Does Neighborhood Ethnic Concentration Interact with Ethnic Identity, Mexican Orientation, or Generation Status to Predict Recidivism among Mexican American Juvenile Offenders?

by

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ABSTRACT

Ethnic enclaves, or neighborhoods with high ethnic densities, have been linked with positive health outcomes and lower crime rates. Using data from the Pathways to Desistance project, this study tested whether neighborhood Latino concentration prospectively predicted re-offense rates among a sample of Mexican American juvenile offenders (n = 247). Further, I tested whether the effect of neighborhood Latino concentration on re-offense was moderated by ethnic identity, Mexican orientation, and generation status. Covariates included demographics and risk factors for offending. Results showed that neighborhood Latino concentration, ethnic identity, Mexican orientation, and generation status were not predictive of re-offense rates. Gender, risk for offending, and time spent supervised during the follow-up period predicted re-offense rates one year later. The results highlight the importance of risk assessment for this high risk group.

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Introduction

Hispanics are the largest ethnic minority group and a rapidly growing segment of the U.S. population (U.S. Census, 2005; Therrien & Ramirez, 2001). Hispanics currently account for approximately 15% of the total population, and the U.S. Bureau of Census (2000) predicts that Hispanics will make up over 33% of the total population by the year 2100. In comparison to non-Hispanic Caucasians and African Americans, Hispanics have the largest percentage of individuals under the age of 24 (Meyer, 2001). Hispanics are growing at a rate faster than other ethnic groups, indicating that the number of Hispanic adolescents will also continue to grow quickly (U.S. Bureau of Census, 2000). Not only are Hispanics disproportionately younger than other ethnic groups, they also tend to reside in dense city areas and have less education and income (Bureau of Census, 2011; Pew Research Center, 2016).

Furthermore, in the U.S., Hispanics are more likely than non-Hispanic Caucasians to reside in neighborhoods characterized by high poverty and social disorganization (Huston, Garcia Coll, & McLoyd, 1994; Portes & Rumbaut, 2001). Social disorganization theory (Shaw & McKay, 1942) suggests that disorganized neighborhoods, characterized as areas with high levels of school dropout, unemployment, and single parent homes, can promote criminal activity among youth who reside in these neighborhoods. However, there is very little research investigating neighborhood ethnic concentration characteristics and their impact on Hispanic youth crime. Ethnic enclaves are defined as areas with a high, singular ethnic concentration in which inhabitants can benefit from the ethnic community's social network, including networking abilities to gain employment and housing resources. Lind (1930) contended that there was an

important difference between residing in heterogeneous, disorganized neighborhoods and neighborhoods that were impoverished yet homogeneous. Homogeneous neighborhoods were thought to exert more social control over their inhabitants than heterogeneous neighborhoods. Some studies examining these neighborhood structures have found that ethnic enclaves prevent negative health outcomes for Mexican Americans and crime rates for immigrants. For example, neighborhood percentage of Mexican Americans was related to low morbidity and mortality rates among elderly Mexican Americans (Eschbach, Ostir, Patel, Markides, & Goodwin, 2004). Another series of studies conducted by Sampson and colleagues (see Sampson, 2008) found that immigrant neighborhoods were associated with less violent crimes, regardless of neighborhood poverty levels. Thus, the protective effect of Mexican American ethnic enclaves could extend to other outcomes, such as crime committed by adolescents.

Additionally, Mexican American youth likely gain benefits from being exposed to strong family traditions and community values instilled within Mexican culture. However, residing in the United States means that these adolescents also learn to adapt to the American way of life. This socialization process of taking on the values and cultural beliefs from a secondary culture is called *acculturation*. On the other hand, the process by which one learns and takes on norms from their culture of origin is known as *enculturation.* The findings from studies examining acculturation and enculturation processes are mixed. Miller and colleagues (2008) found that Mexican American adolescents who report more acculturation to mainstream American culture were more likely to use illicit drugs. However, Lopez and Brummett (2003) found that Latino gang

members reported being more enculturated in comparison to Latinos who were not in gangs.

Given conflicting findings, the links among acculturation, enculturation and criminal behavior seem more complex than previously assumed. This complexity is highlighted in subsequent research that suggest that the dual processes of acculturation and enculturation can contribute to adaptive resources for some adolescents. These resources may lead to engaging in prosocial behaviors rather than crime. In particular, one study showed that this dual process of acculturation and enculturation was linked to lower substance use among juvenile offenders (Losoya et al., 2008). These processes are important in predicting criminal activity among Mexican American adolescents.

Although acculturation and enculturation seem to be linked to adolescent behaviors, these cultural processes are often indirectly measured. In many instances, generational status is used as a proxy for acculturation. Generational status is usually measured by asking parents and children for their country of birth. This crude approximation of acculturation does not adequately measure the process of adapting to and accepting the values and norms of a host culture. It entirely misses the internalization of social norms that occurs during the socialization process of residing in a host environment. Nonetheless, generational status has been found to be linked with criminal behavior, such that later generations engage in more criminal activity than do earlier generations (Bersani, Loughran, & Piquero, 2014; Caetano, 1987; Gibson & Miller, 2010; Gilbert, 1987; Morenoff & Astor, 2006). The effects of generational status and acculturation and enculturation are likely similar but not necessarily identical, and it is important to test the effects of each factor.

Moreover, there is research showing that identifying with one's ethnic background can be protective against delinquent behaviors. This is known as an *ethnic identity*, or one's self-concept and connection towards an ethnic group (Phinney, 1990). Researchers have found a negative association between ethnic identity and antisocial behaviors (Brook, Zhang, Finch & Brook, 2010). Ethnic identity reflects group pride and understanding of cultural membership, which is distinct from the socialization process ascribed to enculturation. The development of an ethnic identity has been theorized to occur during the period of adolescence in which significant changes in cognitive maturity take place, leading to the development of a personal identity (Knight et al., 2012; Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). Ethnic identity is therefore a distinct factor that is likely related to psychological maturity (Erikson, 1968). Further, having a strong ethnic identity may instill beneficial social norms and stop an adolescent's path into delinquency.

To date, few studies have investigated the interplay between neighborhood characteristics and perceived ethnic identity and acculturation and enculturation within Hispanic youth who are at high risk for offending (Leventhal & Brooks-Gunn, 2000). The current study utilizes a high-risk sample of Mexican American juvenile offenders to investigate the relationship of neighborhood ethnic concentration, ethnic identity, acculturation (specifically, Mexican orientation), and generational status on offense outcomes. The study uses a longitudinal design to prospectively predict re-offending.

Background

Mexican American adolescents and crime

Historically, crime has been controversially tied to race. Good data are necessary for accurate analyses of crime among racial and ethnic groups. However, the data reported by criminal justice agencies frequently fail to accurately report differences in race and ethnicity. For example, Hispanics are often counted under the category of whites (Walker, Spohn, & DeLone, 2012). Though national data on the number of incarcerated Hispanics are provided through the Bureau of Justice Statistics and the Office of Juvenile Justice and Delinquency Prevention (OJJDP), these resources allow for very few detailed analyses (Schuck, Lersch, & Verrill, 2004). For instance, Mexican American youth are not identified separately but rather only within the larger group of "Hispanics." The OJJDP (2013) lacks full national data on delinquency cases involving Hispanic youth. Because of changing standards of ethnicity reporting, only some samples reported on Hispanic youth. Out of the reported delinquency cases, approximately 25.8% of case referrals involved Hispanic youth. In addition, cases involving Hispanic youth were more likely to result in delinquency adjudication compared to non-Hispanic Caucasian or African American youth cases (OJJDP, 2013). The question of whether Hispanic delinquent youth cases are more severe than other youth cases (leading to more cases to be adjudicated) or if there is some other differentiating factor in the court process for Hispanic youth is unclear from these data. However, the higher number of adjudicated cases suggests that research examining Hispanic adolescent offenders and factors related to their offending may serve to better inform youth justice policy.

Although Hispanic youth are overrepresented among delinquent youth, there are very few research studies on adolescent Hispanics in the juvenile justice court system. In fact, there is still not very much research focused primarily on Hispanics within the criminal justice literature (Jang, 2002; Schuck et al., 2004), even though research on Hispanic Americans is growing (Walker et al., 2012). A review of research examining the representation of Hispanics in criminal justice literature (Schuck et al., 2004) found that, although many studies included Hispanic populations, studies rarely focused on Hispanics, suggesting that this population suffers from "invisibility" in the criminal justice literature.

Because Mexican Americans make up the majority of U.S. Hispanics at 66% (Humes, Jones, & Ramirez, 2010), many of the studies that look at Hispanic crime are most likely examining Mexican and Mexican American individuals. Early research found that Mexican American adolescents have higher rates of juvenile arrest when compared to non-Hispanic Caucasian adolescents (60%; Jones & Krisberg, 1994). Flowers (1988) reported that Mexican American adolescents are disproportionately incarcerated at almost double the proportion of their representation within the general population. In addition, high prevalence and frequency of criminality has been found among Mexican American adolescents (Chavez, Oetting, & Swaim, 1994; Watts & Wright, 1990). Mexican American adolescents also experience high rates of substance use (Johnston, O'Malley, Bachman, Schulenberg & Miech, 2014) and school dropout (U.S. Department of Education, 2015), which are factors that may lead to increased crime rates. Another important factor to consider is that Mexican Americans are disproportionately involved in

gangs (more specifically, Hispanics constitute 47% of all gang members; Egley, 2000, Tapia, Kinnier, & MacKinnon, 2009).

The U.S. Department of Justice (2006) estimates that approximately 55% of juvenile offenders will re-offend. Considering that the annual cost for one incarcerated youth is more than $48,000 (Byrnes, Macallair, & Shorter, 2002) and younger offenders have a longer risk period for re-offense (prevalence of offending tends to peak from 15 to 19 years; Durham, 1996; Loeber & Stallings, 2011; Walters, 1996), intervening in the process of re-offending among juvenile delinquents can mitigate the high cost to society. Unfortunately, many studies do not specifically examine ethnic minority juvenile groups beyond comparing minority-status with non-minority-status, and thus, there is relatively little research on risk and protective factors for recidivism among specific ethnic populations (Jimerson, Sharkey, O'Brien, & Furlong, 2004; Pobanz & Furlong, 2000). A meta-analysis examining predictive factors for juvenile recidivism found that being a minority group member was positively related to recidivism. However, when SES was entered before minority status in the hierarchical regression equation, minority status did not remain a significant predictor (Cottle, Lee, & Heilbrun, 2001), suggesting that SES better explains the likelihood of recidivism than does minority status. Lack of information on the relationship between ethnic minority status and re-offense is detrimental to the interventions currently being used to treat these populations, especially since Hispanics comprise of at least a fifth of the national juvenile delinquent group. Research identifying risk and protective factors related to recidivism for Mexican American adolescents is necessary for understanding a growing population and can aid in the development of effective programs to reduce rates of offense in future groups.

Research on juvenile crime has found some consistent predictive factors. Among factors found to predict criminal recidivism in the general population of juvenile offenders, the meta-analysis by Cottle and colleagues (2001) found offense history, family problems, ineffective use of leisure time, delinquent peers, conduct problems, and non-severe pathology to be the most robust predictors of re-offending. In addition to these factors, Hispanic youth are more likely to live in poverty and attend deficient schools (Kerr, Beck, Shattuck, Kattar, & Uriburu, 2003; Mirabal-Colon, & Velez, 2005). Furthermore, Hispanic families are more likely to live in neighborhoods with greater access to drugs, alcohol, and firearms (Alaniz, Cartmill, & Parker, 1998; Eamon & Mulder, 1995). In combination, these factors can create an environment prone to criminal activity. Research investigating the neighborhoods in which these juveniles live can shed light on the factors that contribute to and protect these youth from re-offending.

Neighborhoods and crime

Environmental context has been posited as an important factor for influencing developing adolescents (Bronfenbrenner & Morris, 1998). More specifically, neighborhoods are an important context for developing youth because neighborhoods provide the primary context of socialization outside of the family unit (Miller & Gibson, 2011). Some research has found direct links between neighborhood characteristics and criminal behavior among Hispanic and Mexican American youth. In a study looking at Mexican American youth in Chicago, concentrated disadvantage in neighborhoods (a scale comprising of % families below poverty, % families on public assistance, % female-headed families, and unemployment rate) was associated with higher risk of

committing violent acts only in the third generation of Mexican American youth (Morenoff & Astor, 2006). Low immigrant concentration within neighborhoods has also been found to be associated with higher homicide rates (Martinez, 2000; Martinez & Lee, 2000).

A comprehensive review of research on the effects of neighborhood residence on child and adolescent outcomes by Leventhal and Brooks-Gunn (2000) found that neighborhood-focused studies most commonly examine the effect of neighborhood characteristics on emotional and behavioral outcomes. Although ethnic concentration was one of the more common neighborhood characteristics examined in these empirical studies, Latino populations were almost always combined with other foreign-born minority and African American populations and were not investigated separately. One study found that adolescents residing in low SES, primarily Latino neighborhoods exhibited less conduct disorder symptoms when compared to adolescents living in working class neighborhoods comprised of Latinos and non-Hispanic Whites (Aneshensel & Sucoff, 1996). Aneshensel and Sucoff (1996) also found that, youth residing in low SES, primarily Latino neighborhoods had lower symptoms related to depression compared to youth residing in working class neighborhoods. This latter finding suggests that there may be an association between Latino concentrated neighborhoods and mental health benefits, which is a phenomenon that has been documented in other studies (e.g., Lee & Liechty, 2014; Vega, Ang, Rodriguez, & Finch, 2011).

Ethnic enclaves, or neighborhoods with high proportions of a specific ethnicity, can facilitate positive outcomes for individuals whose ethnicity matches the enclave's

overall ethnic makeup through processes such as having strong social networks and community services (e.g., churches, grocery stores, restaurants), providing access to local employment opportunities, and sharing an ethnic identity among other community members (Chiswick & Miller, 2005). Ethnic enclaves tend to have close-knit social networks with high levels of trust among community members (Portes & Sensenbrenner, 1993). Thus, an ethnic enclave may produce strong community ties and therefore reduce criminal activities among its inhabitants.

According to social disorganization theory, increased heterogeneity of neighborhood population is theorized to increase crime rates by restricting the formation of common values and community problem solving. As a result, effective communication between residents becomes limited and leads to a lack of community control (Kornhauser, 1978; Shaw & McKay, 1942). Conversely, ethnic homogeneity in neighborhoods would support development of social networks between residents who match the ethnic makeup of the enclave, and, as a result, stimulate a community's social, cultural, and economic institutions and lower crime rates through increased social control (Sampson, Raudenbush & Earls, 1997). Furthermore, areas with strong social networks will have an increased cost of reputational harm for individuals who deviate from the norm and commit criminal acts, thereby also increasing social control (Coleman, 1988).

