). Contrasting our expectations, foreign-born status is not significantly associated with family obligation when other demographic traits are included in the model. Other family characteristics, such as number of siblings and whether or not the adolescent lived with both biological parents, were also not significant predictors of family obligation.

This model points to the importance of considering how selection into the different geographic areas might affect variation in family obligation across the regions. As seen in table 2, adolescents living in urban and rural North Carolina are more likely to be foreign born, which we assumed would drive the mean level difference in family obligation. Yet once we include language spoken at home and parents' high school education, two characteristics that also differ significantly between LA and North Carolina, the gap in family obligation is largely explained for and foreign born status is not significant. This suggests that cultural and socioeconomic differences also largely explain what distinguishes the foreign born from the native born, at least when it comes to predicting future family assistance.

In model 3, we add in the percent of Hispanic individuals who reside in the school census tract and the school-level average of net positive ethnic treatment experienced over a 14 day period as broad measures of social contact. No significant effects for these measures are found. Although as anticipated, the association between family obligation and percent Hispanic in the school census tract is positive. However, the association between net positive ethnic treatment at the school level and family obligation is negative, albeit not statistically significant, when other variables are in the model. Bivariate correlations (see Appendix B), however, indicate a positive association between school-level net positive ethnic treatment and family obligation when other factors are not accounted for. One reason for this could be that any attention due to ethnicity is enough for Latino youth to question their cultural values and discourage family obligation, once other demographic factors such as parents' income and student's language spoken at home are taken into consideration.

With the inclusion of social contact measures, the coefficient for urban North Carolina is again statistically significant and positively associated with family obligation (0.35, $p<0.10$). This indicates a suppression effect of the percent Hispanic in the school census tract on the indicator for urban North Carolina. In this case, suppression can be understood as a negative confounder, whereby the inclusion of one variable increases the explanatory power of another variable. This generally happens when the bivariate association between the main independent variable of interest and the outcome measure is in one direction (as is the case for the positive association between urban North Carolina and family obligation), but the association between the newly introduced variable and the outcome is in the opposite direction (as is the case for the negative association between percent Hispanic in the school census tract and family obligation: see Appendix B) (Mackinnon et al. 2000). What we draw from this model is that including the share of Hispanics in the neighborhood clarifies the significant relationship between urban North Carolina and family obligation. In fact, adolescents in urban North Carolina endorse stronger levels of family obligation despite being surrounded by fewer co-ethnics than their peers in rural North Carolina and Los Angeles.

Model 4 includes indicators of ethnic identity. Both ethnic belonging and ethnic centrality are significant; stronger perceptions of ethnic belonging are associated with greater endorsements of family obligation (.22, $p<.01$) and stronger feelings of ethnic centrality are correlated with greater family obligation (.10, $p<.01$). Parent's education also remains significantly associated with future family obligation, but language spoken at home does not. This suggests that ethnic identification explains most of the variation in language use, a common indicator of cultural assimilation. With the inclusion of strength of ethnic identity, the coefficient for the share of Hispanics in the school census tract is now statistically significant, with a positive effect on family obligation (0.6, p<.01). School-level net ethnic treatment is also significant in this model, but still negatively associated with family obligation (-2.17, p<.10). Contrary to our expectations, these findings indicate a suppression effect of ethnic identity and ethnic belonging on percent Hispanic in the school census tract and school-level net ethnic treatment (Mackinnon et al. 2000). This means that including indicators for ethnic identity increases the predictive value and power of contextual variables. Despite the inclusion of ethnic identity into the model, the percent Hispanic in the school census tract is now more strongly correlated with family obligation, as is the net positive ethnic treatment of adolescents at the school level.

Model 5 lastly includes interaction terms of social contact measures and ethnic identity into the analysis. We find that with the inclusion of interaction terms, ethnic belonging and ethnic centrality are no longer statistically significant predictors of family obligation. Furthermore, the coefficient for net positive ethnic treatment is no longer statistically significant. Yet the indicator for co-ethnics in the school census tract remains positively and significantly associated with family obligation. In addition, we find that the relationship between ethnic belonging and family obligation differs for adolescents living in more concentrated co-ethnic neighborhoods. Specifically, among adolescents attending schools in neighborhoods with other Hispanics, predicted levels of family obligation are higher for those with a stronger, rather than a weaker sense of ethnic belonging. Finally, we also note that the coefficient for urban North Carolina remains statistically significant even after including all covariates into the model; those living in urban North Carolina have higher predicted levels of family obligation then their Angeleno peers.

