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Should We Disaggregate Latino Youths Based on Ancestral Group When Examining Risk Factors of Violent and Delinquent Behavior

by
Elvis Sevilla

An Applied Dissertation Submitted to the
Abraham S. Fischler College of Education
And School of Criminal Justice in Partial
Fulfillment of the Requirements for the
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2024

Approval Page

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Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

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____March 19, 2024_____
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Acknowledgments

I wish to dedicate this research to some significant individuals in my life. First, to my wife Rachel Sevilla and daughter Albertina Sevilla: without your love and support, I would not have pursued such an accomplishment. I am very grateful and blessed for the support and love you show me despite my joys and frustrations. A mi Madre Julia Sevilla y mi Abuela Amelia Sevilla, I hope that this is the legacy you can be proud of in the history of our family and our ancestry. I would not be where I am today had it not been for your parenting, love, and support to allow me to follow my dreams. I miss you, Abuela, and I hope you are smiling from above. To all my family and friends, I hope to share this celebration with you all for your support and toast to thee. I would not have been able to finish this dissertation without the accountability and support of my employers at Midwest Evaluation and Research, LLC. Thank you for teaching me what a true leadership looks like and strives to be. Finally, I want to thank my chair Dr. Steve Hecht PhD. for guiding me throughout this entire endeavor of my dissertation, I have learned so much in this process and I appreciate his grace.

Abstract

Should We Disaggregate Latino Youths Based on Ancestral Group When Examining Risk Factors of Violent and Delinquent Behavior. Elvis Sevilla, 2024: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education and School of Criminal Justice. Keywords: Latino, Hispanic, violence, delinquency, life-course criminology

Researchers frequently aggregate Latino subgroups during statistical analyses despite findings indicating that cultural distinctions within Latino subgroups have unintended hidden impacts on analyses. This study disaggregated the Latino sample to assess if Latino youth samples differ among subgroups (i.e., Mexicans/Mexican Americans, Cubans/Cuban Americans, Puerto Ricans, Central/South Americans, and other Latinos) who self-reported violent and nonviolent delinquent behavior. Also, this study used Sampson and Laub's age-graded theory to investigate life-course characteristics that predicted violent and nonviolent delinquent behaviors. A two-step approach analysis determined the differences in violent and delinquent behaviors among Latino subgroups and then which life-course risk factors predicted the variability of self-reported violent and delinquent behaviors within Latino youth subgroups. To address the study questions, a MANOVA and ANOVA analyses was used to determine the differences in violent and delinquent behaviors among Latino subgroups in the dataset of Waves I and III of the National Longitudinal Study of Adolescent to Adult Health Survey. The second analysis of multiple linear regression analysis was utilized to determine if life-course predictive factors determine violent and delinquent outcomes within each Latino youth subgroup. The results of this study revealed that determinants of life-course risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation-seeking, and deviant peers) differed between Latino intra-ethnic subgroups and predicted certain Latino subgroup violent and delinquent outcomes. Consequently, this research has persuasive evidence that researchers not to aggregate analyses by combining the Latino sample, which may obscure statistical trends that depend on which Latino subgroup is considered.

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Chapter 1: Introduction

Hispanic and Latino pan-ethnic categories have been used interchangeably for many years in research in the United States (Leung et al., 2014; Saavedra Cisneros, 2017; Taylor et al., 2012). In the literature, disagreements have emerged about which name is most suitable (Leung et al., 2014; Taylor et al., 2012) although neither phrase truly describes all subgroups within these cultures (Saavedra Cisneros, 2017). *Hispanic* refers to a person whose heritage originates from a Spanish-speaking nation, whereas *Latino* refers to a person who is from or whose lineage originates from a Latin American country, such as the Caribbean Islands, Central America, South America, or Mexico (Jaimes et al., 2013). Not everyone identifies as both Hispanic and Latino because not all Latinos are of Hispanic descent, and not all Hispanics are from Latin American countries (Jaimes et al., 2013; Saavedra Cisneros, 2017). For instance, Brazilian nationals are Latino because their country is in South America, but they are not Hispanic because their original language is Portuguese, not Spanish. In comparison, Spaniards are Hispanic because they come from a Spanish-speaking nation, but they are not Latino because they are European, not from Latin America (Jaimes et al., 2013). Cubans, Mexicans, and Puerto Ricans are examples of people who are Hispanic as well as Latino. In this study, the terms *Hispanic* and *Latino* are used interchangeably to refer to those of Hispanic and Latino heritage.

In the context of research, the issue of combining the Hispanic and Latino groups solely based on language, without sufficient clarification, is not the only problem (Jaimes et al., 2013; Leung et al., 2014). Also of great importance is the aggregation of Hispanics and Latinos during research analysis (Chen & Zhong, 2013). Using Sampson and Laub's

age-graded theory, this study addressed some of the challenges that occur while conducting collective research on the Latino community, as well as the reasons why it is crucial for academics to understand the negative effects that aggregated studies have on public policy.

Chapter 1 offers an overview of the full research project and discusses the study's background, which includes considerations that must be taken into account while studying Hispanic communities, such as statistical aggregation, national diversity, and behavioral variation. This section also includes literature pertaining to the study's theoretical direction, knowledge gap, goal, and importance. The research questions and methodology employed in this study are presented together with the underlying assumptions and restrictions.

Nature of the Problem

While research on risk factors for youth violence is widespread, Hispanic youths are the subject of far fewer studies (Fenimore et al., 2019). Research has previously established a severity gradient in which the overall prevalence of fighting and violence is lowest among White youths, gradually greater among Hispanic youths, and significantly higher among African American youths (McNulty & Bellair, 2003). This result highlights the importance of developing and implementing prevention efforts aimed at African American (and, to a lesser extent, Hispanic) youths, especially young males and those struggling with academic engagement, school failure, and frequent parental conflict, among other life-course characteristics (McNulty & Bellair, 2003). Since racial differences in teenage violence (Piquero et al., 2002) and delinquency have been demonstrated by previous research, it is nevertheless outside the scope of this study,

which intends to seek a more thorough understanding of specific populations such as Latino violence and delinquency.

Despite the heightened level of violence in Hispanic communities and the disproportionate engagement Hispanics have with the legal system, only a small subset of studies have investigated risk factors for Hispanic youth violence and delinquency (Jennings et al., 2010). Violence is one of the top three primary causes of death for Hispanic youths between the ages of 10 and 18 in the United States (Heron, 2019). Life course studies are needed to determine the cumulative effects of risk factors between a number of domains in a Hispanic youth sample (e.g., individual, family, peer, school/neighborhood, community, and cultural heritage) (Fenimore et al., 2019). The research indicated that the combination of these risk variables greatly enhanced the likelihood of aggressive behavior among Hispanic children (Fenimore et al., 2019). Additional literature on adolescent Latinos indicates that antisocial behavior varies among subgroups, and these differences correlate with an individual's nationality and immigrant generation (Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Martínez, 2009; Stansfield, 2014). However, Hispanic studies examine the Latino population collectively based on either ancestral origin or immigrant generation, which can lead to misinterpretations of group differences, and aggregated studies may produce biased data (Chen & Zhong, 2013). This misinterpretation of aggregated studies is biased due to Latinos' cultural differences between ancestral origin and those who immigrated to the United States (Malavé & Giordani, 2015). As a corollary, the misinterpretation of biased data has prevented policymakers from making well-informed judgments about law and public policy (Oliver et al., 2014; Orton et al., 2011; Shonkoff & Bales, 2011). Due

to the cultural distinctions among subgroups, Chen and Zhong (2013) caution against aggregating the Hispanic population due to the possibility of hidden bias. Prior research has not examined the extent to which life course risk factors predict violent and delinquent behaviors among Latino subgroups by ethnicity (Piquero et al., 2002), nor has it established how life course risk factors vary among members of Hispanic subgroups who display antisocial behaviors (McGlamory-Evans, 2019). Therefore, this study attempted to address the research problem of examining self-reported risk factors of Latino youth violence and delinquency and to disaggregate the variation of self-reported Latino youth violence and delinquency.

Background and Significance

In the United States, there was a 25% rise in the Hispanic population from 2000 to 2010 (Martinez, 2017), and today the aggregated Latino sample makes up the largest minority of the United States' population. This represents roughly 16% of the national resident population in the United States (Martinez, 2017). The Hispanic adolescent sample expanded by 134% between 1990 and 2013 (Hockenberry & Puzzanchera, 2016), more than 80% of whom were born to undocumented immigrants (Catalano, 2013). Presently, approximately 23% of American adolescents ages 10 to 17 are Latino juveniles (Hockenberry & Puzzanchera, 2016) Latinos younger than 15 reported 60% of disorderly conduct, and 63% of property and public order offenses combined (Hockenberry & Puzzanchera, 2016). Latino youth were 2nd highest prevalence of school violence and weapon carrying, 2nd in fighting and violence than non-Hispanic Whites (Tiffany, 2019). Latino youth were 3rd highest prevalence in residential placement, delinquency prevalence, caseloads, and the largest proportion of property and drug crime

(Hockenberry, 2020; Hockenberry & Puzzanchera, 2020). Hispanics are the largest contributor to American sample growth, according to census data from 2010 (Colby & Ortman, 2015; Ennis et al., 2011), and their sample is projected to rise to a quarter of the American population (Colby & Ortman, 2015; Ennis et al., 2011; Hockenberry & Puzzanchera, 2016). Due to the tremendous growth of the Hispanic sample, it is obvious that many Americans inaccurately associate crime increases to immigration growth (Kunovich, 2017; Schnapp, 2015). However, this study did not focus on the immigration issues, but rather examined the disaggregation of the Latino subgroups.

These fast changes in the demographic mix of the United States indicate a heightened need to comprehend in-group differences among Latinos. Regarding youth violence, Latinos continue to be an understudied demographic that is not included in a significant number of papers analyzing violent behaviors or victimization (Guerra & Smith, 2006). 70% of Latino youths in the United States are either of Mexican (58%), Puerto Rican (9%) or Cuban (3.5%) ancestry (Krogstad & Noe-Bustamante, 2020). The terms used to describe these samples have evolved. Latino youths can self-identify with a number of other Latin American nations, such as El Salvador, Honduras, or Guatemala; however, there are very few studies that disprove this notion (Jiang & Peguero, 2017; McGlamory-Evans, 2019).

Hispanic and Latino samples possess diverse social characteristics that are exclusive to these samples (Saavedra Cisneros, 2017; Taylor et al., 2012). There are historical, cultural, generational, and immigration pattern differences between Latino subgroups (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017), which may affect studies' outcomes (Chen & Zhong, 2013). The nationality

of an individual is strongly associated with an elevated risk for aggressive and delinquent conduct, according to previous studies (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Stansfield, 2014). In one disaggregated study conducted by Estrada-Martínez et al. (2013), the researchers found that teenage Puerto Ricans living in the United States have a greater propensity for violence than Cuban, Mexican, Caucasian, and African American juveniles. Their research also indicates that the risk of violence among Cuban teenagers is statistically comparable to that of White non-Hispanic adolescents, with little statistical difference between the two groups (Estrada-Martínez et al., 2013). Antisocial behaviors also vary throughout immigrant generations, according to several studies (Alvarez-Rivera et al., 2014; Antunes & Ahlin, 2021; Hurwich-Reiss & Gudiño, 2016; Jiang & Peguero, 2017). For example, the research of Jiang and Peguero (2017) reveals that first-generation immigrants have a lower risk of committing violent and nonviolent delinquent acts compared to second and third-plus generation immigrants, and there is statistically insignificant variation among second and third-plus generation immigrants (Alvarez-Rivera et al., 2014; Antunes & Ahlin, 2021; Dipietro & McGloin, 2012; Hurwich-Reiss & Gudiño, 2016). Numerous criminologists, sociologists, and psychologists have conducted studies to identify cross-ethnic social characteristics that explain behavioral means in violence and delinquency (Bender, 2012; Giordano et al., 2014; Hart & Mueller, 2013; Jiang et al., 2013; Noyori-Corbett & Moon, 2013).

Franke (2000) used the National Longitudinal Study of Adolescent Health (Add Health) to determine that, compared to White adolescents, African American and Latino adolescents were significantly more likely to engage in a serious physical altercation

and/or threaten someone with a gun or knife within the previous year. Latino adolescents had considerably lower rates on these metrics than African American adolescents, but they are significantly more likely to have shot or stabbed someone than African American adolescents. McNulty and Bellair (2003), Bellair et al. (2016), and Kaufman (2005) discovered that Latinos had a higher rate of serious violent conduct than non-Hispanic African Americans. The researcher did not include any other racial group analysis or racial group distinctions in this study as this lies outside of the scope of this research as stated in the limitation of this manuscript. Relative to non-Hispanic White Americans, this study questions the presumptive homogeneity of the pan-ethnic designation and demonstrates the importance of conducting subgroup analysis based on ancestral origin of the youth participants (Chen & Zhong, 2013). The majority of prior studies on youth violence have neglected to make this crucial distinction (Chen & Zhong, 2013; McGlamory-Evans, 2019). Therefore, this study did not necessarily examine the racial differences or immigration differences of Latino youths; rather, it delved further into the variance of violence and delinquency in Latino youths, disaggregated by ancestral origin of youth only, such as Mexican Americans, Cubans, Puerto Ricans, Central/South Americans, and other Hispanics.

Advancing Scientific Knowledge

This study was significant in the domains of criminal justice and sociology because it utilized previous material to better evaluate Hispanic subgroups. Previous research acknowledges antisocial behavior differences between Latino nationalities and immigrant generations (Bersani, 2014; Bersani et al., 2014; Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Jiang & Peterson, 2012;

Jiang & Peguero, 2017; Stansfield, 2014), but no studies have examined how parental engagement, school trouble, neighborhood image, sensation-seeking behavior, and deviant peers affect violent and criminal behavior as a single model. These variables separately have been identified in previous studies of Latino youths (Fenimore et al., 2019). These risk factors have been found to be associated with violent and delinquent outcomes over the life course or age of individuals (Benson, 2012). The theoretical life-course framework for this study was discussed in the next section. This study addressed the literature gap in criminological Latino studies by disaggregating the Hispanic sample by ethnicity, such as Mexican Americans, Cubans, Puerto Ricans, Central/South Americans, and other Hispanics, examining previously identified risk factors of violence and delinquency and comparing the differences between the Latino subgroups such as Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, Central/South American, and other Hispanics.

Theoretical Implications

This research utilized Sampson and Laub's age-graded life course theory as its framework for the study. The life course perspective is a broad multidisciplinary theoretical framework for criminology that applied to this research (Benson, 2012), and it also had a direct impact on criminology research (Siegel, 2019). The term *life course* encompasses more than the length of a person's existence (Benson, 2012). In other words, it is not simply the time between birth and death. Instead, the *life course* refers to a series of age-graded stages and social roles that are socially constructed and acknowledged as distinct from one another (Benson, 2012; Mayer & Müller, 1986). One of the central tenets of the life course perspective is that individuals take diverse paths through life, and

one of the primary goals of the life course perspective is to understand this diversity: for example, why certain children born at the same time and into similar circumstances sometimes take radically different paths through life (Benson, 2012). Why do some children born into a poor family in a poor neighborhood become a criminals, while other children born into an equally poor family next door become a successful, law-abiding citizens? (Benson, 2012).

During adolescence, there is a rapid, nearly explosive increase in the incidence of crime. After a brief period of adolescent rebellion, the average individual settles into a life of more or less consistent conformity (Benson, 2012; Moffitt, 1993). This pattern, however, is not ubiquitous. Some individuals follow trajectories of much longer duration that involve significantly more serious types of criminal behavior (Benson, 2012; Moffitt, 1997). According to life course theory, there are a number of factors that influence the conformity of adolescents to societal norms (Moffitt, 1993). Life-course theory research has identified a number of risk factors (e.g., including parental engagement, school problems, neighborhood perceptions, sensation-seeking behavior, and deviant peers) (Fenimore et al., 2019). It has been demonstrated that these risk factors are associated with the conformity of Latino adolescent behavior (Fenimore et al., 2019). Consequently, these risk factors were selected for further examination in this study.

Multiple studies on Latino communities support the early life course theoretical framework and suggest that accumulated risk factors might have a significant impact on an adolescent's antisocial conduct (Fenimore et al., 2019). Hispanic males demonstrate a much higher prevalence of violence and a higher prevalence of a variety of risk variables for violent conduct, consistent with the gender and violence research in general (Jennings

et al., 2010). Jennings et al. (2016) examined the cumulative impact of risk factors between several domains in a sample of Hispanic children (e.g., individual, family, peer, school/neighborhood, biological/neurodevelopmental, and ethnic-specific). Several markers, including attitudes toward delinquency, sensation-seeking behavior, academic achievement, abuse, neglect, poverty, delinquent friends, exposure to violence, low birth weight, and cultural stress were analyzed within these six risk domains (Jennings et al., 2016). Their findings revealed that the combination of these risk variables considerably enhanced the likelihood of aggressive behavior among Hispanic children (Jennings et al., 2016). Literature-supported conventional risk factors for violence among Hispanic youth include acceptance of aggression, relationships with deviant peers, internalizing behaviors, depression, and alcohol/drug use (Ludin et al., 2018; Maldonado-Molina et al., 2010). In a sample of Puerto Rican teenagers, exposure to violence, thrill-seeking behaviors, criteria conducive to law disobedience, delinquent friends, and a poor school environment were also associated with violence (Maldonado-Molina et al., 2009). Concerning school factors, academic problems have been linked to violence, whereas positive attitudes toward school and higher levels of school support have been linked to decreases in violence among Latino youth (Peacock et al., 2003; Pérez et al., 2008; Shetgiri et al., 2010). Additionally, exposure to community violence is one of the strongest predictors of aggression among Hispanic children (Peacock et al., 2003). Additionally, local gang membership has been proven to account for a portion of the elevated levels of violence among Hispanic children (McNulty & Bellair, 2003).

The relationship between cultural influences and juvenile violence among Hispanics is highly intricate. Hispanic youths are a varied group, as they represent a

number of cultures with varying values and backgrounds. Estrada-Martínez et al. (2011), for instance, studied the effects of family and immigrant determinants on teenage violence, taking into account a variety of subgroups, including Puerto Ricans, Cubans, and Mexicans. Their findings suggested a far more diversified sample than is commonly assumed by scholars (Estrada-Martínez et al., 2017). However, there is also the instance of acculturation risk, such as more traditional gender role attitudes being linked to physical aggression among Hispanic kids (Grest et al., 2018). The data analyzed in this study aided in identifying risk factors that vary among Hispanic subgroups not previously included in the same study. By including these variables in the same study, the unique predictive validity of the variables can be ascertained. This study attempted to show that risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation-seeking behavior, and deviant peers) may predict life course outcomes of violence and delinquency among Hispanic subgroups. This study contributed to the theoretical understanding of life course theory pertaining to subgroups of Latinos by providing significant, exhaustive material.

Practical Applications

The criminal justice community, for minority groups as well as the social and psychological health care disciplines, have a vested interest in adolescent violent and delinquent behaviors due to their widespread societal impact (Estrada-Martínez et al., 2017; Stansfield, 2014). Cultural diversities occur among Latino minority communities and induce means in antisocial behaviors (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Jiang & Peterson, 2012; Jiang & Peguero, 2017; Stansfield, 2014). In this research project, it determined which risk factors

have the most influence on violent and nonviolent delinquent behaviors among Hispanic subgroups, which is beneficial to the fields of criminal justice, sociology, and psychology. For instance, criminologists and sociologists might utilize this knowledge to strengthen social policy programs aimed at enhancing teenagers' skills and reducing violent and delinquent criminal conduct. Psychologists have also acknowledged the substantial implications of subgroup diversity and acculturation on mental health treatment options (Manoleas & Garcia, 2003). Therefore, psychologists and program administrators who desire to develop tailored treatment strategies for antisocial behaviors among youths based on ethnic means may find the knowledge gathered from this research useful (Manoleas & Garcia, 2003).

Barriers and Issues

The first potential hurdle in this study is sampling. According to previous studies, the sample of interethnic Hispanic subgroups may have statistically significant limits due to its sample sizes. This means that the available sample size was constrained by the study design in order to achieve statistical significance. This study, therefore, aimed to broaden the scope of sample criteria to meet the statistical minimum required while also striving to preserve sample relevance.

Another challenge of the study was ensuring the integrity of the variables. There were numerous variables that were measured in this research. However, some of the variables were composed of participant survey responses, and the design of the survey questions varied. Consequently, it was difficult to determine which survey questions were appropriate for constructing a scale for each variable. Therefore, the researcher adjusted the number of survey items to comply with the conceptualization of each variable as

statistically appropriate and rigorous.

Purpose Statement

This study is a continuation of research conducted in prior studies to examine the prevalence of Latino sample aggregation. Research studies utilized Add Health data but solely evaluated generational disparities and different immigrant groups, which included Hispanics, Asians, and "other" immigrants. This study did not concentrate on immigration or generational influences on Latino behavior. Rather, the purpose of this study is to remedy potential methodological flaws resulting from the aggregation of intra-ethnic groups among Latino samples. This study utilized risk factors (e.g., parental control, school trouble, neighborhood perception, sensation-seeking behavior, and deviant peers) that derive from the life course framework to disaggregate Hispanic youth. This study's objective is to determine the extent to which life course risk factors influence self-reported violent and delinquent behaviors among Mexican Americans, Puerto Ricans, Cubans, Central/South Americans, and other Hispanics.