On the other hand, segmented assimilation theory suggests that adolescents who assimilate into highly disadvantageous neighborhoods may be adopting inner-city oppositional subcultures, which could lead to higher risk of joining gangs and committing crimes (Portes & Rumbaut, 2001; Portes & Zhou, 1993; Zhou, 1997). Given that Hispanics in the U.S. are more likely than non-Hispanic Caucasians to reside in

neighborhoods characterized by high poverty and social disorganization (Huston et al., 1994; Portes & Rumbaut, 2001), these youth will likely also experience limited economic opportunity, segregation, and poverty-factors which can contribute to increased crime rates (Alba, Logan, & Stultz, 2000; Morenoff & Tienda, 1997).

However, previous research shows that neighborhood Latino concentration seems to be protective in relation to mental health outcomes, including conduct disorders (Aneshensel & Sucoff, 1996; Lee & Liechty, 2014; Leventhal & Brooks-Gunn, 2000; Vega et al., 2011). This protective effect may lead to other positive behavioral outcomes, including preventing criminal activities. Thus, as Latino concentration in neighborhoods increases, one can theorize that the protective effect of ethnic concentration may reduce adolescent criminal behaviors.

Research on neighborhoods often finds that neighborhood effects are nonlinear. For example, a study by Browning, Leventhal, and Brooks-Gunn (2004) found that a quadratic neighborhood immigrant concentration term significantly predicted timing of first sexual intercourse among adolescents even after taking into account individual, peer and family-level variables. Adolescents living in neighborhoods with higher concentration of immigrants were linked with decreasing odds of sexual onset whereas adolescents living in neighborhoods with low levels of immigrant concentration showed increasing odds of sexual onset. Indeed, another study by Browning and colleagues (2008) examined number of sexual partners in early adolescence and found that a quadratic immigrant concentration term significantly predicted having no sexual partner versus having one sexual partner, where adolescents living in neighborhoods with very low or with very high immigrant concentration were more likely to have no sexual

partner and adolescents living in neighborhoods with moderate immigrant concentration were more likely to have one sexual partner. Browning and colleagues (2008) also controlled for individual, peer, and family-level variables. Examining nonlinear neighborhood effects is thus necessary to fully understand the role of neighborhoods in predicting adolescent outcomes.

Despite the evidence that neighborhood context is an important factor in Mexican American adolescents' development, there are few research studies on Mexican American adolescents and the impact that their neighborhood's ethnic density has on criminal behaviors. Researchers contend that more ethnically homogenous research designs would produce more accurate findings for ethnic minorities (White, Zeiders, Knight, Roosa, & Tein, 2014). Indeed, Latinos of Mexican origin, which are the largest ethnic subgroup among Latinos in the U.S., live in neighborhoods that vary in ethnic concentration from high to low levels (i.e., Euro-American communities; Roosa et al., 2009). This level of variation allows for studying implications of differing levels of neighborhood Latino ethnic concentration for Mexican Americans.

Ethnic identity and crime

Because Mexican Americans are a growing minority population that is also particularly youthful in its demographic makeup, the cultural orientation of developing Mexican American youth has been of interest as a factor that may potentially foster (or suppress) criminal behaviors (Boutakidis, Guerra, & Soriano, 2006; Lopez & Brummett, 2003; Szapocznik & Kurtines, 1993; Vega & Gil, 1999; Vigil, 1988). Ethnic identity is one of these factors. Ethnic identity is generally defined as the understanding of one's

ethnic group, which includes identification with the ethnic group, a sense of belonging, and thoughts and feelings towards the group (Phinney, 1990). Even though scholars have posited theories relating ethnic identity to antisocial behavior, there has been little research that specifically looks at the relationship between ethnic identity and adolescent criminal behavior, and even less research examining these factors as they develop over time (Knight et al., 2012).

Ethnic identity theory suggests that identity development increases during adolescence, when social and cognitive maturity also occurs (Umaña-Taylor et al., 2009; Erikson, 1968). Criminal behavior and offending tend to also follow a developmental trajectory during adolescence, in which offending peaks during adolescence and declines as adolescents reach adulthood (Agnew, 2003; Piquero, 2008). The decline in offending has also been attributed to psychological maturation (Agnew, 2003), which suggests that decreases in criminal behavior and increases in ethnic identity both occur during normative developmental changes (Monahan, Steinberg, Cauffman, & Mulvey, 2009; Quintana, 2008). Although it is advantageous to model changes in self-reported ethnic identity over time, many researchers have also opted to measure ethnic identity levels at a particular point in time and have discovered effects to health and psychological well-being outcomes (Brook et al., 2010; Roberts, Phinney, Masse, Chen, Roberts & Romero, 1999; Umaña-Taylor, 2004). In particular, Brook and colleagues (2010) found that ethnic identity was negatively associated with antisocial behavior, which in turn was linked with substance use. Although this study investigated a group of African American and Puerto Rican adolescents, there may also be a negative relationship between ethnic identity and crime activity among Mexican American adolescents.

Some mixed findings suggest that ethnic identity does not simply lead to positive outcomes. Acevedo-Polakovich and colleagues (2014) contend that the mixed findings involving ethnic identity and psychological health among Latinos may be better explained by social contextual influences. Neighborhoods may have an interactive effect with ethnic identity on adolescent outcomes. Considering that ethnically concentrated neighborhoods may serve to promote prosocial behaviors for Mexican American adolescents, it is hypothesized that the effect of neighborhoods can be amplified in the presence of a strong ethnic identity.

Knight and colleagues (2012) examined trajectories of ethnic identity and self-reported offending and found four distinct groups: moderately low ethnic identity/low offending, high ethnic identity/low offending, moderate ethnic identity/moderate offending, moderate ethnic identity/high offending. The high offending group tended to increase their ethnic identity over time, but were also more likely to engage in gang membership. The authors note that it is possible that the high offending group may be struggling with identity formation ("navigating the conflicting demands of the ethnic and mainstream communities"). Perhaps this high offending group resides in heterogeneous neighborhoods made up of mixed ethnic minorities, which can be the source of tension (e.g., discrimination) linked to high rates of re-offense. To date, investigators have not examined the ethnic concentration of the neighborhoods these youth live in, which is a salient environmental context that may better illustrate the relationship between ethnic identity and re-offense among juvenile delinquents.

Enculturation and crime

For some ethnic minority groups, increased exposure to the mainstream culture of the U.S. has been found to be associated with increased delinquency (Fridrich & Flannery, 1995; Samaniego & Gonzalez, 1999; Vega, Khoury, Zimmerman, Gil, & Warhaheit, 1995; Wall, Power, & Arbona, 1993). This may be due, in part, to the greater risk that ethnic minority youth face with regard to balancing the behavioral expectations and values of the ethnic culture in the home and neighborhood with the behavioral expectations and values of their mainstream school and broader community (Knight, Vargas-Chanes, Losoya, Cota-Robles, Chassin & Lee, 2009a). It may also be the case that ethnic minority youth, who often reside in disadvantaged neighborhoods, are adopting normative behaviors from inner city subcultures and are more likely to be at higher risk for committing crimes (Portes & Zhou, 1993). The process of assimilation to mainstream U.S. culture is frequently referred to as acculturation among researchers. The current understanding of acculturation involves a dual cultural adaptation process, taking into account enculturation (adaptation to and taking on the normative values of one's ethnic culture) as well as acculturation (adaptation to and taking on normative values from the mainstream culture; Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002; Knight, Jacobson, Gonzales, Roosa, & Saenz, 2009b).

However, research examining acculturation and enculturation processes with adolescent antisocial behavior has been mixed. Some studies have found that Hispanics who were more acculturated to mainstream US culture were more likely to abuse substances and use illicit drugs (Caetano, 1987; Miller et al., 2008), which was consistent with the studies solely examining acculturation and delinquency. Further, enculturation

has been posited as a protective factor against delinquent behaviors such as substance use, due to strong social ties to one's family and loyalty to one's ethnic group and ethnic values. Gil, Wagner, & Vega (2000) found that acculturation predicted alcohol use through the deterioration of Latino family values. Because enculturation encompasses taking on the values and norms of one's ethnic culture, enculturation is likely important in understanding Mexican American adolescent behaviors such as alcohol use. However, research has also found a link between higher Mexican orientation and greater gang involvement (Lopez & Brummett, 2003). Researchers contend that these mixed findings may be due to the failure to incorporate the dual process of acculturation and enculturation in studies. In fact, studies have shown that bicultural identification, taking into account both acculturation and enculturation, is linked to less substance use as well as positive health outcomes (Felix-Ortiz & Newcomb, 1995; Gonzales & Kim, 1997; Losoya et al., 2008).

Miller and Gibson (2011) argued that, in order to understand acculturation and its link to crime, researchers must take into account neighborhoods as a contextual factor that can influence adolescent behaviors. This is based on the notion that adolescents may acculturate, or take on mainstream norms, differentially depending on their environmental context. If a youth resides in an environment comprised mostly of Hispanic persons, it can be theorized that the youth is being exposed to an ethnic culture and is more likely to take on Hispanic cultural norms. To date, there is a lack of research specifically examining enculturation, acculturation, and neighborhood ethnic concentration. The current study focuses on levels of enculturation rather than acculturation, because there is some evidence that high levels of enculturation may be

protective in preventing criminal behavior in specific situations. In terms of intervention directions, promoting enculturation (rather than preventing acculturation) may be a more feasible target. A recent study conducted by Umaña-Taylor and colleagues (2017) delivered an 8-week curriculum focused on facilitating ethnic identity formation to high school adolescents. Part of the curriculum involves the exploration of traditions, rites of passage, rituals and values from one's ethnic background. Results of the study found that adolescents enrolled in the curriculum reported an increase in ethnic identity by the end of the course, and concluded that ethnic identity is a modifiable target for intervention (2017). Although this study focuses on ethnic identity formation, many parts of the intervention also involves the exploration of traditions, rites of passage, rituals and values from one's ethnic background, which could be construed as increasing enculturation. Thus, the results of the intervention indicates that both ethnic identity and enculturation are modifiable intervention targets. The effect of enculturation at a single time-point, from here on after referred to as the adolescent's *Mexican orientation,* may be amplified within the specific context of high ethnic concentration. High ethnic concentration within neighborhoods may promote prosocial values through engagement with Hispanic individuals and interact with the individual's Mexican orientation, which can then lead to preventing future criminal behaviors.

Generational status and crime

Generational status is frequently used to measure assimilation to mainstream U.S. culture and to examine criminal behaviors among immigrants. Although there have been many studies that have linked later generation status to higher risk for criminal behaviors

across ethnic minorities (Bersani, 2014; Gibson & Miller, 2010; Martinez & Lee, 2000; Sampson, 2008), there continues to be a pervasive stereotype that immigrants are linked to increases in crime. However, many research studies have found that later generation minorities tend to commit more crimes than first generation minorities (Bersani, 2014; Gibson & Miller, 2010; Martinez & Lee, 2000; Sampson, 2008). Sampson (2008) argued that first generation immigrant families likely emigrate to a new country seeking new opportunities with a desire to establish themselves as well as their family and are likely not inclined to act in ways that can facilitate deportation.

Generational status continues to be an important factor to consider when examining re-offending behaviors given the research showing that later generational status is related to crime involvement. Second and third-generation youth tend to have higher risk for crime involvement in comparison to their first-generation counterparts (Bersani et al., 2014; Caetano, 1987; Gibson & Miller, 2010; Gilbert, 1987; Morenoff & Astor, 2006). Importantly, research suggests that generational status, although often conflated with acculturation, is a poor proxy to use in place of acculturation. It is poor because it does not take into consideration the complex socialization process that occurs when an immigrant resides in a host environment. For example, first generation immigrant families may vary in terms of how much "American" culture they take on, from language to being able to navigate through educational or occupational systems. Some families may have brought substantial financial resources with them, thereby gaining an advantage over other first generation families. Other families may choose to reside in immigrant neighborhoods or ethnic enclaves that can help with finding resources. Second and third generation families can also vary tremendously on how much

each family decides to hold onto their ethnic cultures, including speaking the language at home to celebrating one's cultural holidays as well as teaching and learning about norms and values from one's culture. Over generations, one can presume that families would become more acculturated to U.S. culture, but the level of acculturation still varies across families and individuals. The current study tests the effects of generational status separately from ethnic identity and Mexican orientation in order to capture possible differential effects of these separate factors to predict re-offending.

Furthermore, there is much debate about how neighborhood factors can influence the link between generational status and crime. Shaw & McKay (1942) showed that particular areas had consistently high rates of delinquency, no matter the generational status or nativity level of the inhabitants. Lind (1930) argued that homogeneous neighborhoods may have increased social control and reduce criminal activities among immigrant ethnic minorities and found that homogenous neighborhoods indeed had had lower rates of crime in comparison to disorganized, heterogeneous neighborhoods. However, Gibson and Miller (2010) found no relationship between neighborhood ethnic concentration and violent crime and thus dropped the neighborhood variable in subsequent analyses. Gibson and Miller (2010) then went on to find that individuals from later generational statuses were more likely to report violent offending in comparison to first generation individuals. To the author's knowledge, there are no studies that have examined whether ethnic neighborhood concentration is moderated by generation status to predict re-offending behaviors. It is possible the neighborhood ethnic concentration can exert preventative effects on adolescent offense rates through strong community values, and that these effects may be moderated by generation status. In particular, later

generation adolescents who may have higher risk for criminal involvement could be positively affected by a homogeneous, largely ethnic neighborhood.

Present Study

This study seeks to better understand offending behaviors among Mexican American adolescents by investigating whether neighborhood ethnic density is an important factor to consider alongside ethnic identity in the prediction of re-offending behavior. In particular, this study examined whether Latino concentration within neighborhoods interacted with individual levels of ethnic identity, Mexican orientation, and generational status to predict self-reported re-offending.

Hypotheses

This study hypothesizes that the relationship between ethnic concentration of Latinos in neighborhoods and re-offense will be moderated by (1) ethnic identity, (2) Mexican orientation, and (3) generational status.

For the first model, it is hypothesized that adolescents residing in neighborhoods with higher ethnic concentration will re-offend less than adolescents residing in neighborhoods with lower ethnic concentration. Further, neighborhood ethnic concentration will interact with ethnic identity such that higher levels of ethnic identity will amplify the protective effect of ethnic concentration on re-offending.