DISCUSSION

Results from our descriptive analysis confirm our first hypothesis that feelings of family obligation are strongest among adolescents living in the "new" immigrant destination of North Carolina compared to the established "gateway" city of Los Angeles. In fact, adolescents residing in urban areas of North Carolina – where the Latino presence was in fact unprecedented until very recently - had the strongest sense of family obligation. Although we suggested that this could be due to differences in the selection of Latinos who live in urban versus rural North Carolina and Los Angeles (for example, the former are more likely to be foreign born, less educated and less acculturated than the latter), or variation in the social context that surrounds them (for example, the former are less likely to be surrounded by co-ethnics than the latter), these factors failed to explain why adolescents in urban North Carolina felt a stronger need to support their families than their Angeleno peers.

However, several factors did clarify why adolescents in *rural* North Carolina also had higher endorsements of family obligation than those in Los Angeles. The most important demographic factor appears to be parents' educational attainment, a long-term indicator of socioeconomic resources. That parents' lack of a high school education, the most basic and necessary of degrees in the U.S. labor market, is positively associated with future obligation to the family is not surprising. This finding supports previous literature suggesting that poor socioeconomic conditions of some ethnic minority groups leads to the development of strong family ties (Sarkisian and Gerstel 2004; Sarkisian et al. 2007). We find no significant associations between foreign-born status – an important marker of whether adolescents feel incorporated or are able to assimilate – and family obligation. This affirms Phinney et al.'s (2000) finding that among Latinos, generational status is not a significant correlate of family obligation. In addition, household composition such as the number of co-resident siblings or the presence of both biological parents was not significantly associated with adolescent's future support to the family. This goes against much of the established literature on the effects of family structure on parental care in later life (Matthews 2002; Pezzin et al. 2008). However, it could suggest that family structure has no immediate influence on how children think about parental care. It may be that only when adolescents reach adulthood does the presence of siblings or the life-long absence of a parent matter for family obligations.

Including social contact measures as well as indicators for adolescent's ethnic identity into the model presented both anticipated and unanticipated results. We found that the presence of co-ethnics in the neighborhood was positively and significantly associated with family obligation, which supports our original hypothesis that larger shares of co-ethnics could serve to socially enforce norms of family obligation. However, attending school where others notice one's ethnicity, even if in a positive light, is negatively associated with family obligation. This may be because any attention to one's ethnicity may lead to the questioning of cultural norms associated with one's ethnic group. On the other hand, we also found that adolescents with a stronger sense of ethnic belonging and centrality had higher predicted levels of family support, confirming previous research that linked the development of adolescent ethnic identities to family socialization (Fuligni and Flook 2005). Thus, our second hypothesis is partially confirmed. Certain demographic factors, social contact measures and psychological correlates explained the variation in strength of family obligation for adolescents living in rural North

Carolina and urban Los Angeles; however, these factors failed to explain the difference for adolescents living in urban North Carolina compared to their peers elsewhere.

While previous research only hints at the association between potential contextual effects and cultural factors, our findings show that the two should be examined interactively. By interacting social contact measures with ethnic identity, we confirmed our third hypothesis and find that among those attending school in neighborhoods with a greater share of Latinos, having a strong sense of ethnic belonging increases the predicted level of family obligation compared to those with low levels of ethnic belonging.

Finally, our models are unable to explain why adolescents living in urban North Carolina have higher predicted levels of family obligation then their peers living in Los Angeles. One reason is that our data do not allow us to capture important demographic differences between the two groups. For example, there is reason to believe that the foreign born in North Carolina are more likely to be undocumented than those in Los Angeles. We acknowledge that undocumented status for children and parents could be an essential correlate of family obligation, but cannot provide the data to support that here. Another reason, also likely, is that our model cannot account for the myriad contextual differences between the regions. Although social contact measures are certainly important, they may not capture the sense of alienation or marginalization felt by adolescents in urban communities where they and their parents are less-than-welcome newcomers. Those that live in North Carolina's urban areas, therefore, may sense a greater need to "stick with the family" and adhere to norms about family obligation, compared to their peers who reside in rural areas where local attitudes are more favorable or established gateway cities where the arrival of new immigrants is rarely noticed.

