To my mom, dad, grandparents, and brothers
ACKNOWLEDGMENTS

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Abstract of Thesis Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
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A CROSS CULTURAL APPLICATION OF SELF-CONTROL THEORY: PREDICTING
CRIME AND DELINQUENCY AMONG LATINO CHILDREN AND ADOLESCENTS
LIVING IN CHICAGO

By

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Major: Criminology, Law, and Society

Research on the delinquency and criminal behavior of Latino youths in the U.S. has been limited. Even fewer studies have applied mainstream criminological theories to an all Latino sample. The current study addresses this research gap by applying Gottfredson and Hirschi’s (1990) self-control theory to a large Latino sample composed of Mexicans, Puerto Ricans, and other Latino subgroups residing in the city of Chicago. According to their theory, Gottfredson and Hirschi argue that individuals with low self-control are more likely to engage in criminal or analogous behaviors than individuals with high self-control. They argue that the source of low self-control is poor parenting at a young age. Thus, they posit that children whose parents do not properly socialize them will develop low self-control, inevitably leading to their involvement in a range of risky behaviors, such as criminal behavior. While their theory has received much research support, studies have rarely confirmed many of their major propositions using all minority samples. Using longitudinal data from the Project on Human Development in Chicago Neighborhoods (PHDCN), the relationship between family process variables, self-control, and delinquency among 1,031 Latino children and adolescents was
examined. Results lend partial support to Gottfredson and Hirschi’s theory. Low self-control was found to be a significant predictor of delinquent/criminal behavior across three different measures of such behavior. While parenting variables were significantly associated with low self-control, they were not found to be significant predictors of delinquency/criminal behavior. Some interesting subgroup differences were found between Mexicans, Puerto Ricans, and other Latino subgroups and are further discussed. Implication for theory and future research is also discussed.
CHAPTER 1
INTRODUCTION

Research on the deviant behavior of minority groups, specifically Latinos, in the United States has received limited attention in criminology. Of the available research, some findings have emerged that warrant efforts to continue studying these groups. Latinos for example, the nation’s fastest growing minority group, have rates of offending between those for whites and those for blacks (Martinez, 2002). Despite differing rates of deviant behavior across racial and ethnic groups, numerous mainstream theories fail to address this racial/ethnic disparity. Gottfredson and Hirschi’s (1990) general theory of crime, or self-control theory, is among one of few exceptions. Regardless of gender, race, and ethnicity, self-control theory claims to be able to explain all analogous and criminal behaviors at all times, and that low self-control is the individual level cause of crime.

Despite this claim, few studies have empirically tested the applicability and validity of self-control theory to cultures other than white American (e.g., Vazsonyi, Pickering, Junger, & Hessing, 2001; Vazsonyi & Crosswhite, 2004; Vazsonyi & Belliston, 2007; Vazsonyi & Klanjsek, 2008). This study applies different components of Gottfredson and Hirschi’s (1990) theory to a sample of U.S. Latino children and adolescents, specifically Mexicans, Puerto Ricans, and other Latinos residing in Chicago. The current study will test several propositions from self-control theory that center on parenting, self-control, and criminal and delinquent behaviors. If Gottfredson and Hirschi are correct then it is expected that variables derived from self-control theory will be helpful in understanding variability in delinquency and criminal behavior in a Latino sample as a whole.

Among other initiatives, this study will be one of the first to assess self-control
levels of Latino children and adolescents. This task in and of itself has many advantages. First, the analysis will provide valuable information on a growing segment of the population that has been understudied. Second, it will be able to assess the claim made by Gottfredson and Hirschi that their theory is applicable across cultures. Third, this study may be the first step in explaining if a relationship exists between self-control and various delinquent and criminal behaviors among Latino children and adolescents, specifically among Mexicans, Puerto Ricans, and a number of other Latino subgroups in Chicago, which has the third largest Latino population in the U.S. (U.S. Census, 2000).

In order to accomplish these tasks, longitudinal, cohort data from the Project on Human Development in Chicago Neighborhoods (PHDCN) is used. The PHDCN allows for the comparison of self-control, delinquency, and parenting practices across some Latino ethnic groups. The simultaneous comparison of multiple Latino ethnic groups is rare in empirical studies, and even rarer in criminological studies (Urbina, 2007). This study thus aims to examine self-control levels and delinquent behavior among children and adolescents ranging in age between roughly 7 years and 16 years that are of Mexican, Puerto Rican, and other Latino descent. This study will also examine another key construct of self-control theory often assessed in criminological studies: family processes/parenting practices, specifically among Latinos.

An exploratory goal of the current study is to assess whether differences exist in delinquent and criminal involvement among Mexican, Puerto Rican, and other Latino children and adolescents. According to Gottfredson and Hirschi, differences in criminal and analogous behaviors across race and ethnicity can be explained by parenting styles such as through direct supervision and parental warmth, and they argue that differences
in self-control probably far outweigh differences in parental socialization in accounting for racial or ethnic variations in criminal and deviant behaviors. They propose that given the potentially large differences among racial groups in regard to child-rearing practices in the U.S., research on racial differences should focus on differential child-rearing practices and not on ascribing differences to culture. While Gottfredson and Hirschi briefly discuss black and white differences in criminal behavior, self-control, and parenting, they neglect to mention other minority groups, let alone subgroups within particular ethnicities. Interestingly, Gottfredson and Hirschi state that there exists a great potential for differences among racial groups in the U.S. in regards to the different child-rearing elements (i.e., monitoring, attachment, punishment) (pg. 153). Although the authors do not suggest what type of child rearing practices are most likely to occur in specific racial/ethnic groups, they suggest how families who lack specific structures might be putting their kids at a disadvantage (pgs. 97-105). For example, Gottfredson and Hirschi state that in single-parent families one parent is sufficient to raise a child properly, “all else being equal” (pg.103). However, “all else is rarely equal” (pg.104). Single parents are typically women and are faced with the tasks of physically and psychologically maintaining a family (pg. 104). These tasks alone may consume all of a single parent’s time, leaving little (if any) time to monitor and properly punish their children (pg.104).

As previously stated, race/ethnicity has received little attention in this explanation by Gottfredson and Hirschi, other than their claim that any differences in self-control and criminality by race or ethnicity is attributable to differences in child rearing practices. Their argument fails to appreciate any differences that might exist within ethnic groups.
in the U.S. in regards to family structure and family process variables. As the discussion to follow on the current status of Latino groups in the U.S. will demonstrate, some subgroups have higher rates of single parent households and other potentially damaging characteristics that may influence one’s parenting ability. Thus, the current study proposed here attempts to clear up some of these issues and provide a partial test of the applicability of self-control theory across a growing minority group in the U.S.-Latinos. This study will contribute to the expanding body of self-control research by being among the first to apply the theory to a large sample of Latinos.

The current study will first begin with a brief overview of self-control theory and its tenets. Then, a detailed overview of past studies testing the applicability of self-control theory across cultures is provided. Following that, the limited research regarding Latino delinquency and criminal behavior will be presented. This section also provides an overview of the current living situation of U.S. Latinos in an attempt to shed light on this often neglected minority group, since one aim of this study is to explore the applicability of Gottfredson and Hirschi’s main tenets to various Latino subgroups.
CHAPTER 2
LITERATURE REVIEW

An Overview of Self-Control Theory

According to Gottfredson and Hirschi (1990) people who lack self-control are more likely to be impulsive, physical, risk-taking, short-sighted, and non-verbal, thus they tend to engage in criminal and analogous acts (i.e., sky diving, extreme sports). Gottfredson and Hirschi also argue that self-control succumbs to four general elements: basic stability of individual differences over a long period of time; great variability in the kinds of criminal acts engaged in; conceptual or causal equivalence of criminal and noncriminal acts; and inability to predict the specific forms of deviance engaged in (either criminal or noncriminal) (p. 94). All of the characteristics associated with low self-control tend to arise in the absence of nurturance, discipline, and training. Gottfredson and Hirschi deny the notion that people are born criminals or inherit a gene for criminality; although genetic links are now being made as well (Wright & Beaver, 2005; Unnever, Cullen, & Pratt, 2003). They do suggest, however, that individual differences may have an impact on the prospects for effective socialization or adequate control. In their view, effective socialization is always possible whatever the culmination of individual traits. Ultimately, they argue that the major “cause” of low self-control is ineffective child-rearing or parenting practices (1990, p. 97).

Gottfredson and Hirschi point to a lack of systematic integration in child development and criminological literatures (p. 102). They argue that mainstream social science theories are dominated by social learning and deprivation principles which ignore the influence of early childhood manifestations of deviance on later deviance. Specifically, they identify the lack of analysis of acts such as talking back, yelling,
pushing and shoving, and poor school performance during childhood, and its connection to crime. The most influential social scientific theories of crime either ignore or deny the connection between crime and the misbehaviors listed above. For Gottfredson and Hirschi, these behaviors indicate the presence of a major individual-level cause of crime, a cause that in principle may be corrected by addressing these manifestations early on, such as through punishment or discipline.

The role of parenting in self-control theory. According to Gottfredson and Hirschi (1990) there are three minimum conditions that must be met in order to instill self-control in a child (pg. 97). First, the child’s behavior must be monitored. Direct supervision of a child prevents him/her from engaging in criminal or analogous acts, and also trains him/her to avoid such acts on their own (pg. 99). Second, the parent must be able to recognize deviant behavior when it occurs, if not the impact of supervision is null (pg. 99). Third, the parent must punish the deviant behavior. Effective punishment by a loved one can be as simple as an explicit disapproval of unwanted behavior (pg. 100). In order for these three conditions to be met, the parent must also be invested and attached to the child.¹ If properly socialized the child should exhibit high self-control (pg. 97).

Self-Control Theory’s Generalizability Across Cultures

Self-control theory is intended to “explain all crime, at all times” (p. 117). They argue that their theory can explain crime across culture, gender, age, and type of crime (street v. occupational). Gottfredson and Hirschi claim that empirical evidence does not

¹ More recently Hirschi (2004) has stressed the importance of attachment in his reconceptualization of self-control, which redefines self-control as the tendency to consider the whole range of potential consequences of an act. This tendency is influenced by an individual’s bonds or attachments to society and other people (as laid out in his original social control theory).
support cultural theories of criminality that argue crime is different across different cultures. For example, Gottfredson and Hirschi argue that all human groups condemn the use of force and fraud in human interaction. They also argue that all groups endorse values contrary to crime, such as delayed gratification and selflessness. Despite, or perhaps because of, Gottfredson and Hirschi’s emphasis on the cross cultural applicability of self-control theory, they fail to provide a description of different minority groups, other than blacks (pgs. 149-153).