Definitions

Acculturation. Anglo orientation or the extent to which an individual has adapted to the host culture (Cuevas et al., 2018, p. 3).

Adolescent. Between seventh and twelfth grades (Harris, 2013, p. 2); the terms juvenile and youth were used interchangeably to refer to adolescent.

Antisocial behavior. Delinquent behavior that is violent or nonviolent and disrupts societal norms (Frías-Armenta & Corral-Verdugo, 2013, p. 199).

Delinquent behavior. Adolescents' nonviolent and disorderly behavior; also known as deviant behavior, deviance, and delinquency in this study (Jiang & Peguero,

2017, p. 277).

Deviant peers. A friendship created by an antisocial adolescent with another antisocial adolescent of the same age group (Ludin et al., 2018, p. 147; Maldonado-Molina et al., 2009, p. 6).

Enculturation. Latino orientation or the extent to which an individual retains their culture of origin (Cuevas et al., 2018, p. 3).

Ethnicity. The social standing of belonging to a group that shares national or cultural practices (Georgiades et al., 2013, p. 1474).

Intra-ethnic group. A subset of the Hispanic sample who identify as belonging to a particular ancestral group (e.g., Mexican, Puerto Rican, Cuban, but also Central American and South American) (Estrada-Martínez et al., 2017, p. 506).

Life-course theory. The theoretical framework that criminality is a dynamic process that is influenced by both social and individual factors (Benson, 2012, p. 106). These extrinsic and intrinsic factors are assumed to change, and in turn so does the individual's tendency to engage in delinquency-related behaviors. This theoretical framework is also known as Sampson and Laub's Age-graded theory (Sampson & Laub, 1993).

Parental engagement. the wide range of activities in which youths engaged with their resident parents including spending time together and control of youth behavior (Estrada-Martínez et al., 2011, p. 226).

School trouble. Problems that adolescents face in school, such as problems with teachers, paying attention in class, completing homework, and problems with other students (Bui, 2009, p. 419).

Violent behavior. Intentional activity that threatens, inflicts, or attempts bodily damage on others (Estrada-Martínez et al., 2013, p. 226) (also referred to as *violence* in this study).

Chapter 2: Literature Review

Numerous criminological theories, including social disorganization theory, social control theory, strain theory, labeling theory, and differential association theory, among many others, are devoted to the study of criminal behaviors (Cullen & Jonson, 2014; Lilly et al., 2018). In addition, the life course theory is frequently applied in criminology, sociology, and psychology research (Bender, 2012; Giordano et al., 2014; Hart & Mueller, 2013; Jiang et al., 2013; Noyori-Corbett & Moon, 2013) to explain antisocial differences among different samples (Lilly et al., 2018). Not many Latino researchers use the life course as a framework or verify many of the theory's risk factors among intra-ethnic Latino youth subgroups (Bender, 2012; Bondy et al., 2019; Brown & Bakken, 2011; Camacho & Fuligni, 2015; Campos et al., 2014; Chen & Zhong, 2013; Estrada-Martínez et al., 2013; Silva et al., 2016). This study employed the life course theory to determine the extent to which life course risk factors influence self-reported violent and delinquent behaviors among multiple subgroups of Latinos (i.e., Mexican Americans, Cubans, Puerto Ricans, Central/South Americans, and other Latinos).

Studies by Light and Ulmer (2016), Ulmer et al. (2012), and Wright et al. (2016), as well as the majority of articles on violent and nonviolent delinquent behaviors in criminal justice, focus on identifying and explaining differences in crime gaps between various ethnic groups. In general, research utilizing the Uniform Crime Report and the National Victimization Survey demonstrates that White non-Hispanics report less criminal activity than African Americans or Hispanics (Steffensmeier et al., 2011). As a result, researchers frequently use White non-Hispanics as a reference group, and the information gathered serves as a basis for drawing comparison conclusions for minority

groups (Felson & Kreager, 2015; Wright et al., 2016). Felson and Kreager (2015), for instance, use the White non-Hispanic sample as a reference group and compare the delinquency outcomes of African Americans, Asian groups, Native Americans, Puerto Ricans, and Mexican Americans to those of the White non-Hispanic sample. Other studies compare minority groups, such as Ernestus and Prelow (2015) examination of social risk and resilience factors among low-income Latinos and African-Americans. However, there are few research articles that examine intra-ethnic or within-group social diversity and antisocial behavior (Estrada-Martínez et al., 2017). There are some notable exceptions which will be described in Chapter 2.

The subjects of this study included multiple Latino subgroup samples, including Mexican Americans, Cubans, Puerto Ricans, Central/South Americans, and other Latinos. Using the life course theoretical framework, the purpose of this study was to analyze self-reported social, violent, and delinquent behaviors of these groupings. This research purpose was motivated by the study "Social Control and Differential Association Predictors Among Violent and Delinquent Adolescent Latinos," which examined the demographic differences between two Latino ethnic subgroups (McGlamory-Evans, 2019). In addition, this topic was motivated by the paper "Early Risk Factors for Violence Among Hispanic Youth: Evidence from a systematic review", which conducted a life course systematic review of the Latino community (Fenimore et al., 2019). According to Estrada-Martínez et al. (2013), several Hispanic nationalities demonstrated distinct antisocial behavior patterns. In aggregated findings, intra-ethnic differentiation factors are obscured, and the results are misleading (Chen & Zhong, 2013). Before reading this essay, the detrimental ramifications of aggregating subgroup samples in research were

unclear, with questions arising such as “Why do academics categorize Latino samples?” and “Can social ties contribute in identifying intra-ethnic group distinctions in criminal behavior?” Thus, a search for information regarding diverse Hispanic samples commenced.

Literature Search Criteria

Various research strategies were used to gather the relevant information for this study. Journal articles and books recommended or required in NOVA Southeastern University courses were consulted for some of the data in this study. However, the majority of the literature was obtained through Alvin library databases or websites. The search criteria conducted in this study are indicated in the following sections.

Library Resources

Most of the information collected for this dissertation was obtained from the Alvin Sherman Library at NOVA Southeastern University. The databases that were utilized were Journal and Book Locator, Academic Search Premier, PsychARTICLES, ProQuest, EBSCOHost, PsychINFO, and Criminal Justice Database. For each search, a date range between 2009 and the current year, full-text selection, and confirmed peer-reviewed and scholarly articles were specified as search parameters. This date range is justified due to relevant research studies that were published sporadically over time that were crucial to this study.

Google Scholar

Google Scholar was utilized as a secondary research technique. Similar to searches using the Alvin Sherman library, date parameters between 2009 and the current year were set. After locating a possible research article using Google Scholar, the full-text

article was located using Alvin Sherman's Journal and Book Locator, whichindicates whether an article of interest can be found in the databases of the selected school. The articles were examined for the "peer-reviewed" icon in the institution's database to confirm that the information had been scholarly reviewed and to ensure the credibility of the material discovered using this method. Interlibrary loan requests were sent to the Alvin librarian for full-text articles not available through the Alvin Sherman library at Nova Southeastern University.

Websites

In addition to the above-mentioned research methods, the Add Health Publication Database, the Centers for Disease Control and Prevention (CDC), the United States Census Bureau, and the Pew Research Center on Hispanic Trends were used to acquire literature on Latino samples. Using key terms, Add Health's Publication Database was combed for recently published research articles containing the same dataset utilized in this study. In the advanced search, parameters were set to the key terms, and only journal articles were selected. Many of the articles within the Add Health Publication Database are supported by the United States government.

Search Terms

The following search terms were used to obtain information for this study: Latino/a, Mexican, Puerto Rican, Cuban, minority, minorities, immigrant, migrant, generation, acculturation, adolescent/s, juvenile/s, youth/s, Add Health, Adolescent to Adult Health Survey, violence, violent, violent behavior/s, antisocial behavior/s, delinquency, deviant, life course theory, life course criminology, Terry Moffit, nonviolent behavior/s, parent, child, parental attachment, parental control, parental engagement,

parent-child relationship/s, family attachment, familism/o, relationship/s, negative relationship/s, positive relationship/s, peer relationship/s, peers, school achievement, peer association, delinquent peers, deviant peers, subgroup/s, intra-ethnic group/s, crimmigration, Sampson and Laub.

Life Course Theory

The theoretical framework for this study was guided by Fenimore et al. (2019). In their research, the life course theory was utilized to analyze Hispanic adolescent groups (Fenimore et al., 2019). The theoretical research on the comprehensive life course risk factors of violence and delinquency have been conducted among several samples (Bartusch et al., 1997; Benson, 2012; Caspi et al., 1994; Glueck & Glueck, 1950; Loeber & Dishion, 1983; Loeber & Stouthamer-Loeber, 1986; Loeber & Le Blanc, 1990; Loeber et al., 1998; Loeber et al., 2012; Moffitt, 1993; Nagin et al., 1995; Sampson & Laub, 1993; White et al., 1990; Wolfgang et al., 1972). This present section of this dissertation attempted to comprehensively examine the historical overview of the life course theoretical framework.

Self-report studies indicate that a significant number of teenage males and a substantial proportion of teenage females engaged in minor delinquent behavior at some point during their adolescence (Hindelang, 1973; Short & Nye, 1957). In fact, minimal misbehavior is statistically "normal" in the sense that the vast majority of youths engage in it (Moffitt, 1993; Moffitt, 1997). A small proportion of males, less than eight percent, engaged in delinquency that is neither statistically nor morally normal (Benson, 2012). The small proportion of males who repeatedly committed grave personal and property violations had a high likelihood of becoming career criminals and spending a significant

portion of their lives in jail or prison or dying prematurely due to violence (Benson, 2012; Shannon, 1982; West & Farrington, 1973; Wolfgang et al., 1972).

Due to the fact that each person has a unique inner emotional experience of the events that comprise their lives, it is difficult to step back and examine the larger patterns of shared experience (Benson, 2012). However, when stripped of their unique details of time, place, and personality, the events of our lives form a finite number of patterns, and many people experience patterns that are similar (Benson, 2012). Life course theory is the study of patterns and variations in people's experiences as they age (Glueck & Glueck, 1950; Sampson & Laub, 1993). Numerous factors influence the patterns that we as individuals experience. This includes our genetic makeup, our social and demographic characteristics, our family, our friends, the neighborhood in which we grew up, the historical era in which we traverse the life course, and random, unpredictable events (Benson, 2012). It includes concepts and empirical observations from a variety of fields, including biology, psychology, sociology, and history (Benson, 2012). It is not a theory per se, but rather a way of thinking about and studying human lives and development; it is a paradigm that is emerging (Elder, 1996).

The lifespan embraces more than the period between birth and death. Instead, the life course is a series of age-graded different phases and power dynamics that are socially constructed and acknowledged as distinct from one another (Benson, 2012). The various stages are generally divided by normatively defined transitions and tend to be ordered in the sense that certain events are typically expected to initiate or follow others (Mayer & Müller, 1986). “The life course is the set of interconnected trajectories that an individual experiences as they age” (Benson, 2012, p. 3; Glen Jr, 1985), and a *”trajectory* is a

collection of interdependent states within a theoretically defined scope of behavior or experience" (Benson, 2012, p. 3). Trajectories always contain transitions, and the stages that represent a trajectory are always connected by transitions (Elder, 1996).

Typically, life course researchers view trajectories in three distinct human behavior and functioning domains: biological, psychological, and social (Benson, 2012). Despite the fact that we often associate growth with children and teenagers, the life course view asserts that aging is not just growing old, other than being an arbitrary age in the life course (Riley, 1986). Instead, both aging and growth are ongoing processes. Adulthood is not a condition that is fixed and constant; however, there are scholars who argue this assertion (Gottfredson & Hirschi, 1990; Moffitt, 1993). Adults have continual biological, psychological, and social changes as they age, perhaps at a slower rate than children and teenagers (Benson, 2012). From the point of conception in the womb until one's final breath, aging is an ongoing processes, and from birth to death, humans undergo biological, psychological, and social stages (Benson, 2012).

In criminology, researchers have spent a great deal of time attempting to comprehend why people become involved in crime and why some continue crime while others desist (Sampson & Laub, 2003). Numerous attributes, including drug usage, marriage, friendship ties, personality traits, spirituality, and learning experiences, among others, appear to influence these decisions (Giordano et al., 2003; Sampson & Laub, 2003). In the 1930s, two important longitudinal studies of delinquents had become the theoretical and longitudinal research on careers in crime. These studies were the Crime Causation Study (Glueck & Glueck, 1950) and the Cambridge-Somerville Youth Study (Powers & Witmer, 1951). In addition, theoretical support developed the term chronic

offender in Philadelphia in the 1960s, when researchers conducted significant birth cohort research (Wolfgang et al., 1972). After that, the criminal career was also coined in an influential paper on professional criminals and criminal careers, which was published in two volumes by the National Academy of Sciences (Blumstein et al., 1986).

This literature paved the way for future studies in criminology and crime committed throughout a person's life course. In the research studies discussed previously, the authors gathered information about their subjects over a number of years (Glueck & Glueck, 1950; Powers & Witmer, 1951). The Crime Causation Study and the Cambridge-Somerville Youth Study were important studies because of the very thorough information that they provided on the sequential occurrence of offenses over the course of the cohort's lifetime (Glueck & Glueck, 1950; Powers & Witmer, 1951). For instance, the finding that a very small number of people are presumably responsible for the bulk of serious crimes has sparked a significant amount of attention and debate among theorists, academics, and politicians (Wolfgang et al., 1972). These preparatory studies laid the framework of the criminal career, which is defined as the series of crimes committed by an individual offender over the course of their lifetime (Blumstein et al., 1986).

Criminal careers are distinguished by four important characteristics: participation, frequency, seriousness, and career length (Benson, 2012). The first, participation, distinguishes people who have committed a crime at least once in their lifetime from those who have never committed a crime (Blumstein et al., 1986). Current participation, distinguishes those who engage in criminal activity within a certain period of time from those who do not (Benson, 2012). The first time a person commits a crime, known as the age of onset, signifies the beginning of their criminal career (Sampson & Laub, 1993).

Desistance is commonly used to describe the conclusion of a criminal career (Sampson & Laub, 2003). According to scholars of the life course, age of onset is a significant aspect of the criminal career because it appears to be connected with the three other key aspects of criminal careers: frequency, seriousness, and career length (Benson, 2012).

Frequency refers to a person's rate of criminal behavior or the number of crimes a person commits during a certain time period (Benson, 2012). Some criminals have extremely high rates of criminal activity, while others have extremely low rates (Chaiken et al., 1982). In addition, a criminal's recidivism rate may fluctuate throughout the course of his or her criminal career (Benson, 2012). An important topic for life course researchers is whether events or characteristics of the life course impact individual offending rates (Sampson & Laub, 1993). The severity of the violations perpetrated by offenders might also vary (Moffitt, 1993). Regarding the seriousness component, criminal career and life course academics have investigated if there are diverse sorts of criminal pathways based on distinct offending seriousness patterns (Nagin & Land, 1993). As a crucial aspect of criminal careers, academics have placed a strong emphasis on duration of career length (Moffitt, 1997). Criminal careers tend to be brief, often beginning in the mid-teens and ending in the late teens or early twenties, according to study on length (Sampson & Laub, 1993; Steffensmeier & Allan, 2000). However, some adolescents who begin criminal careers continue to commit crimes long into their thirties and beyond (Tracy et al., 1990).

Sampson and Laub’s age-graded theory view derives from the criminal career tradition, the notion that longitudinal sequencing of offenses and the dynamics of criminal careers both vary between people (Sampson & Laub, 1993). What the life path

approach brings to the criminal career tradition is a fuller appreciation of the reciprocal, interdependent relationships between criminal and noncriminal trajectories (Sampson & Laub, 1993). The age-graded theory argues that the examination of individual characteristics and early life events is crucial for comprehending the initiation of delinquent and criminal conduct. However, these factors in isolation are insufficient to account for the persistence of criminal behavior throughout adulthood (Sampson & Laub, 1993). It posits that crime trajectory may be better understood when considered in the context of an individual's entire life and growth (Sampson & Laub, 1993). A central tenet of the Sampson and Laub's theory holds that criminal careers exhibit a dynamic nature, wherein a significant life event has the potential to induce a transition in an individual's life trajectory, hence altering its course (Sampson & Laub, 1993). These pivotal moments are referred to as turning points, or trajectory. Laub and Sampson's research reveals that several teenage issues, such as delinquency, substance misuse, aggression, dropping out of school, and teen pregnancy, frequently exhibit shared risk characteristics (Siegel, 2019). Intervention tactics should encompass a wide range of antisocial, criminal, and deviant behaviors, rather than only targeting a certain subgroup or form of delinquency (Siegel, 2019).

Trajectory refers to a series of interconnected states within a formally defined domain of activity or experience (Benson, 2012, p. 3). Trajectories are defined by a variety of aspects that have implications for individuals, such as entrance, success, and timing (Moffitt, 1997). Entrance occurs when individuals can be classified based on which trajectories they enter and which they do not (Moffitt, 1997). For instance, some individuals perform well in school. At every point of their school careers, they have

distinguished themselves as overachievers while others achieve poorly, which measures their success (Moffitt, 1997). It is possible for them to drop out of high school and never attend college. Upon beginning on a specific trajectory, in this case school achievement, individuals may exhibit different levels of competency in performing the usual tasks or activities associated with this trajectory. Timing in trajectories is of particular significance with regard to development during the life span (Moffitt, 1997). Trajectories are stratified by age (Sampson & Laub, 1993), and age-graded transitions are those that take place at the correct time (Moffitt, 1997; Sampson & Laub, 1993). Additionally, transitions are significant because they often mark turning points or changes in the life trajectory (Benson, 2012). Researchers of the life course aim to comprehend the relationships between childhood or teenage experiences and adult results, as well as how transitions or turning points might alter life course trajectories (Wright & Cullen, 2004).

The life course theory assumes that events that occur at one life stage influence future events (Glueck & Glueck, 1950; Sampson & Laub, 1993). The idea of trajectory indicates continuity and velocity in behavior, psychological functioning, and biological growth throughout time (Wolfgang et al., 1972). These theoretic assumptions have methodological implications; the most significant of these implications is that longitudinal study approaches are required for life course research (Benson, 2012). Life course researchers mainly rely on longitudinal studies meant to collect information on cohorts of individuals who are tracked across time (Benson, 2012). Recent cohort studies have been based on cohorts defined by very limited age spans of one to three years while broader age ranges are also employed (Chantala & Chen, 2014; Glueck & Glueck, 1950; Moffitt, 1993; Sampson & Laub, 2003; Wolfgang et al., 1972). The definition of a cohort

is a group of people who experience the same event at the same time (Benson, 2012).

In criminology, Glueck and Glueck (1950) were pioneers in the use of longitudinal study designs. In the 1930s and 1940s, they performed many longitudinal studies of delinquents and non-delinquents in Massachusetts (Glueck & Glueck, 1950). From the rosters of two Boston facilities for juvenile delinquents, one-half of the sample was officially classified as delinquent (Glueck & Glueck, 1950). Age, race and ethnicity, and intellect were used to compare non-delinquent males with delinquent males (Glueck & Glueck, 1950). The data included social, psychological, and biological traits, family life, educational performance, career experience, criminal conduct, and additional life events (Glueck & Glueck, 1950). Utilizing many respondents and different data sources was a significant strength of the Gluecks' data collecting methods (Sampson & Laub, 1993). Interviews were conducted with the males, their parents, teachers, neighbors, and criminal justice authorities to collect information on the males and their families. In addition to self-reports, parent reports, and teacher reports, official records were reviewed to assess delinquency (Sampson & Laub, 1993). The Gluecks conducted follow-ups on the initial sample when the average age was 25 and again when the average age was 32 between 1949 and 1963 (Sampson & Laub, 1993). Thus, data from childhood to young adulthood are available. Before Sampson and Laub (1993) reassembled the data to publish their conclusions, the data had been inactive. This study not only validated the use of longitudinal design, but it also showed that it had predictive value.

Longitudinal studies have also validated cohort effects. Various age cohorts can be compared to one another in order to identify cohort effects (Benson, 2012). There is a cohort effect when individuals of various cohorts differ considerably in a given feature.

For instance, a cohort effect was observed when the Philadelphia cohort of 1945 was compared to the Philadelphia cohort of infants born in 1958 (Tracy et al., 1990; Wolfgang et al., 1972). As adolescents, the 1958 cohort had much greater rates of violent crime than the 1945 generation had at the same age (Tracy et al., 1990; Wolfgang et al., 1972). A cohort effect may also occur if various cohorts react differently to a life events (Benson, 2012).