For the second model, it is hypothesized that Mexican orientation will moderate the relationship between ethnic concentration and re-offense such that higher levels of enculturation will amplify the protective effect of ethnic concentration on re-offending.

The third model hypothesizes that the relationship between neighborhood ethnic concentration and re-offending is moderated by generational status, such that the protective effect of ethnic concentration will be strongest for first generation adolescents.

An exploratory aim of the current study was to examine whether the interactive relationship of ethnic identity, Mexican orientation, generational status and ethnic concentration in predicting re-offense is quadratic. More specifically, I investigated whether the curvilinear effect of ethnic concentration varies at different levels of ethnic identity, Mexican orientation, and generational status. This aim was included in order to best model neighborhood effects, as neighborhood effects have been found to be nonlinear in previous studies (see Browning et al., 2004, 2008).

Method

Original Study

Participants

Participants selected for the current study are from the Pathways to Desistance study, the largest longitudinal investigation of serious adolescent offenders transitioning from adolescence to young adulthood (Mulvey et al., 2004). Data were collected from 1,354 juvenile offenders in Maricopa County, Arizona (n=654) and Philadelphia County, Pennsylvania (n = 700). The original project was designed to identify distinct pathways out of juvenile justice system involvement as well as to investigate the developmental and social characteristics of these youth as they go through these pathways (Mulvey et al., 2004).

The mean age at most recent adjudication for the original sample was 15.9 (SD = 1.4, range 14-17 at baseline). The average number of prior court petitions for the sample was 2.1 (SD = 2.4). Eighty-six percent of the sample was male, with 25% of the sample self-identifying as Non-Hispanic Caucasian, 44% identified as African American, 29% Hispanic, and 2% as other. Following enrollment into the study, 41% of participants were sentenced to probation, 21% jail/incarceration, 21% non-incarcerated residential placement, 15% were pending, 1% were given fines, and 1% were adjudicated but later dismissed (Schubert et al., 2004).

Recruitment

Between November 2000 and January 2003, approximately 10,461 juvenile offenders of requisite age and petitioned charge status were processed in either the Maricopa County or Philadelphia County court system. Of this sample, 5,382 were dropped from possible participation because their charges were reduced below a felony-level offense at the point of adjudication. Additionally, eligibility status in 1,272 cases were indeterminable due to inadequate court data and were therefore excluded. Out of 3,807 eligible cases, 1,799 cases were not enrolled due to operational constraints (i.e., potential case overload of interviewer, drug offender cap close to being breached). The remaining 2,008 adolescents were approached for inclusion into the study. A total of 1,354 adjudicated youths were consented and enrolled into the study using the eligibility criteria described below.

Juveniles were deemed eligible if they met the following criteria: (a) they were convicted (in adult court) or adjudicated (in juvenile court) of a serious felony (excluding

some crimes, such as misdemeanor property offenses, misdemeanor sexual assault, or weapons offenses); (b) were at least 14 years old and under 18 years old at the time of committing the offense; (c) provided informed assent or consent; and (d) were able to understand and respond to survey items read in English. Since drug violations represent a large proportion of the offenses committed by this age group, the proportion of males recruited based on a drug offense was capped at 15% of the total recruitment sample size in order to keep heterogeneity of offending within the sample (Schubert et al. 2004; Stahl, 2003). This cap was not applied to the female offenders enrolled in the study.

Significant group differences were found between juvenile offenders who were enrolled and not enrolled in the study. These differences included age (M = 15.9 vs 16.1, $p < .001$), age at first court appearance (13.9 vs. 14.2, $p < .001$), number of prior court petitions (M = 2.10 vs. 1.50, $p < .001$), and percentage of females (14.0% vs. 9.0%, $p < .001$). Racial/ethnic differences were also found, with significantly more non-Hispanic Caucasian offenders (25% vs. 20%, $p < .001$) and fewer African Americans (44% vs. 49% $p < .001$) found in the enrolled group than the non-enrolled group (Schubert et al., 2004).

Procedure

Following informed consent, participants completed a baseline interview which included topics such as psychological development, antisocial behavior, and mental health. Participants who were processed in the juvenile court system completed the baseline interview within 75 days of their adjudication hearing. Participants processed in the adult court system completed the interview within 90 days of either (a) a

decertification hearing in Philadelphia, where the case was determined on whether it would be processed in adult court or be returned to juvenile court, or (b) an adult arraignment hearing in Phoenix, where charges were formally presented and the defendant had the opportunity to enter a plea.

After the initial baseline interview, follow-up data were collected every 6 months for the first 36 months, and every 12 months for the 48 months afterwards. Data collection ended in March 2010, with the total data spanning 84 months (7 years). Dates for follow-up interviews were calculated based on the date of each participants' respective baseline interview to ensure approximately equal measurement periods across all participants. The range for collecting the time-point interview was approximately six weeks prior to the follow-up and until eight weeks following the target date. If the interview was not conducted during this time period, the interview was considered absent and no further attempts to complete the interview were made until the next time-point assessment. Retention rates across every time-point were very high (> 90% followed at each wave).

Trained interviewers conducted baseline and follow-up interviews by reading survey items aloud to participants in English. In general, participants answered verbally and their responses were entered electronically. When items inquired about confidential or sensitive topics or when private conditions could not be established, participants were given a portable keypad to enter a non-verbal response. Approximately 53% of all interviews (N = 5,500) were conducted in the participants' home, 36% were conducted in a facility, and 11% were conducted elsewhere. A certificate of confidentiality was issued

by the U.S. Department of Justice to ensure the highest level of protection available given the sensitive nature of the information in the study (for additional information regarding project procedures, please see Schubert et al., 2004). Adolescents were compensated between $50 and $150 for completing assessments.

Current study

Eligibility criteria

The present study uses a subsample of the original participants from the Pathways to Desistance project. Participants were selected for analysis using several criteria. At baseline, participants must have reported race/ethnicity by self-identifying as Hispanic and answered an item in the Acculturation Rating Scale for Mexican Americans (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995) self-identifying as being Mexican American ("Do you consider yourself to be Mexican American?"). One juvenile recruited from Philadelphia was taken out of the subsample in order to focus on the subsample in Phoenix. These items were used to select the Mexican American subsample.

Because the current study is interested in how ethnic concentration in neighborhoods interacts with ethnic identity in predicting re-offense, census block data must be available for participants to be selected for the study. Participants provided residential addresses at each follow-up interview, and addresses were geo-coded to census blocks. For juveniles without census block data at 6-month follow-up (due to missing the interview, having a partial interview, being located in a group home or shelter, or being homeless), census block data from 12-, and 18- month follow-up (whichever follow-up had neighborhood block information) were used to maximize

sample size (participants with census data first available at 6-month wave = 200, 12-month wave = 35, 18-month wave = 12).

Participant demographics

The participants in this subsample were between the ages of 14 and 18 at the time of their baseline interview (M age = 15.85; SD = 1.07). Because census block data were available at different time-points, ages range between 14 and 19 years of age at the time-point at which census data are first available (M age = 16.49; SD = 1.13). All participants had been adjudicated in a juvenile court or found guilty in an adult court of a serious offense. On average, court records indicated a lifetime history of about 2 prior court petitions (not including probation violations). Eighty-eight percent of the participants were male. Regarding parents' education, most of the adolescents' parents did not have a high school diploma (68%). Participant demographics are reported in Table 1.

Measures

The measures used in the present study were part of a larger battery of measures from the Pathways to Desistance Project. Descriptive statistics and correlations of measures are reported in Table 1 and Table 2.

Predictors

Latino ethnic concentration

Residential addresses were collected at follow-up and geo-coded to census blocks (Bureau of Census, 2000). This study used % Latino concentration captured at the available census time-point (participants with census data at 6-month wave = 200, 12-

month wave = 35, 18-month wave = 12; refer to the Participants section under Current Study for details) to estimate ethnic concentration in neighborhood. The time-point at which census data are first available is hereafter denoted the 'T1' time-point for participants, with outcomes measured 12 months after T1. Neighborhood Latino concentration ranged from 1.3% to about 96%, with a mean of 50.96% (SD = 25.82; see Table 1).

Although Latino concentration does not specifically capture percent of Mexican Americans (the ethnicity of most interest), the Hispanic population in the Phoenix metropolitan area is largely comprised of Mexican Americans (making up 91% of the overall Hispanic population; Pew Research Center, 2011). Thus, it is reasonable to assume that Latino concentration in Phoenix neighborhoods is mostly comprised of Mexican American persons.

Moderators

Ethnic identity

Ethnic identity was measured using the Multigroup Measure of Ethnic Identity (MEIM; Phinney, 1992) at T1. The MEIM was used to measure a sense of membership in and positive feelings towards one's ethnic group. The items are assessed with a Likert response scale ranging from 1 (strongly disagree) to 4 (strongly agree). The MEIM assesses two dimensions of ethnic identity development: Ethnic Affirmation and Belonging and Ethnic Identity Exploration. Ethnic Affirmation and Belonging consists of 7 items assessing ethnic pride and sense of belonging toward one's ethnic group (e.g., "I feel strong attachment towards my own ethnic group"). Ethnic Identity Exploration

consists of 5 items assessing the exploration and developmental process of understanding one's ethnic identity (e.g., "I have spent time trying to find out more about my own ethnic group"). A mean score of the two dimensions was used to measure ethnic identity (r = .64). Items are listed in the Appendix. Cronbach's alpha was reported in a previous manuscript (α = .89; Knight et al., 2012). In this sample, the mean of ethnic identity was 2.81 (SD = .49; see Table 1).

Mexican orientation

Mexican orientation was measured using the Acculturation Rating Scale for Mexican-Americans II (ARSMA-II; Cuellar et al., 1995) at T1. The ARSMA-II measures Mexican and Anglo cultural orientation. The ARSMA-II consists of 48 items using a Likert response scale ranging from 1 (not at all) to 5 (extremely often or almost always). The ARSMA-II contains two scales: Scale 1 is composed of 30 items measuring the Anglo Orientation Subscale (AOS) and Mexican Orientation Subscale (MOS), and Scale 2 is comprised of 18 items which measure a Marginality Scale. For this study, the MOS score was used to measure the construct of enculturation. The Marginality Scale, as noted by Cueller et al. (1995), is not a reliable scale in comparison to Scale 1 (AOS and MOS), and thus, only Scale 1 MOS items were used in this study. Items for the MOS subscale are listed in the Appendix. Cronbach's alpha was reported in a previous manuscript (α = .72; Knight et al., 2012). The MOS mean was 2.92 (SD = 1.0; see Table 1) in this study.

Generational status

Generational status was measured by using the country of birth for the youth and his or her parents (measured at the baseline assessment for the larger Pathways to

Desistance Project). First generation youth are defined as those who were born outside of the U.S. with foreign born parents. Second generation youth are those who were born in the US, with at least one foreign-born parent. Third generation youth are those who were born in the US and both parents were born in the US. For the current study, there are 31 first-generation adolescents, 97 second-generation adolescents, and 109 third-generation adolescents. Generational statuses of 10 adolescents (4.1%) could not be determined because of incomplete information on the birthplace of fathers. Full information maximum likelihood (FIML) was used in all analyses to handle missing values.

Generational status was dummy-coded into two code variables (D1 and D2) using the 1st generation as the base group. Code variable D1 compares 2nd generation (coded as 1) to 1st generation adolescents. Code variable D2 compares 3rd generation (coded as 1) to 1st generation adolescents.

Outcome measure

Re-offense

Re-offense was measured using an adapted form of the Self-Report Offending scale (SRO; Huizinga, Esbensen, & Weiher, 1991) to measure engagement in criminal activities. The SRO consists of 22-items that assess the prevalence and frequency of offending since the prior interview. When an item was endorsed (when the adolescent said they engaged in the activity during the follow-up period), follow-up questions collected information on frequency of the activity, recency, and situations surrounding the reported offense. The 22-items included the following crimes: (1) destroyed or damaged property, (2) set fire to house, building, etc., (3) rape, (4) murder, (5) shot at

someone (pulled trigger), (6) shot someone (where bullet hit), (7) beaten up someone badly, (8) been in a fight, (9) beaten up, threatened or attacked someone as part of a gang, (10) entered/broken in a building to steal, (11) used checks/credit cards illegally, (12) stolen a car/motorcycle, (13) prostitution, (14) stolen something from a store, (15) carjacked someone, (16) taken something from another by force (with a weapon), (17) taken something from another by force (without a weapon), (18) bought/received/sold stolen property, (19) sold marijuana, (20) sold other illegal drugs, (21) drove drunk or high, and (22) carried a gun. An offending variety proportion score was created by the Pathways to Desistance Project members. The offense variety score was calculated by using the number of acts that were committed in the recall period in the numerator and the number of SRO questions answered in the denominator. This offense variety score has been shown to be a consistent and valid estimate of involvement in illegal activity during a given recall period (Osgood, McMorris, & Potenza, 2002; Thornberry & Krohn, 2000).

For the current study, a re-offense period of one year is of interest. SRO (as measured by the offense variety score) was averaged across two 6-month follow-up waves to measure re-offense one year after T1. For example, if the available census time-point is at 6-month, SRO was averaged across 12-month and 18-month time-point to capture a one-year time-period of possible re-offending. If the adolescent only has an available census time-point at 12-month, SRO was averaged across the 18-month and 24-month time-point to capture re-offense rates. On average, participants had SRO score of .08 (SD = .10, range = .00 - .57). Approximately 35.3% of participants had a SRO score of 0 one year after T1.

Self-reported offending was preferred over official arrest records since official arrest convictions do not measure criminal activity accurately. Many criminal behaviors may go undetected by the criminal justice system, whereas self-report would be a better measurement of crimes actually committed by the individual, even given methodological issues with self-report (e.g., memory decay).

Covariates

Demographics

Demographic variables including age, gender, and parents' education may be related to the predicted outcome. Thus, these variables were tested in the models as potential covariates. Age was measured at T1 (M = 16.49, SD = 1.13). Gender and parents' education were taken from the Pathways to Desistance Project's baseline assessment. Approximately 88% of the sample size was male. Parents' education consists of two variables: mother's education level and father's education level. Parents' education was combined by averaging both mother's and father's education level (0 = grade school or less, 1 = some high school, 2 = high school diploma, 3 = trade school/some college, 4 = college graduate, 5 = some graduate school/graduate school degree/). In cases where one parent's education level was missing, the other parent's education level was used. Parents' education was coded so that 0 indicated less than a high school education and 1 indicated having a high school diploma or completing any education beyond high school. Most parents reported not having a high school diploma (68%). Please see notes in Table 1.