A number of recent studies, particularly those by Vazsonyi and colleagues, have set out to test the applicability of self-control theory across different cultures in the U.S. and abroad (e.g., Vazsonyi et al., 2001; Vazsonyi & Crosswhite, 2004; Vazsonyi & Belliston, 2007; Vazsonyi & Klanjsek, 2008). Vazsonyi’s studies have incorporated both male and female samples from Hungary, Japan, the Netherlands, and Switzerland. Within the U.S., Vazsonyi’s studies have examined African American samples from rural and nonrural areas. Overall, studies by Vazsonyi and colleagues support Gottfredson and Hirschi’s claim that self-control theory can be applied cross culturally.

The studies mentioned here are all based on samples from the International Study of Adolescent Development (ISAD) and employ the Normative Deviance Scale (NDS) (Vazsonyi et al., 2001). The ISAD collected information from multiple sites from four different countries (Hungary, the Netherlands, Switzerland, and the United States). Students from the European nations were selected from schools for university-bound students and vocational/technical training schools. In the U.S., students were selected from high schools, community colleges, and universities. As part of the ISAD, participants were administered the NDS, which consists of seven subscales for different
types of deviant behavior including theft, assault, alcohol use, drug use, vandalism, school misbehavior, and a general deviance measure. The purpose of the NDS was to capture norm-violating behavior in all cultures in an effort to have a cross national instrument. It was also developed to capture less serious forms of norm-violating behavior that is common in most cultures.

The studies by Vazsonyi and colleagues have found support for the effect of self-control on deviant behavior. For example, using a sample of over 8,000 adolescents (ages 15-19) from Hungary, the Netherlands, Switzerland and the U.S. (African American adolescents) Vazsonyi et al. (2001) found that self-control accounted for 20% of the total variance explained in total deviance for the entire sample. In particular, self-control accounted for 10% of the variance in theft; 12% in assault; 13% in alcohol use; 13% in drug use; 14% in school misbehavior; 15% in vandalism; and 16% in general deviance. Vazsonyi et al. (2001) also found that of the different dimensions of a self-control scale, risk seeking was found to be the best predictor of all deviance subscales, except for assault which was best predicted by temper and self-centeredness. Furthermore, the entire self-control scale accounted for more variability in less serious forms of deviant behavior. The authors conclude that the developmental processes involving self-control and deviance are consistent across cultures.

In a similar study, Vazsonyi and Crosswhite (2004) set out to test the validity and reliability of the Grasmick, Tittle, Bursik, and Arneklev (1993) self-control scale among a rural African American adolescent population in Alabama. Vazsonyi and Crosswhite (2004) found that self-control accounted for 15.2% of the variance in total deviance for males and 5.5% of the variance for females. For females, low self-control did not predict
theft or assault. Overall, the authors conclude that low self-control is a good predictor of deviant behaviors among African American males and females, especially for vandalism, alcohol use, drug use, school misconduct, and general deviance. The study only found one difference between African American males and white males, for school misconduct. There were more differences between females of the two groups, particularly for alcohol use, drug use, and school misconduct.

Many scholars argue that one of self-control theory’s central tenant’s is that family socialization processes lead to the development of self-control, which in turn influences involvement in delinquent and analogous behaviors (Hay, 2001; Hope, Grasmick, & Pointon, 2003; Pratt, Turner, & Piquero, 2004). Simply put, bad parenting is the “cause” of low self-control (Gottfredson & Hirschi, 1990: 97). During a child’s development, various opportunities arise in which unruly or bad behavior can be corrected through proper parenting techniques. As previously mentioned, such proper techniques include supervision, recognition of bad behavior, and punishment. Parents who fail to train and discipline their children allow a child’s bad behavior to flourish, along with their low level of self-control.

According to Vazsonyi and Belliston (2007) even fewer studies have attempted to examine the indirect effects of family processes on deviance through self-control.² Vazsonyi and Belliston (2007) suggest that measurement issues, sample differences, and different operationalizations of key constructs such as self-control may be possible reasons for limited research regarding the family, self-control, and deviance.

² Although Gottfredson and Hirschi (1990) do not make reference to the indirect effects of parenting on delinquency, researchers such as Vazonyi and Belliston (2007) suggest that parenting variables may have an effect on delinquency above and beyond that which is explained by (or accounted for by) self-control.
relationship. They also argue that previous work has failed to examine multiple family process variables simultaneously, often neglecting the attachment dimension. According to Gottfredson and Hirschi, attachment is a necessary condition for “good” parenting to occur. A logical extension of that proposition is that a parent who is attached to their child will have the child’s best interest at heart, which will include more supervision, recognition of bad behavior, and appropriate punishment.

Vazsonyi and Belliston (2007) are among the first to examine the family, self-control, and deviance relationship cross culturally (including youth from Hungary, Japan, the Netherlands, Switzerland, and the U.S.). They test the direct and indirect effects of family processes (closeness, support, and monitoring) on self-control and deviance in a cross national, cross sectional sample. Participants were asked about their perceptions of their relationship with their mothers using the Adolescent Family Process Measure (AFP). Of the six subscales in the AFP, the study focused on three: closeness, support, and monitoring. The authors employed structural equation models to then test the direct and indirect effects of family processes on low self-control and deviance.

Overall the results of Vazsonyi and Belliston’s (2007) study indicated both direct and indirect effects of family process measures on deviance, which is consistent with self-control theory. Support and monitoring were found to be negatively associated with low self-control and with deviance in all groups, except for Japanese youth. They also found that closeness did not provide any additional explanatory power above that accounted for by support and monitoring. The strongest indirect effect was found between support and deviance, followed by monitoring and deviance. Altogether, the three family process measures accounted for 11.5% of the total variance in low self-
control across the total sample. Family processes and low self-control together accounted for between 22.3% and 35.9% of the explained variance in deviance across groups (or 25.2% for the entire sample). They conclude that the model linking the importance of family processes in predicting low self-control and deviance is applicable across the different cultural samples employed in the study.

Hay (2001) has also examined the effects of parenting on self-control and delinquency using an urban sample of 197 high school students in the U.S. The diverse sample was 32% Hispanic, 20% African American, and 41% non-Hispanic white. The study included measures for two of Gottfredson and Hirschi’s parenting variables: parental monitoring and discipline. Participants were asked to report their “general impression” about parents’ habits. The delinquency variables were based on measures of projected rather than self-reported delinquency and substance use. Hay found monitoring and discipline to be negatively related to low self-control. He also found that a combined measure of monitoring and discipline had an even stronger effect on self-control than either measure independently. Hay also included other parenting variables identified in past research, especially those used by Baumrind (1966, 1991, 1996), in his study. Hay included variables on: parental acceptance of their children; the extent to which parents facilitate their adolescents’ psychological autonomy; and the extent to which parents refrain from physical forms of discipline. The results showed that when using a broader range of parenting variables low self-control is better explained. This is a finding echoed in past research (see Pratt & Cullen, 2000). When examining the effect of family variables and low self-control on two delinquency measures, Hay found that low self-control partially accounted for (mediated) the effects of monitoring-discipline on
delinquency; specifically, low self-control mediated only about one-fourth of the effect.

Unnever et al. (2003) found similar results in their study of over 2,400 U.S. middle school students. The authors employed the Grasmick et al. (1993) self-control scale, a self-report instrument for delinquent involvement and arrest, and a parental monitoring and discipline measure developed by Simons, Wu, Conger, and Lorenz (1994). This study is unique in that it also employed a measure for ADHD (Attention Deficit Hyperactivity Disorder). Results showed that children who experienced greater monitoring and consistent discipline had more self-control. ADHD was also shown to be significantly related to low self-control, even after controlling for parental measures. Results also indicated that parental monitoring remained a significant predictor of delinquency, even after controlling for low self-control. In other words, low self-control only partially mediated the effect of parenting on delinquency.

In a related study, Vazsonyi and Klanjsek (2008) tested the relationship between family processes, self-control, and deviance using a cross cultural sample of over 3,700 Swiss males. In addition, however, the authors tested whether this relationship held across different socioeconomic levels. Participants in apprentice training schools were considered to be of lower strata, while participants attending a Gymnasium or teaching college were considered to be of higher strata. The study revealed that participants from lower strata reported receiving less maternal and paternal support, perceived less paternal closeness, and experienced less maternal monitoring. Similar to Vazsonyi and Belliston’s (2007) study a significant link was found between maternal support and low self-control. For males, from both strata, the relationship between maternal support and low self-control was statistically significant, although the relationships between
closeness or monitoring and self-control were not. When observing the effect of family processes on deviance, however, all three maternal family variables were predictors of deviance among lower strata adolescents; only monitoring was significant for those in the higher strata. Low self-control was found to be a significant predictor of deviance across higher and lower economic levels. For those belonging to lower strata, the statistical models including maternal family process variables and self-control accounted for 20% of the explained variance in deviance (17% in models including paternal family measures). For those belonging to higher stratas, the model including maternal family process variables and self-control accounted for 26% of the variance in deviance (24% in models including paternal family measures). Additionally, maternal family process variables accounted for 5% of the explained variance in self-control for the lower strata, and 6% for the higher strata. Path analysis showed that maternal family processes had larger direct effects on total deviance than indirect effects through self-control, in both economic groups. This study is unique in that it distinguishes between socioeconomic levels. According to Gottfredson and Hirschi, people rarely live in equal circumstances; in most societies economic inequality is one of the major factors dividing people and their families.

One common theme in these studies is that parental monitoring has consistently shown to be a strong predictor of self-control and deviance, warranting its use in the current research. These studies have also found that low self-control partially mediates the effect of family processes on deviance. Overall, these studies provide general support for the main tenets of self-control theory. One major shortcoming of these studies, that the current study aims to address, is the applicability of self-control theory
to one of the largest minority populations in the U.S.: Latinos.

**Latinos and Latino Subgroups**

Latinos comprise the fastest growing minority group in the U.S. (U.S. Census, 2000). The Census recognizes 12 Latino origin ethnic groups (e.g., Puerto Rican, Mexican, Cuban, Salvadorian, Nicaraguan) on its survey, although there are many others. Despite the presence of Latinos in the U.S. for decades, even centuries for some groups, the criminological literature has neglected research on Latinos’ experience within the U.S. (Martinez, 2002; Urbina, 2007; Morin, 2008). There are numerous reasons for this gap in the literature. For one, the Census did not include “Hispanic” as an option on its survey until 1970. Similarly, criminal justice agencies reporting to the FBI for the Uniform Crime Report typically employed only three racial categories in their paper work- African American, Caucasian, and “other” (Urbina, 2007). It was not until 1980 when the FBI forced its reporting agencies to keep data on Latinos (Urbina, 2007).