The literature makes a compelling justification for a longitudinal design to be utilized for this project. This project derived its data from the National Longitudinal Study of Adolescent Health, also known as Add Health. Previous studies did not have representative samples or consisted of a sample in which a majority of participants were White (Glueck & Glueck, 1950; Sampson & Laub, 1993; Wolfgang et al., 1972). It is for this reason that this project filled the need of examining the Latino minority sample and its constituent subgroups (Piquero et al., 2002; Sampson et al., 2005). It is a prospective longitudinal study of a nationally representative sample of seventh through twelfth grade teenagers (Chantala & Chen, 2014). In 2008, when the sample was aged 24 to 32, the most current Wave of data was obtained (Harris et al., 2009). The Add Health research integrates a variety of data kinds and levels of analysis, which is one of its most significant characteristics, and it collects longitudinal survey data on the social, economic, psychological, and physical health of respondents (Chantala & Chen, 2014). The survey data are complemented with contextual information on the respondents' families, neighborhoods, schools, communities, and romantic partners (Harris et al., 2009). Thus, researchers may investigate how different types of social settings interact with individual traits to impact life course outcomes (Benson, 2012). In addition,

biological data, such as genetic markers, are gathered to allow the study of biological and social relationships (Harris et al., 2009).

Life Course and Latino Youth

Add Health, along with a limited number of databases, has been inclusive of studying life course outcomes of Latino samples (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Jennings et al., 2010; Maldonado-Molina et al., 2009; McGlamory-Evans, 2019). Because previous age-graded research had limitations, such as a homogenous sample, non-representative sample size, or misrepresentation of an aggregate sample (Piquero et al., 2002; Sampson & Laub, 1993; Sampson et al., 2005; Tracy et al., 1990; Wolfgang et al., 1972), this section reviewed the available reference of life course age-graded studies associated with Latino samples.

One study aimed to offer a systematic and comprehensive assessment of empirical data exploring the impact of a variety of early life course risk variables on violence among Hispanic children (Fenimore et al., 2019). This study evaluated research that used samples of Hispanic adolescents or a specific subset of Hispanic youths, such as Mexican, Cuban, or Puerto Rican youths. Although studies dating as far back as 2003 were included, the vast majority of research on risk factors for violence among Hispanic children has been conducted in the last decade (Fenimore et al., 2019). The studies differed significantly in a number of significant aspects, including sample makeup, sample size, analytic approach, measurements, and the statistical model employed. These studies investigated a variety of individual, peer, family, school, neighborhood, community, and cultural risk variables associated with violent conduct (Fenimore et al., 2019). Sex, acculturation, age, forceful discipline, attitudes toward delinquency, exposure

to violence, sensation-seeking behavior, and alcohol use were shown to be the most frequent risk factors for violence among Hispanic children (Fenimore et al., 2019). Each of these risk variables has been validated by a variety of research studies examining their associations with violent conduct among Hispanic children (Jennings et al., 2010; Jennings et al., 2016; Maldonado-Molina et al., 2010).

The addition of "community and cultural" risk variables is unique to the literature, focusing on violent and delinquent behavior (Fenimore et al., 2019). These risk variables included immigrant status in the first, second, or earlier generations; acculturation; enculturation; familismo/familism; parent immigrant status; Spanish spoken at home; and U.S.-centered acculturation (Cuevas et al., 2018; Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017). Some research discovered a non-significant or negative correlation between acculturation and juvenile violence among Hispanics (Bersani, 2014; Bersani et al., 2014; Chen & Zhong, 2013; Jiang & Peguero, 2017; Peguero & Jiang, 2014). As a result of acculturation, this particular cultural risk factor may be explained by a deeper association with American ideals towards violence and the possibility of familial conflict (Bersani et al., 2014; Chen & Zhong, 2013). Therefore, this project’s research will not focus on immigration and generational characteristics.

Prior research has also combined Latino groups based on nationality or immigration status, which gives generalizable results for both samples but lacks statistical precision (Bersani, 2014; Bersani et al., 2014; Chen & Zhong, 2013). In addition, this analysis is intended to identify early life course risk variables that predict violence and delinquency among Hispanic children in general; however, future research may find it

useful to investigate the variability in which these subgroups differ in self-reported violent and delinquent behaviors (Fenimore et al., 2019). This is the first constraint of the literature on the Hispanic life course that was addressed by this study.

This study addressed the previous research by addressing the additional constraint posed by statistical techniques of Hispanic risk variables. Most other research has analyzed dichotomous variables, such as an assessment of a single item variable for violence, delinquency, and other factors (Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; McGlamory-Evans, 2019). This study sought to scale these variables so that the link between age-graded life course risk factors and behavioral outcomes may be adequately measured. Lastly, this study employed the necessary longitudinal design to ensure statistical rigor in its examination of the predictability of Latino behavior.

Study Variables

Violence.

One of the top causes of death among Hispanic children is intentional violent conduct (Estrada-Martínez et al., 2013; Heron, 2019; Xu et al., 2016). Latino children are more prone to violence than other ethnic groups of adolescents (Estrada-Martínez et al., 2011), and various studies found that young males, older youths, youths who experienced more coercive discipline, youths with more positive attitudes toward delinquent behavior, youths who were exposed to violence in the home/community, youths who reported greater sensation seeking, and youths who drank alcohol were most violent (Fenimore et al., 2019). The association between each of these risk variables and aggressive conduct among Hispanic children has been substantiated by a variety of research studies (Fenimore et al., 2019). It is essential to validate the significance of risk variables in

several subgroups of the Latino community (Chen & Zhong, 2013; Estrada-Martínez et al., 2013). It was discovered that these risk variables separate Hispanic children from other young demographics as culturally distinct risk factors (Fenimore et al., 2019). Using the Add Health dataset, Estrada-Martínez et al. (2011) determined that the risk of violence varies by heritage. In comparison to Cubans, Mexicans, and Central/South American Latinos, Puerto Ricans are more likely to engage in aggressive conduct throughout adolescence (Estrada-Martínez et al., 2017; Maldonado-Molina et al., 2009). Further, Estrada-Martínez et al. (2017) conducted a longitudinal study utilizing the Add Health data and discovered that Cubans had a greater risk for violent behavior between the ages of 13 and 18 compared to other Hispanic intra-ethnic groups.

Nonviolent Delinquency.

Nonviolent delinquency is characterized by destructive, nonaggressive activities, such as stealing, vandalism, and running away (Estrada-Martínez et al., 2017; Jiang & Peguero, 2017). According to some studies, youths who engage in deviant behaviors are more likely to engage in future high-risk activities (Peacock et al., 2003). Examining delinquent risk variables is challenging, and people may be variably impacted (Newsome et al., 2016; Peacock et al., 2003). The chance of a person committing a criminal act varies by heritage and subgroups, similar to violent behavior (Bersani et al., 2014; Chen & Zhong, 2013; Jiang & Peguero, 2017; Martinez, 2017; Stansfield, 2014).

Parental Engagement.

Parental engagement surrounding a child's conduct has a substantial impact on whether a youth participated in delinquent behaviors (Deutsch et al., 2012; Fagan et al., 2013; Jiang & Peguero, 2017; Karriker-Jaffe et al., 2013). Karriker-Jaffe et al. (2013)

found that the amount of physical aggressiveness among youths is negatively correlated with parental engagement. When parental engagement is poor, the levels of physical aggressiveness among adolescent groups are greater; however, when parental engagement grows, the levels of physical aggression drop (Karriker-Jaffe et al., 2013). Also, studies show that higher levels of parental engagement showed an increased risk of violent behavior among certain minority youth (Estrada-Martínez et al., 2011; Estrada Martinez, 2009). Further study indicates that ethnic minority parents impose more restrictions on their children than do White, non-Hispanic parents (Deutsch et al., 2012). Studies have also shown that stricter parental restrictions in minority households foster tighter, more effective relationships between parents and children (Fagan et al., 2013). However, one study measuring parental engagement showed to not have a significant impact on Latino groups (Estrada Martinez, 2009). One study indicated that a lack of parental control influences delinquency prevention more than parental connection (Steketee et al., 2013).

School Trouble.

Historically, minority youths had much lower academic competence levels than non-Hispanic White youths (Henry et al., 2012; Malavé & Giordani, 2015). Children of Latino heritage typically lack the critical information required for academic success in American schools, which may have negative effects on youth behavior and future ambitions (Camacho & Fuligni, 2015; Henry et al., 2012). Youths with scholastic challenges are more likely to engage in criminal conduct, run away from home, and drop out of school (Gerard & Booth, 2015; Hawkins et al., 2013; Henry et al., 2012; Jiang & Peguero, 2017; Tucker et al., 2011). Some research suggest that an adolescent's antisocial

conduct contributes to scholastic difficulties and increases the risk of dropping out of school (Hawkins et al., 2013). In turn, low academic achievement raises a child's risk of engaging in criminal behavior (Hawkins et al., 2013). Research indicates that juvenile delinquency, particularly violence, rises considerably when a youth fails to succeed in school environments (Henry et al., 2012). As risk indicators for school conflict rise, so does the frequency of aggressive and delinquent acts (Henry et al., 2012). Intriguingly, Henry et al. (2012) remarked that failing to graduate from high school is not a reliable indicator of criminal conduct, although dropping out of school is a stronger indicator of an increase in criminal activity. Lifelong challenges, such as bad health, reduced salaries, and prolonged public aid reliance are the results of dropping out of school (Henry et al., 2012; Malavé & Giordani, 2015). These outcomes worry public health professionals since they influence not just the person but also the whole social structure (Henry et al., 2012; Malavé & Giordani, 2015).

Neighborhood Perceptions.

According to neighborhood studies, racial and ethnic variety within communities is associated with greater social distance between neighbors, more residential turnover, less institutional investments, inadequate social resources, and political marginalization (Sampson et al., 1997). Sampson et al. (1997) also imply that neighborhood settings are connected with minority violence. Risk is contingent on other neighborhood variables and does not affect all Latino subgroups in the same manner, according to the data (Bersani et al., 2014; Parker & Stansfield, 2015; Powell et al., 2010; Zimmerman & Messner, 2013). According to some studies (Lee & Martinez Jr, 2002; Sampson, 2008), the concentration of foreign-born immigrants is connected with a decreased likelihood of

violent conduct among local children. One recent study indicated that neighborhood contentment during childhood reduces risk throughout adulthood, except among Mexicans, for whom it has no lasting benefit (Estrada-Martínez et al., 2017). In addition, the danger was enhanced for those Latinos residing in mostly Black communities (Estrada-Martínez et al., 2017). The neighborhood's increased concentration of foreign-born people has a negative effect on other Latinos (Estrada-Martínez et al., 2017).

Deviant Peers.

If a youth makes friendships with peers who do not engage in violence or delinquency, he or she is more likely to engage in prosocial actions (Fagan & Wright, 2012; Fagan et al., 2013). Rorie et al. (2011) contend that youths' delinquency is a taught behavior via connections with deviant peers. When antisocial peers promote poor behavior, an environment for norm deviations is developed (Rorie et al., 2011). Research demonstrates that youths' own violence and delinquency is directly related to whether the youths associate with deviant peers (Fagan & Wright, 2012; Gray et al., 2015; Hoffmann et al., 2013; van der Woude et al., 2017), regardless of ethnic background (Fagan & Wright, 2012; Gray et al., 2015). The frequency of delinquent peer interactions increases the probability of aggressive and delinquent conduct in adolescents (Jiang & Peterson, 2012). According to Zimmerman and Messner (2013), Latinos and White non-Hispanics have similar associations with delinquent peers and prefer to relate less frequently with deviant peers than African American youths. However, studies indicate that certain Hispanic subgroups exhibit more violence than White non-Hispanics and African Americans (Estrada-Martínez et al., 2013). Relationships with delinquent peers influence adolescent development from middle childhood through early adulthood (Lee et al.,

2017).

Sensation Seeking.

Sensation seeking entails failing to consider the long-term consequences of actions, as well as being immediately prone to aggression and violence (Beaver et al., 2015). Sensation seeking plays a distinct role in the concept of self-control as it is the fundamental ability to regulate one's thoughts, emotions, and behaviors in response to life's demands (Beaver et al., 2015). Early-life neural networks may be more flexible than those created later in life (Walsh & Beaver, 2009). Behavioral scientists have investigated how genetic and early-life environmental variables combine to cause antisocial behavior (Beaver et al., 2015; Kochanska et al., 2009). This suggests that early-life pressures may have an influence on people when they reach adulthood, but addressing these stressors early on may reduce the likelihood of criminal activity (Kochanska et al., 2009). According to an analysis by Maldonado-Molina et al. (2009) of Puerto Rican adolescents, several risk/protective factors (thrill seeking or sensation seeking and exposure to violence) distinguished delinquents from non-delinquents. Sensation seeking and exposure to violence are significant discriminators for all criminal categories compared to the trajectory of non-offenders, according to the findings for Bronx males (Jennings et al., 2010; Maldonado-Molina et al., 2009).

Age.

Life experiences have a large impact on youth antisocial behavior and may have lifelong effects on a person (Fite et al., 2014). Furthermore, age is a crucial element that impacts aggressive and delinquent conduct in males (Fagan & Wright, 2012; Sampson & Laub, 1993). Life course theorists Sampson and Laub (1993) argue that aggressive and

delinquent behaviors increase throughout adolescence and early adulthood, but antisocial behaviors tend to diminish social ties with school, family, and friends. Jennings et al. (2013) confirm Sampson and Laub (1993) original concept and supplement that the trajectory of criminality is based on the degree of violent and delinquent behaviors committed during early adolescence.

Gender.

Different genders have distinctive social ties, deviant peer relationships, and criminality (Fagan & Wright, 2012; Harris-McKoy & Cui, 2013; Hart & Mueller, 2013; Steketee et al., 2013). Steketee et al. (2013) observed that familial closeness is a higher protective factor against aggressive and delinquent conduct in males than in females. Additional evidence indicates that young males are better protected against antisocial conduct when they have strong school ties (Hart & Mueller, 2013). Studies suggest that young females are more sensitive to the impacts of delinquent peer affiliations (Steketee et al., 2013), and these interactions have a greater bearing on violent conduct among females than among males (Fagan & Wright, 2012). The literature indicates mixed reviews on these assertions. Using fraternal twins of opposite sex, Newsome et al. (2016) discovered that females were more resistant to violent and nonviolent delinquency risk factors than males. The authors hypothesize that contextual and genetic variables impact the disparities between males and females' antisocial behaviors; females are influenced by their environment, while males are more subject to heredity (Newsome et al., 2016). In recent years, aggressive and delinquent behaviors have grown among underage females (Hockenberry & Puzzanchera, 2016), yet females are still far less likely than young males to engage in criminal activities (Harris-McKoy & Cui, 2013).

Limitations of Previous Research

Prior research with Hispanics mostly supports the life course theory (Fenimore et al., 2019); however, these investigations have incorrectly incorporated Latino samples. Few studies have focused on Hispanic subgroups (Estrada-Martínez et al., 2013), and the Latino community has complex, varied, and distinctive social traits (Saavedra Cisneros, 2017; Taylor et al., 2012). Numerous characteristics, such as history, culture, and heritage patterns, differentiate these Hispanic subgroups (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Fenimore et al., 2019). Differences within intra-ethnic groups may lead to unintended statistical mistakes during analysis (Chen & Zhong, 2013). There is a clear link between an adolescent's nationality and their risk for antisocial conduct (Estrada-Martínez et al., 2013; Fenimore et al., 2019). Estrada-Martínez et al. (2013) found that teenage Puerto Ricans have a larger propensity for violent conduct whereas adolescent Cubans and White non-Hispanics demonstrate a statistically negligible difference in violent behavior. Previous studies examine the Latino sample by nationality but do not account for diversity, which predicted behavioral effects between subgroups of the Latino sample in a life course perspective.

Research Questions

Adolescent years are a peak time for violent and delinquent conduct, and scholars have worked to pinpoint the social factors that contribute to these actions (Glueck & Glueck, 1950; Moffitt, 1993; Sampson & Laub, 1993). The family, school, and other factors are important parts of an adolescent's existence, and both institutions serve as mediating safeguards against violent and delinquent actions during adolescence, according to the life course developmental theory. The predictors of violence and

delinquency in this study were modeled after Fenimore's 2019 work and included parental engagement, school problems, sensation seeking, neighborhood perspective, deviant peers, age, and gender. This study mimicked the Fenimore (2019) study to respond to the following questions:

1. Do Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths differ in self-reported violence and delinquency?

2. To what extent do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers differ within each subgroup of Latino youths?

3. Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported violence among Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths?

4. Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported delinquency among Mexican/Mexican Americans, Puerto Rican, Cuban, Central/South American, and other Latino youths?

Chapter 3: Methodology

To reserve the focus of this research, the purpose of this study and the research questions are restated. New information is also provided regarding the sample characteristics (including the targeted demographics), archival data acquisition procedure, analyses, and the survey instruments.

Purpose of the Study

Prior research has aggregated Latino sample data by ancestry or generation, which may have led to erroneous statistical conclusions (Chen & Zhong, 2013; Estrada-Martínez et al., 2017). This study continued the work of previous researchers and incorporated characteristics used by Fenimore et al. (2019). Later in this chapter, Jiang and Peguero (2017) and McGlamory-Evans (2019) highlight the modifications that were made to several of the Add Health data items utilized in prior studies in order to disaggregate the Latino sample and examine differences of violent and delinquent behavior. The objective of this study examined the self-identified Mexican/Mexican American, Puerto Rican, Cuban, Central and South American, and other Latino youths in order to discover whether or not they differ in terms both levels of predictors and ratings of violent and delinquent behaviors as well as relations between predictors and violent and delinquent behaviors.

Research Questions and Hypotheses

Research Question 1

Do Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths differ in self-reported violence and delinquency?

H_0: There is not a statistically significant difference in means among subgroups of

Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths who self-reported violence and delinquency.

H_1: There is a statistically significant difference in means among subgroups of Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths that self-reported violence and delinquency.

Research Question 2

To what extent do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers differ within each subgroup of Latino youth?

H_0: There is not a statistically significant difference in means among subgroups of Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths that self-reported parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers.

H_1: There is a statistically significant difference in means among subgroups of Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths that self-reported parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers.

Research Question 3

Does parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported violence among Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths?

H_0: The parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors do not uniquely predict self-reported

violence within the Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youth samples.

H_1: The parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors do uniquely predict self-reported violence within the Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youth samples.

Research Question 4

Does parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported delinquency among Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths?

H_0: The parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors do not uniquely predict self-reported delinquency within the Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youth samples.

H_1: The parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors do uniquely predict self-reported delinquency within the Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youth samples.

Participants

As previously mentioned, this study utilized secondary data from the National Longitudinal Study of Adolescent Health Survey (Add Health); hence the following sample information was collected by Add Health researchers. Harris (2013) is one of the

researchers who designed the Adolescent Health Survey and has published information about the sample, research design, and data collecting. As discussed earlier in this manuscript, participants in the Wave I Add Health Survey were middle and high school students between seventh and twelfth grade, and the respondents were between the ages of 9 and 17 (Harris, 2009). The researchers collected information from participants at over 130 schools across 80 different United States school districts (Harris, 2009). Respondents were also asked to identify friends from their school whom they believed may want to participate in the study (Harris, 2009). The Wave I in-school survey included more than 90,000 students (Harris, 2009), with only 12,105 adolescents that were tested in the in-home survey (Harris, 2009). A random sample of youths who participated in the in-school survey, stratified by grade and gender, was selected to participate in a 90-minute in-home interview with the participants and their families (Harris, 2013, pp. 2-3). According to the dataset, a total of 6,504 individuals participated in both the in-school and in-home questionnaires, with representative sample of respondents identifying as Hispanic (Kathleen Mullan Harris & Richard J Udry, 2015). Nationwide data collecting for Wave III was undertaken between August 2001 and April 2002 (Harris, 2013). Respondents were then between the ages of 18 and 26 and undergoing the transition to adulthood (Harris, 2013). At Wave III, Add Health conducted interviews with about 11,418 respondents, resulting in a response rate of 76% (Harris, 2013).

Only youths who participated in both the Wave I in-school questionnaire and in-home interview and the Wave III in-home questionnaire were included in this study. Unweighted participants who self-reported as Hispanic or Latino ancestry, such as Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, Central/South

American, and other Latino individuals were also measured (Kathleen Mullan Harris & Richard J Udry, 2015). In both Wave I in-school and in-home data collection and Wave III in-home data collection, participants were questioned on their national origin. The time interval between Wave I and III is 7 years; Wave I was collected in 1994 and Wave III was collected in 2001. During the in-school survey, participants were limited to one of six ancestry responses: (1) Mexican/Mexican American, (2) Chicano/Chicana, (3) Cuban, (4) Puerto Rican, (5) Central/South American, or (6) other Hispanic (Kathleen Mullan Harris & Richard J Udry, 2015). However, during the in-home interview, participants were permitted to select more than one ancestry (Harris & Udry, 1998). Due to the possibility of multiple responses during the in-home survey, the in-home and in-school data were compared manually, and missing responses from the in-school data were recoded to match the in-home data. Also, Chicano/Chicana subgroups were excluded due to small frequency of participant that self-identified in the survey. All unweighted Latino subgroups were included in the project's final data set.