Composite risk score

Items that have been previously found to predict offense behavior were used in the current study to create a composite risk score via hierarchical factor analysis. This composite risk score was reported by Mulvey, Schubert, and Chung (2007) and recreated in the current study. Seven risk domains measured at baseline (Pathways to Desistance baseline time-point) were included: previous criminal behavior, antisocial attitudes, parental deviance, antisocial peers, school problems, mood problems, and substance use problems. Increased likelihood of poor outcomes have been documented among adolescents with prior history of antisocial behavior (Moffitt, 1993), antisocial attitudes and beliefs (Zhang, Loeber, & Stouthamer Lober, 1997), parental deviance (Farrington & Loeber, 2000), delinquent peers (Thornberry, Krohn, Lizotte, & Chard Wierschem, 1993), academic problems (Farrington, 1989), mood disorders (Marmorstein & Iacono, 2003), and substance use disorders (Hussong, Curran, Moffitt, Caspi, & Carrig, 2004).

To derive this composite, a hierarchical confirmatory factor analysis (CFA; i.e., second-order factor analysis) was performed on the full study sample of all Mexican Americans from the Phoenix site (n = 333). All indicators were measured at the Pathways to Desistance baseline time-point. A prior criminal history subordinate factor was created by using the following indicators: aggressive offending, income-related offending, and school-related difficulties (ever expelled, caught cheating in class before age 11, caught disturbing class before age 11, caught skipping class, dropped out of school). An antisocial attitudes subordinate factor was created by using the following indicators: moral disengagement (Mechanisms of Moral Disengagement; Bandura, Barbarnelli, Caprara, & Pastorelli, 1996), consideration of others (Weinberger Adjustment Inventory;

Weinberger & Schwartz, 1990), and legal cynicism (Procedural Justice Inventory; Tyler, 1997). A parental deviance subordinate factor was created by using the following: mother ever arrested/jailed, father ever arrested/jailed, mother ever had a history of alcohol problems (Substance Use/Abuse Inventory; Chassin, Rogosch, & Barrera, 1991), and mother ever had a history of drug problems (Substance Use/Abuse Inventory; Chassin et al., 1991). An antisocial peers subordinate factor was created from: peer antisocial behavior (Rochester Youth Study; Thornberry, Lizotte, Krohn, Farnworth & Jang, 1994), peer antisocial influence (Rochester Youth Study; Thornberry et al., 1994), and proportion of friends ever arrested. A mood disorder subordinate factor was created by using the following indicators: diagnosis of select mood disorders (MDD, dysthymia, manic episodes using the Composite International Diagnostic Interview [CIDI]; World Health Organization [WHO], 1990), impairment from depressive symptoms (CIDI; WHO, 1990), diagnosis of post-traumatic stress disorder (CIDI; WHO, 1990), and anxiety problems (Revised Children's Manifest Anxiety Scale; Reynolds & Richmond, 1985). A substance use problems subordinate factor was created using: diagnosis of alcohol dependence (CIDI; WHO, 1990), diagnosis of drug dependence (CIDI; WHO, 1990), significant social consequences from alcohol use (Substance Use/Abuse Inventory; Chassin et al., 1991), significant social consequences from drug use (Substance Use/Abuse Inventory; Chassin et al., 1991), and total dependence symptoms from alcohol or drug use (Substance Use/Abuse Inventory; Chassin et al., 1991).

These six subordinate factors (prior criminal history, antisocial attitudes, parental deviance, antisocial peers, mood disorder, and substance use history) were loaded onto a higher order factor, the risk composite score (see Figure 1 for the hierarchical factor

model). The CFA resulted in significant indicator loadings and showed good model fit (CFI = .960, RMSEA = 0.041). The manifest factor score was used as a covariate in the analyses. Because the composite risk score includes previous history of criminal activity (assessed at baseline), the score also serves to account for baseline levels of SRO.

Proportion of supervised time

Some participants were sentenced to reside at institutional facilities (e.g., prison, residential treatment programs) during their participation in the study. Given that these environments are restrictive, these participants likely had less opportunity to engage in criminal behaviors and reduced exposure to their neighborhoods. The current study controlled for this restriction by using an item measuring the proportion of supervised time (PST). This item assessed the amount of time spent in settings with no community access, calculated as the number of days spent in a supervised setting divided by the total number of days elapsed during the recall period (period in between interviews) and transformed into a proportion score ranging from 0 to 1 (see Piquero et al., 2001). For this study, PST is averaged across two follow-up time-points. Participants whose PST was less than .9 were included in the current study allowing for neighborhood exposure to exert some influence on the participant's outcome. PST in this sample ranged from 0.0 to .86, with an average of .16 (SD = .25). Approximately 54% of participants reported that they did not spend any time in restrictive settings during the 12 months following T1 (i.e., 0 for PST).

Neighborhood disadvantage factor

Given that neighborhood disadvantage is related to higher risk of committing crimes and also related to Latino concentration (Portes & Zhou, 1993; Zhou, 1997; Portes & Rumbaut, 2001), a neighborhood disadvantage factor (created by the Pathways to Desistance Project members) was taken from the census block data (at T1) and used as a covariate. As described in Mulvey et al. (2010), the neighborhood disadvantage factor was derived using four indicators from the 2000 Census data, including (1) percentage of households below the poverty line, (2) percentage of households receiving public assistance, (3) percentage of unemployed residents, and (4) percentage of residents with less than a high school education. A principle components analysis previously calculated by Mulvey et al. (2010) revealed a factor score that accounted for 77% of total explained variance. This standardized factor score was provided alongside the census data and was used as a covariate in these analyses.

Mobility

Given that juvenile offenders are a highly mobile population, census blocks were examined over a 12-month period to calculate change in neighborhood at the block level due to its implications with neighborhood ethnic concentration. In the current sample, 57% did not move into a different block during the 12-month period after census data were taken, 36% moved into a different block, and 7% moved to two different blocks during the 12-month period. Mobility was measured as a count variable (no moves were coded 0, one or two moves coded as 1) and used as a covariate.

Power Analysis

Power analyses were conducted using G*Power 3 (Faul, Erdfelder, Lang & Buchner, 2007) for an Ordinary Least Squares regression. For the test of the gain in prediction of recidivism, over and above covariates, from the interaction term between Latino concentration percentage and ethnic identity, there is sufficient power (>.80) to detect a moderate (f^2 = .15) and a large effect (f^2 = .35). The power to detect a small effect (f^2 = .02) is .70, below the traditional benchmark of acceptable power. Based on the number of predictors, the effect size must be larger than .03 in order to detect an overall R^2 deviation from zero. Because interaction effects tend to be small, it is very likely that there is inadequate power to detect an interaction with this sample size (Cohen, Cohen, West & Aiken, 2003).

Results

Preliminary Analyses

Descriptive statistics and correlations

Descriptive statistics for all variables used in the analyses are displayed in Table 1. A number of measured variables showed skewed distributions and indicated kurtosis values outside the range of normal distribution. The standard error for skewness was approximated by $\sqrt{\frac{6}{N}}$, and two times the standard error for skewness was used to determine whether the distribution is skewed (cutoff is ±.312 for a sample size of 247; Brown, 1997). The standard error for kurtosis was approximated by $\sqrt{\frac{24}{N}}$ with two times the standard error for kurtosis used to determine whether the distribution likely differs

from a mesokurtic distribution (cutoff is ±.623 for a sample size of 247; Brown, 1997). In order to account for non-normal distributions, all model parameters were estimated with maximum likelihood with robust standard errors.

Table 2 displays bivariate correlations among the study variables. Self-reported offending was significantly correlated with gender (r = -.13, p = .042), the risk composite score (r = .46, p = .000), and proportion of supervised time (r = .30, p = .000). These correlations show that males tend to offend more than females, as the risk score increases, self-reported offending also increases, and the increase of supervised time is related to an increase in SRO. Percent Latino concentration was significantly correlated with age (r = .13, p = .044), parents' education level (r = -.33, p = .000), proportion of supervised time (r = .21, p = .001), and the neighborhood disadvantage factor (r = .56, p = .000). Older adolescents were more likely to live in more concentrated Latino neighborhoods. Concentrated Latino neighborhoods were more disadvantaged. Adolescents from more Latino concentrated neighborhoods had higher proportions of supervised time and parents who were less educated. Percent neighborhood Latino concentration was also significantly correlated with Mexican orientation (r = .29, p = .000) and generational status (r = -.15, p = .018). These correlations indicate that adolescents living in more concentrated Latino neighborhoods were more oriented towards traditional Mexican culture and were more likely to be a first generation adolescent.

Missing data

Based on preliminary analyses, there was a small number of missing values for predictor variables. Variables measuring age and ethnic concentration in neighborhood

(% Latino) did not have missing data. Ethnic identity and Mexican Orientation variables were missing for one adolescent at the available census time-point. Ethnic identity and Mexican Orientation variables were taken from the Pathways to Desistance baseline time-point for this participant. Generational status was missing for 10 adolescents. Parents' education was missing for 3 individuals. Six individuals had missing data for PST and SRO. Analyses were conducted with full information maximum likelihood (FIML) to handle missing values.

Clustering

Upon analyzing the census blocks, adolescents in the study sample resided in 205 unique census block groups, indicating some clustering of adolescents in neighborhoods. However, the mean number of adolescents residing in unique blocks is 1.2 adolescents (171 blocks included 1 adolescent, 28 blocks included 2 adolescents, 4 blocks included 3 adolescents, and 2 blocks included 4 adolescents). Due to the low number of adolescents residing within a block, it was not feasible to examine the intracluster correlation and design effects.

Regression diagnostics

Regression diagnostics were conducted to examine possible outliers by looking for variables with high distance, leverage or influence on the regression coefficients (Cohen et al., 2003). One case showed high distance (studentized deleted residual = 4.51) and leverage ($D^2 = 13.56$). This case was deemed an outlier and was removed from analyses. The results did not change when this case was included in the analyses.

Multicollinearity

Multicollinearity may occur when correlations among predictor variables are strong, contributing to inflations of the regression coefficient standard errors and thus affecting the overall statistical significance of the predictors (Cohen et al., 2003). In the current analyses, nonessential multicollinearity was reduced by centering continuous variables (Cohen et al., 2003). Moreover, multicollinearity was assessed by examining the Variance Inflation Factor (VIF) and tolerance of each predictor. If the VIF is 10 or greater or if the tolerance is .10 or less, there may be multicollinearity problems (Cohen et al., 2003). All variables used in the current study had a VIF less than 10 and tolerance greater than .10.

Covariate by predictor interactions

In order to test the assumption that covariate effects are independent of predictor effects, covariate by predictor interactions were built into the regression model and tested. False discovery rate (FDR) was used to control for the increased rate of type I errors due to conducting multiple tests. FDR adjusted p-values for covariate by predictor interactions were non-significant ($p > .05$). Thus, covariate by predictor interactions were not included in the primary analyses.

Primary analyses

All predictors and covariates were centered or were coded with meaningful zeroes (e.g., gender was coded with 0 = males) in order to aid with interpretation of beta coefficients. Hypotheses were tested using hierarchical regression analyses. Block 1 included all covariates. Covariates included age, gender, parents' education, a risk

composite score, proportion of supervised time, a neighborhood disadvantage factor, and a residential mobility variable. Due to previous research indicating that neighborhood disadvantage is highly correlated with neighborhood ethnic concentration, the neighborhood disadvantage factor was examined with careful consideration of whether regression coefficients changed signs and standard errors became large. Coefficients and standard errors were not affected by the neighborhood disadvantage factor, thus the factor was included in all analyses. Block 2 included Block 1 and % Latino concentration and ethnic identity (to test Hypothesis 1) or % Latino concentration and Mexican orientation (to test Hypothesis 2) or % Latino concentration and generational status (to test Hypothesis 3). Block 3 included Blocks 1 and 2 and the interaction variable (% Latino x Ethnic identity for Hypothesis 1; % Latino x Mexican orientation for Hypothesis 2; % Latino x D1 and % Latino x D2 for Hypothesis 3). Full hierarchical regression model results are displayed in Tables 3 - 5.

Across all models testing the three hypotheses, results indicated that gender, the risk composite score, and proportion of supervised time were consistent significant predictors of self-reported offending one year after T1 (Tables 3 – 5). The unstandardized beta coefficient estimates the amount increase in the dependent variable for every 1-unit increase in the predictor variable of interest when all other predictor variables are at the mean or at zero. For the dummy-coded variables (e.g., generational status dummy codes), the constant represents the mean of the base group when all other variables are at 0 or at the mean. The unstandardized beta coefficient for the dummy coded variable is the mean for the indicated group minus the mean of the base group. The results indicated that gender predicted more offending (male adolescents re-offended significantly more than

female adolescents), a higher risk composite score predicted more offending, and more time spent in a supervised setting predicted more offending. No other variables aside from the aforementioned covariates emerged as significant predictors in the primary models tested.

As an exploratory aim, quadratic interaction terms (examining the quadratic effect of Latino concentration with moderators: ethnic identity, Mexican orientation and generational status) were tested in additional models to predict SRO. These models initially did not converge due to scaling of the Latino concentration terms. After rescaling all terms with Latino concentration (divided by ten), the models converged. The interaction terms were entered simultaneously with the covariates and predictor variables. The results are outlined in Tables 6 – 10. Significant predictors of self-reported offending continued to include gender, the risk composite score, and proportion of supervised time. The main effects and interaction effects testing Latino concentration and moderators (ethnic identity, Mexican orientation) did not reach significance. Mobility was also a significant predictor for 3rd generation adolescents, indicating that 3rd generation adolescents who moved during the follow-up period offended more 1 year later.

Discussion

The purpose of the present study was to examine the effects of neighborhood ethnic concentration and ethnic identity, Mexican orientation, and generational status on re-offending among Mexican American juvenile offenders. Previous research has shown that neighborhoods provide an important environmental context that may influence adolescent development (Aneshensel & Sucoff, 1996; Lee & Liechty, 2014; Leventhal &

Brooks-Gunn, 2000; Martinez, 2000; Martinez & Lee, 2000; Morenoff & Astor, 2006; Vega et al., 2011). In particular, ethnic enclaves, or neighborhoods with high ethnic concentration, can provide strong social networks and access to opportunities that may otherwise be lacking in neighborhoods with low ethnic concentration (Chiswick & Miller, 2005; Portes & Sensenbrenner, 1993) and prevent criminal behaviors. Further, research has shown that positive health outcomes are linked with Latino neighborhood concentration (Lee & Liechty, 2014; Leventhal & Brooks-Gunn, 2000; Vega et al., 2011).