In recent years, however, there have been attempts in the criminological literature to address Latino issues. Although individual level theories, such as self-control theory, have not been widely tested on Latinos in the U.S., some exceptions do exist. For instance, Smith and Krohn (1995) used a sample of young Hispanic, African American, and white male adolescents to examine the role of ethnic and racial diversity in the relationship between family processes and delinquency. Guided by Hirschi’s (1969) social control theory, the family process variables they measured were: parent-child attachment, parent-child involvement, and parental control. Other family variables include hardship and single-parent family. Results indicate that the family process variables as a whole do a better job at accounting for the variance in delinquency.
among Hispanic males, compared to African American and white males. The study also found that different variables had different effects on delinquency for each of the three groups. For example, for Hispanics, being from a single-parent household and having parents that are less involved is significantly related to greater involvement in delinquent behavior. Taylor, Biafora, Warheit, and Gil (1997) also found differing effects of certain factors among racial/ethnic groups. For example, they found that among Hispanics the best predictors of self-reported theft/vandalism were low family pride and family substance use. For African Americans, low family communication was the strongest predictor of self-reported theft/vandalism, and for whites it was low family pride.

Smith and Krohn (1995) also found that attachment for Hispanics is associated with a greater perception of family involvement, in turn reducing delinquency. For whites and African Americans, however, strong parent-child attachment and a greater sense of parental control are associated with lower delinquency. In a similar study, Leiber, Mack, and Featherstone (2009) also sought to examine the family-delinquency relationship through Hirschi’s (1969) social control framework. The authors employed data from the National Longitudinal Study of Adolescent Health (Add Health) on over 9,000 seventh to twelfth grade students from white, African American, and Latino backgrounds. Their analysis included family process variables such as maternal attachment, maternal supervision, and parental control; and two measures of delinquent behaviors (non-serious vs. serious). Specifically, the non-serious delinquency measures captured minor property crimes, shoplifting, and interpersonal delinquent behavior. The serious delinquency measures included robbery, burglary, and physical violence. Initial analysis indicated Latino youth to have higher involvement in non-serious delinquent behavior. In
regards to the family process variables, only maternal attachment was found to be a significant predictor of delinquency across all three racial/ethnic groups. Interestingly, and in contrast to the finding by Smith and Krohn (1995), parental control was found to be significant for Latinos, but only for Latino families that were non-intact (i.e., single parent households). Specifically, in non-intact Latino families, higher levels of parental control resulted in a decreased probability of delinquent involvement among youth.

The importance of attachment and bonding for Latino youth has further been highlighted in other studies. For example, Rodriguez and Weisburd (1991), who studied inner-city Puerto Rican American male adolescents, found that family bonding was more important in influencing delinquency among Puerto Rican males than white males. Family bonding was determined by the amount of time families spent together on a weekly basis. Also of importance is the finding that peer bonds were only half as significant in predicting delinquency for Puerto Rican males as for white males. German, Gonzalez, and Dumka (2009) also found youth family processes to be a protective factor against deviant peer influences. German et al. (2009), found exposure to deviant peers to be associated with increased youth externalizing problems (as determined by the Child Behavior Checklist), among a sample of over 500 Mexican-origin youth. However, they found the negative impact of deviant peer associations to be offset by strong family values. Other studies, however, have suggested that attachment to parents and peers do not significantly influence delinquency among Latinos (Peacock, McClure, & Agars 2003).

The mixed results on the influence of parental attachment on delinquency is also seen in a study by Loukas, Suizzo, and Prelow (2007) which found both positive and
negative attachment effects in a large Latino youth sample. Using data from the Welfare, Children, and Families: A Three-City Study on over 400 Latinos, this study sought to assess the role of protective factors in the lives of Latino youth from low income families. Family process variables employed in this study included maternal monitoring, mother-adolescent relationship quality, and family routines. Two adolescent adjustment measures were used: delinquent behaviors (e.g., getting drunk, stealing, physical fighting), and internalizing problems (e.g., depression, anxiety). The study also included a measure for linguistic acculturation in which higher acculturation levels corresponds to the child’s primary caregiver’s ability to speak English more proficiently. Prior research has suggested that the rate at which Latino mothers acculturate to U.S. society influences their family life (Martinez, 2006; Dumka, Roosa, & Jackson, 1997) and cigarette/alcohol use (Landrine, Richardson, Klonoff, & Fay, 1994; Unger et al., 2000). Overall, the study found that higher levels of maternal monitoring acted as a protective factor against delinquency and internalizing behaviors for sons of mothers high in linguistic acculturation (greater English proficiency), but not for sons of mothers low in linguistic acculturation. Alternatively, maternal attachment was not important in families with high linguistically acculturated mothers, but important in families with low linguistically acculturated mothers. A better relationship between a mother of low linguistic acculturation and her son resulted in more delinquent behaviors. For girls, monitoring was found to be a protective factor, across acculturation levels.

Vazsonyi and Flannery (1997) also examined the relationship between family processes and delinquency using a large sample of white and Hispanic youth in sixth and seventh grade. The study made use of the following parental variables: monitoring,
discipline, and parent-child relationship. The family variables accounted for 33% of the explained variance in delinquency for whites and 22% for Hispanics. In particular, parental monitoring was a stronger predictor of delinquency among whites than among Hispanics. On the other hand, school substance use was more associated with delinquency among Hispanics than among whites. School variables such as academic achievement, commitment, and aspirations accounted for 8% of the explained variance in delinquency for whites and 17% for Hispanics. These analyses show that family process variables were more associated with delinquent behavior for whites, while school variables were more associated with delinquent behavior for Hispanics. Further analysis, however, indicated that family and school variables shared a similar amount of variability in regards to delinquent behavior for both whites and Hispanics.

Other studies have also documented the association between family processes and substance use among Latinos (Pokhrel, Unger, Wagner, Ritt-Olson, & Sussman, 2008; Mogro-Wilson, 2008). According to the Monitoring the Future survey, Latino youth have a higher percentage of alcohol and cigarette usage than their white and African American counterparts (Johnston, O’Malley, Bachman, & Schulenberg, 2006). In a study of over 1,900 Latino youth, Pokhrel et al. (2008) sought to examine the relationship between parental monitoring, parent-child communication, and substance use (i.e., cigarette, alcohol, marijuana). Similar to Loukas et al. (2006), the authors also included acculturation measures. The data was taken from Project RED (Retiendo y Entiendo Diversidad para Salud), a longitudinal study of acculturation patterns and substance use among Latino adolescents in Southern California high schools. The study found both monitoring and parent-child communication to be inversely related to
all three drug types. They also found parent’s expectation of child’s acculturation to be inversely related with alcohol use. The authors also conducted tests to find out if monitoring and parent-child communication mediated the relationship between parent’s expectation of child’s acculturation and alcohol use, and found no mediation.

In a similar study examining the family process-substance use relationship, Mogro-Wilson (2008), found significant effects for parental control and parental warmth on alcohol use. Using the Add Health data set, this study consisted of over 1,800 Latino youth and employed measures for family processes, acculturation, and alcohol use. Results show that in homes where English is spoken, parental control decreases, resulting in an increased use of alcohol among youth. Parental warmth had a negative effect on alcohol use for Latino youth, with an increase in parental warmth resulting in reduced alcohol use among youth. Parental warmth was also found to strengthen the parent-youth relationship, in turn reducing alcohol use. Parental control also had a negative effect on alcohol use, with an increase in parental control resulting in decreased alcohol use by Latino youth.

Overall, research has shown the importance of family processes in predicting delinquency among Latino youth. However, more research is still needed, especially research on Latino self-control. This research gap leaves us with the difficult task of speculating about self-control levels of Latinos as a group, and even harder for the individual subgroups. Previous research has suggested that even though the link between structural level factors and parenting processes has not been determined, theoretically it is a relationship that warrants further investigation (Pratt et al., 2004). Given this theoretical basis, below is a brief description of the economic situation of the
Latino subgroups in the U.S. This overview is important because there is a lack of theory regarding Latino family processes, self-control, and delinquency differences among Latino subgroups. The differences outlined below are from the few available sources documenting the lives of Latinos in the U.S., and may help address any differences that may arise between some of the subgroups in the current study’s analysis.

**Economic Situation of Latinos in the U.S.**

There are over 45 million Latinos in the U.S., constituting 15.1% of the population (U.S. Census, 2007). In 2007 the national Latino poverty rate was 21.5%, while the national average was 12.5% (U.S. Census, 2008). Although the 2007 percentages are not available by ethnic group at this time, below are the most recent poverty estimates per ethnic group, along with some other important structural variables. Please note that information on all the variables were not available for all ethnic groups.

**Mexicans**

As of 2006, there were 28.3 million Mexicans in the U.S. They accounted for 9% of this country’s population and are the largest Latino ethnic group in the U.S. (U.S. Census, 2007). As of 2002, the poverty rate for Mexicans in the U.S. was 21.2%. That rate increased to 37.6% for families headed by single women. The average individual income for Mexicans in 2002 was the lowest of all Latino ethnic groups at $27,877, compared to $38,200 for all Latinos. As of 2003, only 6.3% of Mexicans had college degrees, the lowest rate of all the three largest Latino ethnic groups (Mexicans, Puerto Ricans, and Cubans).

**Puerto Ricans**

As of 2003, there were approximately 3.6 million Puerto Ricans in the U.S. and
they constitute the second largest Latino ethnic group (U.S. Census, 2003). Many scholars have characterized the U.S. Puerto Rican community as poor and part of the urban underclass, reporting their high poverty rates for the past fifty years (Baker, 2002). In 2002, the average individual income for Puerto Ricans was below the Latino average ($33,927 vs. $38,200 respectively). Puerto Ricans have the second highest poverty rates of any other group in the U.S. with a rate for families at 22.8%. The poverty rate for Puerto Rican families headed by single women is even greater, at 39.3% (higher than the Mexican rate). In regards to education, Puerto Ricans have a long history of high dropout rates (Nieto, 2000). As of 2003, only 9.9% of Puerto Ricans had college degrees.

“Other” Latinos

This section describes the situation of Cubans in the U.S., because they constitute the third largest Latino subgroup in the country and are a large portion of the “other” Latino category employed in the current study. As of 2004, there were approximately 1.5 million Cubans in the U.S., making up 4% of the Latino population (U.S. Census, 2006). Their median household income was $38,000 which was higher than the median for all Latinos at $36,000. The poverty rates for Cubans have generally been lower than for other Latinos. In 2004, when the poverty rate for Latinos under age 18 was 27%, Cubans under 18 only had a rate of 13%. For Latinos between age 18 and 64 the overall poverty rate was 17%, while Cubans only had a rate of 11%. For Cuban families headed by single women, the poverty rate increases to 15.3%, still below that of both Mexicans and Puerto Ricans. Cubans also have a home ownership rate (61%) greater than all Latinos (47%). In terms of education, 25% of Cubans 25 or older have a college degree, which is double the rate among all Latinos (12%). In terms of marriage rates,
52% of Cubans 15 or older were married in 2004, about the same rate as all Latinos (51%). The Cuban divorce rate, however, was higher than the overall Latino rate (12% vs. 7% respectively).

The information just presented above serves to bring to the surface some of the differences across Latino subgroups. Although the current study will not hypothesize about the self-control or delinquency levels of any particular subgroup, the information presented above serves to reiterate Gottfredson and Hirschi’s claim that things are rarely equal in our society and certain families or groups will have more obstacles to overcome than others. As stated at the beginning of the paper, the main purpose of this research is to test the applicability of self-control theory to a minority population, specifically Latino subgroups. The analysis to follow will test self-control theory’s main tenets.