Power Analysis

Cohen (1988) provides the following parameters to consider when making inferences from statistical tests: power, significance criterion, sample size, and effect size. Power refers to the likelihood of correctly rejecting the null hypothesis when it is actually incorrect (Cohen, 1988). The significance criterion is the measure to determine the level of probability needed to establish the validity of an outcome or the likelihood of incorrectly rejecting the null hypothesis (Cohen, 1988). This is measure within a region of critical region of values that are referenced to accept or reject the null hypothesis (Cohen, 1988). Sample size is the required minimum amount of sample participants in

the study in order to detect a reliable statistical outcomes (Cohen, 1988). The effect size is how large of an effect occurred for each of the considered analyses (Cohen, 1988). This study utilized five subsamples from the larger Hispanic sample represented by the Add Health data; consequently, a power analysis was undertaken to ensure that all subsample sizes were adequate to make valid inferences from the statistical findings.

For the research questions 1 and 2, a MANOVA power analysis was conducted using G*Power version 3.1.9.7 for determining the minimum required sample size estimation, based on data from the Add Health data set (Harris, 2009). There was no indication of the small, medium, and large effect sizes in the G*Power program. According to Miles and Shevlin (2001), there were available eta squared cutoffs for small, medium, and large effect sizes for determining f^2. The eta squares were retrieved online from the cutoffs indicated for small, medium, and large values (Cohen, 1988; Miles & Shevlin, 2001). The researcher made the decision to use MANOVA: global effects just before medium effect size $f^2 = .059$ (Cohen, 1988). With a significance criterion of $\alpha = .05$ and power = .80, the minimum sample size needed with this effect size is N = 135 for conducting the MANOVA analysis to determine the differences of behavioral outcomes within the Latino subgroups. An ANOVA power analysis was also conducted to determine the sample size appropriate for each dependent variable alone. For this study the researcher had to consider number of groups (i.e., Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino) and the number of dependent variables (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers).

According to Miles and Shevlin (2001), there were available eta squared cutoffs

for small, medium, and large effect sizes for determining f^2. The eta squares were retrieved online from the cutoffs indicated for small, medium, and large values (Cohen, 1988; Miles & Shevlin, 2001). A priori power analysis of ANOVA: fixed effects, omnibus, one-way was chosen using just before medium effect size of $f^2 = .0627$ (Cohen, 1988). With a significant criterion of $\alpha = .05$ and power = .80, the minimum sample size needed with this effect size is N = 90 conducting each separate ANOVAs.

For research questions 3 and 4, a linear multiple regression priori power analysis was conducted using G*Power version 3.1.9.7 just before medium effect size $f^2 = .149$ or $R^2 = .13$ determining the minimum required sample size estimation (Cohen, 1988), based on data from the Add Health data set (Harris, 2009). With a significance criterion of $\alpha = .05$ and power = .80 (Cohen, 1988), the minimum sample size needed with this effect size is N = 55 for conducting the multiple linear regression analysis to test each individual predictor. Also, a priori power analysis was conducted to determine the effect size of all predictor variables on the outcome variable (Cohen, 1988). With a significance criterion of $\alpha = .05$ and power = .80 (Cohen, 1988), the minimum sample size needed with this effect size is N = 92 for conducting the multiple linear regression analysis for all predictor variables together. The total obtained sample size of this study is adequate to test the study hypothesis.

Instruments

As indicated previously in this chapter, the Add Health Wave I and Wave III datasets were compiled from questionnaires submitted by middle and high school children and their families between the school years of 1994–1995 and 2001–2002 (Harris, 2013). The Wave I and Wave III datasets and codebooks have been made

available to the public by the Carolina Population Center at the University of North Carolina at Chapel Hill via the Odum Institute Dataverse Network website (Harris et al., 2009). The dataset contains over 2,700 items, including information on violence, relationships, peer networks, future aspirations, household members, ethnicity, and generational information (Harris, 2013). This study focused on the violent and delinquent behavior differences of those participants who self-identify as Mexican/Mexican American, Cuban, Puerto Rican, Central/South American, and other Hispanic youths socially linked to parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers. In addition, the Add Health data provided the necessary information to answer the study's research questions.

There are several multi-scales and multi-item composites, as well as self-reporting, inside the Add Health data (Sieving et al., 2001). This method of data collection is problematic while doing research since it may compromise the data's dependability during statistical analyses (Sieving et al., 2001). To assure the accuracy of the Add Health data, Sieving et al. (2001) examined its reliability and validity and found "sufficient levels of internal consistency" (Sieving et al., 2001, p. 79). Additionally, the authors stated that researchers utilizing this dataset should conduct their own reliability and validity testing on items from the Add Health data specific to their particular study (Sieving et al., 2001). In accordance with previous researchers, (Harris-McKoy & Cui, 2013; Hoffmann et al., 2013; Jiang & Peguero, 2017), reliability tests was conducted on the Add Health Survey questions used to build the study's variables.

Dependent Variables

Violence.

The reliability of McGlamory-Evans (2019) employed eight questions from the Add Health in-home survey. Respondents were asked to indicate the frequency with which they had engaged in the following violent behaviors within the past year: shot or stabbed a person, pulled a gun or knife on a person, injured an individual requiring medical attention, or engaged in a serious physical fight, as well as whether they had ever used a weapon during a fight (Harris, 2009). Based on their reliability tests, the researchers constructed an additive scale with a coefficient score of $a = 0.87$ (McGlamory-Evans, 2019). In addition, gang membership has been shown to be highly associated with violent delinquency; therefore, this project utilized one item that asked respondents if they were in a gang (Slepicka, 2019). Finally, the eighteen survey items from the Wave I in-home along with the matching variables asked in Wave III Adolescent Health Survey were used to establish the violence variable for this study of a total of eighteen survey items. The reliability coefficient was recalculated to include all subgroups not included from previous studies (Estrada-Martínez et al., 2013; McGlamory-Evans, 2019; Slepicka, 2019). This composite variable was determined for the eighteen questions used in this research study to assess violence for a more accurate measurement than previous studies (8 items; $\alpha = .76$).

Delinquency.

The McGlamory-Evans (2019) study measured nonviolent delinquency, using eleven questions from Wave I and III in-home Adolescent Health Survey. Participants were asked how often they committed burglary, stole a car, stole something worth more than $50, stole something worth less than $50, shoplifted, painted graffiti, lied to their parents about where they were going, sold drugs, intentionally damaged property, ran

away, were rowdy or loud in public, threatened to use or used a weapon to take something they wanted, and were involved in a group fight in the past year (Kathleen Mullan Harris & Richard J Udry, 2015). The internal consistency reliability was calculated by McGlamory-Evans (2019) was Cronbach's $a = 0.93$ and by Slepicka (2019) was Cronbach's $a = 0.733$. This project utilized eighteen questions from the McGlamory-Evans (2019) scale along with the remaining similar questions from the Slepicka (2019): however, the reliability coefficient was recalculated to incorporate all subgroups left out of prior research (11 items; $\alpha = .82$).

Independent Variables

Parental Engagement.

The parental engagement variable included similar items from previous research for this project (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Russell et al., 2001). The variable was measured using a seventeen-item additive scale from the Wave I Add Health Survey in-home. Participants were asked whether both their parents engaged in shopping activities, participated in sports, attended religious services, sought entertainment outside the home, dedicated time to school-related projects, engaged in discussions regarding personal issues, socialized on dates or at parties, talked about school projects, or permitted them to make their own decisions about weeknight bedtime, weekend curfew, friends, clothing, the quantity of television they watch, television programs, and nutrition (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Kathleen Mullan Harris & Richard J Udry, 2015; Jiang & Peguero, 2017; Russell et al., 2001). This variable was recoded (*0 = No, 1= Yes)*, calculated to achieve an acceptable internal reliability (17 items; $\alpha = .71$).

School Trouble.

The variable school trouble was quantified as an additive scale based on five dichotomous questions from the Add Health Survey, and its measurement mirrored previous research (Russell et al., 2001). Respondents were asked if they had difficulty with feeing close to the people at school, being part of school, being happy at school, and feeling safe at school (Kathleen Mullan Harris & Richard J Udry, 2015; Russell et al., 2001). Russell et al. (2001) calculated $a = 0.75$ for the Cronbach coefficient. Similar to the previous study, the school trouble reliability analysis score was acceptable and aligned with previous studies (Bui, 2009; Jiang & Peguero, 2017). In this research study, reliability calculations were recoded (*0 = Never, 1 = Just a few times, 2 = About once a week, 3 = Almost every day, 4 = Everyday*) performed using the five items deemed acceptable. (5 items: $\alpha = .78$).

Neighborhood Perception.

This study applied past findings to life course frameworks to account for the longitudinal effect of one's neighborhood on behavioral patterns (Estrada-Martínez et al., 2017). Previous studies indicate that exposure to neighborhood-based violence is one of the most prevalent risk factors for Latino children (Fenimore et al., 2019). One study examined the extent to which perceptions of local settings influenced the likelihood of Latino kids engaging in violent behavior from adolescence to adulthood (Estrada-Martínez et al., 2017). The data suggested that neighborhood happiness during youth decreased adult risk, with the exception of Mexicans, for whom it had no long-term effect. Estrada-Martínez et al. (2017) did not have an acceptable level of internal consistency and therefore were not utilized in this research. However, this study

employed a single item of a self-reported variable from the Wave I dataset, which asked participants if they felt safe in their neighborhood. There is no available test retest reliability reported for this instrument as this was a single survey item asked in Wave I dataset only.

Sensation Seeking.

According to the research, one of the most prevalent risk factors for Latino youths is seeking sensations (Fenimore et al., 2019; Lydon-Staley & Geier, 2018; Peach & Gaultney, 2013). Although the literature utilized datasets other than the Add Health dataset used in this investigation, as this variable was accessible in the Add Health data set (Lydon-Staley & Geier, 2018), measures of risk-taking concepts were used in this study (Jennings et al., 2010; Maldonado-Molina et al., 2009). There is a conceptual distinction between sensation seeking (orientation toward unusual and stimulating events) and impulsivity (ability to regulate behavior) (Lydon-Staley & Geier, 2018; Oshri et al., 2018). Nonetheless, these concepts share overlapping properties (Lydon-Staley & Geier, 2018). Similar to previous studies, this study therefore utilized sensation-seeking measures from Wave I addressing a single self-reported item such as enjoying taking risks (Lydon-Staley & Geier, 2018; Peach & Gaultney, 2013). The literature makes no reference to the reliability coefficient because it was not able to meet the minimum satisfactory of acceptable internal reliability. Therefore, the researcher only utilized one survey item regarding sensation seeking. There is no available test-retest reliability reported for this instrument as this was a single survey item asked in Wave I dataset only.

Deviant Peers.

Numerous scholars, including Deutsch et al. (2012), Jiang and Peguero (2017),

and McGlamory-Evans (2019), among others, contributed to the development of the deviant peers variable. On the Wave I Add Health in-home survey, participants were asked how many of their three closest friends use marijuana, smoke cigarettes, and consume alcohol (Deutsch et al., 2012; Kathleen Mullan Harris & Richard J Udry, 2015; Jiang & Peguero, 2017; McGlamory-Evans, 2019). Jiang and Peguero (2017) calculated *a* = 0.76 for the dependability coefficient of these three items. The reliability coefficient was recalculated and recorded (*0 = No friends, 1 = One friend, 2 = Two friends, 3 = Three friends*) for this study in the same manner as it was done in previous studies (3 items: $\alpha = .75$).

Archival Data Acquisition Procedures

The data used in this study are secondary and readily accessible to the public. While gathering data for the Add Health Survey, researchers utilized a variety of sampling techniques. During Wave I's in-school data collection in 1994–1995, 80 American high schools were selected using stratified sampling. These schools were then stratified by school type, size, racial composition, metropolitan area, and region. After identifying each high school, one of each high school's associated middle schools was solicited to participate in the in-school survey. The number of educational institutions that participated in the Add Health study was 132, ranging from seventh to twelfth grade, and spanning 80 cities across the United States. Researchers at Add Health also adopted a snowball sampling technique, in which students were asked to recommend classmates who they believed could be interested in participating in an in-home interview. This question was intended not only for recruitment purposes, but also to assist researchers in developing friend networks among students (Harris, 2013, pp. 3-5).

To collect information for Wave I's in-home interviews, Add Health researchers utilized school enrollment lists to identify pupils enrolled in each of the 132 schools (n = 20,745). 200 teenagers were randomly selected from each paired school (high school and its feeder middle school) and stratified by grade and gender to engage in a 90-minute in-home interview. Youths from each school who were not present or who declined to participate in the in-school survey were permitted to engage in the in-home interviews. Parents, guardians, and other household members also participated in a 30-minute interview with an interviewer. Those respondents who participated in the Wave I's in-home interview constituted the study's core sample (Harris, 2013, pp. 3-4).

Using NICHD funds for the continuation of the program project, Add Health conducted a Wave III follow-up survey with Wave I respondents when they entered adulthood in 2001 and 2002. After graduating from high school, adolescents enjoy greater independence and begin to explore other lifestyles. Consequently, their social settings shift, and their experiences expand. Wave III's data capture these expanding experiences by concentrating on the multiple domains of young adult life that individuals enter during the transition to adulthood, as well as their well-being in the domains of labor market, higher education, relationships, parenting, civic participation, and community involvement. Using longitudinal data from adolescence, this third Wave of in-home interviews enabled researchers to map early trajectories out of adolescence in health, achievement, social relationships, and economic status and to document how adolescent experiences and behaviors are related to decisions, behavior, and health outcomes during the transition to adulthood. The primary objective of this third follow-up was to determine the relationship between teenage development and the transition to adulthood,

which occurs when adolescents begin to navigate the social world on their own and create expectations and goals for their future adult roles. Nationwide data collecting for Wave III was undertaken between August 2001 and April 2002. Respondents were now between the ages of 18 and 26 and undergoing the transition to adulthood. At Wave III, Add Health conducted interviews with 15,170 respondents, resulting in a response rate of 76%. The average duration of each interview was 134 minutes. Approximately 90 minutes were devoted to the computer-based interview, which was immediately followed by the collecting of biological materials. The majority of interviews took place at the respondents' homes (Harris, 2013, p. 6).

Using self-identified Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, Central/South American, and other Latino youths, a saturation sample of the Add Health Wave I in-school and in-home data and the Wave III in-home self-reported survey was conducted to answer the research questions of this study. This form of sampling from the Add Health data was consistent with current and past researchers who have used the Add Health datasets to examine ethnic or specific social aspects of adolescent behaviors ((Estrada-Martínez et al., 2013) (Jiang & Peguero, 2017) Estrada-Martínez et al. (2017); Fenimore et al. (2019).

Data Collection

In this investigation, both the Wave I in-school and at-home and the Wave III at-home publicly available secondary dataset from Add Health were utilized. The dataset and associated codebooks are accessible via the website of the Odum Institute Dataverse Network. Before the data was downloaded, the user gave their name, email address, and the reason for downloading the information. In order to undertake data analyses for this

study's research questions and hypotheses, the methods outlined above were carried out, and the necessary Wave I and Wave III materials were downloaded. Despite the fact that the dataset and codebooks are publicly accessible, these materials and the information pertaining to this particular study were stored on a USB drive and maintained in a locked box. The USB drive will be maintained for seven years following the conclusion of this research study, after which it will be destroyed. The unweighted samples were utilized for this study to maintain longitudinal data among participants measured in Wave I and III, and according to the codebooks, the number of subjects in the analysis files is 14,322 for those adolescents enrolled in grade 7–12 during 1994–1995 and 2001 (Chantala & Chen, 2014).

The Add Health data was obtained from the website of the Odum Institute Dataverse Network and opened with the most recent release of IBM SPSS. Inclusion of criteria-compliant participants was extracted from *R* version 3.3.0+, a free statistical software (Posit, 2024). In the previous work of Jiang and Peguero (2017) and Fenimore et al. (2019), the constructs and variables for this study were identified. Following Jiang and Peguero (2017) research, a number of items from the Add Health Survey were utilized as factors. There were contradictions in Jiang and Peguero (2017) and McGlamory-Evans (2019) work as well as differences in the definitions of violent and nonviolent delinquency behavior between the authors' work and this research study. Therefore, the past research of Bui (2009); Estrada-Martínez et al. (2011); Estrada-Martínez et al. (2017); Fenimore et al. (2019); Peach and Gaultney (2013) further informed the selection of a number of survey items pertaining to the Add Health Survey for this project.

Before any statistical applications of the data could begin, *R* was used for data

cleaning and reliability tests since it is more efficient. Then later, SPSS was used for data analysis. Frequency distributions were conducted to check the shape of the distribution. This method was used to know how many respondents belong to this category. Then the sample means were measured to determine whether the sample subgroups were compliant with the minimum of the power analysis to allow for statistical significance for the entire study. Also, reliability tests in *R* were done to assure that the variables produced from the Add Health Survey questions reliably measured the components of the samples for this study (Osborne, 2008). Numerous multi-scale and multi-component items were included in the Add Health data; therefore, researchers who use the Add Health data must conduct their own reliability and validity assessments unique to their sample and research topic (Sieving et al., 2001). In agreement with previous research (Estrada-Martínez et al., 2013; Jiang & Peguero, 2017; McGlamory-Evans, 2019; Oshri et al., 2018), the Cronbach's alpha reliability coefficient was used to measure the items implemented for the variables selected in this study. Then, the items were recoded for the sake of data analysis, calculated, or scaled into the corresponding appropriate variables. Identified below are the Add Health Survey items and scales used for the dependent, independent, and control variables. All questions on these variables were acquired from Wave I & III of the in-home Add Health Survey codebooks, which were created by Kathleen Mullan Harris and Richard J Udry (2015) and were obtained from the Dataverse website.

Age.

Years were used to determine an individual's age. The question “What age are you?” was asked during the in-school phase of the survey (Kathleen Mullan Harris & Richard J. Udry, 2015). The researchers recorded each participant's month and year of

birth, as well as the month and year of the in-home interview. Calculating the difference between the in-home interview date and the adolescent's month and year of birth yielded an age, which was then entered into the in-school survey data.

Delinquency.

The delinquency variable was generated using eleven items from the Add Health Survey (Kathleen M. Harris & Richard J. Udry, 2015). The items asked, "During the last 12 months, how frequently did you..."

1. “paint graffiti or signs on someone else’s property or in a public place?”
2. “deliberately damage property that didn’t belong to you?”
3. “lie to your parents or guardians about where you had been or whom you were with?”
4. “take something from a store without paying for it?”
5. “run away from home?”
6. “drive a car without its owner’s permission?”
7. “steal something worth more than $50?”
8. “go into a house or building to steal something?”
9. “sell marijuana or other drugs?”
10. “steal something worth less than $50?”
11. “act loud, rowdy, or unruly in a public place?”

The Add Health Survey Wave I Section 29: Delinquency Scale and Wave III Section 26: Delinquency and Violence assessed these 11 items using a Likert-type scale ranging from 0 to 3 (0 = *never*; 1 = *1 or 2 times*; 2 = *3 or 4 times*; 3 = *5 or more times*). These items, like the violence variable, were computed and then recoded into numeric for

the purpose of data analysis. The delinquency variable scale range (0 to 37) scored as a good reliability coefficient (11 items; α = .82).

Deviant Peers.

The deviant peers variable was constructed using three questions from the Add Health Survey Section 28: Tabacco, Alcohol, Drugs (Kathleen M. Harris & Richard J. Udry, 2015) and was applied in the work of Jiang and Peguero (2017). Participants were asked, "How many of your three closest friends..."

1. “smoke at least one cigarette a day?”
2. “drink alcohol at least once a month?”
3. “use marijuana at least once a month?”

The Add Health Survey examined these items on a Likert-type scale ranging from 0 (*no friends*) to 3 (*three friends*). These three items were added together and then summed into a continuous variable. A Higher scores indicated that respondents associated with a higher level or risking deviant peers. The deviant peers scale range (0 to 9) was found to be acceptably reliable (3 items: α = .75).

Gender.

On a dichotomous scale (1 = *males* and 2 = *females*), gender was measured. During analysis, this variable was recoded as 2 = *males* and 1 = *females*. The query "What gender are you?" was asked during the in-school survey and validated during the in-home interview. Responses on gender from the in-home interviews were imported into the in-school data for cases in which gender variable information. This procedure was carried out to guarantee a comprehensive dataset.

Neighborhood Perception.

Previous research includes three subjective items of neighborhood perception from Section 36 of Wave 1 of the Neighborhood Satisfaction Survey (Estrada-Martínez et al., 2017). However, previous research was not able to meet the minimum satisfactory of acceptable internal reliability (Estrada-Martínez et al., 2017). Therefore, the researcher only utilized one survey item, in which respondents were questioned regarding the following neighborhood perceptions:

1. “I feel safe in my neighborhood?”

This question, derived from Wave I Section 36: Neighborhood, used a Likert scale ranging from 1 to 5 (1= *strongly agree*, 5= *strongly disagree*) (Kathleen Mullan Harris & Richard J. Udry, 2015). Respondents who scored higher were perceived as having a higher risk level of negative neighborhood perception.