However, in the current study, neighborhood Latino concentration was not found to be related to re-offending behaviors. This is in contrast to Aneshensel & Sucoff's (1996) study, which found that adolescents residing in low SES, primarily Latino neighborhoods showed less conduct disorder symptoms in comparison to adolescents residing in mixed neighborhoods of Latinos and non-Hispanic Whites. Aneshensel & Sucoff's (1996) finding suggests that neighborhood ethnic concentration may affect adolescent crime-related behaviors earlier, prior to being adjudicated. This may explain why I did not find an effect on re-offending among adolescents who have already established offending behaviors. Another possibility (which is not mutually exclusive) is that neighborhood effects were difficult to detect in this sample because they had reduced levels of exposure to the neighborhood. That is, more than half of the participants spent some of the time confined to supervised settings where they likely did not have exposure to the protective influences of ethnic enclaves.

The current study sought to extend prior research by including individual levels of cultural orientation to examine possible differential main effects along with interactions between neighborhood ethnic concentration and individual reports of relation to one's ethnic group. Previous research has indicated that stronger ethnic identity is negatively associated with antisocial behaviors (Brook et al., 2010). In theory, Mexican American adolescents with a strong ethnic identity have a meaningful connection towards their ethnic group (Phinney, 1990), which may be linked with prosocial values and disengagement from criminal behaviors. However, in the current study, neither the main effect of ethnic identity nor the interactive effect of Latino concentration and ethnic identity predicted re-offending behaviors. Previous research has found a connection between ethnic identity and antisocial behaviors among a mixed sample of adolescents (Brook et al., 2000). Furthermore, prior research utilizing the Pathways to Desistance data found that Mexican American juvenile offenders who fit into a very high ethnic identity trajectory and Mexican American juvenile offenders who fit into a very low ethnic identity trajectory offended least across seven years (Knight et al., 2012). However, when examining ethnic identity at baseline, the findings in this study indicate that ethnic identity does not predict criminal behaviors one year after baseline among Mexican American juvenile offenders. Further, the effect of neighborhood Latino concentration was not found to be moderated by ethnic identity levels to predict re-offending. Again, perhaps it was too late to find effects related to neighborhood ethnic concentration and ethnic identity within this sample of adolescents who have already established offending behaviors. It may also be the case that lack of statistical power led

to poor ability to detect interactions between neighborhood ethnic concentration and variables related to ethnic identity and Mexican Orientation.

Furthermore, it is known that some Mexican American adolescents may take on values and norms of their ethnic culture but will not necessarily identify with or have a meaningful connection to their culture. That is to say, being enculturated to one's ethnic group is not equivalent to having a strong ethnic identity. Thus, it would be important to distinguish the effects of both ethnic identity and one's Mexican orientation. In testing whether Mexican orientation moderated the effect of Latino ethnic concentration, the results showed that neither the main effects nor the interactive effect of neighborhood ethnic concentration and Mexican orientation predicted re-offense. Although previous researchers have found some mixed evidence to indicate that enculturation may be related to antisocial behaviors (Gil et al., 2000; Lopez & Brummett, 2003), the current study did not find evidence to support any relationship between Mexican Orientation and re-offense. Further, incorporation of environment by investigating neighborhood ethnic concentration did not change the results.

Another often used method to measure acculturation and enculturation is generational status. Although generational status is a crude way to measure acculturation, many studies have found a relationship between generational status and criminal activity. In general, later-born generations are at more risk for substance use and other criminal behaviors (Bersani, 2014; Gibson & Miller, 2010; Martinez & Lee, 2000; Sampson, 2008). The current study did not find generational status to predict re-offense after controlling for individual and family risk factors. One possible implication of this finding

is that these individual and family risk factors may be confounders of the relationship between generational status and offending. In other words, there may be no true relation between generational status and offending as the true relationship is between offending and individual and family risk factors. Another possible interpretation is that individual and family risk factors could be mediators that explain the effect of generational status on offending. Further, taking into account neighborhood Latino concentration did not aid in explaining the relationship between generational status and offense, and the Latino concentration effect did not seem to depend on generational status. That is to say, neighborhood Latino concentration did not have a specific effect on re-offense that depended on the adolescent's generational status. One might wonder if the null generational status finding is related to the fact that the risk factors for *re*-offending are different than the risk factors for criminal behaviors. Thus, if one is attempting to predict recidivism among juvenile offenders, generational status may not be useful variable for predicting future re-offense, as is shown in the current study.

As mentioned earlier in the introduction of the study, research often finds that neighborhood effects are nonlinear, such that sharp increases or decreases of an effect can occur at the ends of a neighborhood distribution (Browning et al., 2004, 2008). Thus, in order to capture possible nonlinear neighborhood effects (Browning et al., 2004, 2008), quadratic effects of Latino concentration were tested yet no significant quadratic effects emerged in the present study. It is important to note that the current study's sample size limits the ability to detect curvilinear effects as well as interaction effects if they truly exist within this group. However, because previous research has neighborhood effects to

be nonlinear, it continues to important to consider these nonlinear effects in models investigating how neighborhoods can influence outcomes.

Although not a focus of the study, several findings emerged that replicate previous literature. Consistent across all models, being male was linked to higher rates of re-offending one year later even though the sample size of female juvenile offenders was small. This aligns with previous statistics showing that males tend to commit more crimes that lead to arrest (Walker & Madden, 2013). Furthermore, the risk composite score also predicted higher re-offense rates at the follow-up time point. Previous research has consistently found that previous criminal history, mood disorders, antisocial beliefs, parental deviance, peer deviance, as well as academic difficulties predict offending behaviors (Moffitt, 1993; Marmorstein & Iacono, 2003; Zhang et al., 1997; Farrington & Loeber, 2000; Thornberry et al., 1993; Farrington, 1989). These factors are also used in risk assessments to estimate the likelihood of future criminal acts (Vincent, Guy, & Grisso, 2012). The consistency of these factors predicting re-offending behaviors found in previous studies as well as the current study underscores their importance in being possible intervening factors.

The current study also found several effects that were not hypothesized nor replicated in previous studies. First, mobility was found to be predictive of re-offense only among 3rd generation Mexican Americans, suggesting that 3rd generation adolescents who moved during the one-year follow-up period were more likely to commit a crime. However, this finding only emerged after inclusion of the quadratic effect of Latino concentration. Given the number of tests conducted, it is unlikely that this finding

is a true effect and it must be interpreted with utmost caution as the increase of number of tests can result in an increase in Type I error rate.

Second, being in a controlled or supervised setting for a larger proportion of time during the follow-up period predicted higher re-offense rates. However, it is important to note that proportion of supervised time was positively correlated with the re-offending rates during the follow-up period. This suggests that it is likely not the amount of supervised time that caused the offense, but rather the offense led to more supervised time. More specifically, adolescents engaged in illegal behaviors during the follow-up period and were likely to be punished for the crime by having their time supervised in a controlled setting. Although this relationship could not be unpacked to examine the sequence of offense of supervised time, amount of supervised time was an important variable to include in the current study in order to identify the amount of exposure the adolescent had to their neighborhood. Offenders who are sent to controlled supervision centers are less likely to be exposed and influenced by their neighborhood environment.

The intention of including amount of supervised time was to guarantee that the youth was exposed to their neighborhood at minimum. However, the study would have benefited from better measurement of neighborhood exposure. New methods for examining neighborhood effects are being utilized, including methods that directly measure amount of exposure to areas in neighborhoods. Measuring activity spaces, or areas that every day activity occurs for the adolescent, would more accurately reflect areas where individuals spend their time as well as areas that they have travelled through and may be influenced by. Activity spaces have been previously found to span a much

larger space than residential census tracts (Jones & Pebley, 2014; Matthews & Yang, 2013, for a review on activity spaces, see Noah, 2015). To utilize a more dynamic methodology to encapsulate individual exposure to areas would more accurately reflect environmental influence and aid with isolating real neighborhood effects. Noah (2015) marked that activity spaces could be measured in many ways, including mapping fixed versus spontaneous activity areas, quantifying the frequency and duration of activity in each location, and collecting data on reasons for going to particular areas.

Activity spaces can also explain a process by which enculturation and ethnic identity forms, as individuals who spend more time in ethnic spaces may be more prone to pick up cultural values and identify with that culture. In the case of juvenile offenders, it may be particularly important to assess activity spaces that allow for positive role models to influence the adolescent, such as extended family members, school and/or community role models. Thus, activity spaces might better reflect exposure to neighborhood environments than census data and will serve to more precisely elucidate the possible effects of neighborhoods.

Strengths and Limitations

The current study extended previous research by being the first to test the interactive effects of neighborhood Latino concentration and three ethnic/cultural measures (ethnic identity, Mexican orientation, and generational status) to predict re-offending. The study prospectively predicted re-offense over one year within a high-risk sample of adjudicated adolescents. Although there is extensive literature on criminal offending among adolescents, criminal recidivism among ethnic minorities is

understudied. Measures assessing ethnic identity or acculturation are rarely included. By using multiple measures, I was able to test the specific effects of ethnic identity, enculturation, and generation status on criminal activity. The neighborhood was examined at the block level, which is the smallest neighborhood unit available by census data. Furthermore, the study allowed for the inclusion of covariates often unavailable in other samples, such as prior criminal history from both the adolescent and their parents, mood problems, substance use, peer deviancy, residential mobility, and neighborhood disadvantage. These covariates are important to consider when investigating crime behaviors and neighborhood effects.

The current study was also able to incorporate many variables that reflect neighborhood selection bias, such as parental education and mobility. Many researchers contend that in order to investigate neighborhood effects, one must incorporate selection bias. It is known that families do not simply choose neighborhoods to reside in and subsequently move into those neighborhoods. Often, families are only capable of selecting into particular neighborhoods due to limited resources and knowledge (Bergström & van Ham, 2010). Parental education was included as a proxy for socioeconomic status and, in addition, served as a control variable to model out family employment characteristics that likely influence selection into neighborhoods. For example, parental education is an indicator for employment opportunities, with less education being linked with higher job instability and unemployment rates. Parents who are less educated are more likely to make less money and reside in neighborhoods that are cheaper to live in, yet have higher poverty levels or other disadvantaged structural

components. Notably, although parental education was negatively correlated with the neighborhood Latino concentration, parental education did not predict re-offending behaviors in this study.

Additionally, residential mobility was included as a covariate to model those who moved across the follow-up period and those who did not. Mobile families tend to be more disadvantaged and have less control over where they choose to live, leading to selection into disadvantaged neighborhoods (Bergström & van Ham, 2010). In accounting for this, I found that mobility did not predict re-offense in all models aside from the model which included the quadratic Latino concentration effect among third generation offenders. This model was likely due to the increase in Type I error, although it did show that third generation individuals who moved across the follow-up period were more likely to re-offend.

Despite several strengths, there are limitations to the study that need to be considered. First, the study's sample size leads to limited ability to detect interactions (e.g., Latino concentration and ethnic identity) and quadratic interaction effects (e.g., Latino concentration squared and ethnic identity), especially since neighborhood effects tend to be small after controlling for individual and family variables (Chen, Howard & Brooks-Gunn, 2011; Duncan & Raudenbush, 1999). Second, the study did not account for ethnic identity and Mexican orientation changes by T2, which could have affected the results. Third, the usage of census data assumes equal amounts of exposure to the neighborhood. This is likely not the case in the real world as adolescents will be exposed to their neighborhood differentially. In the current study, exposure to the neighborhood

was not accounted for beyond covarying out proportion of supervised time. Serious juvenile offenders have additional complications to their neighborhood exposure as they would not be influenced by their neighborhood if they spent time at an institutional facility as a result of a conviction. Proportion of supervised time may have served as too crude of a measure for neighborhood exposure. Fourth, the extent of influence that the "new" neighborhoods adolescents moved to during the follow-up period on re-offending behaviors is unknown. Lastly, examining neighborhood and ethnic/cultural influences at too late of an age or, in this case, post-adjudication may underestimate the possible important effects that these variables may have had during earlier stages.

Future Directions

Future research could explore mechanisms that could be affected by neighborhoods, ethnic identity, and enculturation and influence offense outcomes. Mechanisms that may play a more direct role on reoffending behaviors among Mexican American adolescent include having strong family values and perceptions of future opportunity. Assessing for family values and perceptions of opportunity may align closer to the social cohesion theory, whereby neighborhoods that are more cohesive and supportive of community morals and values will exert more social control and as a result will also reduce criminal behaviors (Sampson et al., 1997). Additionally, family values are often related to stronger ethnic identity and Mexican orientation. By directly exploring some of these values and viewpoints on future opportunities, researchers may get closer to finding what influences adolescents to criminally offend and create relevant interventions. Qualitative research designs could be beneficial to uncover some of these

mechanisms in an exploratory manner. Noah (2015) contends that qualitative research in the form of in-depth interviews and observations could uncover reasons as to why neighborhood experiences differ between individuals. Differing neighborhood experiences likely involve a multitude of factors that may be too difficult to capture from Likert-type questionnaires.

Conclusion

The current investigation found that neighborhood Latino ethnic concentration, in conjunction with ethnic identity, enculturation (Mexican Orientation), and generation status, did not predict re-offending outcomes one-year later among a sample of Mexican American juvenile offenders. Results showed that neighborhood and individual ethnic measures were not able to predict re-offending outcomes over and above gender and criminal risk. These results highlight the importance for risk assessment in this population as the cost of re-offense on families and taxpayers is high. As the Mexican American population grows, it will be increasingly important for researchers to understand factors that may influence criminal behaviors in these groups. These efforts will aid in the development of prevention/intervention programs for high risk groups.

Tables

Table 1. *Descriptive statistics for predictor variables, outcome variables and covariates*

Variables	N	Min.	Max.	Mean/%	Std. Dev.	Skewness	Kurtosis
Covariates							
Age	247	14.00	19.00	16.49	1.13	-.25	-.84
Gender							
Male	218	--	--	88.26%	--	--	--
Female	29	--	--	11.74%	--	--	--
Parents' education[a]							
Less than high school	166	--	--	68.03%	--	--	--
High school or more	78	--	--	31.97%	--	--	--
Risk composite score	247	-.28	.33	-.01	.15	.30	-.81
Proportion of supervised time (PST)	241	0.00	.86	.16	.25	1.37	.49
Neighborhood disadvantage factor (standardized)	247	-1.66	3.09	-.38	.67	1.46	4.12
Mobility							
Never moved	142	--	--	57.49%	--	--	--
1-2 moves	105	--	--	42.51%	--	--	--
Predictors							
% Latino from census block	247	1.30	96.05	50.96	25.82	-.23	-1.15
Ethnic identity	247	1.00	4.00	2.81	.49	-.60	2.27
Mexican orientation	247	1.25	5.00	2.92	1.00	.45	-.76
Generational status[b]							
1st generation	31	--	--	13.08%	--	--	--
2nd generation	97	--	--	40.93%	--	--	--
3rd generation	109	--	--	45.99%	--	--	--
Outcome							
Self-reported offending (variety proportion score)	241	.00	.57	.08	.10	1.77	3.65

[a]Parents' education is missing for 3 individuals.
[b]Generational status is missing for 9 individuals.