**Hypotheses**

Gottfredson and Hirschi (1990) claim self-control theory is applicable across racial and ethnic groups. If self-control theory is applicable across all groups, then Latinos’ delinquency and self-report offending should be influenced by family process variables and self-control in the same manner as previous studies of mainly white samples have. Specifically, self-control should at least partially explain the effect of parenting variables on delinquency and criminal behavior. The following research questions and hypotheses will be tested:

**Research question 1**: Do parenting variables (warmth, supervision/monitoring, and hostility) influence self-control levels of Latino children and adolescents?

Hypothesis a: Net of demographic and theoretically relevant control variables, Latino children and adolescents whose parents show more warmth, more supervision,
and less hostility will have higher self-control than those whose parents show the opposite.

**Research question 2:** Do parenting variables (e.g., warmth, supervision/monitoring, and hostility) influence involvement in delinquency and criminal behavior among Latino children and adolescents?

Hypothesis b: Net of demographic and theoretically relevant control variables, Latino children and adolescents whose parents show more warmth, more supervision, and less hostility will report less involvement in delinquent and criminal behavior than those whose parents show the opposite.

**Research question 3:** Do levels of self-control influence involvement in delinquency and criminal behavior among Latino children and adolescents?

Hypothesis c. Net of demographic and theoretically relevant control variables, Latino children and adolescents with lower self-control will report more involvement in delinquent and criminal behavior than those with more self-control.

**Research question 4:** Does self-control explain the association between parenting and involvement in delinquency and criminal behavior of Latino children and adolescents?

Hypothesis d: Net of demographic and theoretically relevant control variables, the effect of parenting on the delinquent and criminal behavior of Latino children and adolescents will be accounted for by self-control. In other words, Latino children and adolescents whose parents show more warmth, more supervision, and less hostility will have higher self-control than those whose parents show the opposite, and in turn will report less involvement in delinquent and criminal behavior than those with low self-control.

Gottfredson and Hirschi’s self-control theory is a general theory that claims to explain involvement in delinquency and crime across cultures, races, and ethnicities. If Gottfredson and Hirschi are correct the hypotheses stated above should hold true for
the Latino sample in this study.

There is a lack of theory regarding Latino subgroup differences in terms of family processes, self-control, and delinquency, thus making it difficult to hypothesize which subgroup is expected to exhibit high/low self-control and high/low delinquency. Therefore, it is an exploratory goal of this study to assess if any differences exist across the Latino subgroups in terms of their self-control and delinquent and criminal involvement.
CHAPTER 3
METHODS AND ANALYTIC STRATEGY

Data

Data for this study are taken from the Project on Human Development in Chicago Neighborhoods (PHDCN), which began in 1994. The data collection process was multifold and centered on neighborhoods, children, and their families. Collection began with the identification of over 300 neighborhood clusters, collapsed from 847 census tracts in the city of Chicago. The researchers employed a stratification procedure based on the socioeconomic status and racial/ethnic makeup of the neighborhood. The clusters included low, medium, and high socioeconomic status neighborhoods. The clusters were also identified by percentage of racial/ethnic composition, thus providing a sample of children from Chicago neighborhoods that are ethnically, racially, and socioeconomically diverse (Sampson, Raudenbush, & Earls, 1997).

One part of the study consists of a community survey in which 8,782 participants reported on community conditions. Another part of the study, most pertinent here, is the longitudinal cohort component, which includes data on thousands of participants from age 0 to 18, over a seven year period beginning in 1994. To arrive at these cohorts the PHDCN directors employed a three-stage sampling technique. First, a stratified probability sample of 80 neighborhoods was selected from the 343 neighborhood clusters. Data on neighborhood clusters were obtained from multiple sources including the 1990 U.S. Census, police reports, and a separate community survey measuring neighborhood social processes. The neighborhoods were stratified by racial/ethnic composition (e.g., predominantly white, black, or Latino) and socioeconomic status (i.e., low, medium, high). Next, block groups were randomly selected from each
neighborhood and a complete list of dwelling units was compiled for each block group. Then, through in-person screening, pregnant women, children, and young adults within six months of the seven age cohorts were identified and asked to participate in the study. This process yielded a total of 6,228 participants and their primary caregivers (Earls, Brooks-Gunn, Raudenbush, & Sampson, 1994).

The current study focuses on the 9, 12, and 15 year old cohorts, ranging in age from 7 to 16 years of age. We use these cohorts for several reasons. First, according to Gottfredson and Hirschi, “the origins of criminality are to be found in the first 6 to 8 years of life” (1990:273). Second, once formed, self-control is stable throughout the life course, thus justifying the use of a sample older than the 6-8 year age range, to test the tenets of the theory. Third, participants in this young sample are still under the care of a parent or other primary caregiver, thus increasing the reliability of the survey questions regarding parenting practices/family processes.

The sample used in this study only included Latino participants which made up about 44% of the total PHDCN longitudinal sample. There were 382 participants in cohort 9, 353 in cohort 12, and 296 in cohort 15, for a total of 1,031 Latino children and adolescents. Specifically, 66% of the final sample identified as Mexican, 20% as Puerto Rican, and 14% belonged to another Latino subgroup. A check for missing data was conducted and mean replacement was used (i.e., mean values for each variable was used to substitute any missing values on that variable for a particular participant). Therefore, all 1,031 participants were used in each analysis.

Parenting variables had the following percentages of missing data: warmth (4.2); hostility: (3.9); and supervision: (3.7). Delinquency/criminal behavior variables had the following percentages of missing data: CBCL (22.3); self-reported total offending (21.6); and self-reported violent offending (20.0). Self-control had 3.6% of data missing. Each control variable had less than 3% missing data, except for delinquent peers which had 30.3%.
Numerous variables were included in the administered surveys, but of most interest here are the variables measuring race/ethnicity, family structure and interaction, child behavioral and emotional problems, and self-reported offending. Below is a description of the instruments used to measure these variables (Achenbach, 1991; Huizinga, Esbenson, & Weihar, 1991; Loeber, Stouthamer-Loeber, Van Kammen, & Farrington, 1989; Buss & Plomin, 1975; Gibson, Morris, & Beaver, 2009; Caldwell & Bradley, 1984; Selner-O’Hagan & Earls, 1994).

**Dependent Variables**

**Child Behavior Checklist (CBCL).** The CBCL is one of the most commonly used standardized measures in child psychology for evaluation of behavioral and emotional problems in children between the ages of 2 and 3, and between 4 and 18 (Achenbach, 1991; Achenbach, Howell, Quay, Conners, & Bates, 1991). In the PHDCN, the CBCL was administered to the primary caregivers of subjects in the 9, 12, and 15 year old cohorts (Earls, Brooks-Gunn, Raudenbush, & Sampson, 1997a). The questions in the survey are designed to assess internalizing behavior such as anxiety and depression, as well as externalizing behavior such as aggression, hyperactivity and delinquent behavior.

Of central importance in this study is the delinquency component of the CBCL (see Appendix B for complete list of items). Many of these items are analogous behaviors.

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4 The validity of the CBCL in minority samples has been investigated by numerous studies, with mixed results (Mano, Davies, Kelin-Tasman, & Adesso, 2009; Sivan, Ridge, Gross, Richardson, & Cowell, 2009; Gross, Fogg, Young, Ridge, Muennich Cowell, Richardson, & Sivan, 2006). Some studies have found the CBCL to be reliable and valid across different racial/ethnic groups including African Americans, Latinos, and whites (Gross et al., 2006). Other studies suggest that the CBCL does not adequately assess problems in diverse populations, especially among African American youth populations (Mano et al., 2009). Based on the reliability coefficient (.751) of the CBCL in the current study, however, the CBCL does appear to be a reliable measure across this Latino sample.
according to Gottfredson and Hirschi. It is also important to note that many of these behaviors are age-specific, but since self-control is developed at an early age and stable throughout one's life, childhood misbehavior/delinquency should be a positive indicator of future misbehavior/criminality. Items were measured on a 3-point scale (i.e., 0=not true, 2= very true) like the original CBCL. A full survey consisting of 113 items was administered at wave 1, while a reduced survey consisting of 61 items was administered at waves 2 and 3. For purposes of the current study, only survey data from wave 2 will be analyzed. Although the CBCL survey used at wave 2 has fewer items, it provides measures of all the items that make up the delinquency scale as described by Achenbach and colleagues (1991).

The final CBCL delinquency scale employed in this study consisted of 11 items averaged, which yielded a reliability of .751. Table A-1 (Appendix A) shows the average CBCL Delinquency score to be .228 (range 0-2), indicating that on average these youth rarely engaged in delinquent behaviors such as stealing outside the home, skipping school, and using alcohol or drugs.

**Self-Report of Offending (SRO).** The SRO was adapted from the Self-Report of Delinquency Questionnaire and the Self-Report of Antisocial Behavior Questionnaire (Huizinga et al., 1991; Loeber et al., 1989). The SRO focuses on a subject’s involvement in antisocial behavior and the legal consequences (if any) of that behavior. Subjects were asked about lifetime and past-year only involvement in an array of delinquent and criminal behaviors such as theft, assault, and public disorder. For this study only items capturing past-year only involvement were used. These items were measured on a “yes” or “no” scale. (yes=1; no =0). Follow-up questions were also
asked to obtain information on the age the behavior began and the date of most recent
criminal activity. Subjects were also probed about whether they engaged in solitary
versus group offending and their involvement with police and the criminal justice
system. Data collected at wave 2 will be analyzed in the current study and will employ
two measures of offending within the past year: total offending (a combined measure of
both property and violent offending) and violent offending. The total offending measure
consists of 19 items including: carried a weapon, shot at someone, and stolen
something from a store (see Appendix B for complete list). The reliability of the total
offending scale is .686. The violent offending measure consists of 13 items and has a
reliability of .646 (Earls et al., 1997c).

Analyses of the self-report offending measures, found in Table A-1 (Appendix A),
indicate low levels of delinquent involvement by these Latino youth. For example, the
mean score for total self-report offending is .743 (range 0-12) and the mean score for
violent self-report offending is .440 (range 0-8).

**Independent Variables**

**Self-control.** Following recent research using the PHDCN (Gibson et al., 2009;
Gibson, Sullivan, Jones, & Piquero, 2010), items from the Emotionality, Activity,
Sociability, and Impulsivity (EASI) Temperament Survey will be used to measure self-
control. The EASI is designed to evaluate subjects on four temperaments: emotionality,
activity, sociability, and impulsivity (Buss & Plomin, 1975). This survey was
administered to subjects' primary caregiver and asked the primary caregivers to assess
how accurately certain behaviors (e.g., acts on spur of the moment) or personality traits
(e.g., bothered by unfinished task) characterized the subject (Earls et al., 1994). Most survey items were measured on a 5-point Likert scale (i.e., 1= uncharacteristic, 5= characteristic).