Conclusion

Social contexts are often ignored as a possible explanation for ethnic group differences in reports of family obligation. One reason is that too often, social scientists rely on the false dichotomy between economic versus cultural explanations as the culprit behind ethnic differences in family behavior. This study adds much needed nuance to the literature on family obligation, caregiving norms and cultural differences among ethnic minority youth and their majority peers by using data from urban and rural North Carolina and Southern California to investigate how social contexts are associated with family obligation. We control for potential ethnic group differences (Phinney 1990) by examining Latino adolescents only and find that indeed, social contact differences and variation in the strength of ethnic identity are important correlates of family obligation.

However, we are also aware of the limitations to our analysis. The data we use are cross-sectional, and thus can only explain associations between variables without making causal claims. However, in a previous study using longitudinal data from the Los Angeles study only, Kiang and Fuligni (2002) found that strong endorsements of ethnic identity in earlier years were significant predictors of family obligation later on, but the reverse was not true. That is, earlier levels of family obligation were never significant predictors of ethnic identity, which suggests a potential causal direction from ethnic identity to family obligation, at least among adolescents.

Our findings also point to exciting new opportunities for cross-regional comparisons of Latino youth. Unlike cross-national studies, cross-regional analyses allow us to more clearly identify the contextual differences that lead to variation in outcomes. This is especially true when we limit our analyses to one ethnic group. Given the proliferation of Latinos to non-traditional regions of the United States, future studies can shed further light on how variation in social contexts affect the social and psychological outcomes of this group.

As the demographic presence of Latinos continues to grow in “new” and “old” immigrant destinations across the U.S., understanding how adolescents think about future support to the family is an important priority for family scholars. This is especially true as ethnic minorities and immigrants increase their share among America’s later-life population. Given that on average, ethnic minority and immigrant elderly have fewer economic resources than native-born Whites (Borjas, 2009; Gassoumis et al., 2010), understanding how ethnic minority and immigrant children think about family assistance early on could provide insight into the social script of such norms and behaviors that scholars witness in research on middle-age and later-life adults.

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Table 1. Descriptive Results

	Los Angeles		North Carolina-Rural		North Carolina-Urban			
	% or Mean	(SD)	% or Mean	(SD)	% or Mean	(SD)	Wald Test	P-Value
Future Family Obligation								
Combined Future Family Obligation scale	3.46	(0.88)	3.74	(0.88)	3.81	(0.76)	8.1	0.000
Demographic Characteristics								
Female	50.00	---	56.44	---	53.78	---	1.3	0.514
Age	14.84	(0.38)	15.39	(0.79)	15.29	(0.93)	35.2	0.000
Foreign Born Status	17.06	---	61.39	---	74.79	---	115.5	0.000
Non-English most common at home	44.44	---	85.15	---	81.51	---	68.3	0.000
Living w/ Both Biological Parent	58.73	---	63.37	---	56.30	---	1.2	0.560
Number of siblings living in household	1.38	(1.33)	1.96	(1.30)	1.72	(1.33)	7.8	0.001
Neither parent graduated HS*	22.22	---	63.37	---	44.54	---	52.7	0.000
Social Contact								
Proportion Hispanic in school tract	24.33	(0.12)	13.55	(0.07)	3.66	(0.02)	207.2	0.000
School-Level Net Positive Ethnic Treatment	0.01	(0.00)	0.05	(0.03)	0.09	(0.04)	375.5	0.000
Ethnic Identity								
Ethnic Belonging	3.96	(0.93)	4.44	(0.72)	4.59	(0.62)	28.5	0.000
Ethnic Centrality	3.24	(0.91)	3.81	(0.81)	3.83	(0.73)	27.3	0.000
Sample Size	**252**		**119**		**101**			