Table 2. *Correlations for predictor variables, outcome variables and covariates (n = 247)*

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1	Age	--											
2	Gender	.03	--										
3	Parents' education level[a]	.04	.18**	--									
4	Risk composite score	.20**	.00	.02	--								
5	Proportion of supervised time[b]	.01	-.09	-.16*	.18**	--							
6	Disadvantage factor	.01	-.00	-.23**	.06	.20**	--						
7	Mobility	.07	.17**	-.02	.15*	.02	.01	--					
8	% Latino from census block	.13*	-.04	-.33**	.04	.21**	.56**	-.11†	--				
9	Ethnic identity	.16*	-.06	-.22**	.00	-.05	.05	-.06	.10	--			
10	Mexican orientation	.11†	-.04	-.37**	-.06	.07	.20**	-.06	.29**	.41**	--		
11	Generational status[c]	-.05	.06	.28**	.12	-.01	-.17*	.18**	-.15*	-.15*	-.58**	--	
12	Self-reported offending	.06	-.13*	-.05	.46**	.30**	.06	.10	.07	-.11†	-.05	.08	--

†p < .10, *p < .05, **p < .01 [a]Parents' education n = 244. [b]Proportion of supervised time = 241. [c]Generational status n = 237.

Table 3. *Hierarchical Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration and Ethnic Identity, Controlling for Individual, Family, and Risk Factors (n = 247)*

	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)
Block 1:						
Constant	.066*** (.009)	--	.067*** (.009)	--	.066*** (.009)	--
Age	-.003 (.005)	-.036 (.051)	-.002 (.005)	-.024 (.054)	-.002 (.005)	-.028 (.053)
Gender	-.037** (.013)	-.120** (.043)	-.039** (.014)	-.124** (.043)	-.039** (.014)	-.126** (.043)
Parents' education	.001 (.013)	.004 (.061)	-.001 (.014)	-.004 (.064)	.000 (.014)	.000 (.065)
Risk composite score	.282*** (.044)	.423*** (.053)	.280*** (.043)	.422*** (.053)	.279*** (.044)	.420*** (.053)
Proportion of supervised time	.084** (.029)	.213** (.066)	.080** (.028)	.202** (.065)	.082** (.027)	.206** (.065)
Disadvantage factor	-.001 (.007)	-.005 (.049)	-.003 (.009)	-.017 (.058)	-.002 (.009)	-.013 (.059)
Mobility	.013 (.012)	.062 (.057)	.012 (.012)	.060 (.058)	.013 (.012)	.063 (.058)
Block 2:						
% Latino concentration	--	--	.000 (.000)	.030 (.068)	.000 (.000)	.034 (.068)
Ethnic identity	--	--	-.021 (.014)	-.101 (.066)	-.021 (.014)	-.101 (.066)
Block 3:						
Latino concentration x Ethnic Identity	--	--	--	--	.000 (.000)	.036 (.046)
R^2	.278***		.287***		.289***	
ΔR^2			.009		.002	

**p < .01, ***p < .001. B = unstandardized beta . β = standardized beta. S.E. = standard error. R^2 = variance. ΔR^2 = change in variance.

Table 4. *Hierarchical Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration and Mexican Orientation, Controlling for Individual, Family, and Risk Factors (n = 247)*

	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)
Block 1:						
Constant	.066*** (.009)	--	.066*** (.009)	--	0.064*** (.010)	--
Age	-.003 (.005)	-.036 (.051)	-.003 (.005)	-.035 (.055)	-.003 (.005)	-.035 (.055)
Gender	-.037** (.013)	-.120** (.043)	-.037** (.014)	-.120** (.043)	-.036** (.014)	-.115** (.044)
Parents' education	.001 (.013)	.004 (.061)	.000 (.016)	-.002 (.073)	-.001 (.016)	-.007 (.072)
Risk composite score	.282*** (.044)	.423*** (.053)	.279*** (.044)	.420*** (.053)	.281*** (.044)	.423*** (.052)
Proportion of supervised time	.084** (.029)	.213** (.066)	.084** (.028)	.210** (.067)	.085** (.028)	.213** (.066)
Disadvantage factor	-.001 (.007)	-.005 (.049)	-.002 (.009)	-.016 (.058)	-.002 (.009)	-.014 (.059)
Mobility	.013 (.012)	.062 (.057)	.013 (.012)	.063 (.058)	.014 (.012)	.067 (.057)
Block 2:						
% Latino concentration	--	--	.000 (.000)	.032 (.067)	.000 (.000)	.036 (.066)
Mexican orientation	--	--	-.004 (.006)	-.041 (.063)	-.004 (.006)	-.041 (.062)
Block 3:						
Latino concentration x Mexican orientation	--	--	--	--	.000 (.000)	.068 (.051)
R^2	.278***		.280***		.285***	
ΔR^2			.002		.005	

**p < .01, ***p < .001. B = unstandardized beta . β = standardized beta. S.E. = standard error. R^2 = variance. ΔR^2 = change in variance.

Table 5. *Hierarchical Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration and Generational Status, Controlling for Individual, Family, and Risk Factors (n = 247)*

	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)	B (S.E.)	β (S.E.)
Block 1:						
Constant	.066*** (.009)	--	.061*** (.012)	--	0.060*** (.012)	--
Age	-.003 (.005)	-.036 (.051)	-.003 (.005)	-.034 (.055)	-.003 (.005)	-.036 (.055)
Gender	-.037** (.013)	-.120** (.043)	-.037** (.014)	-.120** (.043)	-.035* (.014)	-.112** (.044)
Parents' education	.001 (.013)	.004 (.061)	-.002 (.014)	-.008 (.066)	-.002 (.014)	-.008 (.065)
Risk composite score	.282*** (.044)	.423*** (.053)	.280*** (.044)	.420*** (.053)	.277*** (.044)	.416*** (.053)
Proportion of supervised time	.084** (.029)	.213** (.066)	.083* (.029)	.209** (.067)	.085** (.028)	.213** (.067)
Disadvantage factor	-.001 (.007)	-.005 (.049)	-.002 (.009)	-.011 (.061)	-.002 (.009)	-.014 (.061)
Mobility	.013 (.012)	.062 (.057)	.012 (.012)	.057 (.057)	.013 (.012)	.063 (.057)
Block 2:						
% Latino concentration	--	--	.000 (.000)	.023 (.068)	.000 (.000)	-.087 (.122)
2nd Generation (vs. 1st generation)	--	--	.003 (.013)	.015 (.065)	.001 (.013)	.006 (.065)
3rd Generation (vs. 1st generation)	--	--	.011 (.013)	.055 (.065)	.010 (.013)	.049 (.065)
Block 3:						
Latino concentration x 2nd generation	--	--	--	--	.001 (.001)	.112 (.090)
Latino concentration x 3rd generation	--	--	--	--	.000 (.001)	.058 (.093)
R^2	.278***		.280***		.284***	
ΔR^2			.002		.004	

*p < .05, **p < .01, ***p < .001. B = unstandardized beta . β = standardized beta. S.E. = standard error. R^2 = variance. ΔR^2 = change in variance.

Table 6. *Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration and Ethnic Identity, including Quadratic Interaction Terms (n = 247)*

	Unstandardized coefficient	Standardized coefficient
	B (S.E.)	β (S.E.)
Constant	0.072*** (.011)	--
Age	-.002 (.005)	-.026 (.054)
Gender	-.039** (.014)	-.126** (.043)
Parents' education	.001 (.014)	.006 (.066)
Risk composite score	.276*** (.043)	.415*** (.054)
Proportion of supervised time	.081** (.027)	.203** (.065)
Disadvantage factor	-.001 (.009)	-.008 (.059)
Mobility	.013 (.012)	.063 (.058)
% Latino concentration[a]	.001 (.003)	.019 (.071)
Ethnic identity	-.030 (.023)	-.146 (.113)
Latino concentration x Ethnic Identity	.004 (.004)	.044 (.044)
% Latino concentration x % Latino concentration (L^2)	-.001 (.001)	-.049 (.057)
L^2 x Ethnic Identity	.001 (.002)	.057 (.088)

**p < .01, ***p < .001. [a]Rescaled by dividing by ten. B = unstandardized beta . β = standardized beta. S.E. = standard error.

Table 7. *Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration and Mexican Orientation, including Quadratic Interaction Terms (n = 247)*

	Unstandardized coefficient	Standardized coefficient
	B (S.E.)	β (S.E.)
Constant	0.070*** (.011)	--
Age	-.003 (.005)	-.034 (.055)
Gender	-.037** (.014)	-.118** (.044)
Parents' education	.001 (.016)	.003 (.074)
Risk composite score	.282*** (.044)	.423*** (.052)
Proportion of supervised time	.084** (.028)	.211** (.066)
Disadvantage factor	-.001 (.009)	-.008 (.059)
Mobility	.014 (.012)	.069 (.058)
% Latino concentration[a]	.001 (.003)	.021 (.082)
Mexican orientation	-.004 (.008)	-.041 (.070)
Latino concentration x Mexican orientation	.003 (.002)	.086 (.054)
% Latino concentration x % Latino concentration (L^2)	-.001 (.001)	-.066 (.058)
L^2 x Mexican orientation	.000 (.001)	-.001 (.079)

*p < .05, **p < .01, ***p < .001. [a]Rescaled by dividing by ten. B = unstandardized beta .
β = standardized beta. S.E. = standard error.

Table 8. *Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration among 1st Generation Offenders (n = 31)*

	Unstandardized coefficient	Standardized coefficient
	B (S.E.)	β (S.E.)
Constant	0.033 (.028)	--
Age	-.010 (.008)	-.166 (.137)
Gender	-.021 (.026)	-.103 (.126)
Parents' education	-.025 (.027)	-.126 (.132)
Risk composite score	.274** (.102)	.499** (.166)
Proportion of supervised time	.162** (.052)	.578** (.187)
Disadvantage factor	-.013 (.023)	-.123 (.212)
Mobility	-.005 (.018)	-.035 (.114)
% Latino concentration[a]	-.005 (.006)	-.159 (.192)
% Latino concentration x % Latino concentration (L^2)	.004 (.002)	.275 (.172)

**p < .01. [a]Rescaled by dividing by ten. B = unstandardized beta . β = standardized beta. S.E. = standard error.

Table 9. *Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration among 2nd Generation Offenders (n = 97)*

	Unstandardized coefficient	Standardized coefficient
	B (S.E.)	β (S.E.)
Constant	0.076*** (.017)	--
Age	-.012 (.010)	-.115 (.086)
Gender	-.044* (.018)	-.112* (.052)
Parents' education	-.016 (.028)	-.060 (.110)
Risk composite score	.311*** (.091)	.387*** (.086)
Proportion of supervised time	.095† (.051)	.231* (.111)
Disadvantage factor	.006 (.012)	.043 (.091)
Mobility	-.005 (.019)	-.022 (.087)
% Latino concentration[a]	.001 (.005)	.022 (.119)
% Latino concentration x % Latino concentration (L^2)	.000 (.002)	.004 (.087)

†p < .10, *p < .05, **p < .01, ***p < .001. [a]Rescaled by dividing by ten. B = unstandardized beta . β = standardized beta. S.E. = standard error.

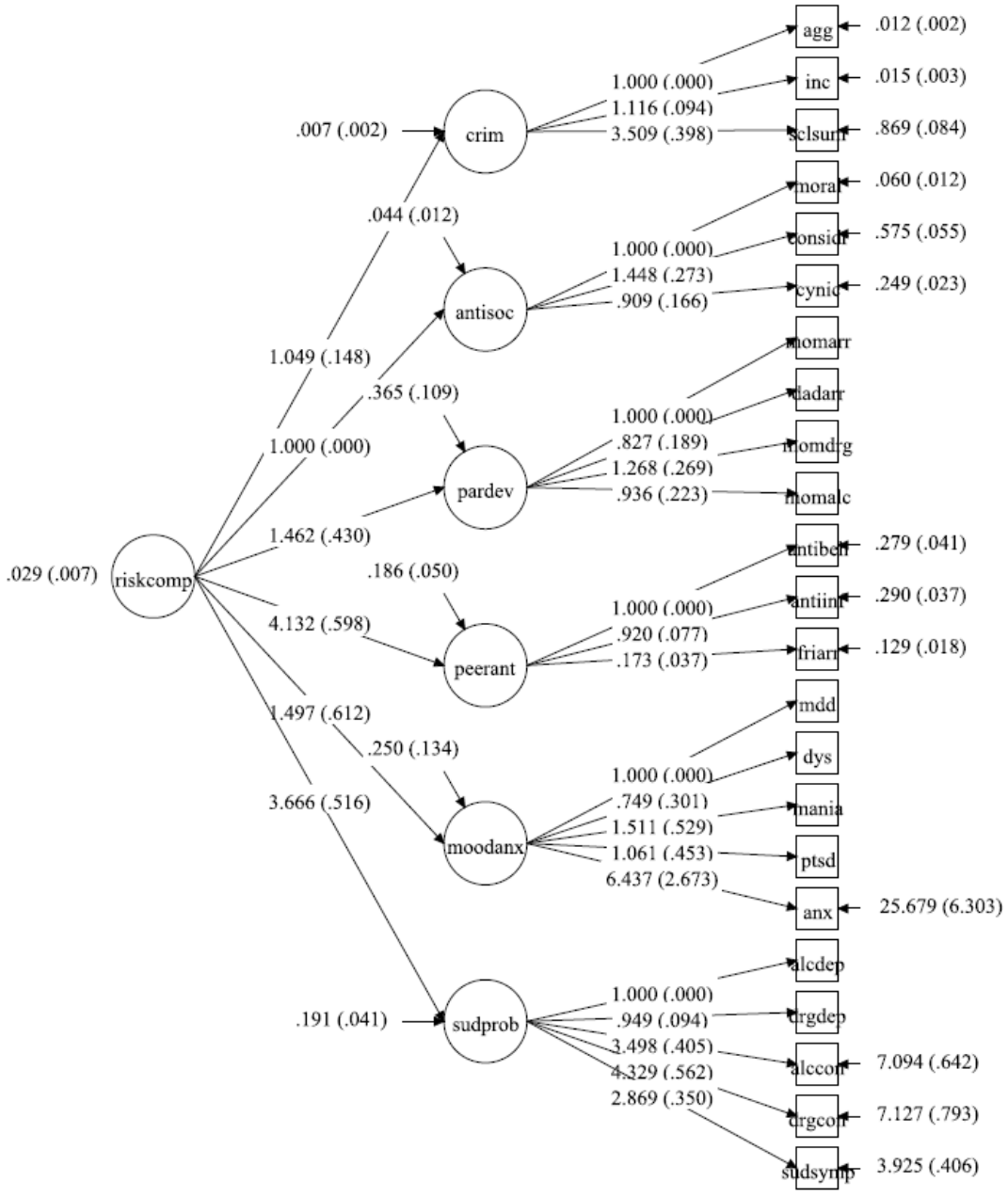
Table 10. *Regression Analysis Predicting Self-reported Offending from Neighborhood Latino Concentration among 3rd Generation Offenders (n = 109)*

	Unstandardized coefficient	Standardized coefficient
	B (S.E.)	β (S.E.)
Constant	0.069*** (.018)	--
Age	.004 (.007)	.043 (.076)
Gender	-.036† (.022)	-.132† (.077)
Parents' education	.000 (.018)	.002 (.092)
Risk composite score	.243*** (.052)	.397*** (.078)
Proportion of supervised time	.034 (.040)	.083 (.096)
Disadvantage factor	-.029 (.020)	-.147 (.097)
Mobility	.039* (.018)	.195* (.080)
% Latino concentration[a]	.002 (.004)	.0265 (.108)
% Latino concentration x % Latino concentration (L^2)	-.002 (.001)	-.143† (.086)

†p < .10, *p < .05, **p < .01, ***p < .001. [a]Rescaled by dividing by ten. B = unstandardized beta . β = standardized beta. S.E. = standard error.