Parental Engagement.

Seventeen items were selected from the Add Health Survey to establish the parental engagement variable from Wave I Section 16: Relations with Parents (Kathleen M. Harris & Richard J. Udry, 2015). These items asked, "Do your parents allow you to make independent judgments regarding...":

1. “the time you must be home on weekend nights?”
2. “the people you hang around with?”
3. “what you wear?”
4. “how much television you watch?”
5. “which television programs you watch?”
6. “what time you go to bed on weeknights?”
7. “what you eat?”

Additionally, the respondents were asked, “Which of the things listed on this card have you done with your MOTHER/FATHER in the past 4 weeks?”

8. “gone shopping”
9. “played a sport”
10. “gone to a religious service or church-related event”
11. “talked about someone you’re dating, or a party you went to”
12. “gone to a movie, play, museum, concert, or sport event”
13. “had a talk about a personal problem you were having”
14. “had a serious argument about your behavior”
15. “talked about your school work or grades”
16. “worked on a project for school”
17. “talked about other things you’re doing in school”

Add Health measured the seventeen questions dichotomously (0 = *no*; 1 = *yes*). The components were added to form a range on an additive scale. Higher scores indicated a higher level of parental engagement. The parental engagement scale range (0 to 25) was found to be acceptably reliable (17 items; $\alpha = .71$).

School Trouble.

Five items from the Adolescent Health Survey were used to quantify school problems (Kathleen M. Harris & Richard J. Udry, 2015). Youths were asked, "How often have you experienced...?"

1. “You feel like you are part of your school.”
2. “You feel close to people at your school.”
3. “You are happy to be at your school.”

4. “The teachers at your school treat students fairly.”
5. “You feel safe in your school.”

Add Health Wave I Section 5: Academics and Education assessed these five items using a Likert-type scale ranging from 1 to 5 (1 = *strongly agree*, 5 = *strongly disagree*). For this study, these five items were combined to create a scale range. Higher variable scores indicated a higher risk level of school trouble. The school trouble scale range (4 to 20) was found to be acceptably reliable (5 items: $\alpha = .78$).

Sensation Seeking.

At Waves I and III, sensation seeking was operationalized as a latent construct utilizing three items (Oshri et al., 2018). However, this research was not able to meet the minimum satisfactory of acceptable internal reliability. Therefore, the researcher only utilized one survey item, in which respondents were questioned regarding the following question about sensation seeking:

1. “Do you agree or disagree that you like to take risks?”

On a scale from 1 (*strongly agree*) to 5 (*strongly disagree*), each item was graded. This was reversed coded meaning that a higher score indicated a higher risk level of sensation seeking.

Violence.

The violence variable was derived from the Add Health Survey and used the eight questions items below (Kathleen M. Harris & Richard J. Udry, 2015). Respondents were asked, "During the past 12 months, how frequently did each of the following occur?"

1. “You pulled a knife or gun on someone.”
2. “You shot or stabbed someone.”

Additionally, the participants were asked, “In the past 12 months, how often did you…”

3. “get into a serious physical fight?”
4. “hurt someone badly enough to need bandages or care from a doctor or nurse?”
5. “take part in a fight where a group of your friends was against another group?”
6. “use or threaten to use a weapon to get something from someone?”
7. “Have you ever belonged to a named gang?”
8. “Have you ever used a weapon in a fight?”

Add Health measured the relevant questions from Wave I Section 31: Fighting and Violence and Wave 3 Section 26: Delinquency and Violence. The first two items were measured on a Likert-type scale ranging from 0 to 2 (0 = *never*, 1 = *once*, and 2 = *more than once*). The third through sixth items were measured on a zero-to-three Likert scale (0 = *never*; 1 = *1 or 2 times*; 2 = *3 or 4 times*; 3 = *5 or more times*), while the seventh and eighth items were measured on a dichotomous scale (0 = *no*; 1 = *yes*). All of these items were computed and then recoded to a matching continuous scale. The violence variable scale range (0 to 22) was found to be acceptably reliable (8 items; $\alpha = .76$).

Missing Data Imputation

In order for a scholar to determine how to manage missing data, he or she must first determine the frequency of the missing data and whether the data is missing arbitrarily (Fitzmaurice et al., 2011). Otherwise, performing statistical analyses on

missing data may result in biased estimates of the results (Fitzmaurice et al., 2011). A researcher has several options for managing missing data, including listwise deletion, pairwise deletion, and various types of imputations (Fitzmaurice et al., 2011). However, the research must first indicate from the frequency in which the data is missing (Fitzmaurice et al., 2011). There are three types of missing data which are missing completely at random (MCAR), missing at random (MAR), or not missing at random (NMAR) (Fitzmaurice et al., 2011). Data that is missing completely at random (MCAR) does not exhibit any obvious pattern in the missing responses (Fitzmaurice et al., 2011). On the other hand, data that is missing at random (MAR) shows a slight pattern in the missing information, which can be explained by other variables that are present in the dataset (Fitzmaurice et al., 2011). In the case of NMAR data, the presence of missing information is solely determined by the other variables present in the dataset (Fitzmaurice et al., 2011). Frequency analyses were used for this research study and the parental variable missing data ranged from 2% to 5%. However, the frequency showed that the respondents and their relationship with their father were missing on average at 30%. The neighborhood perception variable indicated missing at 34%. Under the violence scale, respondents were missing 42% on the number of times they were treated by medical for self-reported violence. Therefore, R was tested on the missing data for Wave I and III using code “library(naniar)” to run for NMAR for both waves of data (Tierney & Cook, 2018). Any value of less than *p*-value of .05 results in significant relationships between the missing data points and other variables within these datasets (Little, 1988). The NMAR test for this study showed Wave I $p > .01$ with 246 missing data points and Wave III $p > .01$ with 63 missing data points. These results violated the MCAR test of less

than .05. Therefore, these significance values showed evidence of data were not missing completely at random, and that the missing data were dependent on other variables within this research study (Little, 1988).

Researchers can deal with missing data in a number of ways, such as by listwise deletion, pairwise deletion, or different types of imputations (Memon et al., 2023; Musil et al., 2002). Listwise deletion eliminates all instances with missing data from the dataset whereas pairwise deletion only excludes instances with missing data from the current computation (Memon et al., 2023). Imputation procedures replace missing data with logarithmic estimates derived from inferences drawn from other items within the variable (Memon et al., 2023). Listwise and pairwise deletion would have violated the requirements of the power analysis, and it would have not resulted in any statistical significance due to unequal and sizes of the samples in this study. Therefore, these two missing data techniques were not considered for this study. Also, multiple imputations are very strict on statistical assumptions, meaning that multiple imputations strictly assumes that the data are normally distributed (Little & Rubin, 2019; Memon et al., 2023). However, the descriptive statistics showed that the sample distribution of the data were not normally distributed. Some of the variables in this study were Likert scale and binary, so these violated the normality assumption. This violation of normality would result in bias and this would change the distribution of the data in this study (Little & Rubin, 2019; Memon et al., 2023) and therefore multiple imputation were not considered for this study. Research recommends a particular method of missing value estimation recommended to use for data that is not missing at random, such as KNN imputation (Anderson et al., 2014; Memon et al., 2023). To overcome the biasness of these

mainstream missing data techniques mentioned above, the researcher decided to utilize KNN imputation for this study.

Since there existed significant missing data was found, using *R* version 3.3.0+, the K-Nearest Neighbors (KNN) imputation method was the statistical approach utilized to substitute missing values inside a dataset (Beretta & Santaniello, 2016). Research has shown that KNN imputation outperforms other missing data techniques in predicting missing data, regardless of the data types (Memon et al., 2023). In addition, KNN was argued to be the best imputation for categorical data which is most of the variables this study utilized (Memon et al., 2023). Using *R*, the KNN algorithm operates by identifying the nearest neighboring data points and subsequently estimating the missing values by computing their average, and it operates under the assumption that data points in close proximity to one another are likely to belong to the same class (Beretta & Santaniello, 2016). KNN imputation exhibits greater flexibility, adaptability, and accuracy in comparison to mean imputation due to its consideration of the underlying relationships and patterns within the dataset (Anderson et al., 2014; Beretta & Santaniello, 2016). The KNN algorithm is applicable to datasets that encompass several types of data, including continuous, ordinal, and categorical variables (Beretta & Santaniello, 2016). The utilization of KNN imputation was chosen by the researcher for this study due to its ability to maintain the required sample size while also maintaining the internal consistency of the variable scales as was done in previous research (Anderson et al., 2014; Beretta & Santaniello, 2016). KNN was conducted in R program by downloading the library(VIM) package and then ran by code DS1_imputed <- kNN(DS1_partitioned, k = 3) for Wave I and DS8_imputed <- kNN(DS8_partitioned, k = 3) or Wave III (Posit,

2024). After the datasets were merged, cleaned, excluded, and recoded, the final dataset consisted of n = 4533 observations.

Analyses for Answering the Research Questions

To analyze each subgroup's violent and delinquent differences, analyses were stratified by national ancestry, but the samples were unweighted from the sample file from the Add Health dataset, which contained a grand total of 4,533 participants due to limited data availability (Chantala & Chen, 2014). Using SPSS, analyses were conducted to answer each of the four research questions using bootstrapping to resample the data 1000 times and measure its reliability.

Research Question 1

Do Mexican/Mexican Americans, Puerto Rican, Cubans/Cuban Americans, Central/South Americans, and other Latino youths differ in self-reported violence and delinquency?

To examine the Latino groups separately, the "select case" function in SPSS was used in conjunction with the "compare groups" ethnicity option. The data were analyzed using a one-way MANOVA by combining Wave I and III. Respondents who self-reported violence were extracted from the original dataset and transferred to a new dataset. Continuous self-reported violence and delinquency variables were examined using one-way MANOVA, along with bootstrapping technique, to compare the differences in mean scores between Latino subgroups (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos) who had self-reported violence and delinquency. After conducting MANOVA, a one-way ANOVA with bootstrapping was conducted to examine the

dependent variables separately (Frost, 2018). The ANOVA analysis included bootstrapping Tukey's HSD pairwise comparisons was utilized to pinpoint which subgroups differ from each other. The bootstrapping in this analysis will test cases 1000 times to determine valid confidence intervals at 95% (Frost, 2018). The group differences in the independent and dependent variables were evaluated using the F-tests for the MANOVA and ANOVA analyses. Effect sizes for the MANOVAS and ANOVAS were reported based on partial eta squared values. Finally, the effect sizes for the pairwise contrasts were evaluated using Cohen's d values.

Research Question 2

To what extent do parental engagement, school trouble, neighborhood perception, sensation-seeking, and deviant peers differ within each subgroup of Latino youths?

Similar to research question 1, the Hispanic groups were examined separately, and the "select case" function in SPSS was used in conjunction with the "compare groups" ethnicity option. The data was analyzed using a one-way repeated measures MANOVA by combing Wave I and III. Respondents who self-reported parental engagement, school trouble, neighborhood perception, sensation-seeking, and deviant peers were extracted from the original dataset and transferred to a new dataset. Self-reported predictors and variables were examined using one-way MANOVA to compare the differences in mean scores between Latino subgroups (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos). After conducting MANOVA, a one-way ANOVA with bootstrapping was conducted to examine the dependent variables separately (Frost, 2018). The bootstrapping in this analysis will test cases 1000 times to determine valid confidence intervals at 95% (Frost, 2018). The

ANOVA analysis included bootstrapping Tukey's HSD pairwise comparisons was utilized to pinpoint which subgroups differ from each other. The group differences in the independent and dependent variables were evaluated using the F-tests for the MANOVA and ANOVA analyses. Effect sizes for the MANOVAS and ANOVAS were reported based on partial eta squared values. Finally, the effect sizes for the pairwise contrasts were evaluated using Cohen's d values.

Research Question 3

Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported violence among Mexican/Mexican Americans, Puerto Rican, Cubans/Cuban Americans, Central/South Americans, and other Latino youths?

With the "split file" option enabled, a multiple Linear regression was performed on the data, with a 95% confidence interval. This multiple linear regression analysis with bootstrapping included the dependent variable of self-reported violence alongside the independent variables of parental engagement, school conflict, neighborhood perception, sensation seeking, and deviant peers, as well as the control variables (age and gender). Dummy variables were created for each of the intra-ethic subgroups to be examined individually. The statistical significance and beta values were used to examine the predictive relationships between the independent and control variables and the self-reported violence variable.

Research Question 4

Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported delinquency

among Mexicans/Mexican Americans, Puerto Rican, Cubans/Cuban Americans, Central/South Americans, and other Latino youths?

Similar to the research question 3, a multiple Linear regression was performed on the data, with a 95% confidence interval. This multiple linear regression analysis with bootstrapping included the dependent variable of self-reported delinquency alongside the independent variables of parental engagement, school conflict, neighborhood perception, sensation seeking, and deviant peers, as well as the control variables (age and gender). Dummy variables were created for each of the intra-ethic subgroups to be examined individually. The statistical significance of regression coefficients was reported. In addition, effect sizes were examined based on the amount of unique variance captured by each of the predictors.

Chapter 4: Results

Background

This chapter provides an overview of the data analyses conducted in this study. The participants in this study were selected using a stratified sampling method. They were adolescent respondents who identified themselves as Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, or of other Latino descent. These participants had taken part in both the Wave I and Wave III Add Health Survey (Harris, 2009). This study had two primary objectives. The primary objective of this study was to evaluate the variations in parental engagement, school trouble, neighborhood perception, sensation seeking, and association with deviant peers between different groups of Latino youth (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans, Central/South Americans, and other Latinos). These variations were assessed in relation to the self-reported engagement in violent and delinquent behaviors. The secondary objective of this study was to assess the variance to which parental engagement, school trouble, sensation seeking, neighborhood perception, and association with deviant peers were predictive of violent and delinquent behaviors among subgroups of Latino youth (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans, Central/South Americans, and other Latinos). Chapter 4 includes an explanation of the sample's characteristics, the descriptive statistics of the variables, and the inferential statistical outcomes derived from the analyses conducted to address the research questions. The chapter finishes by providing a summary of the given outcomes.

Sample Description

Descriptive statistics are often used by researchers in quantitative studies to

provide a comprehensive summary of the characteristics and attributes of the sample group (Creswell & Creswell, 2017). In comparison with inferential statistics, descriptive statistics do not make inferences or draw conclusions from the data (Creswell & Creswell, 2017). Instead, they serve the purpose of simplifying the data in a manner that is easily controllable, allowing researchers to present a concise overview of the data without sacrificing crucial information (Creswell & Creswell, 2017).The following section provides an overview of the descriptive statistics for the samples and variables. It includes frequency distribution and measures of central tendency tables, along with explanations for the data being provided.

The Wave I Add Health Dataset contained a total of 6,504 respondents compared to Wave III dataset that contained 4,882 (Harris, 2009). This dataset is only a sample that is publicly available; the restrictive dataset would have indicated a higher sample amount, but this study did not have access to the restrictive dataset for a grand total of the Add Health Survey sample. Both Waves of data had vast amounts of missing respondents due to this study's exclusion criteria; therefore, to address the missing data issue, KNN Imputation was computed to achieve sample size requirements. After both Waves were partitioned, combined to exclude duplicate respondents, and recoded[1], the final sample totaled 4,533 respondents.

Sample Demographics

The Wave I and III Add Health Survey datasets allowed respondents to self-identify if they were of Hispanic or Latino descent (Harris, 2009). Then, the survey provided respondents with six different Latino intra-ethnic groups to choose from to self-

[1] The KNN Imputation was performed on Wave I and Wave 3 to k = 3 for the *k*-nearest matching method (Anderson et al., 2014).

identify (Harris, 2009). A number of respondents selected multiple different intra-ethnic groups, and these respondents were excluded from this study's analysis along with the Chicano/Chicana group. According the integrity of data and research, it is premise of this study to not aggregate intra-ethnic sample to misrepresent their cultural identity (Chen & Zhong, 2013). Therefore, the researcher did not aggregate the Chicano/Chicana group and combine them with the Mexican/Mexican American group as this would violate the aggregate premise of this study, misrepresent them as an intra-ethnic group, and there were too few respondents in this category. This exclusion criteria resulted in the final sample of 4,533 respondents. Those who indicated only Mexican/Mexican American (499, 11%), Cuban/Cuban American (22, 0.5%), Puerto Rican (81, 1.8%), Central/South American (57, 1.3%), and other Hispanic (3874, 85.5%) heritage were included in this study (Table 1).

Table 1

Descriptive Statistics for Frequency of Final Sample by Ethnicity After Exclusions

	Frequency	Percent
Mexican/Mexican American	499	11.0%
Cuban/Cuban American	22	0.5%
Puerto Rican	81	1.8%
Central/South American	57	1.3%
Other Latino	3,874	85.5%
Total	4,533	100.0%

Gender.

The gender descriptive frequency indicated that 46.5% of the sample identified as females, and 53.5% of the sample identified as males overall. In the Mexican/Mexican American subgroup, the genders were 49.5% females and 50.5% males. In the

Cuban/Cuban American subgroup, the genders were 59.1% females and 40.9 males. In the Puerto Rican subgroup, the genders were 49.4% females and 50.6% males. In the Central/South American subgroup, the genders were 52.6% females and 47.4% males. In the other Latino subgroup, the genders were 45.9% females and 54.1% males (Table 2).

Table 2

Descriptive Statistics for Frequency of Final Sample by Gender After Exclusions

			Gender		
			Females	Males	Total
Ethnicity	Mexican/Mexican American	Frequency	247	252	499
		Percentage	49.5%	50.5%	100.0%
	Cuban/Cuban American	Frequency	13	9	22
		Percentage	59.1%	40.9%	100.0%
	Puerto Rican	Frequency	40	41	81
		Percentage	49.4%	50.6%	100.0%
	Central/South American	Frequency	30	27	57
		Percentage	52.6%	47.4%	100.0%
	Other Latino	Frequency	1,779	2,095	3,874
		Percentage	45.9%	54.1%	100.0%
Total		Frequency	2,109	2,424	4,533
		Percentage	46.5%	53.5%	100.0%

Age.

The gender descriptive frequency indicated that in Wave I sample had an age range of 9 with the youngest participant of 12 years of age to the maximum of 21 years of age. The mean age for Wave I was 15.87 (SD = 1.787). Also, Wave III sample had an age range of 10 with the youngest participant of 18 years of age to the maximum of 28 years of age. The mean age for Wave III was 21.75 (SD = 1.827) (Table 3).

Table 3

Descriptive Statistics for Frequency of Final Sample by Age After Exclusions

	Wave I	Wave III
N	4533	4533
Range	9	10
Minimum	12	18
Maximum	21	28
Mean	15.87	21.75
Std. Deviation	1.787	1.827

Dependent Variable Responses Within Sample

Violence.

The overall average violence score was 1.74 (SD = 2.75). In the Mexican/Mexican American subgroup, the mean violence score was 2.31 (SD = 3.27). In the Cuban/Cuban American subgroup, the mean violence score was 2.77 (SD = 3.39). In the Puerto Rican subgroup, the mean violence score was 3.91 (SD = 4.87). In the Central/South American subgroup, the mean violence score was 2.16 (SD = 3.02). In the other Latino subgroup, the mean violence score was 1.60 (SD = 2.57) (Table 4).

Delinquency.

The overall average delinquency score was 3.73 (SD = 4.86). In the Mexican/Mexican American subgroup, the mean delinquency score was 4.14 (SD = 5.05). In the Cuban/Cuban American subgroup, the mean delinquency score was 6.32 (SD = 9.07). In the Puerto Rican subgroup, the mean delinquency score was 7.27 (SD = 7.33). In the Central/South American subgroup, the mean delinquency score was 4.14 (SD = 5.62). In the other Latino subgroup, the mean delinquency score was 3.59 (SD = 4.69) (Table 4).

Table 4

Mean Scores for Dependent Variables by Ethnicity

	Ethnicity	Mean	Std. deviation	Frequency
Violence	Mexican/Mexican American	2.31	3.27	499
	Cuban/Cuban American	2.77	3.39	22
	Puerto Rican	3.91	4.87	81
	Central/South American	2.16	3.02	57
	Other Latino	1.60	2.58	3,874
	Total	1.74	2.75	4,533
Delinquency	Mexican/Mexican American	4.14	5.05	499
	Cuban/Cuban American	6.32	9.07	22
	Puerto Rican	7.27	7.34	81
	Central/South American	4.14	5.62	57
	Other Latino	3.59	4.69	3,874
	Total	3.73	4.86	4,533

Independent Variable Responses Within Sample

Parental Engagement.

The overall average parental engagement score was 9.49 (SD = 4.14). In the Mexican/Mexican American subgroup, the mean parental engagement score was 9.37 (SD = 4.39). In the Cuban/Cuban American subgroup, the mean parental engagement score was 8.82 (SD = 4.94). In the Puerto Rican subgroup, the mean parental engagement score was 10.01 (SD = 3.99). In the Central/South American subgroup, the parental engagement score was 9.44 (SD = 4.40). In the other Latino subgroup, the mean parental engagement score was 9.50 (SD = 4.10) (Table 5).

School Trouble.