*Missing values entered using modal category from parent's country of origin

Source: NC SIAA and LA SIAA

Table 2: OLS Regression for Future Support for the Family

	Model 1		Model 2		Model 3		Model 4		Model 5	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Location (base=Los Angeles)										
North Carolina-Rural	0.28*	0.11	0.02	0.11	0.12	0.11	0.05	0.08	0.07	0.08
North Carolina-Urban	0.34**	0.07	0.13	0.08	0.35†	0.16	0.27†	0.12	0.33*	0.14
Demographic Characteristics										
Female			0.03	0.07	0.04	0.07	0.01	0.07	0.01	0.07
Age			-0.03	0.04	-0.03	0.04	-0.04	0.05	-0.04	0.04
Foreign Born			0.13	0.11	0.14	0.12	0.13	0.10	0.12	0.10
Non-English language at home			0.19*	0.07	0.18*	0.07	0.06	0.08	0.07	0.08
Living w/ both biological parents			-0.06	0.09	-0.06	0.09	-0.06	0.09	-0.07	0.09
Number of siblings in household			0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.03
Neither parent graduated HS[1]			0.31**	0.08	0.32**	0.09	0.32**	0.08	0.33**	0.08
Social Contact										
% Hispanic in school tract					0.40	0.22	0.63**	0.19	0.82**	0.18
School-Level Net Positive Ethnic Treatment					-1.98	1.29	-2.17†	1.02	-2.50	1.92
Ethnic Identity[2]										
Ethnic Belonging							0.22**	0.07	0.06	0.10
Ethnic Centrality							0.10**	0.03	0.06	0.04
*Contact*Ethnic Identity*										
% Hispanic in school tract*Ethnic Belonging									0.75*	0.25
% Hispanic in school tract*Ethnic Centrality									0.04	0.09
School Net Positive Treatment*Ethnic Belonging									0.52	2.80
School Net Positive Treatment*Ethnic Centrality									0.87	0.75
Constant	3.46**	0.04	3.76**	0.65	3.71**	0.58	3.93**	0.65	3.88**	0.62
R^2	0.033		0.087		0.091		0.168		0.176	
N	**472**		**472**		**472**		**472**		**472**	

Note: Standard errors are adjusted for clustering at the school level

[1] Missing values entered using modal category from Parental COR

[2] Ethnic Belonging and Ethnic Centrality are mean centered

†p < .10. *p < .05. **p < .01.

Table A. Question Wording

Future obligations to support family? (Fuligni et al. 1999, 2002)

a. Help your parents financially in the future
b. Live at home with your parents until you are married
c. Help take care of your brothers and sisters in the future
d. Spend time with parents even after you no longer live with them
e. Live or go to college near parents
f. Have your parents live with you when they get older

Ethnic Belonging and Affirmation (Phinney 1992)

a. I have a clear sense of my ethnic background and what it means for me.
b. I am happy that I am a member of the group I belong to.
c. I have a strong sense of belonging to my own ethnic group.
d. I understand pretty well what my ethnic group membership means to me.
e. I have a lot of pride in my ethnic group.
f. I feel a strong attachment towards my own ethnic group.
g. I feel good about my cultural or ethnic background.

Ethnic Centrality (Sellars et al. 1998)

a. In general, being a member of my ethnic group is an important part of my self-image.
b. Being a part of my ethnic group is an important reflection of who I am.
c. I have a strong sense of belonging to my own ethnic group.
d. I feel a strong attachment towards my own ethnic group.
e. Overall, being a member of my ethnic group has very little to do with how I feel about myself.
f. Being a part of my ethnic group is unimportant to my sense of what kind of person I am.
g. Being a part of my ethnic group is not a major factor in my social relationships.

Table B. Correlation of Variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	Family Obligation	1.00												
(2)	Region of residence	0.18*	1.00											
(3)	Female	0.03	0.04	1.00										
(4)	Age	0.10*	0.31*	-0.02	1.00									
(5)	Foreign Born	0.18*	0.52*	-0.05	0.38*	1.00								
(6)	Non-English language at home	0.22*	0.35*	-0.01	0.22*	0.45*	1.00							
(7)	Living w/ both biological parents	-0.01	-0.01	0.02	0.01	-0.01	0.08	1.00						
(8)	Number of siblings in household	0.07	0.13*	0.04	0.06	0.03	0.08	0.16*	1.00					
(9)	Neither parent graduated HS[1]	0.23*	0.24*	0.07	0.34*	0.24*	0.38*	0.10*	0.18*	1.00				
(10)	% Hispanic in school tract	-0.09	-0.68*	-0.05	-0.26*	-0.33*	-0.22*	0.05	-0.06	-0.15*	1.00			
(11)	School-Level Net Pos. Ethnic Trtmnt	0.12*	0.78*	0.04	0.21*	0.45*	0.27*	0.00	0.11*	0.24*	-0.48*	1.00		
(12)	Ethnic Belonging	0.33*	0.32*	0.07	0.15*	0.27*	0.31*	0.00	0.02	0.15*	-0.28*	0.27*	1.00	
(13)	Ethnic Centrality	0.30*	0.30*	0.03	0.16*	0.19*	0.30*	0.01	0.02	0.18*	-0.24*	0.20*	0.67*	1.00

* p<.05

[1] Missing values entered using modal category from Parental COR