Figures

Figure 1. *Composite risk score*



Note. Variables lacking variance are categorical.

References

Acevedo-Polakovich, Chavez-Korell, & Umaña -Taylor, A. J. (2014). U.S. Latinas'/os' ethnic identity: Context, methodological approaches, and considerations across the life span. *The Counseling Psychologist, 42*(2), 154-169.

Agnew, R. (2003). An integrated theory of the adolescent peak in offending. *Youth & Society, 34*, 263–299.

Alaniz, M., Cartmill, R., & Parker, R. (1998). Immigrants and violence: the importance of neighborhood context. *Hispanic Journal of Behavioral Sciences, 20*(2), 155-174.

Alba, R. D., Logan, J. R., & Stults, B. J. (2000). The changing neighborhood contexts of the immigrant metropolis. *Social Forces, 79*(2), 587-621.

Aneshensel, C. S., & Sucoff, C. A. (1996). The neighborhood context and adolescent mental health. *Journal of Health and Social Behavior, 37*, 293-310.

Bandura, A., Barbarnelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology, 71*(2), 364-374.

Bergström, L., & van Ham, M. (2010). Understanding neighbourhood effects: Selection bias and residential mobility. Discussion paper no. 5193, Institute for the Study of Labor.

Bersani, B. E. (2014). An examination of first and second generation immigrant offending trajectories. *Justice Quarterly, 31*(2), 315-343.

Bersani, B. E., Loughran, T. A., & Piquero, A. R. (2014). Comparing patterns and predictors of immigrant offending among a sample of adjudicated youth. *Journal of Youth and Adolescence, 43*, 1917-1933. *Justice Quarterly, 31*(2), 315-343.

Boutakidis, I., Guerra, N. G., & Soriano, F. (2006). Youth violence, immigration, and acculturation. In N. G. Guerra, E. P. Smith, N. G. Guerra, & E. P. Smith (Eds.) *Preventing youth violence in a multicultural society* (pp. 75–99). Washington, DC: American Psychological Association.

Bronfenbrenner, U., & Morris, P. A. (1998). *The ecology of developmental processes*. Hoboken, NJ: Wiley.

Brook, J. S., Zhang, C., Finch, S. J., & Brook, D. W. (2010). Adolescent pathways to adult smoking: Ethnic identity, peer substance use, and antisocial behavior. *The American Journal on Addictions, 19*(2), 178–186.

Brown, James D. (April, 1997). *Skewness and kurtosis.* Retrieved from http://jalt.org/test/bro_1.htm

Browning, C. R., Leventhal, L., & Brooks-Gunn, J. (2004). Neighborhood context and racial differences in early adolescent sexual activity. *Demography, 41*(4), 697-720.

Browning, C. R., Burrington, L. A., Leventhal, T., & Brooks-Gunn, J. (2008). Neighborhood structural inequality, collective efficacy, and sexual risk behavior among urban youth. *Journal of Health and Social Behavior*, *49*, 269-285.

Bureau of Census. (2011). *The Hispanic Population: 2010. 2010 Census Briefs.* (Publication No. C2010BR-04). Washington, DC: U.S. Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2011/dec/c2010br-04.pdf

Bureau of Census. (2000). Population projections of the United States by Age, Sex, Race, Hispanic origin, and Nativity: 1999-2010. Population Projection Program. Population Division. Washington, DC. U.S. Census Bureau.

Byrnes, M., Macallair, D., & Shorter, A. (2002). Aftercare as afterthought: Reentry and the California youth authority. Retrieved from http://www.cjcj.org/uploads/cjcj/documents/aftercare.pdf

Caetano, R. (1987). Acculturation and drinking patterns among U.S. Hispanics. *British Journal of Addiction, 82,* 789-799.

Chassin, L., Rogosch, F., & Barrera, M. (1991). Substance use and symptomatology among adolescent children of alcoholics. *Journal of Abnormal Psychology, 100*(4), 449-463.

Chavez, E. L., Oetting, E. R., & Swaim, R. C. (1994). Dropout and delinquency: Mexican American and Caucasian non-Hispanic youth. *Journal of Clinical Child Psychology, 23,* 47−55.

Chen, J. J., Howard, K. S., & Brooks-Gunn J. (2011). How do neighborhoods matter across the life span? In: K. L. Fingerman, C. A. Berg, J. Smith & T. Antonucci (Eds.), *Handbook of life-span development* (pp. 805-836). New York, NY: Springer Publishing Company.

Chiswick, B. R., & Miller, P. W. (2005). Do enclaves matter in immigrant adjustment? *City and Community, 4,* 5-35.

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, S95-120. *Community, 4*, 5-35.

Cottle, C. C., Lee, R. J., & Heilbrun. K. (2001). The prediction of criminal recidivism in juveniles: A meta-analysis. *Criminal Justice and Behavior, 28*(3), 367-394.

Cuellar, I., Arnold, B., & Maldonado, R. (1995). Acculturation Rating Scale for Mexican Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Sciences, 17,* 275–304.

Denno, D. W. (1986). Victim, offender, and situational characteristics of violent crime. *Journal of Criminal Law and Criminology, 77,* 1142-1158.

Duncan, G. J., & Raudenbush, S. W. (1999). Assessing the effects of context in studies of children and youth development. *Educational Psychologist, 34,* 29-41.

Durham, J. L. (1996). *Crime in America.* Santa Barbara, CA: ABC-CLIO.

Eamon, M. & Mulder, C. (2005). Predicting antisocial behavior among Latino young adolescents: an ecological systems analysis. *American Journal of Orthopsychiatry, 75*(1), 117-127.

Egley, A., Jr. (2000). Highlights of the 1999 national youth gang survey [Fact Sheet]. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.

Eschbach, K., Ostir, G. V., Patel, K. V., Markides, K. S., & Goodwin, J. S. (2004). Neighborhood context and mortality among older Mexican Americans: Is there a barrio advantage*? American Journal of Public Health, 94*(10), 1807–1812.

Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims, 4*, 79−100.

Farrington, D. P., & Loeber, R. (2000). Epidemiology of juvenile violence. *Child and Adolescent Psychiatric Clinics of North America, 9*(4), 733−748.

Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G*Power3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 29,* 175-191.

Felix-Ortiz, M., Newcomb, M. D. (1995). Cultural identity and drug use among Latino and Latina adolescents. In: G. J. Botvin, S. Schinke & M. A. Orlandi (Eds.), *Drug abuse prevention with multiethnic youth* (pp. 147–165). Thousand Oaks, CA: Sage Publications.

Flowers, R. B. (1988). *Minorities and criminality*. New York: Greenwood.

Fridrich, A. H., & Flannery, W. P. (1995). The effects of ethnicity and acculturation on early adolescent delinquency. *Journal of Child and Family Studies, 4*, 69–87.

Gibson, C. L., & Miller, H. V. (2010). Crime and victimization among Hispanic adolescents: a multilevel longitudinal study of acculturation and segmented assimilation. U.S. Department of Justice. Doc no: 232278.

Gil, A. G., Wagner, E. F., & Vega, W. A. (2000). Acculturation, familism, and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology, 28*(4), 443–458.

Gilbert, M. J. (1987). Alcohol consumption patterns in immigrant and later generation Mexican American women. *Hispanic Journal of Behavioral Sciences, 9*, 299-313.

Gonzales, N. A., Kim, L. S. (1997). Stress and coping in an ethnic minority context: Children's cultural ecologies. In: S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention. Issues in clinical child psychology* (pp. 481–511). New York: Plenum.

Gonzales, N. A., Knight, G. P., Morgan-Lopez, A., Saenz, D., & Sirolli, A. A. (2002). Acculturation and the mental health of Latino youths: An integration and critique of the literature. In J. M. Contreras, JM., K. A. Kerns, & A. M. Neal-Barnett (Eds.) *Latino children and families in the United States: Current research and future directions* (pp. 45-74). Westport, CT: Praeger.

Haapanen, R. A., & Jesness, C. P. (1982). *Early identification of the chronic offender: Final report.* Sacramento, CA: Department of the Youth Authority.

Hollander, H. E., & Turner, F. D. (1985). Characteristics of incarcerated delinquents. Relationship between development disorders, environmental and family factors, and patterns of offense and recidivism. *Journal of the American Academy of Child Psychiatry, 24,* 221-226.

Huizinga, D., Esbensen, F., & Weihar, A. (1991). Are there multiple paths to delinquency? *Journal of Criminal Law and Criminology, 82*, 83−118.

Humes, K. R., Jones, N. A., & Ramirez, R. R. (2011). Overview of Race and Hispanic Origin: 2010. 2010 Census briefs, U. S. Census Bureau. Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf

Hussong, A. M., Curran, P. J., Moffitt, T. E., Caspi, A., & Carrig, M. M. (2004). Substance abuse hinders desistance in young adults' antisocial behavior. *Development and Psychopathology, 16*(4), 1029−1046.

Huston, A. C., Garcia Coll, C. & McLoyd, V. C. (Eds.) (1994). Children and poverty [Special issue]. *Child Development, 65*.

Jang, S. J. (2002). Race, ethnicity, and deviance: A study of Asian and non-Asian adolescents in America. *Sociological Forum, 17*, 647-680.

Jimerson, S. R., Sharkey, J. D., O'Brien, K. M., & Furlong, M. (2004) The Santa Barbara Assets and Risk Assessment to Predict Recidivism Among Male and Female Juveniles: An Investigation of Inter-rater reliability and Predictive Validity. *Education & Treatment of Children, 27*(4), 353-373.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E. & Miech, R. A. (2014). Monitoring the Future national survey results on drug use, 1975–2013: Volume I, Secondary school students. Ann Arbor: Institute for Social Research, The University of Michigan.

Jones, M. A., & Krisberg, B. (1994). *Images and reality: Juvenile crime, youth violence and public policy*. San Francisco, CA: National Council on Crime and Delinquency.

Jones, M., & Pebley, A. R. (2014). Redefining neighborhoods using common destinations: Social characteristics of activity spaces and home census tracts compared. *Demography, 51*(3), 727-752.

Kerr, M. H., Beck, K., Shattuck, T. D., Kattar, C., & Uriburu, D. (2003). Family involvement, problem and prosocial behavior outcomes of Latino youth. *American Journal of Health Behavior, 27*(Suppl 1), S55-65.

Knight, G. P., Jacobson, R. P., Gonzales, N. A., Roosa, M. W., & Saenz, D. S. (2009b). An evaluation of the psychological research on acculturation and enculturation processes among recently immigrating populations. In R. L. Dalla, J. DeFrain, J. Johnson, & D. Abbot (Eds.) *Strengths and challenges of new immigrant families: Implications for research, policy, education, and service* (pp. 9-31). Lanham, MD: Lexington Publishers Inc.

Knight, G. P., Losoya, S. H., Cho, Y. II, Chassin, L., Williams, J. L., & Cota-Robles, S. (2012). Ethnic identity and offending trajectories among Mexican American juvenile offenders: Gang membership and psychosocial maturity. *Journal of Research on Adolescence, 22*(4), 782-796.

Knight, G. P., Vargas-Chanes, D., Losoya, S. H., Cota-Robles, S., Chassin, L., & Lee, J. M. (2009a). Acculturation and enculturation trajectories among Mexican-American adolescent offenders. *Journal of Research on Adolescence, 19*, 625-653.

Kornhauser, R. R. (1978). *Social sources of delinquency*: An appraisal of analytic models. Chicago: University of Chicago Press.

Lee, Meng-Jung, & Liechty, J. M. (2014). Longitudinal associations between immigrant ethnic density, neighborhood processes, and Latino immigrant youth depression. *Journal of Immigrant and Minority Health, 17*(4), 983-991.

Leventhal, T. & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin, 126*, 309-337.

Lind, A. W. (1930). The ghetto and the slum. *Social Forces, 9,* 206–215.

Loeber, R., & Stallings, R. (2011). Modeling the Impact of Interventions on Local Indicators of Offending, Victimization, and Incarceration. In R. Loeber & D. P. Farrington (Eds.) *Young Homicide Offenders and Victims: Risk Factors, Prediction, and Prevention from Childhood* (pp. 137-152). New York: Springer.

Lopez, D. A., & Brummett, P. O. (2003). Gang membership and acculturation: ARSMA-II and choloization. *Crime and Delinquency, 49*, 627-642.

Losoya, S. H., Knight, G. P., Chassin, L., Little, M., Vargas-Chanes, D., Mauricio, A., & Piquero, A. (2008). Trajectories of acculturation and enculturation in relation to heavy episodic drinking and marijuana use in a sample of Mexican American serious juvenile offenders. *Journal of Drug Issues, 38*(1), 171-198.

Marmorstein, N. R., & Iacono, W. G. (2003). Major depression and conduct disorder in a twin sample: Gender, functioning, and risk for future psychopathology. *Journal of American Academy of Child and Adolescent Psychiatry, 42*(2), 225−233.