For purposes of the current study, survey data from wave 1 will be analyzed. Seventeen items taken from the EASI Temperament Survey will be used to construct a self-control scale (Gibson et al., 2009). Although many tests of self-control theory employ the Grasmick et al. scale (1993), Pratt and Cullen’s (2000) meta-analysis of self-control theory finds that the impact of self-control on deviance is significant regardless of how self-control is measured. The specific items drawn from the EASI survey to construct the self-control scale in this study are related to several of the outcomes predicted by Gottfredson and Hirschi (Gibson et al., 2009). The specific items will be measuring four main concepts. First, inhibitory control is similar to Gottfredson and Hirschi’s notion of impulsivity, which reflects the inability to delay gratification and control frustrations (e.g., trouble controlling impulses). Second, decision time is similar to Gottfredson and Hirschi’s notion of short-sightedness, which refers to a child’s (in)ability to delay decision making until after considering other alternatives (e.g., often says the first thing that comes into their head). Third, sensation seeking is similar to Gottfredson and Hirschi’s notion of risk-seeking (e.g., doing crazy things just to be different). Fourth, persistence is similar to Gottfredson and Hirschi’s notion of lack of diligence, referring to the likelihood that a child will follow through or complete a task.

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5 Parental assessments of self-control have been used in previous studies (Pratt et al., 2004; Gibson et al., 2009). Some scholars argue that the use of an external rating of self-control is one way to address problems associated with self-reporting (Piquero, MacIntosh, & Hickman, 2000). One such problem with self-reports is that one’s level of self-control can affect their response. For example, someone with low self-control might not follow survey instructions properly because of their impulsiveness or inability to focus, thus potentially biasing their answers.
(e.g., tends to give up easily). Research suggests that parental reports provide valid measures of inhibition and temperament, especially as measured by the EASI survey (Lyon & Plomin, 1981).

The self-control scale constructed for this study consists of 17 items (listed in Appendix B) and has a reliability of .681. Each participant’s self-control level is a sum of the 17 items, in which higher scores indicate lower self-control. The Latino youth in this study exhibited, on average, a self-control score of 43.874 (range 17-80).

**Home Observation for Measurement of the Environment (HOME).** The HOME measure consists of interviewers’ perception of a subject’s household and the interaction between the subject and other household members, particularly the primary caregiver. The interviewer’s own observations along with follow up questions to the primary caregiver are available in the HOME report (Caldwell & Bradley, 1984; Selner-O’Hagan & Earls, 1994). For purposes of the current study, only data from wave 1 will be analyzed. Specific items from this report will be used to construct and measure the following parenting concepts: parental warmth, lack of hostility, and supervision/monitoring. The parental warmth and lack of hostility measures are similar to Gottfredson and Hirschi’s notion of attachment, which is a necessary condition to ensure the proper socialization of children. Their notion of attachment refers to parental affection (lack of hostility) and investment (warmth) in the child. The parental supervision/monitoring measure employed in this study, is similar to Gottfredson and Hirschi’s notion of monitoring as a necessary element in their effective child-rearing model. Sample survey items include: parent talks with child twice during visit (warmth); parent does not shout at child during visit (lack of hostility); and subject has a set time
(curfew) to be home on school nights (supervision/monitoring) (see Appendix B for a complete list of items). The warmth and hostility measures are derived from interviewer observations of parent and parent-child interactions during interviews. It is a possible concern that parents might inhibit their behavior in the presence of an interviewer. However, past research in criminology and psychology has viewed external assessments of parenting as favorable (Patterson, 1982). Additionally, the warmth and hostility measures used in the PHDCN have been subjected to psychometric analysis and have been found to be valid and reliable, and both operated as expected when predicting self-control (Leventhal, Selner, O’Hagan, Brooks-Gunn, Bingenheimer, & Earls, 2004).6

All of the parenting scales constructed here were the sums of “yes”= (1) and “no”= (0) items. The parental warmth scale consisted of 9 items and yielded a reliability of .773. The mean warmth score is 6.552 (range 0-9), indicating that parents exhibit high levels of warmth towards their children in this sample. The parental lack of hostility scale consisted of 4 items and yielded a reliability of .920. The mean lack of hostility score is 3.672 (range 0-4), indicating that parents exhibited a low level of hostility towards their children. The parental supervision scale consisted of 13 items and yielded a reliability of .530. The mean supervision score is 11.603 (range 4-13), indicating that parents exhibited high supervision towards their children in this sample.

Control Variables

Sex. Participant sex was coded (0) for female and (1) for male. The sample was

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6 In their analysis, Leventhal et al. (2004) used data from six national data sets, including the PHDCN, across three age categories (infants/toddlers, early childhood, and middle childhood) and found the measures to be both valid and reliable predictors of self-control.
51.6% male and 48.4% female (n=1,031).

**Age.** Participants ranged in age from 7 years of age to almost 16 years of age, with the mean age of the sample being 11.911 years.

**Socioeconomic Status (SES).** Participants’ household income was calculated using the principal component of three variables including household income, maximum education level of primary caregiver and partner, and the socioeconomic index (SEI) for primary caregiver’s and partner’s jobs. The sample mean was 1.063 (range .001-3.349) indicating that participants, on average, resided in households of low socioeconomic status.

**Family structure.** Respondents were asked to describe their relationship to their primary caregiver (i.e., biological, adoptive, step) and whether or not their primary caregiver had a partner. This measure was coded 1= child only lives with one caregiver and 2= child lives with two caregivers. Approximately 83% of the sample reported living with two caregivers.

**Family size.** Respondents reported their number of siblings and whether or not those siblings lived with them at home. The mean family size was 5.726 persons (range 2-14).

Both the family structure and family size variables were taken from the *Family Structure and Health History/Household Composition*. Data collected at wave 1 for the Family Structure and Health History survey will be analyzed. At wave 1 the subjects’ primary caregivers gave information regarding a subject’s household, including other household members and their relationship to the subject. The information gathered from this survey is very detailed, considering the presence of over 900 variables. This
information will allow us to establish the structure of a subject’s family (i.e., traditional 2-parent household, female headed household, male headed household). As previously stated, Gottfredson and Hirschi argue that the family processes, self-control, deviance relationship should not vary by socioeconomic status. However, some researchers have suggested that the degree to which structural characteristics influence parenting practices and family processes is not fully understood (Pratt et al., 2004). Therefore, it is important to control for structural factors as a potential confounding variable.

**Ethnicity.** Subjects were classified into one of three categories depending on the ethnicity of their biological parent: Mexican, Puerto Rican, or “other” Latino. “Other” Latino consisted of subjects who were not Mexican or Puerto Rican, but of some other Latino background (e.g., Cuban, South American, Central American). In all the analysis Mexicans are the reference category.

**Delinquent peers.** Despite Gottfredson and Hirschi’s claim that the effect of self-control on deviance should diminish the effect of any other independent variables, research has refuted this. Particularly, research has shown support for social learning variables, even in combination with self-control measures, in predicting delinquency. In Pratt and Cullen’s (2000) meta-analysis, social learning variables, in combination with self-control, improve the total explained variance in statistical models. In the current study, respondents’ association with delinquent peers was measured using a 20 item scale, which yielded a reliability of .883 (Earls et al., 1997b). The items were coded “yes” = 1, “no” =0. Sample items included: How many of your friends have gotten into trouble at school? How many of your friends have used marijuana or pot? How many of your friends have attacked someone with a weapon? (see Appendix B for a complete
Each participant’s delinquent peer association was measured by a sum of the 20 items, with higher scores indicating greater association with delinquent peers. The mean score for delinquent peer association was 28.674 (range 20-51).

**Analytic Strategy**

Figure 1 will be empirically assessed in order to test the main hypotheses of this study. Specifically, a series of multivariate linear regression models will be calculated in order to assess the nature of the relationship between parenting, self-control, and delinquency.

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Parenting  Self-control  Delinquent Behavior
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Figure 3-1. Parenting, self-control, delinquent behavior relationship

The data collection design of the PHDCN also calls for the use of the robust cluster function, which produces robust standard errors and makes adjustments for the lack of independence of observations. The subjects in the longitudinal cohort study have links to neighborhoods that differ by socioeconomic conditions and racial/ethnic composition. Using the robust cluster function corrects for the fact that children are nested in neighborhoods and those who live in the same neighborhood share that commonality, which reduces the independence of observations, in turn biasing the results. The robust standard errors produced by the robust cluster function help minimize this bias in the analysis and results.

The analysis in this study will proceed in several steps in order to address each research question. First, a bivariate analysis will be conducted to establish the nature of the relationship between different variables. Next, models will be estimated either
through OLS regression or Negative Binomial regression to answer each of the four research questions. The first set of multivariate models will estimate if parenting variables influence self-control levels in Latino children and adolescents (research question 1). In line with hypothesis a, parenting variables should be positively related to self-control levels for Latino children and adolescents, net of the control variables. In other words, parents exhibiting high warmth, supervision/monitoring, and lack of hostility should have children with higher self-control scores.

Then, an analysis will be conducted for each of the three outcome variables separately (CBCL delinquency, self-reported total offending, self-reported violent offending). In the models predicting delinquency as measured by the CBCL, OLS regression will be used because of the continuous nature of the CBCL measure. In the models predicting delinquency as measured by either self-reported total offending or self-reported violent offending, negative binomial regression will be used because of the count nature of each outcome variable.

Within each analysis research questions 2-4 will be addressed. Each analysis will include models that allow for estimating: the influence of parenting on delinquency and criminal behavior (research question 2); the influence of self-control on delinquency and criminal behavior (research question 3); and if the association between parenting and involvement in delinquency and criminal behavior is explained by self-control in Latino children and adolescents (research question 4). Question 4 tries to address the mediating effects of self-control. According to Baron and Kenny (1986), the mediating variable (in the present study: self-control) is the mechanism through which the independent variable (family processes) influences the dependent variable(s)
(delinquency and self-report offending). This model assumes that there are two causal paths leading to the outcome/dependent variable. First, there is the direct path from the independent variable (family processes) to the outcome variables (delinquency/self-report offending). Second, there is the indirect path from the independent variable to the outcome variable, through the influence of the third (mediator) variable.

In line with hypotheses b-d, it is expected that: children whose parents exhibit high levels of warmth, supervision/monitoring, and a lack of hostility will be less involved in delinquent or criminal behavior (hypothesis b); children with low self-control will be more involved in delinquent or criminal behavior (hypothesis c); and the influence of parenting on delinquent and criminal behavior should be accounted for by self-control (hypothesis d).
CHAPTER 4
RESULTS

Bivariate Analysis

A correlation analysis (see Table A-2, Appendix A) was first conducted to determine the nature of the relationship between independent and dependent variables. Table A-2 reveals that several variables are significantly correlated (at the p<.05 level). In regards to the parenting variables, warmth, lack of hostility, and supervision are all significantly related to the CBCL delinquency outcome measure, in the suspected direction. These correlations suggest that as parents exhibit greater levels of warmth and supervision, and less hostility, their children are less likely to engage in delinquent behavior. The parenting variables, however, were not found to be strongly correlated with either of the self-reported offending measures (total, violent). In regards to low self-control, negative, significant relationships were found between low self-control and both parental lack of hostility and supervision. Low self-control was also significantly correlated with all the delinquency outcome measures (CBCL, self-reported total offending, self-reported violent offending), in the expected direction: lower levels of self-control (higher scores) indicate greater involvement in delinquent behavior.