The overall average school trouble score was 9.30 (SD = 3.25). In the Mexican/Mexican American subgroup, the mean school trouble score was 9.44 (SD = 3.29). In the Cuban/Cuban American subgroup, the mean school trouble score was 9.36

(SD = 3.58). In the Puerto Rican subgroup, the mean school trouble score was 10.00 (SD = 3.39). In the Central/South American subgroup, the school trouble score was 8.49 (SD = 3.08). In the other Latino subgroup, the mean school trouble score was 9.27 (SD = 3.23) (Table 5).

Neighborhood Perception.

The overall average neighborhood perception score was 1.92 (SD = 0.94). In the Mexican/Mexican American subgroup, the mean neighborhood perception score was 1.96 (SD = 0.95). In the Cuban/Cuban American subgroup, the mean neighborhood perception score was 2.05 (SD = 1.04). In the Puerto Rican subgroup, the mean neighborhood perception score was 2.17 (SD = 1.07). In the Central/South American subgroup, the neighborhood perception score was 2.09 (SD = 0.95). In the other Latino subgroup, the mean neighborhood perception score was 9.27 (SD = 3.23) (Table 5).

Sensation Seeking.

The overall average sensation seeking score was 2.51 (SD = 1.02). In the Mexican/Mexican American subgroup, the mean sensation seeking score was 2.39 (SD = 0.99). In the Cuban/Cuban American subgroup, the mean sensation seeking score was 2.41 (SD = 1.18). In the Puerto Rican subgroup, the mean sensation seeking score was 2.33 (SD = 1.00). In the Central/South American subgroup, the sensation seeking score was 2.42 (SD = 1.01). In the other Latino subgroup, the mean sensation seeking score was 2.53 (SD = 1.02) (Table 5).

Deviant Peers.

The overall average deviant peers score was 2.41 (SD = 2.58). In the Mexican/Mexican American subgroup, the mean deviant peers score was 2.80 (SD =

2.72). In the Cuban/Cuban American subgroup, the mean deviant peers score was 2.23 (SD = 2.74). In the Puerto Rican subgroup, the mean deviant peers score was 2.95 (SD = 2.83). In the Central/South American subgroup, the deviant peers score was 1.79 (SD = 2.28). In the other Latino subgroup, the mean deviant peers score was 2.36 (SD = 2.55) (Table 5).

Table 5

Descriptive Statistics of Risk Factors by Ethnicity N = 4533

	Ethnicity	Mean	Std. Deviation	N
Parental engagement	Mexican/Mexican American	9.37	4.398	499
	Cuban/Cuban American	8.82	4.944	22
	Puerto Rican	10.01	3.992	81
	Central/South American	9.44	4.404	57
	Other Latino	9.50	4.104	3874
	Total	9.49	4.143	4533
School trouble	Mexican/Mexican American	9.44	3.292	499
	Cuban/Cuban American	9.36	3.580	22
	Puerto Rican	10.00	3.399	81
	Central/South American	8.49	3.083	57
	Other Latino	9.27	3.237	3874
	Total	9.29	3.247	4533
Neighborhood perception	Mexican/Mexican American	1.96	.958	499
	Cuban/Cuban American	2.05	1.046	22
	Puerto Rican	2.17	1.070	81
	Central/South American	2.09	.950	57
	Other Latino	1.90	.943	3874
	Total	1.92	.949	4533
Sensation seeking	Mexican/Mexican American	2.39	.990	499
	Cuban/Cuban American	2.41	1.182	22
	Puerto Rican	2.33	1.000	81

	Central/South American	2.42	1.017	57
	Other Latino	2.53	1.029	3874
	Total	2.51	1.026	4533
Deviant peers	Mexican/Mexican American	2.80	2.722	499
	Cuban/Cuban American	2.23	2.742	22
	Puerto Rican	2.95	2.837	81
	Central/South American	1.79	2.289	57
	Other Latino	2.36	2.555	3874
	Total	2.41	2.581	4533

Analyses to Answer the Research Questions

Research Question 1.

The first research question asked: Do Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths differ in self-reported violence and delinquency?

Model for Research Question 1. A one-way MANOVA analysis was conducted to answer the first research question. This analysis utilized binary independent variables to compare differences of means between the outcomes of continuous variables. Since the sample sizes were uneven, the MANOVA and the ANOVA analysis included bootstrapping technique of 1000 times as a nonparametric method of estimation. Lastly, Tukey's HSD Test was conducted to determine the differences of means between each of the subsample groups for both the violence and delinquent dependent variables. This analysis included bootstrapping technique 1000 times as a nonparametric method of estimation, significance level in this model was set to 5%.

Results for Research Question 1.

According to the MANOVA analysis, there was a significant difference in means

between ethnicity groups when considered jointly on the dependent variables of violence and delinquency, $\Lambda = .977$, F (8, 9054) = 13.04, $p < .001$, $\eta^2 = .011$. Next, there was a significant difference in means between ethnicity subgroups and violence, F (4, 4528) = 21.91, $p < .001$, $\eta^2 = .019$ (Table 6). There was also a significant difference in means between ethnicity subgroups and delinquency, F (4, 4528) = 14.92, $p < .001$, $\eta^2 = .012$ (Table 6). These findings indicated a statistically significant difference in at least some of the pairs of means among Latino subgroups of Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths that self-reported violence and delinquency (Table 6).

Table 6

Multivariate Analysis of Variance by Violence and Delinquency (N = 4,533)

Source	Dependent variable	Sum of squares	Df	Mean square	*F*	*p*	η^2
Ethnicity	**Violence**	**652.32**	**4**	**163.08**	**21.91**	**<.001***	**.019**
	Delinquency	**1334.41**	**4**	**333.60**	**14.29**	**<.001***	**.012**
Error	Violence	33702.47	4528	7.44			
	Delinquency	105709.79	4528	23.35			
Total	Violence	48001.00	4533				
	Delinquency	170260.00	4,533				

a. R Squared = .019 (Adjusted R Squared = .018)
b. R Squared = .012 (Adjusted R Squared = .012)
c. *Significance values have been verified at the .05 level by bootstrap.

Results for Group Differences in Mean Violence. Next, post hoc comparisons using the Tukey HSD test determined that mean violence scores for Mexican/Mexican Americans (M = 2.31, SD = 3.27) was significantly different from other Latinos (M = 1.60, SD = 2.75). Also, the Tukey HSD tests determined that mean violence scores for Puerto Ricans (M = 3.91, SD = 4.88) was statistically significant from Mexican/Mexican

Americans (M = 2.31, SD = 3.27), Central/South Americans (M = 2.16, SD = 3.02), and other Latinos (M = 1.60, SD = 2.75) (Table 8). The output significance values were also significant at 0.05 using bootstraps estimates of standard error. The mean values for Mexican/Mexican Americans and Puerto Ricans were higher than the other Latino groups. The answer to this research question, in terms of which groups, seems to have more reported mean violence than the other groups (Table 8).

Table 7

Analysis of Variance by Violence Scores Between Ethnicity (N = 4,533)

Source	Sum of Squares	Df	Mean Square	*F*	*p*	η^2
Ethnicity	652.327	4	163.082	21.91	<.001*	.019
Error	33702.473	4528	7.443			
Total	48001.000	4533				

a. R Squared = .019 (Adjusted R Squared = .018)

b. *Significance values have been verified at the .05 level by bootstrap.

Table 8

Tukey HSD to Compare Means Violence Scores Between Ethnicity (N = 4,533)

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	SE	*p*	*d*
Mexican/Mexican America	Cuban/Cuban American	-.46	.59	.94	
	Puerto Rican	-1.60*	.33	<.001	-.45
	Central/South American	.15	.38	.99	
	Other Latino	.71*	.15	<.001**	.27
Cuban/Cuban American	Mexican/Mexican American	.46	.59	.94	
	Puerto Rican	-1.14	.66	.41	
	Central/South American	.61	.69	.89	
	Other Latino	1.17	.58	.26	

Puerto Rican	Mexican/Mexican American	1.60*	.33	<.001**	.45
	Cuban/Cuban American	1.14	.66	.41	
	Central/South American	1.76*	.47	.002**	.41
	Other Latino	2.31*	.31	<.001**	.87
Central/South American	Mexican/Mexican American	-.15	.38	.99	
	Cuban/Cuban American	-.61	.69	.90	
	Puerto Rican	-1.76*	.47	.002**	-.41
	Other Latino	.55	.36	.55	
Other Latino	Mexican/Mexican American	-.71*	.13	<.001**	-.27
	Cuban/Cuban American	-1.17	.58	.26	
	Puerto Rican	-2.31*	.31	<.001**	-.87
	Central/South American	-.55	.36	.55	

Based on observed means.
The error term is Mean Square (Error) = 7.153.
*. The mean difference is significant at the .05 level.
**. The mean difference is significant at the .05 level using bootstrap.

Results for Group Differences in Mean Delinquency. Next, post hoc comparisons using the Tukey HSD test determined that mean delinquency scores for Puerto Ricans (M = 7.27, SD = 7.34) was statistically significant from Mexican/Mexican Americans (M = 4.14, SD = 5.05), Central/South Americans (M = 4.14, SD = 5.62), and other Latinos (M = 3.59, SD = 4.69) (Table 10). Also post hoc comparisons using the Tukey HSD test determined that mean delinquency scores were statistically significant between Mexican/Mexican Americans (M = 4.14, SD = 5.05) and other Latinos (M = 3.59, SD = 4.69) (Table 10). The output significance values were also significant at 0.05 using bootstraps estimates of standard error. The mean values for Puerto Ricans were higher

than the other Latino groups. The answer to this research question in terms of which groups seems to have reported mean delinquency than the other groups (Table 10).

Table 9

Analysis of Variance by Delinquency (N = 4,533)

Source	Sum of Squares	Df	Mean Square	*F*	*p*	η^2
Ethnicity	1334.41	4	333.60	14.29	<.001*	.012
Error	105709.79	4528	23.346			
Total	170260.00	4533				

a. R Squared = .012 (Adjusted R Squared = .012)

b. *Significance values have been verified at the .05 level by bootstrap.

Table 10

Tukey HSD to Compare Means Delinquency Scores Between Ethnicity (N = 4,533)

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	SE	*p*	*d*
Mexican/Mexican American	Cuban/Cuban American	-2.18	1.05	.23	
	Puerto Rican	-3.13*	.58	<.001**	-.57
	Central/South American	0.00	.68	1.00	
	Other Latino	.55	.23	.12	
Cuban/Cuban American	Mexican/Mexican American	2.18	1.05	.23	
	Puerto Rican	-.95	1.16	.92	
	Central/South American	2.18	1.21	.38	
	Other Latino	2.73	1.03	.06	
Puerto Rican	Mexican/Mexican American	3.13*	.58	<.001**	.57
	Cuban/Cuban American	.95	1.62	.92	
	Central/South American	3.13*	.835	.002**	.47

	Other Latino	3.68*	.542	<.001**	.77
Central / South American	Mexican/Mexican American	.00	.68	1.00	
	Cuban/Cuban American	-2.18	1.21	.38	
	Puerto Rican	-3.13*	.84	.002	-.47
	Other Latino	.55	.65	.912	
Other Latino	Mexican/Mexican American	-.55	.23	.12	
	Cuban/Cuban American	-2.73	1.03	.06	
	Puerto Rican	-3.68*	.54	<.001**	-.77
	Central/South American	-.55	.65	.91	

Based on observed means.
The error term is Mean Square (Error) = 25.066.
*. The mean difference is significant at the .05 level.
**. The mean difference is significant at the .05 level using bootstraps.

Results for Research Question 2.

The second research question asked: To what extent does parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers differ between each subgroup of Latino youths?

Model for Research Question 2. A one-way MANOVA analysis was conducted to answer the second research question. This analysis utilized independent variables to compare differences of means between the outcomes of intra-ethnic Latino subgroups. Since the sample sizes were uneven, the MANOVA and the ANOVA analysis included bootstrapping technique of 1000 times as a nonparametric method of estimation. Lastly, Tukey's HSD Test was conducted to determine the differences of means between each of the subsample groups against the violence and delinquent outcome variables. This analysis included bootstrapping technique 1000 times as a nonparametric method of

estimation, significance level in this model was set to 5%.

Hypothesis Testing Results for Research Question 2. The second research question encompassed multiple components, which led to the development of various corresponding results. The research findings for each variable are also reviewed in the tables below.

According to the MANOVA analysis, there was a significant difference in means between ethnicity groups when considered jointly on the variables of parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers, $\Lambda = .990$, F (20, 15,005) = 2.39, $p < .001$, $\eta^2 = .003$. Next, there was a significant difference in means between ethnicity subgroups and neighborhood perception, F (4, 4528) = 2.53, $p = .038$, $\eta^2 = .002$ (Table 11). The model indicated a significant difference in means between ethnicity subgroups and sensation seeking, F (4, 4528) = 3.01, $p = .017$, $\eta^2 = .003$ (Table 11). The model also resulted a significant difference in means between ethnicity subgroups and deviant peers, F (4, 4528) = 5.07, $p < .001$, $\eta^2 = .004$ (Table 10). However, the model found no significant difference in means between ethnicity subgroups and parental engagement, F (4, 4528) = .58, $p = .68$, $\eta^2 = .001$, and school trouble, F (4, 4528) = 2.14, $p = .07$, $\eta^2 = .002$ (Table 11). The output significance values were also significant at 0.05 using bootstraps estimates of standard error. This model concluded that there is a statistically significant difference in means between Latino subgroups of Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths that self-reported neighbor perception, sensation seeking and deviant peers. Lastly, the model did not find statistical significance difference in means between Latino subgroups of Mexican/Mexican American, Puerto

Rican, Cuban, Central/South American, and other Latino youths that self-reported parental engagement and school trouble.

Table 11

Analysis of Variance by Parental Engagement, School Trouble, Neighborhood Perception, Sensation Seeking, and Deviant Peers (N = 4,533)

Source	Dependent Variable	Sum of Squares	Df	Mean Square	F	p	η^2
Ethnicity	Parental engagement	39.569	4	9.892	.576	.680	.001
	School trouble	90.047	4	22.51	2.137	.074	.002
	Neighborhood perception	9.102	4	2.27	2.532	.038	.002
	Sensation seeking	12.656	4	3.16	3.013	.017	.003
	Deviant peers	134.752	4	33.68	5.074	<.001	.004
Error	Parental engagement	77745.44	4528	17.170			
	School trouble	47698.60	4528	10.534			
	Neighborhood perception	4069.53	4528	.899			
	Sensation seeking	4754.09	4528	1.050			
	Deviant peers	30060.59	4528	6.639			
Total	Parental engagement	486271.00	4533				
	School trouble	439422.00	4533				
	Neighborhood perception	20757.00	4533				
	Sensation seeking	33336.00	4533				
	Deviant peers	56492.00	4533				

Significance values have been verified at the .05 level by bootstrap.

In the next section, the ANOVA models were utilized to examine each variable independently with respect to possible significant differences between each pair of Latino subgroups. The output significance values were also significant at 0.05 using bootstraps estimates of standard error. The post hoc comparisons using the Tukey HSD test

determined that mean neighborhood perception scores (Table 12). The output significance values were also significant at 0.05 using bootstraps estimates of standard error. The findings indicated that there is no statistically significant difference in neighborhood perception between any of the Latino subgroups.

Table 12

Tukey HSD to Compare Means Neighborhood Perception Scores Between Ethnicity (N = 4,533)

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	SE	*p*	*d*
Mexican/ Mexican American	Cuban/Cuban American	-.08	.207	.995	
	Puerto Rican	-.21	.114	.351	
	Central/South American	-.12	.133	.884	
	Other Latino	.06	.045	.669	
Cuban/Cuban American	Mexican/Mexican American	.08	.207	.995	
	Puerto Rican	-.13	.228	.981	
	Central/South American	-.04	.238	1.000	
	Other Latino	.14	.203	.957	
Puerto Rican	Mexican/Mexican American	.21	.114	.351	
	Cuban/Cuban American	.13	.228	.981	
	Central/South American	.09	.164	.985	
	Other Latino	.27	.106	.085	
Central/South American	Mexican/Mexican American	.12	.133	.884	
	Cuban/Cuban American	.04	.238	1.000	
	Puerto Rican	-.09	.164	.985	
	Other Latino	.18	.126	.592	

Other Latino	Mexican/Mexican American	-.06	.045	.669	
	Cuban/Cuban American	-.14	.203	.957	
	Puerto Rican	-.27	.106	.085	
	Central/South American	-.18	.126	.592	

Based on observed means.
The error term is Mean Square (Error) = .914.
*. The mean difference is significant at the .05 level.
**. The mean difference is significant at the .05 level using bootstraps.

In the next section, the post hoc comparisons using the Tukey HSD test determined that mean sensation seeking scores for other Latinos (M = 2.53, SD = 1.03) was statistically significant from Mexican/Mexican Americans (M = 2.39, SD = .99) (Table 13). The output significance values were also significant at 0.05 using bootstraps estimates of standard error. The findings indicated that more sensation seeking was reported higher for other Latinos than Mexicans/Mexican Americans.

Table 13

Tukey HSD to Compare Means Sensation Seeking Scores between Ethnicity (N = 4,533)

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	SE	*p*	*d*
Mexican/Mexican American	Cuban/Cuban American	-.02	.223	1.000	
	Puerto Rican	.05	.123	.993	
	Central/South American	-.03	.143	.999	
	Other Latino	-.15*	.049	.024**	-.14
Cuban/Cuban American	Mexican/Mexican American	.02	.223	1.000	
	Puerto Rican	.08	.246	.998	

	Central/South American	-.01	.257	1.000	
	Other Latino	-.12	.219	.981	
Puerto Rican	Mexican/Mexican American	-.05	.123	.993	
	Cuban/Cuban American	-.08	.246	.998	
	Central/South American	-.09	.177	.988	
	Other Latino	-.20	.115	.417	
Central/South American	Mexican/Mexican American	.03	.143	.999	
	Cuban/Cuban American	.01	.257	1.000	
	Puerto Rican	.09	.177	.988	
	Other Latino	-.11	.137	.927	
Other Latino	Mexican/Mexican American	.15*	.049	.024**	.14
	Cuban/Cuban American	.12	.219	.981	
	Puerto Rican	.20	.115	.417	
	Central/South American	.11	.137	.927	

Based on observed means.
The error term is Mean Square (Error) = 1.046.
*. The mean difference is significant at the .05 level.
**. The mean difference is significant at the .05 level using bootstraps.

In the next section, the post hoc comparisons using the Tukey HSD test determined that mean deviant peers' scores for Mexicans/Mexican Americans (M = 2.80, SD = 2.72) were statistically significant from Central/South Americans (M = 1.79, SD = 2.29) and other Latinos (M = 2.36, SD = 2.55) (See Table 14). The output significance values were also significant at 0.05, using bootstraps estimates of standard error. The findings indicated that more deviant peers were reported for Mexicans/Mexican Americans than Central/South Americans and other Latinos.

Table 14

Tukey HSD to Compare Means Deviant Peers Scores Between Ethnicity (N = 4,533)

(I) Ethnicity	(J) Ethnicity	Mean Difference (I-J)	SE	*p*	*d*
Mexican/Mexican American	Cuban/Cuban American	.58	.561	.843	
	Puerto Rican	-.15	.309	.989	
	Central/South American	1.01*	.360	.039**	.38
	Other Latino	.45*	.123	.002**	.17
Cuban/Cuban American	Mexican/Mexican American	-.58	.561	.843	
	Puerto Rican	-.72	.619	.770	
	Central/South American	.44	.647	.961	
	Other Latino	-.13	.551	.999	
Puerto Rican	Mexican/Mexican American	.15	.309	.989	
	Cuban/Cuban American	.72	.619	.770	
	Central/South American	1.16	.445	.069	
	Other Latino	.59	.289	.241	
Central/South American	Mexican/Mexican American	-1.01*	.360	.039**	-.38
	Cuban/Cuban American	-.44	.647	.961	
	Puerto Rican	-1.16	.445	.069	
	Other Latino	-.57	.344	.466	
Other Latino	Mexican/Mexican American	-.45*	.123	.002**	-.17
	Cuban/Cuban American	.13	.551	.999	
	Puerto Rican	-.59	.289	.241	

	Central/South American	.57	.344	.466

Based on observed means.
The error term is Mean Square (Error) = 6.448.
*The mean difference is significant at the .05 level.
**The mean difference is significant at the .05 level using bootstraps.

Research Question 3.

The third research questions asked: Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported violence among Mexicans/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths?

Model for Research Question 3.

A multiple linear regression model was utilized to answer research question 3. The multiple regression analysis showed the influence of the independent variables on the violence outcome (George & Mallery, 2019). These models also showed the measure of overall effect size of the predictor variables on the violent outcomes variable (George & Mallery, 2019). Lastly, this analysis included bootstrapping technique of 1,000 times as a nonparametric method of estimation, significance level in this model was set to 5%.

Hypothesis testing results for Research Question 3.

The third research question encompassed multiple components, which led to the development of various corresponding results. The research findings for each variable are also reviewed based on the tables below.