Martinez, R. (2000). Immigration and urban violence: The link between immigrant Latinos and types of homicide. *Social Science Quarterly*, *81*, 363-374.

Martinez, R., & Lee, M. T. (2000). On immigration and crime. *Criminal Justice, 1*, 485-524.

Matthews, S. A., & Yang, T. C. (2013). Spatial polygamy and contextual exposures (SPACEs): Promoting activity space approaches in research on place and health. *American Behavioral Scientist, 57*(8), 1057-1081.

Meyer, J. (2001). Age: 2000, Census 2000 Brief. Washington, DC: US Department of Commerce, Bureau of the Census, Economics and Statistics Administration.

Miller, H. V., & Gibson, C. L. (2011). Neighborhoods, acculturation, crime, and victimization among Hispanics: The cross-fertilization of the sociologies of immigration and crime. *Journal of Contemporary Criminal Justice, 27*, 4-17.

Miller, J. M., Miller, H. V., Zapata, J. T., & Yin, Z. (2008). Mexican-American youth drug use and acculturation: A note on the mitigating effects of contextual dynamics. *Journal of Drug Issues, 38*, 199-214.

Mirabal-Colon, B., & Velez, C. (2005). Youth violence prevention among Latino youth. In N. Guerra, & E. Smith, (Eds.), *Preventing youth violence in a multicultural society*. Washington, D.C.: American Psychological Association.

Moffitt, T. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674−701.

Monahan, K. C., Steinberg, L., Cauffman, E., & Mulvey, E. P. (2009). Trajectories of antisocial behavior and psychosocial maturity from adolescence to young adulthood. *Developmental Psychology, 45,* 1654–1668.

Morenoff, J. D., & Astor, A. (2006). Immigrant assimilation and crime: Generational differences in youth in Chicago. In R. Martinez, Jr. & A. Valenzuela, Jr. (Eds.), *Immigration and crime. Race, ethnicity, and violence* (pp. 36-63). New York: New York University Press.

Morenoff, J. D., & Tienda, M. (1997). Underclass neighborhoods in temporal and ecological perspective. *Annals of the American Academy of Political and Social Science, 551,* 59-72.

Mulvey, E. P., Schubert, C. A., & Chung, H. L. (2007). Service use after court involvement in a sample of serious adolescent offenders. *Children and Youth Services Review, 29,* 518-544.

Mulvey, E. P., Steinberg, L., Fagan, J., Cauffman, E., Piquero, A R., Chassin, L., . . . & Losoya, S. H. (2004). Theory and research on desistance from antisocial activity among adolescent serious offenders. *Youth Violence and Juvenile Justice, 2,* 1–24.

Mulvey, E. P., Steinberg, L., Piquero, A., Besana, M., Fagan, J., Schubert, C., … & Cauffman, E. (2010). Trajectories of desistance and continuity in antisocial behavior following court adjudication among serious adolescent offenders. *Developmental Psychopathology, 22*(2), 453-475.

Noah, A. J. (2015). Putting families into place: Using neighborhood-effects research and activity spaces to understand families. *Journal of Family Theory & Review, 7*(4), 452-467.

Office of Juvenile Justice and Delinquency Prevention (OJJDP). (2013).OJJDP Statistical Briefing Book. Online. Available: http://www.ojjdp.gov/ojstatbb/special_topics/qa10603.asp?qaDate=2013. Released on October 02, 2015.

Osgood, D. W., McMorris, B. J., & Potenza, M. T. (2002). Analyzing multiple-item measures of crime and deviance I: Item response theory scaling. *Journal of Quantitative Criminology, 18,* 267-296.

Pew Research Center. (2011). Hispanic population in select U.S. metropolitan areas, 2011. Retrieved from http://www.pewhispanic.org/2013/08/29/hispanic-population-in-select-u-s-metropolitan-areas-2011

Pew Research Center. (2016, April 19). Statistical portrait of Hispanics in the United States. Retrieved from http://www.pewhispanic.org/2016/04/19/statistical-portrait-of-hispanics-in-the-united-states/

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin, 108*(3), 499–514.

Phinney, J. S. (1992). The multigroup ethnic identity measure, a new scale for use with diverse groups. *Journal of Adolescent Research, 7*, 156–176.

Piquero, A. R. (2008). Taking stock of developmental trajectories of criminal activity over the life course. In A. Liberman (Ed.), *The long view of crime: A synthesis of longitudinal research* (pp. 23–78). New York, NY: Springer.

Piquero, A. R., Blumstein, A., Brame, R., Haapanen, R., Mulvey, E. P., & Nagin, D. S. (2001). Assessing the impact of exposure time and incapacitation on longitudinal trajectories of criminal offending. *Journal of Adolescent Research, 16*, 54–74.

Pobanz, M., & Furlong, M. (2000). Using protective factors to enhance the prediction of negative short-term outcomes of first-time juvenile offenders. Paper presented at the Teacher Educations for Children with Behavior Disorders conference, Phoenix, AZ.

Portes, A., & Rumbaut, R. G. (2001). *Legacies: The story of the immigrant second generation.* Berkeley: University of California Press.

Portes, A., & Sensenbrenner, J. (1993). Embeddedness and immigration: Notes on the social determinants of economic action. *American Journal of Sociology, 98*, 1320-1350.

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Science, 530*, 74-96.

Quintana, S. M. (2008). Racial perspective-taking ability: Developmental, theoretical, and empirical trends. In S. M. Quintana & C. McKown (Eds.), *Handbook of race, racism, and the developing child* (pp. 16–36). Hoboken, NJ: Wiley.

Reynolds, C.R., & Richmond, B.O. (1985). *Revised Children's Manifest Anxiety Scale. RCMAS Manual.* Los Angeles: Western Psychological Services.

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *Journal of Early Adolescence, 19*, 301–322.

Roosa, M. W., Weaver, S. R., White, R. M. B., Tein, J. Y., Knight, G. P., Gonzales, N. A., … Saenz, D. (2009). Family and neighborhood fit or misfit and the adaptation of Mexican Americans. *American Journal of Community Psychology, 44,* 15–27.

Samaniego, R. Y., & Gonzalez, N. A. (1999). Multiple mediators of the effects of acculturation status on delinquency for Mexican American adolescents. *American Journal of Community Psychology, 27,* 189–210.

Sampson, R. J. (2008). Rethinking crime and immigration. *Contexts, 7,* 28-33. doi: http://dx.doi.org/10.1525/ctx.2008.7.1.28

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277,* 918-924.

Schubert, C. A., Mulvey, E. P., Steinberg, L., Cauffman, E., Losoya, S. H., Hecker, T., … Knight, G. P. (2004). Operational lessons from the Pathways to Desistance Project. *Youth Violence and Juvenile Justice, 2,* 237–255.

Schuck, A. M., Lersch, K. M., & Verrill, S. W. (2004). The invisible Hispanic: The representation of Hispanic in criminal justice research: What do we know and where should we go. *Journal of Ethnicity in Criminal Justice, 2*, 5−22.

Shaw, C., & McKay, H. (1942). *Juvenile delinquency and urban areas.* Chicago: University of Chicago Press.

Speirs, V. L. (1988). OJJDP update on research: Study sheds new light on court careers of juvenile offenders. *Juvenile Justice Bulletin* (U.S. Department of Justice Pub No. 1988-202-048/8004). Washington, DC: U.S. Government Printing Office.

Stahl, A. L. (2003). Delinquency cases in juvenile courts, 1999. Washington, DC: Office of Juvenile Justice & Delinquency Prevention.

Szapocznik, J., & Kurtines, W. M. (1993). Family psychology and cultural diversity: Opportunities for theory, research and application. *American Psychologist, 48,* 400–407.

Tapia, H. A., Kinnier, R. T., & Mackinnon, D. P. (2009). A comparison between Mexican American youth who are in gangs and those who are not. *Multicultural Counseling and Development, 37,* 229-239.

Therrien, M., & Ramirez, R. R. (2001). The Hispanic population in the United States. Current population reports. Washington, DC: United States Department of Commerce, Bureau of the Census.

Thornberry, T. P., & Krohn, M. D. (2000). The self-report method for measuring delinquency and crime. *Measurement and Analysis of Crime and Justice, 4,* 33-83.

Thornberry, T. P., Krohn, M. D., Lizotte, A. J., & Chard Wierschem, D. (1993). The role of juvenile gangs in facilitating delinquent behavior. *Journal of Research in Crime and Delinquency, 30*(1), 55−87.

Thornberry, T.P., Lizotte, A.J., Krohn, M.D., Farnworth, M. & Jang, S.J. (1994). Delinquent peers, beliefs, and delinquent behavior: A longitudinal test of interactional theory. *Criminology, 32*, 47-83.

Tyler, T. (1997). Procedural fairness and compliance with the law. *Swiss Journal of Economics and Statistics, 133*(2/2), 219-240.

U.S. Bureau of the Census. (2000). 2000 Census of populations and housing: Summary tape file 3A [CD-ROM]. Washington, DC: U.S. Department of Commerce, Bureau of the Census.

U.S. Census. (2005). Hispanic population passes 40 million. U.S. Census Bureau News. Retrieved from: http://www.census.gov/PressRelease/www/releases/archives/population/005164.html.

U.S. Department of Education. (2015) The Condition of Education 2015 (NCES 2015-144). National Center for Education Statistics. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=16

U.S. Department of Justice (2006). Juvenile offenders and victims: 2006 national report. Retrieved from http://www.ojjdp.gov/publications/PubAbstract.asp?pubi=234394

Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence, 27*, 139–146.

Umaña-Taylor, A. J., Douglass, S., Updegraff, K. A., & Marsiglia, F. F. (2017). A small-scale randomized efficacy trail of the Identity Project: Promoting adolescents' ethnic-racial identity exploration and resolution. *Child Development.* doi: 10.1111/cdev.12755

Umaña-Taylor, A. J., Gonzales-Backen, M., A., & Guimond, A. (2009). Latino adolescents' ethnic identity: Is there a developmental progression and does growth in ethnic identity predict growth in self-esteem? *Child Development, 80*, 391-405.

Vega, W. A., & Gil, A. G. (1999). A model for explaining drug use behavior among Hispanic adolescents. *Drugs and Society, 14*, 55–73.

Vega, W. A., Khoury, E. L., Zimmerman, R. S., Gil, A. G., & Warhaheit, G. J. (1995). Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology, 23*, 167–179.

Vega, W., Ang, A., Rodriguez, M., & Finch, B. (2011). Neighborhood protective effects on depression in Latinos. *American Journal of Community Psychology*, *47*(1), 114–126.

Vigil, J. D. (1988). Group processes and street identity: Adolescent Chicano gang members. *Ethos, 16,* 421–445.

Vincent, G. M., Guy, L. S., & Grisso, T. (2012). *Risk assessment in juvenile justice: A guidebook for implementation.* Chicago, IL: MacArthur Foundation.

Walker, J. T., & Maddan, S. (2013). *Understanding Statistics for the Social Sciences, Criminal Justice, and Criminology*. Jones & Bartlett Publishers.

Walker, S., Spohn, C., & DeLone, M. (2012). *The color of justice: Race, ethnicity, and crime in America* (5th ed.). Belmont, CA: Cengage/Wadsworth.

Wall, J. A., Power, T. G., & Arbona, C. (1993). Susceptibility to antisocial peer pressure and its relation to acculturation in Mexican American adolescents. *Journal of Adolescent Research, 8,* 403–418.

Walters, J. P. (1996). *The state of violent crime in America.* Washington, DC: National Crime Prevention.

Watts, W. D., & Wright, L. S. (1990). The drug use-violent delinquency link among Mexican-Americans. In M. De La Rosa, E. Y. Lambent, & B. Gropper (Eds.), *Drugs and violence: Causes, correlates, and consequences* (NIDA Research Monograph 103). Rockville, MD: National Institute on Drug Abuse.

Weinberger, D.A., & Schwartz, G.E. (1990). Distress and restraint as superordinate dimensions of self-reported adjustment: a typological perspective. *Journal of Personality, 58*(2), 381-417.

White, R. M. B., Zeiders, K. H., Knight, G. P., Roosa, M. W., & Tein, J-Y. (2014). Mexican origin youths' trajectories of perceived peer discrimination from middle childhood to adolescence: Variation by neighborhood ethnic concentration. *Journal of Youth and Adolescence, 43,* 1700-1714.

World Health Organization. (1990). Composite International Diagnostic Interview. Geneva, Switzerland, World Health Organization.

Zhang, Q., Loeber, R., & Stouthamer Lober, M. (1997). Developmental trends of delinquency attitudes and delinquency: Replication and synthesis across time and samples. *Journal of Quantitative Criminology, 13*, 181−216.

Zhou, M. (1997). Segmented assimilation: Issues and controversies and recent research on the new second generation. *International Migration Review, 31*, 975-1008.

APPENDIX A

MULTIGROUP MEASURE OF ETHNIC IDENTITY

(Rating scale: 1 “strongly disagree” to 4 “strongly agree”)

1. I have spent time trying to find out more about my ethnic identity group, such as its history, traditions, and customs.
2. I am active in organizations or social groups that include mostly members of my own ethnic group.
3. I have a clear sense of my ethnic background and what it means for me.
4. I think a lot about how my life will be affected by my ethnic group membership.
5. I am happy that I am a member of the group I belong to.
6. I have a strong sense of belonging to my own ethnic group.
7. I understand pretty well what my ethnic group membership means to me.
8. To learn more about my ethnic background, I have often talked to other people about my ethnic group.
9. I have a lot of pride in my ethnic group and its accomplishments.
10. I participate in cultural practices of my own group, such as special food, music, or customs.
11. I feel a strong attachment towards my own ethnic group.
12. I feel good about my cultural or ethnic background.

APPENDIX B

MEXICAN ORIENTATION SUBSCALE

(Rating scale: 1 “not at all” to 5 “extremely often or almost always”)

1. I speak Spanish
2. I enjoy speaking Spanish
3. I associate with Mexicans and/or Mexican Americans
4. I enjoy listening to Spanish language music
5. I enjoy Spanish language TV
6. I enjoy Spanish language movies
7. I enjoy reading in Spanish
8. I write in Spanish
9. My thinking is done in the Spanish language
10. My contact with Mexico has been _____
11. My father identifies or identified himself as ‘Mexicano’
12. My mother identifies or identified herself as ‘Mexicana’
13. My friends, while I was growing up, were of Mexican origin
14. My family cooks Mexican foods
15. My friends now are of Mexican origin
16. I like to identify myself as a Mexican American
17. I like to identify myself as a Mexican