Other variables that exhibit significant correlations with all the outcome measures include: age, family structure, and delinquent peer associations. The analysis also finds some delinquency outcomes to be significantly correlated with certain Latino subgroups: being Mexican is significantly correlated with self-reported violent offending; being Puerto Rican is significantly correlated with CBCL delinquency and self-reported total offending; and being "other" Latino is significantly correlated with self-reported total offending and self-reported violent offending. Also, on average, Puerto Ricans have
higher scores on CBCL delinquency than Mexicans and “other” Latinos. However, on average, “other” Latinos have higher scores on both self-reported total and violent offending. These findings do not come as a surprise given that Puerto Ricans (mean: 46.928) and “other” Latinos (mean: 46.061), on average, have lower self-control than Mexicans (mean: 42.494) in the sample.

**Multivariate Analysis**

The first multivariate analysis can be found in Table A-3 (Appendix A), which shows the results from an OLS regression predicting self-control. Model 1 in Table A-3 reveals that several control variables are significantly related to low self-control, including: sex, age, being Puerto Rican, being “other” Latino, and delinquent peer associations. On average, males have significantly lower self-control than females (b=1.94; p<.05); older participants have significantly higher self-control than younger participants (b= -.515, p<.05); Puerto Ricans (b=4.041, p<.05) and “other” Latinos (b=3.146, p<.05) have lower self-control than Mexicans (reference group); and participants with more delinquent peer associations have lower self-control (b=.329, p<.05). The R-squared for this model was .0610, suggesting that the variables in this model account for 6.10% of the explained variance in self-control levels among the sample. Model 2 of Table A-3 shows the influences of parenting variables on low self-control. Net of control variables, parental lack of hostility and supervision have negative and statistically significant influences on low self-control. On average, children whose parents are less hostile have higher self-control than children whose parents are more hostile (b= -.933; p<.05). Also, on average, children whose parents exhibit high levels of supervision have higher self-control than children whose parents are less supervisory (b= -.611; p<.05). In regards to the control variables, those that were significant in
Model 1 remain significant, and in the same direction. The R-squared for Model 2 is slightly higher than in Model 1 at .0786.

Table A-4 (Appendix A) shows the results from OLS regressions that assess the influence of parenting and low self-control on wave 2 CBCL delinquency scores. Model 1 includes only demographic variables and reveals three variables to have statistically significant influences on delinquency. First, and consistent with prior research, age has a positive and statistically significant influence on delinquency, indicating that older children are more delinquent than their younger counterparts (b=.008, p<.05). Second, compared to Mexicans, Puerto Ricans are significantly more likely to report engaging in more delinquency (b=.052, p<.05). Third, compared to Mexicans, other Latino subgroups are also significantly more likely to report delinquent outcomes (b=.070, p<.05). It is interesting to note that no sex differences were found in this model, or any of the models measuring CBCL delinquency. This finding is surprising given that previous research has tended to find significant offending differences between males and females. Overall, the R-squared of Model 1 is .036.

In Model 2 of Table A-4 parenting variables are included along with control variables. As shown, ethnic subgroup associations remain intact, with Puerto Ricans and “other” Latinos reporting significantly more involvement in delinquent behaviors (b=.059, p<.05; b=.076, p<.05, respectively). Age is no longer found to be significant in this model. Of the parenting variables, only parental warmth is found to be statistically significant, in the negative direction (b= -.007, p<.05). In other words, as parental warmth increases, the child exhibits less involvement in delinquent behavior. Parental hostility and supervision did not reach significance in this model. Model 2 has an R-
squared of .051, indicating that this model accounts for 5.1% of the explained variance in delinquency as measured by the CBCL.

In Model 3 of Table A-4 a self-control measure is introduced. Low self-control has a positive and statistically significant influence on delinquency, indicating that children and adolescents with lower self-control (higher scores) report engaging in more delinquency (b=.006, p<.05). Furthermore, after introducing a measure of low self-control into the model, parental warmth became statistically insignificant. Age reemerged as a significant predictor of delinquency (b=.010, p<.05), but the difference between Puerto Rican and Mexican youth became insignificant. The “other” Latino subgroup variable (b=.054, p<.05) remained significant throughout each of the three models. The R-squared of this model increased to .143, indicating that this model accounted for 14.3% of the explained variance in delinquency.

Table A-5 (Appendix A) shows a series of negative binomial regression equations which show the influence of parenting and self-control on self-reported wave 2 total offending. Model 1 shows a regression with only control variables. Sex, age, and delinquent peers are found to be statistically significant predictors, in the positive direction. On average, males report significantly higher levels of involvement in total offending behavior than females (b=.319, p<.05); older children are more likely to report involvement in total offending behavior than their younger counterparts (b=.091, p<.05); and youth with more delinquent peer associations are more likely to report higher levels of total offending behavior (b=.063, p<.05). Unlike the results of the analyses measuring delinquency using the CBCL and self-reported violent offending (Table A-6, described below), there appear to be no subgroup differences between Puerto Ricans and
Mexicans, nor between “other” Latinos and Mexicans for this analysis measuring self-reported total offending. Model 2 in Table A-5 includes parenting variables. None of the parenting variables have significant influences on offending, but sex, age, and delinquent peers remain positive and statistically significant (b=.319, p<.05; b=.089, p<.05, b=.063, p<.05, respectively). Model 3 in Table A-5 introduces low self-control and shows that low self-control has a positive and statistically significant influence on offending (b=.012, p<.05), indicating that children and adolescents with low self-control are likely to report engaging in more offending than those with more self-control. Sex, age, and delinquent peers remain significant predictors of self-reported offending (b=.301, p<.05; b=.096, p<.05, b=.060, p<.05, respectively), while parenting variables remain non-significant. Also reported in Table A-5 (and Table A-6) are the percentage change values, which indicate the percent change in the mean of the outcome variable (self-report total offending) for a one unit increase in an independent variable. For example, in Model 3 of Table A-5 the percentage change reported for low self-control is 1.2, indicating that a one unit increase in self-control score results in a 1.2% increase in the mean of self-reported total offending at wave 2.

Table A-6 (Appendix A) shows a series of negative binomial regression equations estimating the influence of parenting and self-control on self-reported wave 2 violent offending. Model 1 establishes the effect of the demographic variables on self-reported violent offending. As well established in the literature, sex and age are statistically significant predictors of violent offending. On average, males are significantly more likely to report greater involvement in violent offending (b=.422, p<.05), and older children are also significantly more likely to report greater involvement in violent
offending (b=.109, p<.05). There are also statistically significant differences between Puerto Ricans and Mexicans, and “other” Latinos and Mexicans, in the positive direction. On average, Puerto Ricans report more involvement in violent offending than Mexicans (b=.352, p<.05), and “other” Latinos also report more involvement in violent offending than Mexicans (b=.365, p<.05). Additionally, peer delinquency has a positive and statistically significant effect on wave 2 violent offending, indicating that as association with delinquent peers increases, so does involvement in violent offending (b=.066, p<.05).

Model 2 in Table A-6 introduces parenting variables into the analysis of self-reported violent offending. In this model, the same demographic variables that were significant in model 1 (Table A-3) remain significant, and in the same direction (sex: b=.422, p<.05; age: b=.110, p<.05; Puerto Rican: b=.347, p<.05; other Latino: b=.364, p<.05; delinquent peers: b=.066, p<.05). The parenting variables do not prove to be statistically significant. Model 3 in Table A-6 incorporates a low self-control measure. Net of controls and parenting variables, low self-control has a positive and statistically significant effect on wave 2 violent offending, indicating that children and adolescents with lower self-control report engaging in more violent offending than those with greater self-control (b=.014, p<.05). In terms of the control variables, sex, age, being Puerto Rican, and delinquent peers remained statistically significant, in the same direction (b=.401, p<.05; b=.119, p<.05; b=.286, p<.05; .062, p<.05, respectively). The “other” Latino variable did not remain significant in this model.
CHAPTER 5
DISCUSSION AND CONCLUSIONS

This study set out to apply Gottfredson and Hirschi’s self-control theory to an understudied group in criminology—Latinos. It was a goal of this study to shed light on the relationship between family processes and self-control, and then examine how these factors influence involvement in delinquent and offending behaviors for Latino youth. This thesis was also an attempt to examine both the direct and indirect effects of family processes on deviance through self-control, an endeavor not often undertaken (Vazsonyi & Belliston 2007). Specifically, if self-control theory is valid across cultures, as argued by Gottfredson and Hirschi, then Latinos’ delinquency should be influenced by parenting and self-control in the same manner as previous studies of mainly white samples have shown.

Using data from the PHDCN allowed for the testing of these assumptions with a sample of 1,031 Latino youth and their primary caregivers. It was hypothesized that parenting measures would predict both self-control levels and involvement in delinquent behavior among Latino youth, as measured both by the CBCL and self-report scales (hypothesis a and b respectively). It was also hypothesized that self-control would influence involvement in delinquency among Latino youth and mediate the relationship between parenting and delinquent outcomes (hypothesis c and d respectively). In general, support was found for some hypotheses. Partially consistent with hypothesis a, two of the three parenting measures (lack of hostility and supervision/monitoring) significantly predicted self-control levels. However, the parenting variables could not significantly predict delinquent involvement across any of the delinquency measures, which is contrary to hypothesis b. The only exception to this finding was that parental
warmth was able to predict delinquency as measured by the CBCL; but that association did not remain once self-control was added, which is consistent with hypothesis d. Furthermore, consistent with hypothesis c, Latino children and adolescents with lower self-control reported higher levels of involvement in delinquency as measured both by the CBCL and self-report measures.

It is also important to note consistencies and inconsistencies across the different models. First, low self-control proved to be a significant predictor of delinquent involvement across all models. Second, the only control variable that remained a significant predictor of delinquent involvement across all models was age. Delinquent peers was found to be significant only across the models employing self-reported measures of offending. Third, only two significant differences were found for Latino subgroups. Differences were found between “other” Latinos and Mexicans for the model measuring the effect of parenting measures and self-control on CBCL delinquency outcomes. Additionally, differences were found between Puerto Ricans and Mexicans for the model measuring the influence of parenting and self-control on self-reported violent offending. These findings are discussed in more detail below.