First, the regression model of violence between Mexican/Mexican Americans results indicated that the combination of independent variables explained 18.8% of the variance in the respondent's level of risk of violent outcome ($p < .001$) (Table 15). The

slope of the variables of age and gender are -.293 and -.953, respectively, where gender was coded 1 = Females, 2 = Males. This means that respondents' violent outcomes decreased .293 units for each year of age and females were .953 more violent than males, holding all other factors constant. Also, both age (R^2 = 2.37%, p < .001) and gender (R^2 = 1.99%, p < .001) were significant predictors of violent outcomes. When controlling for all other variables, the model revealed that school trouble (R^2 = 3.31%, p < .001), neighborhood perception (R^2 = 1.90%, p < .001), sensation seeking (R^2 = .88%, p .022), and deviant peers (R^2 = 5.06%, p < .001) were all statistically significant predictors of violent outcomes of respondents (Table 15). However, the model showed that parental engagement was not a significant predictor for Mexican/Mexican American group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 15

Multiple Regression Model of Violence for Mexican/Mexican American Sample (N = 499)

Model		Slope	t	*p*	R^2
1	(Constant)	7.173	3.873	<.001	
	Age	-.293	-3.776	<.001	2.37%
	Gender	-.953	-3.469	<.001	1.99%
	Parental engagement	.027	.890	.374	.13%
	School trouble	.190	4.471	<.001	3.31%
	Neighborhood perception	.479	3.403	<.001	1.90%
	Sensation seeking	-.322	-2.304	.022	.88%
	Deviant peers	.290	5.537	<.001	5.06%

a. Dependent Variable: violence
b. Total R^2 = .188 (Adjusted R^2 = .176)
c. Note. * p < .05.
d. Significance values have been verified at the .05 level by bootstrap.

Next, the regression model of violence between Cuban/Cuban Americans results showed the combination of independent variables (Table 16). The entire regression model resulted in none of the independent variables uniquely predicted the self-reported violence between the respondents of the Cuban/Cuban American group (Table 16).

Table 16

Multiple Regression Model of Violence for Cuban/Cuban American Sample (N = 22)

Model		Slope	t	*p*	R^2
1	(Constant)	-13.481	-.808	.433	
	Age	.857	1.205	.248	8.07%
	Gender	-2.338	-1.136	.275	7.18%
	Parental engagement	.186	.897	.385	4.49%
	School trouble	-.026	-.078	.939	.03%
	Neighborhood perception	-1.001	-.812	.430	3.65%
	Sensation seeking	.380	.349	.732	.67%
	Deviant peers	.136	.319	.754	.56%

a. Dependent Variable: violence
b. Total $R^2 = .222$ (Adjusted $R^2 = -.167$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

First, the regression model of violence between Puerto Ricans results indicated that the combination of independent variables explained 37% of the variance in the respondent's level of risk of violent outcome, ($p < .001$) (Table 17). The slope of the variable of gender -3.446, where gender was coded 1 = Females, 2 = Males. This means that respondents' violent outcomes where females were 3.446 more violent than males, holding all other factors constant. Being female ($R^2 = 11.70\%$, $p < .001$) was shown to be a significant predictor of violent outcomes for the Puerto Rican group. When controlling

for all other variables, the model revealed that only deviant peers (R^2 = 5.06%, p < .001) was a statistically significant predictor of violent outcomes for the Puerto Rican group (Table 17). However, the model showed that age, parental engagement, school trouble, neighborhood perception, sensation seeking was not a significant predictor of violence for the Puerto Rican group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 17

Multiple Regression Model of Violence for Puerto Rican Sample (N = 81)

Model		Slope	t	*p*	R^2
1	(Constant)	9.992	1.543	.127	
	Age	-.357	-1.190	.238	1.23%
	Gender	-3.446	-3.680	<.001	11.70%
	Parental engagement	.150	1.244	.217	1.35%
	School trouble	.243	1.691	.095	2.46%
	Neighborhood perception	.787	1.810	.074	2.82%
	Sensation seeking	-.401	-.823	.413	.58%
	Deviant peers	.677	3.754	<.001	12.18%

a. Dependent Variable: violence
b. Total R^2 = .370 (Adjusted R^2 = .309)
c. Note. * p < .05.
d. Significance values have been verified at the .05 level by bootstrap.

Next, the regression model of violence between Central/South Americans results showed the combination of independent variables (Table 18). The entire regression model resulted in none of the independent variables uniquely predicted the self-reported violence between the respondents of the Cuban/Cuban American group (Table 18).

Table 18

Multiple Regression Model of Violence for Central/South American Sample (N = 57)

Model		Slope	t	*p*	R^2
1	(Constant)	3.624	.659	.513	
	Age	-.057	-.264	.793	.11%
	Gender	-.582	-.693	.491	.77%
	Parental engagement	.019	.206	.838	.07%
	School trouble	.266	2.005	.051	6.40%
	Neighborhood perception	-.154	-.376	.708	1.39%
	Sensation seeking	-.789	-2.009	.050	.23%
	Deviant peers	.249	1.437	.157	3.31%

a. Dependent Variable: violence
b. Total $R^2 = .216$ (Adjusted $R^2 = .105$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

Lastly, the regression model of violence between other Latinos results indicated that the combination of independent variables explained 18.1% of the variance in the respondent's level of risk of violent outcome, ($p < .001$) (Table 19). The slope of the variables of age and gender are -.162 and -1.272, respectively, where gender was coded 1 = Females, 2 = Males. This means that respondents' violent outcomes decreased .162 units for each year of age and females were 1.272 more violent than males, holding all other factors constant. Also, both age ($R^2 = 1.16\%$, $p < .001$) and gender ($R^2 = 5.71\%$, $p < .001$) were significant predictors of violent outcomes. When controlling for all other variables, the model revealed that parental engagement ($R^2 = .35\%$, $p < .001$), school trouble ($R^2 = 1.35\%$, $p < .001$), neighborhood perception ($R^2 = 1.49\%$, $p < .001$), sensation seeking ($R^2 = .48\%$, p .022), and deviant peers ($R^2 = 5.29\%$, $p < .001$) were all statistically significant predictors of violent outcomes of other Latinos (Table 19). The

output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 19

Multiple Regression Model of Violence for Other Latino Sample (N = 3,874)

Model		Slope	t	*p*	R^2
1	(Constant)	5.019	9.630	<.001	
	Age	-.162	-7.449	<.001	1.16%
	Gender	-1.272	-16.427	<.001	5.71%
	Parental engagement	.038	4.086	<.001	.35%
	School trouble	.98	7.951	<.001	1.35%
	Neighborhood perception	.343	8.413	<.001	1.49%
	Sensation seeking	-.177	-4.725	<.001	.48%
	Deviant peers	.250	15.786	<.001	5.29%

a. Dependent Variable: violence
b. Total $R^2 = .181$ (Adjusted $R^2 = .179$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

The results of the third research question were to determine whether the results were different among all the subgroups in this study. Specifically, did the regression model indicate whether life course risk factors uniquely predict the variance of violence between the Latino intra-ethnic subgroups. The results of the regression models showed that self-reported violence for Mexican/Mexican American, Puerto Rican, and other Latino groups were significantly explained by the independent variables in this study. However, the regression models showed not significant predictor of self-reported violence among the Cuban/Cuban American and Central/South American groups. The results indicated that Puerto Rican group scoring the highest self-reported violence followed by the Mexican/Mexican American group.

Self-reported females were shown to be significant predictors of violent outcomes for the Mexican/Mexican American, Puerto Rican, and other Latino groups, but not for Cuban/Cuban American groups. Also, deviant peers were shown to be a significant predictor of violence between Mexican/Mexican American, Puerto Rican, and other Latino groups, but not for Cuban/Cuban American groups. Age was shown to be a predicator of violence in the Mexican/Mexican American and other Latino groups. As in the older the respondents in this study self-reported less violence among these groups. These models indicated that school trouble, neighborhood perception, sensation seeking, and deviant peers were significant predictors of violent outcomes among Mexican/Mexican American and other Latino groups. However, parental engagement was shown to be significant predictor of violence only for the other Latino group.

Research Question 4

The fourth research question asked: Does parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported delinquency among Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths?

Model for Research Question 4.

A multiple linear regression model was utilized to answer research question 3. The multiple regression analysis showed the influence of the independent variables on the violent outcome variable (George & Mallery, 2019). This model also showed the measure of the overall effect size of the predictor variables on the violent outcomes variable (George & Mallery, 2019). This analysis included bootstrapping technique 1000 times as a nonparametric method of estimation, significance level in this model was set to 5%.

Hypothesis Testing Results for Research Question 4.

The fourth research topic encompassed multiple components, which led to the development of various corresponding results. Research findings for each variable are also reviewed based on Tables below.

First, the regression model of delinquency between Mexican/Mexican Americans results indicated that the combination of independent variables explained 17.1% of the variance in the respondent's level of risk of violent outcome, ($p < .001$) (Table 20). The slope of the variable of age -.498 meaning that respondents' violent outcomes decreased .498 units for each year of age, holding all other factors constant. Also, age ($R^2 = 2.86\%$, $p < .001$) was a significant predictor of delinquent outcomes for the Mexican/Mexican American group. When controlling for all other variables, the model revealed that school trouble ($R^2 = 4.97\%$, $p < .001$), neighborhood perception ($R^2 = .83\%$, $p = .027$), and deviant peers ($R^2 = 4.97\%$, $p < .001$) were all statistically significant predictors of delinquency outcomes of respondents (Table 20). However, the model showed that gender, parental engagement, and sensation seeking were not a significant predictor of delinquency for the Mexican/Mexican American group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 20

Multiple Regression Model of Delinquency for Mexican/Mexican American Sample (N = 499)

Model		Slope	t	*p*	R^2
1	(Constant)	10.653	3.680	<.001	
	Age	-.498	-4.109	<.001	2.86%

	Gender	-.449	-1.045	.297	.18%
	Parental engagement	.017	.356	.722	.02%
	School trouble	.360	5.419	<.001	4.97%
	Neighborhood perception	.487	2.212	.027	.83%
	Sensation seeking	-.254	-1.165	.245	.23%
	Deviant peers	.444	5.419	<.001	4.97%

a. Dependent Variable: delinquency
b. Total $R^2 = .171$ (Adjusted $R^2 = .159$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

Next, the regression model of delinquency between Cuban/Cuban Americans results indicated that the combination of independent variables explained 75.6% of the variance in the respondent's level of risk of delinquency outcome, ($p = .002$) (Table 21). The slope of the variable of age 2.964 meaning that respondents' delinquency outcomes increased 2.964 units for each year of age, holding all other factors constant. Also, age ($R^2 = 13.47\%$, $p = .015$) was a significant predictor of delinquent outcomes for the Cuban/Cuban American group. When controlling for all other variables, the model revealed that neighborhood perception ($R^2 = 8.53\%$, $p = .044$), and deviant peers ($R^2 = 16.40\%$, $p = .008$) were statistically significant predictors of delinquency outcomes of respondents (Table 21). However, the model showed that gender, parental engagement, school trouble, and sensation seeking were not a significant predictor of delinquency for the Cuban/Cuban American group. The output significance values were also not significant at 0.05 using bootstraps estimates of standard error, the samples were based on 997 samples.

Table 21

Multiple Regression Model of Delinquency for Cuban/Cuban American Sample (N = 22)

Model		Slope	t	*p*	R^2
1	(Constant)	-49.377	-1.976	.068	
	Age	2.964	2.784	.015	13.47%
	Gender	-5.161	-1.675	.116	4.88%
	Parental engagement	-.250	-.806	.434	1.12%
	School trouble	-.192	-.388	.704	.26%
	Neighborhood perception	.4.086	-2.214	.044	8.53%
	Sensation seeking	2.221	1.364	.194	3.24%
	Deviant peers	1.958	3.071	.008	16.40%

a. Dependent Variable: delinquency
b. Total $R^2 = .756$ (Adjusted $R^2 = .634$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

Next, the regression model of delinquency between Puerto Ricans results indicated that the combination of independent variables explained 19.8% of the variance in the respondent's level of risk of delinquency outcome, ($p = .020$) (Table 22). The slope of the variable of age -1.475 meaning that respondents' delinquency outcomes decreased 1.475 units for each year of age, holding all other factors constant. Also, age ($R^2 = 9.24\%$, $p = .005$) was a significant predictor of delinquent outcomes for the Puerto Rican group. When controlling for all other variables, the model revealed that deviant peers ($R^2 = 5.76\%$, $p = .025$) were a statistically significant predictor of delinquency outcomes of respondents (Table 22). However, the model showed that gender, parental engagement, school trouble, neighborhood perception, and sensation seeking were not a significant predictor of delinquency for the Puerto Rican group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 22

Multiple Regression Model of Delinquency for Puerto Rican Sample (N = 81)

Model		Slope	t	*p*	R^2
1	(Constant)	36.922	3.359	.001	
	Age	-1.475	-2.898	.005	9.24%
	Gender	-1.575	-.991	.325	1.08%
	Parental engagement	-.134	-.645	.515	.48%
	School trouble	.283	1.161	.249	1.49%
	Neighborhood perception	1.090	1.478	.144	2.40%
	Sensation seeking	-.788	-.951	.345	1%
	Deviant peers	.700	2.285	.025	5.76%

a. Dependent Variable: delinquency
b. Total $R^2 = .198$ (Adjusted $R^2 = .121$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

Next, the regression model of delinquency between Central/South Americans results indicated that the combination of independent variables explained 40.4% of the variance in the respondent's level of risk of delinquency outcome, ($p < .001$) (Table 22). When controlling for all other variables, the model revealed that deviant peers ($R^2 =$ 26.73%, $p < .001$) was a statistically significant predictor of delinquency outcomes of respondents (Table 22). However, the model showed that age, gender, parental engagement, school trouble, neighborhood perception, and sensation seeking were not a significant predictor of delinquency for the Central/South American group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 23

Multiple Regression Model of Delinquency for Central/South American Sample (N = 57)

Model		Slope	t	*p*	R^2
1	(Constant)	11.021	1.234	.223	
	Age	-.372	-1.055	.296	1.35%
	Gender	-1.886	-1.384	.173	2.34%
	Parental engagement	-.217	-1.475	.147	2.66%
	School trouble	.298	1.381	.174	2.31%
	Neighborhood perception	.594	.896	.375	.98%
	Sensation seeking	.006	.009	.993	.0001%
	Deviant peers	1.318	4.688	<.001	26.73%

a. Dependent Variable: delinquency
b. Total $R^2 = .404$ (Adjusted $R^2 = .318$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

First, the regression model of delinquency between other Latinos results indicated that the combination of independent variables explained 16.9% of the variance in the respondent's level of risk of delinquency outcome, ($p < .001$) (Table 20). The slope of the variable of age and gender are -.285 and -1.346, respectively, where gender was coded 1 = Females, 2 = Males. This means that respondents' delinquency outcomes decreased .285 units for each year of age and females were 1.346 more violent than males, holding all other factors constant. Also, age ($R^2 = 1.10\%$, $p < .001$) and gender ($R^2 = 1.93\%$, $p < .001$) was a significant predictor of delinquent outcomes for the other Latino group. When controlling for all other variables, the model revealed that school trouble ($R^2 = 1.02\%$, $p < .001$), neighborhood perception ($R^2 = .41\%$, $p < .001$), sensation seeking ($R^2 = .46\%$, $p < .001$), and deviant peers ($R^2 = 9.49\%$, $p < .001$) were all statistically significant predictors of delinquency outcomes of respondents (Table 24).

However, the model showed that parental engagement was not a significant predictor of delinquency for the other Latino group. The output significance values were also significant at 0.05 using bootstraps estimates of standard error.

Table 24

Multiple Regression Model of Delinquency for Other Latino Sample (N = 3,874)

Model		Slope	t	*p*	R^2
1	(Constant)	8.998	9.422	<.001	
	Age	-.285	-7.148	<.001	1.10%
	Gender	-1.346	-9.487	<.001	1.93%
	Parental engagement	.017	.965	.334	.02%
	School trouble	.155	6.897	<.001	1.02%
	Neighborhood perception	.327	4.378	<.001	.41%
	Sensation seeking	-.318	-4.638	<.001	.46%
	Deviant peers	.611	21.042	<.001	9.49%

a. Dependent Variable: delinquency
b. Total $R^2 = .196$ (Adjusted $R^2 = .168$)
c. Note. * $p < .05$.
d. Significance values have been verified at the .05 level by bootstrap.

The results of the fourth research question were to determine whether the results were different among all the subgroups in this study. Specifically, did the regression models indicate whether life course risk factors uniquely predict the variance of delinquency between the Latino intra-ethnic subgroups. The results of the regression models showed that self-reported violence Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, Central/South American, and other Latino groups were significantly explained by the independent variables in this study. The results indicated that Puerto Rican group scoring the highest self-reported delinquency followed by the Cuban/Cuban American then Mexican/Mexican American groups.

Self-reported females were shown to be significant predictors of delinquency outcomes only for the other Latino group, but not for Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, and Central/South American groups. Also, deviant peers were shown to be a significant predictor of delinquency for all Latino subgroups. Age was shown to be a predicator of delinquency in the Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, and other Latino groups, but not Central/South American groups. Interestingly, younger respondents were significant predictors of delinquency among the Mexican/Mexican American, Puerto Rican, and other Latino groups, but not Cuban/Cuban American or Central/South American groups. However, in the Cuban/Cuban American groups older respondents were shown to be predictors of delinquency, which is the opposite of the remaining intra-ethnic subgroups. These models indicated that school trouble was a significant predictor of delinquency among the Mexican/Mexican American and other Latino groups. In addition, neighborhood perception was a significant predictor of delinquency for the Mexican/Mexican American, Cuban/Cuben American, and other Latino groups, but not Puerto Rican and Central/South American groups. Sensation seeking was significant predictors of delinquency only for the other Latino groups. Finally, parental engagement was shown not to be significant predictor of delinquency for all the Latino subgroups in this study.

Chapter 5: Discussion

Introduction

The Latino sample has had a significant and rapid expansion over the previous two decades in our American society (Hockenberry & Puzzanchera, 2016; Martinez, 2017). This growth has been mostly driven by the Hispanic adolescent demographic, accounting for a significant proportion of the overall sample increase in the United States (Hockenberry & Puzzanchera, 2016). The growth of the Latino community has also been observed in Hispanic incarceration rates, which are higher than the typical rates of the Latino national sample (Martinez, 2017). This trend has raised concerns among criminal justice and public health care professionals (Henry et al., 2012). Lawmakers depend on empirical research to inform the development of social policies aimed at addressing criminal behavior, including acts of violence and delinquency (Oliver et al., 2014; Orton et al., 2011; Shonkoff & Bales, 2011). Previous research has consolidated the Latino community based on their nationality and generational distinctions (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Fenimore et al., 2019; Jiang & Peguero, 2017). However, it is important to acknowledge that there exist historical and cultural variations between different Latino intra-ethnic groupings (Chen & Zhong, 2013; Fenimore et al., 2019). The practice of aggregating minority samples in research studies has led researchers to attribute social features and criminal activities to the entire Hispanic community, perhaps overlooking important data insights that are distinctive among different intra-ethnic groups. Given the significant influence that empirical studies have had on the decision-making processes of policymakers, it is crucial for researchers to ensure the inclusion of rigorous and transparent data analyses in

their studies.

This study expanded upon previous criminological research conducted on Latino samples by examining the Hispanic ethnicity at a more rigorous level, namely by considering ancestral identity. Utilizing Fenimore et al. (2019) study for this project's framework and the publicly available Add Health dataset, this study relied on a non-experimental, quantitative research design to examine life course risk factors as predictors of violent and delinquent behaviors among Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos. As done in previous research, this study utilized the life course developmental framework theory by Sampson and Laub (1993) age-graded theory to create the risk variables applied in this study.

The findings of this study provided evidence in support for some research questions, but there were results that did not reach support for other research questions. To address the first research question, do Mexican/Mexican American, Puerto Rican, Cuban, Central/South American, and other Latino youths differ in self-reported violence and delinquency? A multivariate analysis of variance (MANOVA) model was implemented followed by an ANOVA model using bootstrapping for standard error of estimates.

The second research question was also addressed using a multivariate analysis of variance (MANOVA) model along with ANOVA tests both using bootstrapping for standard error of estimates. This model was performed to determine the extent to which life course risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers) differ within each subgroup of Latino

youth.

A multivariate linear regression model with bootstrapping method was utilized to address the third and fourth research questions. This analysis determined which of the life course risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers) uniquely predicted violence and delinquency between each Latino subgroups (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos) along with using age and gender as control variables. The summary of the findings are discussed in the next section.

Summary of Findings

This study established four questions for research. The questions addressed were:

Research Question 1: Do Mexican/Mexican American, Puerto Rican, Cuban/Cuban American, Central/South American, and other Latino youths differ in self-reported violence and delinquency?

Research Question 2: To what extent do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers differ within each subgroup of Latino youth?

Research Question 3: Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-reported violence among Mexican/Mexican American, Puerto Rican, Cuban/Cuban American, Central/South American, and other Latino youths?