Overall, this study provides partial support for Gottfredson and Hirschi’s theory and indicates that self-control theory is applicable to Latino youth. Specifically, a link does exist between self-control and various delinquent and criminal behaviors among Latino children and adolescents. Self-control theory has different components, and the current study aimed to explore some of them. For example, Gottfredson and Hirschi argue that the major “cause” of low self-control is ineffective child-rearing or parenting practices (1990, p. 97). Initial correlation analyses showed low self-control to be negatively
associated with each of the three parenting measures. A test using OLS regression finds two of the three parenting variables, hostility and supervision, to be significant predictors of self-control, net of all control variables. Taken together, the parenting and control variables accounted for 7.86% of the explained variance in self-control levels.

The results of these initial analyses are quite surprising in light of the analyses that followed in Tables A-4, A-5, and A-6. In Table A-4, containing the OLS regression results of the effect of parenting measures and self-control on CBCL delinquency outcomes, the only parenting variable that is significant is parental warmth (similar to the attachment component described by Gottfredson and Hirschi). The significance of this variable, however, dissipates with the introduction of self-control.

Furthermore, in neither Tables A-5 nor A-6, using negative binomial regression to determine the influence of parenting and self-control on self-reported total offending and violent offending (respectively), do any of the parenting variables reach significance in any model. This finding is not consistent with other work that finds parental warmth to be significant even after accounting for low self-control (Unnever et al., 2003, Vazsonyi & Belliston, 2007; Hay, 2001). Several possibilities emerge here. First, the parenting measures for warmth and hostility were recorded by an interviewer during the interview, creating a potential bias. For example, the presence of an interviewer might have altered the parent’s hostile or warm behavior toward the child in order to give the interviewer a good impression. This then has the potential to restrict variation in the variables. Second, parenting variables and self-control were measured at the same time. This is a potential bias because a child’s self-control level might influence parenting. For example, a child with low self-control might be difficult to handle and
parents might exhibit less warmth and more hostility towards him/her. It is also possible that parent’s self-control level might influence how they parent and how they report their child’s self-control level. Further research should address this possibility.

A third possibility is that the parenting measures used in this study are not culturally sensitive and need to be adjusted to capture what is occurring in Latino families. For example, work by Smith and Krohn (1995) has shown family process variables as a whole do a better job accounting for the variance in delinquency among Latino males than either white or black males. Moreover, a large body of research exists that suggests that in Latino families strict discipline and harshness are seen as protective factors for delinquency prevention, unlike in traditional white American families (Guilamo-Ramos, Dittu, Jaccard, Johansson, Bouris, & Acosta, 2007, Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Dornbusch, & Brown, 1992). For Latinos, particularly Mexicans, strictness and harshness are seen as signs of love and affection, thus a child benefits from such practices. The measures used in this study may not be accurately capturing the process by which parenting influences self-control levels, hence the reason why the parenting measures failed to show significance in some models. Or maybe there is another factor or process that is influencing establishment of self-control levels for Latino youth, not just parenting. Perhaps using a broader range of parenting variables would help, as suggested by Hay (2001).

Low self-control, on the other hand, was found to be significant in every model it was introduced in. This finding is consistent with a long line of research supporting self-control theory (Pratt & Cullen, 2000). In this study, low self-control was found to be a
significant predictor of involvement in delinquent outcomes as measured both by the parents’ account in the CBCL and the child’s account in the self-report scales. This finding suggests that Latino youth with low self-control are more likely to engage in negative behaviors such as run away from home, steal, set fires, and skip school. Again, these results show partial support for Gottfredson and Hirschi’s claim that their theory is applicable across culture, race, and ethnicity.

Another interesting finding from this study is the significant association between delinquent peers and self-reported involvement in delinquent behavior, providing support for Akers’ (1985) social learning theory. This finding was consistent only across the models employing self-reported delinquency outcome measures, and not in the models using CBCL delinquency as the outcome measure. This finding is also in contrast to work on Latino samples by Rodriguez and Weisburd (1991) and German et al. (2009) which suggest that family bonds are a protective factor against negative peer influences. In the current study, parenting practices were unable to diminish the positive effect that having delinquent friends had on one’s subsequent involvement in delinquent behavior. The findings of the current study also contradict Peacock et al.’s (2003) work on Latinos that finds attachment to peers not to have a significant influence on delinquency.

Also important to mention is the significant difference found between the different Latino groups, particularly for the models looking at CBCL delinquent outcomes and self-reported violent offending. Specifically, strong differences were found between Mexicans and the “other” Latino subgroup- comprised of Cubans, Central, and South Americans, with “other” Latinos more likely to engage in delinquent behavior. Perhaps
this should not come as a surprise because Mexicans in this sample were significantly more likely to have higher levels of self-control compared to Puerto Ricans and “other” Latinos. These results may also be attributable to the immense differences between Latino subgroups in the U.S. Although there are a number of characteristics Latinos have in common such as language, the differences between them may be greater. For example, Mexicans have a longer presence in the U.S. than any other Latino subgroup (Gonzalez, 2000). Their physical proximity to the U.S. attracts many Mexican migrants from all socioeconomic strata because of the ease of crossing the border (both legally and illegally). The long history of Mexicans in the U.S. may mean they have more established ties in the communities and more stable households. In turn, these factors may contribute to lowered involvement in delinquent activities. Other, smaller Latino subgroups, such as those from Central and South America have a more recent presence in the U.S. (Gonzalez, 2000) and may be less financially and familiarly established, thus affecting parenting practices and a child’s involvement in “bad” behavior.

The models looking at CBCL delinquency also found a difference between Puerto Ricans and Mexicans in both the baseline and parenting models, but not once self-control was introduced, indicating that self-control explained the difference between Puerto Ricans’ and Mexicans’ delinquent involvement. For the models assessing self-reported violent offending, a significant difference is also found between Puerto Ricans and Mexicans (after low self-control is added). Like Mexicans, Puerto Ricans have also had a long presence in the U.S.- but of a different nature. Puerto Ricans are legal U.S. citizens, but suffer minority status like other Latino groups. They are also among the
poorest and least educated Latino subgroups. Perhaps the social location of Puerto Ricans in U.S. society disrupts their family environment, thus affecting how children are raised. Future research should explore if the social, economic, and political differences between the Latino subgroups account for the differences in their delinquent involvement.

Also worth noting is that there were no significant differences between Latino subgroups for any of the models including self-reported total offending. This is interesting given the fact that differences were found in one of the model’s examining self-reported violent offending. The difference between the two outcome measures is that self-reported total offending includes both violent and property crime involvement. Could the inclusion of property crimes in the outcome variable have diminished any potential subgroup differences in delinquent involvement? Future research should look at different types of crimes and examine if involvement varies by Latino subgroup.

Another important finding that should not be overlooked is the differences in self-control levels between Mexicans in the sample and all other Latino groups. This study has been among the first to comment on the self-control level of Latinos. This endeavor should serve as a starting point for future research to build on. Further research should try to compare how self-control levels vary by all the different races and ethnicities. For example, do Latinos have higher or lower self-control levels compared to whites, blacks, and Asians? If so, what accounts for those differences? The potential of culture to affect how a parent views their child’s self-control levels is grave. Are the typical self-control measures used in this study, and others, culturally sensitive? Additional research is needed to assess this claim.
To conclude, this study provides partial support for Gottfredson and Hirschi’s self-control theory. This study found that low self-control directly influences involvement in delinquent behavior such as running away from home, stealing, and skipping school. What this study failed to prove was Gottfredson and Hirschi’s claim that parenting practices also affect delinquent outcomes, particularly when looking at self-reported offending. Only one of the parenting variables, parental warmth, was found to be a significant predictor of delinquent outcomes as measured by the CBCL, which measures less serious forms of criminal behavior. Despite this, the results indicate general support for Gottfredson and Hirschi’s contention that their theory can explain crime across different populations.

The findings in this study, however, are not without their limitations. For one, this study may not be generalizable to Latinos in cities outside Chicago. Chicago is a large metropolitan city, home to one of the nation’s largest Latino populations. The experience of Latinos in such an environment is certainly different than that of Latinos in smaller cities and rural areas. For this reason, it is not safe to say that family process variables and self-control act in the same way in influencing delinquent involvement for families living in different geographical areas.

Another limitation of the study is that comparisons were not made between youth of different racial/ethnic groups such as whites, blacks, and Asians. Such a comparison would be unique and definitely make an important contribution to the study of race and crime. Another limitation to consider is the wide age range employed in this study. Participants ranged in age between 7 and 16 years of age. The types of delinquent behaviors youth engage in may vary depending on age. The young age of some of the
participants (those in the 9 year old cohort) may have affected the low mean for delinquent involvement. Perhaps future research can analyze the different age cohorts separately to assess if any differences exist.

In addition, it is important to recognize the measurement limitations of the parenting and self-control variables used in this study. As previously mentioned, two of the three parenting variables (warmth and lack of hostility) were reported by the interviewer, thus potentially biasing the measures and results, especially in cases where the observed behavior was not a true reflection of the actual behavior. It is also important to recognize that not all parenting behavior may have the same effect on children’s behavior or self-control level across age cohorts. For example, establishing a curfew for one’s child may have different implications for the child depending on whether they are 9 years old or 15 years old. The self-control measure used in this study is also vulnerable to measurement issues. For example, having low self-control might influence the way a child fills out a questionnaire or responds to an interviewer. A child who has difficulty finishing tasks may not fill out a questionnaire properly or may not focus on an interviewer’s questions, thus biasing the data and any analysis resulting from that data.

There are also many limitations regarding the applicability of certain items/scales to subjects of different ages. There is concern that the parenting measures may not be properly capturing the parent—child relationship, for several reasons. First, the parenting items may not have the same meaning to a child in the 9 year old cohort compared to an older child in the 12 year old cohort. For instance, one of the parental warmth measures asks if the caregiver hugs or kisses the child in front of the
interviewer. The caregiver of a 15 year old subject may not hug or kiss the child because of fear of embarrassing the child, but that does not necessarily mean that the parent is not warm in other ways. Another warmth measure asks if caregiver uses the diminutive of child’s name. It is possible that the 9 year old child finds such behavior endearing, but a 15 year old might find it controlling.

Similarly, the lack of parental hostility measure also has potential limitations based on age. For example, one item asks if caregiver slaps or spanks child during interview. Spanking or slapping might be more commonplace where young children reside, especially if it is seen as a normal disciplinary tool. Spanking or slapping a 15 year old might be used more as a control mechanism. Potential discrepancies are also present with the supervision/monitoring measures. For instance, a 9 year old may not have a curfew because at such a young age kids are not going out alone, so this measure does not accurately capture age-appropriate supervision practices.

The same age-related problems are also found in the self-control measure. It is possible that these uniform measures used to identify self-control do not mean the same things at different ages. For example, teenagers are probably more likely to “try to be different” or “get bored easily” than their younger counterparts because of the social processes going on in their lives.

The delinquency and criminal outcome variables in this study also have some limitations regarding age appropriateness. For example, the CBCL asks caregivers if the child swears or steals. Swearing is different for 9 year olds compared to 15 year olds, and also carries different consequences for the child. Opportunities to steal are also different for 9 year olds than 15 year olds; younger kids are probably not
encountering the same opportunities to steal as older kids. It is also important to note that opportunity is a factor that is built into the delinquency measures - for a criminal or delinquent act (e.g., stealing) to occur an opportunity to commit that act must be present (e.g., unsupervised purse). Although the data do not account for opportunity, results should be interpreted with this caution in mind. The self-reported violent offending measure also suffers from age-related limitations. For example, one item asks if the child has hit someone they lived with. Given the large size of the average family in this sample, it is a possibility that the younger kids are “hitting” the older kids during typical sibling rivalries. Therefore, this behavior may not be “delinquent” or “criminal” in the traditional sense.

For all the reasons laid out in this paper, criminological research will benefit if it continues to examine Latinos. The field can no longer ignore the importance of this group in our society, especially given the fact that Latinos are the fastest growing minority in the U.S. (U.S. Census, 2007). Research involving Latinos will not only help advance general theories of crime, but will also help remove the stigma and negative stereotypes these individuals face on a daily basis.
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*p < 0.05

Note: Appropriate bivariate analysis (i.e., correlation, ANOVA, chi-square) used to correspond to the nature of the variables (i.e., continuous, dichotomous). Specifically, correlations involving two continuous variables (e.g., age, SES, Family Size, Delinquent Peers, Warmth, Hostility, Supervision, LSC, CBCL, SRO Total and SRO Violent) were estimated by Pearson correlations. Correlations involving one continuous variable and one dichotomous variable (Family Structure, Mexican, Puerto Rican, Other Latino) were estimated by ANOVAs. Correlations involving two dichotomous variables were estimated by chi-square.
### Table A-3. Influences of control variables & parenting on levels of self-control (OLS regression)

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**Table A-4. Effect of parenting measures & self-control on CBCL delinquency outcomes (OLS regression)**

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Table A-5. Negative binomial regression predicting wave 2 self-reported total offending: Influences of parenting & self-control

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Table A-6. Negative binomial regression predicting wave 2 self-reported violent offending: Influences of parenting & self-control

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APPENDIX B
INSTRUMENTS

Criminal Involvement Measures

*Child Behavioral Checklist (CBCL) Delinquency*

Doesn’t seem to feel guilty after misbehaving
Hangs around with others who get in trouble
Runs away from home
Sets fires
Steals at home
Steals outside the home
Swearing or obscene language
Prefers being with older kids
Truancy/skips school
Lies or cheats
Destroys things that belongs to his/her family

*Self-Reported Total Offending*

In the past 12 months have you:

Carried a weapon
Purposely set fire to a house, car, or vacant building
Snatched someone’s purse or wallet
Hit someone you live with
Hit someone you did not live with
Attack someone with a weapon
Use a weapon or force to get money or thing from people
Thrown object like rocks or bottles at people
Shot someone
Shot at someone
Been in a gang fight
Threatened to physically hurt someone
Tried to have sexual relations with someone against their will
Purposely damaged or destroyed property belonging to you
Entered or broken into a building to steal something
Stolen something from a store
Taken something that didn’t belong to you from any member of your family
Stolen a car or motorcycle
Used credit or bank card without permission

*Self-Reported Violent Offending*

In the past 12 months have you:
Carried a weapon
Purposely set fire to a house, car, or vacant building
Snatched someone’s purse or wallet
Hit someone you live with
Hit someone you did not live with
Attack someone with a weapon
Use a weapon or force to get money or thing from people
Thrown object like rocks or bottles at people
Shot someone
Shot at someone
Been in a gang fight
Threatened to physically hurt someone
Tried to have sexual relations with someone against their will

**Self- Control**

**Inhibitory Control**

Has trouble controlling their impulses
Usually cannot stand waiting
Can tolerate frustration better than most (reverse code)
Has trouble resisting temptation
Finds self-control easy to learn (reverse code)

**Decision Time**

Often says the first thing that comes into their head
Likes to plan things way ahead of time (reverse code)
Often acts on the spur of the moment
Always likes to make detailed plans before (s)he does something

**Sensation Seeking**

Generally seeks new and exciting experiences and sensations
Will try anything once
Sometimes does “crazy” things just to be different
Tends to get bored easily

**Persistence**

Generally likes to see things through to the end (reverse code)
Tends to give up easily
Unfinished tasks really bother (reverse code)
Once gets going on something (s)he hates to stop (reverse code)
Parenting Measures

Warmth

Parent talks with child twice during visit
Parent answers child’s questions orally
Parent encourages child to contribute
Parent mentions skill of child
Parent praises child twice during visit
Parent uses diminutive for child’s name
Parent voice positive feelings to child
Parent caresses, kisses, or hugs child
Parent responds positively to praise of child

Lack of Hostility

Parent does not shout at child during visit
Parent does not express annoyance with child
Parent does not slap or spank child
Parent does not scold or criticize child

Supervision/Monitoring

Subject has a set time (curfew) to be home on school nights
Subject has a set time (curfew) to be home on weekend nights
Has established rules about homework and checks to see if homework is done
Requires subject to sleep at home on school nights
When primary caregiver is not at home, reasonable procedures are established for
subject to check in with primary caregiver or other designee on weekends or after
school
After school subjects goes somewhere that adult supervision is provided
Establishes rules for behavior with peers and asks questions to determine whether they
are being followed
Subject is not allowed to wander in public places without adult supervision for more than
three hours
Has had contact with two of the subject’s friends in the law two weeks
Has visited with school or talked to the teacher or counselor within the last three months
Has discussed hazard of alcohol and drug abuse with subject in past year
Denies subject access to alcohol (including beer and wine in the home)
Know signs of drug use and remain alert to possible type of experimentation
Delinquent Peers Measure

In the past year, how many of your friends and/or people you spend time with have done the following things:

- Skipped school
- Gotten in trouble at school
- Gotten in trouble at home
- Lied, disobeyed, or talked back to adults
- Purposely damaged or destroyed property
- Stolen something worth $5 or less
- Stolen something worth $5 but less than $500
- Stolen something worth more than $500
- Go into building and steal something
- Taken a motor vehicle, car or motorcycle for a ride or drive without the owner's permission
- Gotten into a physical fight (fist) with schoolmates/coworker or friends
- Hit someone with the idea of hurting them
- Attacked someone with a weapon with the idea of seriously hurting them
- Have used a weapon or force to get money or thing from people
- Sold drugs, such as heroin, cocaine, crack or LSD (other than marijuana)
- Used marijuana or pot
- Used any form of alcohol (including wine, liquor, or beer)
- Used drugs, such as heroin, cocaine, crack or LSD (other than marijuana)
- Used tobacco
- How many have had sexual intercourse
APPENDIX C
MISSING DATA

In the present study there were a large number of missing data for certain key variables such as the delinquent/criminal outcome measures (see Methods). For this reason, the analyses presented were further analyzed using list-wise deletion - a technique that drops observations from analysis when data are missing. The mean replacement technique employed in the original models may bias coefficients because there might be a reason why a subject has missing information and replacing their non-response with the sample average for a particular item masks that reason. The average score or value may not be an accurate representation of the subject’s actual value for that particular item.

In order to determine if mean replacement influenced the results of the original models, new models were tested using list-wise deletion (models not presented here). This new analysis was conducted only for the CBCL delinquency and self-reported violent offending models (self-reported total offending was dropped from the analysis due to the overlap in items with self-reported violent offending).

First, and most important to this study, low self-control remains a significant predictor of involvement in delinquent and criminal behavior as measured by the CBCL and self-reported violent offending. There are some differences, however, between the original and new models that should be acknowledged. In the new model predicting CBCL delinquency two variables that were significant in the original models are no longer found to be significant: age and “other” Latino. Also, two new measures emerge as significant predictors: delinquent peers and parental warmth. In the new models
predicting self-reported violent offending only one difference is found: the significance of Puerto Rican in the original analysis no longer holds true in the new model.

Overall, these differences in models shed new light into the analysis and may be further considered in future work.
APPENDIX D
COHORT ANALYSIS

During the course of this study many issues have arisen regarding the validity and applicability of certain items/scales to subjects of different ages (see Discussion). In the original analysis subjects from all three cohorts (9, 12, 15) were combined and evaluated. Additional analyses were conducted to address potential differences across age cohorts (models not reported here). First, the models predicting CBCL delinquency (using list-wise deletion) were estimated for each individual cohort. For the 9 year old cohort, parental hostility and low self-control were found to be significant predictors of CBCL delinquency. For the 12 year old cohort, parental warmth, “other” Latino, low self-control, and delinquent peers were significant predictors. For the 15 year old cohort, only low self-control was found to be significant. It is important to note that low self-control was found to be a consistent predictor across cohorts, providing partial support for Gottfredson and Hirschi’s theory. However, parenting measures were only significant for the two youngest cohorts.

Second, the models predicting self-reported violent offending (using list-wise deletion) were estimated. For the 9 year old cohort only socioeconomic status was found to be significant. For the 12 year old cohort a number of variables are significant: low self-control, sex, Puerto Rican, and delinquent peers. For the 15 year old cohorts only delinquent peers and sex are significant predictors of involvement in self-reported violent offending. Overall, there are no consistent variables across all the age groups. There are only similarities between cohort 12 and cohort 15 regarding delinquent peers and sex. It is possible that the affect of having delinquent peers is more pronounced for older children given the importance of social groups for these age groups.
APPENDIX E
SELF-REPORTED PROPERTY CRIME

In the original analysis models predicting self-reported property offending were estimated, but left out of the results and discussion because of weak findings. This is surprising in light of past literature which suggests that juvenile engagement in property crimes is noteworthy (e.g., Allan and Steffensmeier, 1989). The weak findings in the current study might have been a result of analyzing all the age groups together. Also, it is possible that younger children have less opportunities to commit crime outside the home, thus property crimes might be more prevalent among older children/adolescents. For instance, some of the property items refer to behavioral acts that younger children may find difficult to engage in, such as using a credit card without permission or stealing a car.

The separate analysis by cohort reveals some differences in significant predictors. On average, the 9 year old cohort engaged in less property offending than the 12 and 15 year old cohorts. The mean score, out of a possible 6, for each of the cohorts was: .121 (Cohort 9); .328 (Cohort 12); and .308 (Cohort 15). For the 9 year old cohort low self-control, family structure, “other” Latino, and delinquent peers are significant predictors of self-reported property offending. For the 12 year old cohort parental hostility, family size, and delinquent peers are significant predictors. For the 15 year old cohort only delinquent peers is significant. It is important to notice that the only consistent measure across age cohorts is delinquent peers. Low self-control is only important for the 9 year old cohort, and only one parenting measure is significant in any of the models (parental hostility).
LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Zahra Shekarkhar is a graduate student in the Department of Sociology and Criminology and Law pursuing a master’s degree. She has a bachelor’s degree in criminology from the University of Miami. Her research interests include minorities and crime, gender and crime, and immigration and crime.