Research Question 4: Do parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers as life course risk factors predict self-

reported delinquency among Mexican/Mexican American, Puerto Rican, Cuban/Cuban American, Central/South American, and other Latino youths?

The dataset from the Add Health Survey consisted of a multitude of variables, including relevant information for addressing the research inquiries. These variables encompassed data pertaining to violent and delinquent behaviors, ethnicity, and risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers). The data was used to generate variables from the items of the Add Health Survey, drawing upon previous research (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2017; Fenimore et al., 2019; McGlamory-Evans, 2019). These variables have been utilized within a quantitative research methodology, which was deemed suitable for this study due to the quantitative nature of the Add Health instrument and associated data. The utilization of a quantitative methodology was deemed appropriate for this study as it aimed to build upon previous research (Fenimore et al., 2019). The study of the research hypotheses and data included the utilization of descriptive statistics, multivariate analysis of variance (MANOVA), and multivariate linear regression analyses.

To address the first research question, with the MANOVA model, there was a significant difference between ethnicity groups when considered jointly on violence and delinquency. Additionally, results indicated statistically significant differences independently between ethnicity subgroups and violence. A second ANOVA test also resulted in statistically significant differences between ethnicity subgroups and delinquency. However, these outcomes did not ascertain which of the intra-ethnic Latino subgroups statistically differed from each other in violence and delinquency. Therefore,

post hoc tests demonstrated statistical significance in violence between intra-ethnic subgroups. It was found that Mexicans/Mexican Americans were significantly higher than other Latinos with regards to reported violence but with a small effect size. Next, Puerto Ricans were found to be significantly higher in violence than Mexicans/Mexican Americans and Central/South Americans but with a small effect size. Additionally, Puerto Ricans scored significantly higher in violence means than other Latinos with a large effect size.

A secondary ANOVA test compared means scores between intra-ethnic subgroups, indicating a statistically significant difference in delinquent outcomes. The delinquency post hoc results indicated Puerto Ricans scoring significantly higher in delinquency than Mexicans/Mexican Americans, Central/South Americans, and other Latinos. Specifically, Puerto Ricans were significantly higher in delinquency compared to Central/South Americans but with a small effects size; however, Puerto Ricans were significantly higher in delinquency compared to Mexicans/Mexican Americans with medium effect size.

For the second research question, a bootstrap MANOVA analysis was performed to determine the extent to which life course risk factors such as parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers differ between subgroups of Latino youth. The results indicated that there was a significant difference between ethnicity subgroups for neighborhood perception, sensation seeking, and deviant peers. However, the results indicated that there was not a significantly different outcome between ethnicity subgroups, parental engagement, and school trouble. Specifically, the results determined significant differences between ethnicity for

neighborhood perception with a small effect size, but the post hoc showed that there were no significant intra-ethnic Latino subgroups that met the .05 significance threshold.

When testing sensation seeking, other Latinos were found to be significantly higher in mean scores from Mexicans/Mexican Americans but with small effect size. Finally, the deviant peers' results between intra-ethnic subgroups indicated that there was a statistical significance between Latino subgroups but with small effect size. Additionally, the post hoc test found that Mexicans/Mexican Americans reported more deviant peers than Central/South Americans and other Latinos but with small effect size.

Next, a multivariate linear regression model with bootstrapping was utilized to examine whether life course risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers) uniquely predicted the variance of self-reported violence between each Latino intra-ethnic subgroup (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos). The results of the regression models showed that the violence variance for Mexican/Mexican Americans, Puerto Ricans, and other Latinos were significantly explained by the independent variables in this study. However, the regression models were not statistically significant for Cuban/Cuban American and Central/South American groups. The results showed that females were statistically-significant predictors of violent outcomes but with small effect sizes for Mexican/Mexican American, Puerto Rican, and other Latino groups. Also, deviant peers were shown to be a significant predictor of violence between Mexican/Mexican American, Puerto Rican, and other Latino groups. Younger adolescents were shown to be more violent than older respondents in the Mexican/Mexican American and other Latino

groups. These models indicated that school trouble, neighborhood perception, sensation seeking, and deviant peers were significant predictors of violent outcomes among Mexican/Mexican American and other Latino groups but with small effect sizes. However, parental engagement was shown to be significant predictor of violence only for the other Latino group but with small effect size.

Additional regression with bootstrapping examinations was conducted to determine whether life course risk factors (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers) uniquely predicted the variance of self-reported delinquency among Latino intra-ethnic subgroups (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos). The results of the regression models showed that the delinquency variance for Mexican/Mexican American, Cuban/Cuban American, Puerto Rican, and other Latino groups were significantly explained by the independent variables in this study. The Mexican/Mexican Americans showed results indicating that younger respondents, school trouble, neighborhood perception, and deviant peers were associated with significant levels of delinquency in this group with small effect sizes. The Cuban/Cuban Americans results showed that older respondents, neighborhood perception, and deviant peers were significant predictors of delinquency in this group with small effect sizes. In addition, other Latinos resulted that younger respondents, female, school trouble, neighborhood perception, and deviant peers all were significant predictors of delinquency with small effect sizes. However, Puerto Ricans resulted with younger respondents and deviant peers were significant predictors of delinquency in this groups with small effect sizes. The Central/South American group only resulted with

deviant peers being a statistically significant predictor of delinquency. Coincidentally, The Cuban/Cuban American regression model resulted with older respondents, neighborhood perception, and deviant peers being significant predictors of delinquency in this group, but the bootstrap results were not significant. All Latino subgroup regression models resulted with parental engagement not being a significant predictor for delinquency.

Interpretation of Findings

This study specifically identified unique social factors that differed and predicted violent behavior as well as for nonviolent delinquency within various subgroups of the Latino sample. The findings of this study provide support for previous research that has identified notable variations in factors that differed and predicted violence and delinquency between different intra-ethnic groups (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Fenimore et al., 2019).

In conjunction with subgroup social means, extant scholarly investigations have suggested that parental engagement holds significant importance within Latino culture (Fagan et al., 2013). The concept of connecting with family affects several aspects of Latino society and is closely linked to the development of positive behaviors (Campos et al., 2014; Stein et al., 2015). Latino children who demonstrate greater parental engagement compared to other ethnic groups indicate lower propensities for engaging in violent and delinquent behaviors (Cavendish et al., 2012; Estrada-Martínez et al., 2013; Karriker-Jaffe et al., 2013). This study only partially supported previous literature on parental engagement. Results revealed that parental engagement did not significantly vary between intra-ethnic Latino subgroups, nor was it a significant predictor of

delinquency. However, the results did provide evidence of parental engagement being a significant predictor of violence in the other Latino groups.

Previous literature argues that adolescents facing school trouble exhibit a heightened propensity to partake in delinquent behaviors, run away from their homes, and prematurely stop their schooling (Henry et al., 2012; Jiang & Peguero, 2017). According to empirical research, a positive correlation exists between academic underachievement in school settings and the incidence of juvenile delinquency, with a special emphasis on violent behavior (Henry et al., 2012). As the prevalence of risk indicators for school conflict increases, there is a corresponding increase in the frequency of aggressive and delinquent behaviors (Henry et al., 2012). As one of the age-graded predictors of Sampson and Laub's work, reduction in employment trajectory can be hindered by school trouble and dropping out (Henry et al., 2012; Sampson & Laub, 1993; Sampson & Laub, 2003). The results of this study partially supported the theory in that school trouble was a statistically significant predictor for violence and delinquency for the Mexican/Mexican American and other Latino groups with small effect sizes. However, the differences of school trouble was not significant for any of the Latino groups.

According to Sampson et al. (1997), the environment of neighborhoods is associated with violence among minority groups. The data suggest that risk is dependent on many neighborhood characteristics and do not uniformly impact all Latino samples (Bersani et al., 2014; Parker & Stansfield, 2015). According to Fenimore et al. (2019), prior research suggests that Latino children are commonly exposed to neighborhood-based violence, which is considered a significant risk factor. A study was conducted to investigate the influence of views of local environments on the propensity of Latino

youths to engage in violent behavior during the transition from adolescence to adulthood (Estrada-Martínez et al., 2017). This study partially supported previous research, finding that negative neighborhood perception between Latinos was statistically significant but with small effect size, however difference between groups were not shown to be significantly different. In addition, neighborhood perception was found to be a significant predictor for violence and delinquency in the Mexican/Mexican American group and other Latino group but with small effect sizes. Coincidentally, neighborhood perception was a statistically significant predictor of delinquency for the Cuban/Cuban American group, but it did not satisfy the bootstrapping threshold.

Empirical evidence establishes the assumption that the engagement of young individuals in violent and delinquent behaviors is significantly influenced by their association with peers who exhibit deviant tendencies (Fagan & Wright, 2012). Also, the likelihood of engaging in aggressive and delinquent behavior among adolescents is positively correlated with the number of encounters with delinquent peers (Jiang & Peterson, 2012). These results emerged in congruence with previous research, which found that association with deviant peers was significantly different between intra-ethnic Latino subgroups but with small effect size. Moreover, more deviant peers were reported for Mexican/Mexican American than Central/South and other Latino groups. Lastly, deviant peers were found to be a strong predictor of violence and delinquency but with small effect size for all Latino subgroups.

Sensation seeking has been shown in previous research to be associated with aggression and violent behavior (Oshri et al., 2018). According to certain studies, sensation seeking is one of the most prevalent risk factors for Latino youth (Fenimore et

al., 2019; Lydon-Staley & Geier, 2018; Peach & Gaultney, 2013). However, other studies indicated that only certain intra-ethnic subgroups among Latinos have sensation seeking as a risk factor (Jennings et al., 2010; Maldonado-Molina et al., 2009). The result of this research found that sensation seeking was significantly higher for other Latinos than Mexican/Mexican Americans. In addition, sensation seeking was a statistically significant predictor of violence in the Mexican/American and other Latino groups, but only significant predictor of delinquency for other Latino group with small effect sizes.

When it comes to the control variable of gender, most previous criminology studies indicate that males outnumber females in self-reported violence and delinquency. (Bondy et al., 2019; Bostaph, 2010; Harris-McKoy & Cui, 2013; Steketee et al., 2013). However, some research would indicate the contrary, that females are more prevalent in aggressive and delinquent behaviors (Newsome et al., 2016). This research did support the notion that gender was a significant predictor among Latino subgroups regarding violence and delinquency but with small effect size. However, the data did reveal that female respondents were statistically more likely to be violent than the male respondents in the Mexican/Mexican American, Puerto Rican, and other Latino groups. Moreover, the result showed that female respondents were statistically more likely to report delinquency that the male respondents in the other Latino group.

Lastly, age is a major element of Sampson and Laub's (1993) age-graded theory, which states that age is a predictor of violence and delinquency for adolescents and adults (Sampson & Laub, 1993; Sampson et al., 2005). For Latino youths, age was shown to be one of the most prevalent risk factors of violence and attitudes toward delinquency (Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2017; Jennings et al., 2016;

Peacock et al., 2003). The results for age revealed that it was a strong predictor among intra-ethnic Latino subgroups of violence for younger respondents than older respondents in the Mexican/Mexican American and other Latinos but with small effect size. In addition, age was shown to be a significant predictor of delinquency for the Mexican/Mexican American, Puerto Rican, and other Latino groups. However, age was also shown to be significant predictor of delinquency for older respondents than younger respondents for the Cuban/Cuban American group. Please note that the significance level for the Cuban/Cuban American group did not meet the practical bootstrapping level. Moreover, the results supported the age-graded theory: there were certain subgroup differences of respondents in the study aged 9–17 and 18–26 were found to be significantly less likely to be violent and delinquent.

Implications of Findings

This research utilized Sampson and Laub's (1993) age-graded theory as its framework to form the variables to examine violence and delinquency among Latino youth (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos). The variables developed in this study derived from a meta-analytic literature review on life course perspective from Fenimore et al. (2019). The life course approach, based on Sampson and Laub's (1993) age-graded theory on antisocial behavior presents two primary points. According to the life course concept, the etiology of criminal behavior undergoes changes across an individual's lifespan (Sampson & Laub, 1993). According to the life course approach, it is posited that distinct causes underlie several problematic paths, with each trajectory potentially having

a few distinct causes (Sampson & Laub, 1993). However, it is acknowledged that certain causal mechanisms may overlap and function between multiple trajectories (Benson, 2012). Furthermore, this particular theoretical framework lays significant stress on the significance of the experiences that individuals encounter throughout the process of aging (Sampson & Laub, 1993). From this particular standpoint, it is held that individuals who share comparable backgrounds may exhibit significant variations in their outcomes, contingent upon the unique experiences they encounter along their life course (Sampson & Laub, 1993). According to Sampson and Laub (1993), individuals may experience varying forms of informal social control at different points throughout their lives (Benson, 2012). The informal social controls identified by Sampson and Laub encompass various domains, including family, parental influences, school environment, peer relationships, and residential mobility (Benson, 2012). Additionally, Sampson and Laub recognized the significance of individuals' foreign-born status and their ancestry in specific minority subgroups (Benson, 2012; Siegel, 2019). The results of this study provided support for certain elements of Sampson and Laub (1993) age-graded theory and indicated that ethnic subgroups revealed variations in the informal social control mechanisms that influence violent and delinquent behaviors.

The rationale for conducting this study was based on a fundamental assumption that ancestral variations among Latino intra-ethnic subgroups could inadvertently influence statistical outcomes in aggregated research (Chen & Zhong, 2013; Estrada-Martínez et al., 2011; Estrada-Martínez et al., 2013; Estrada-Martínez et al., 2017; Fenimore et al., 2019; McGlamory-Evans, 2019). This study corroborated previous researcher since the comprehensive analyses of the dependent variables failed to account

for crucial information that was included in the disaggregated models. Based on the cumulative multivariate output for violent and delinquent behavior, an investigator may erroneously assume that the results are applicable to all intra-ethnic Latino subgroups. However, further analysis through disaggregated testing revealed that the predictors of violence differed between Mexicans/Mexican Americans, Puerto Ricans, and other Latinos, but not between Cubans/Cuban Americans nor Central/South Americans. Furthermore, delinquency was a predictor that differed between Mexicans/Mexican Americans, Cubans/Cuban Americans, and Puerto Ricans, but not between Central/South Americans and other Latinos. The findings of this study indicated that the synthesis of research studies on Latino samples may result in the exclusion or distortion of significant information, the identification of inaccurate predictors, and the potential for researchers to generalize about the Latino sample that may not be applicable to all its subgroups due to effect sizes.

Some scholars may argue that this research aligns with other theoretical frameworks such as social control theory, differential association theory, or social disorganization theory. Hirschi (1969) is credited as the initial scholar to introduce the social control theory. According to Hirschi, variables such as parental/family attachment, school connection, engagement, and dedication to future goals have been identified as protective factors against antisocial tendencies (Gottfredson & Hirschi, 1990; Hirschi, 1969). Since its establishment, subsequent social control theorists have expanded upon the framework by incorporating parental control, parental educational expectations, and school difficulties as supplementary social factors that influence teenage violence and nonviolent delinquency (Jiang & Peguero, 2017; Karriker-Jaffe et al., 2013). However,

one study tested this theoretical approach toward disaggregation of Latino subgroups (McGlamory-Evans, 2019). The study failed to meet the basic premise of theoretical design because it did not ascertain differences of social bonds among the Latino subgroups (McGlamory-Evans, 2019). The study was also not able to meet acceptable internal reliability measures to adequately reach statistical significance.

Differential association theory, developed by Sutherland (1947), believed that crime can be understood as a phenomenon that arises through a process of learning, which has the potential to impact individuals between many cultural contexts. Learning through motives, attitudes, and interactions with others would influence crimes to be committed (Sutherland, 1947). A previous study attempted to test this theory but fell short in its findings due to internal reliability of the variables that aligned with differential association theory (McGlamory-Evans, 2019). The results of the disaggregated model revealed that having delinquent friends was shown to be a protective factor against violence in the Puerto Rican sample whereas it was identified as a risk factor in the Mexican/Mexican American sample (McGlamory-Evans, 2019). This study found higher social causes of violence along with fewer signs of nonviolent delinquency among Puerto Ricans compared to Mexican/Mexican Americans (McGlamory-Evans, 2019). However, the analysis did not find delinquent friends to be a predictor for delinquency among Mexicans/Mexican Americans (McGlamory-Evans, 2019).

The core tenet of social disorganization theory posits that crime is a consequence of disorganized communities wherein the breakdown of informal social constraints leads to the emergence of criminal cultures (Shaw & McKay, 1942). As the influence of societal regulations diminishes, there is an observable reinforcement and

intergenerational transmission of deviant cultural values, exemplified by the formation and perpetuation of gangs (Shaw & McKay, 1942). Moreover, the degradation of group cohesion and subsequent increase in criminal activity can be attributed to alterations within the community, encompassing both social and economic transformations (Bursik Jr, 1988; Shaw & McKay, 1942). It has been argued that this theory could expand to include longitudinal, individual, other crimes, and self-reported data (Bursik Jr, 1988). However, examining macro level data of systemic and community level risk of violence and delinquency lies outside of the scope of this study. A relevant argument could be made to integrate these findings to a more integrated theory of crime and behavior. This study negates the traditional social disorganization by showing how the behaviors of violence and delinquency did change within Latino subgroups with age and that there were statistical differences between subgroups.

With regards to practice, this study expanded upon the research conducted by Fenimore et al. (2019) by investigating the influence of life course risk factors within a narrower demographic. Unlike prior research, this study disaggregated the Latino sample by ancestral origin. The results provided rigorous support for Sampson and Laub's age-graded theory as it expanded between intra-ethnic Latino youth (i.e., Mexicans/Mexican Americans, Cubans/Cuban Americans, Puerto Ricans, Central/South Americans, and other Latinos). This research can be utilized as a framework for prospective research on Latinos.

The primary objective of this study was to investigate the relationship between life course risk factors, violence, and delinquent behaviors within five distinct Latino subgroups with a specific emphasis on the criminological perspective. However, the

findings obtained from this study may also hold relevance and applicability to several other academic disciplines. As an example, the results of this study have identified (e.g., parental engagement, school trouble, neighborhood perception, sensation seeking, and deviant peers) predictors of violence between all five intra-ethnic Latino subgroups, and all but parental engagement as predictors of delinquency. In addition, all the predictor variables were significant between Mexicans/Mexican American, Puerto Rican, and other Latino groups, but not Cubans/Cuban American and Central/South American groups. Also, delinquency was predicted between Mexicans/Mexican American, Puerto Rican, and Cubans/Cuban American groups, but not Central/South American and other Latino groups. This information could be utilized by practitioners, psychologists, and sociologists to supplement their assessment tools for their patients or clients who fit these criteria. One suggested implementation of this study is through the use of an assessment tool, the Compendium of Assessment Tools, which is currently being utilized with this sample (Orpinas et al., 2013).

Furthermore, a significant inference arising from this study is the obscuring of social control and differential association predictors for both violent and nonviolent criminality within the two subgroups, as indicated by the aggregated analyses. This discovery aligns with previous assertions made by researchers that when doing aggregated surveys, the cultural and historical distinctions among Latino ethnicities tend to be obscured (Chen & Zhong, 2013; Estrada-Martínez et al., 2013). Researchers must recognize the presence of latent effects in studies that combine intra-ethnic groups and obscure the influences of variables (McGlamory-Evans, 2019). It is advisable for researchers to refrain from merging several nationalities throughout the process of data

analysis since this practice may lead to detrimental misrepresentation of information. Such misrepresentation, in turn, has the potential to influence policymakers in their decision-making about public administration (Orton et al., 2011; Shonkoff & Bales, 2011).

Limitations of the Study

As stated throughout previous chapters, this study does bear some limitations to consider. First, this study did not account for generational history nor immigration status. Previous studies have attempted to aggregate these identity statuses within the Latino sample (Jiang & Peguero, 2017; McGlamory-Evans, 2019). Previous studies did not find significance between certain generations of immigrants, which may be due to sampling challenges (Jiang & Peguero, 2017). Secondly, this study only considered two Waves of data to examine differences among Latino subgroups. Other studies compared Latino subgroups using all Waves, but they have run into sampling challenges as well (Estrada-Martínez et al., 2017). This study ran into sampling challenges that had to exclude one of the identified Latino subgroups, Chicano/Chicana, because there were too few respondents who self-identified as such to produce estimates. Also, the Cuban/Cuban American group was shown to have sampling challenges with outcome prediction due to not meeting the bootstrapping threshold. Meaning that even though the Cuban delinquency regression modeling was shown to be significant none of the variables were able to explain the variation of the outcome, and therefore would imply that there are other variables that would explain delinquency outcomes for this group.

Another limitation of this study is the sample itself. This study only utilized the question that asked respondents of their ancestral origin. A further attempt to disaggregate

the Latino sample would be to examine ancestral origin by nationality. For instance, Central/South Americans are considered an aggregate form of Latinos and would therefore have to be further disaggregated by nationality. Sampling size is another caution for researchers to consider. This study showed that the sample of intra-ethnic Latino subgroups were unweighted and therefore it was difficult when considering missing data issues to not violate power analysis. The samples may also have had issues with identifying with their ancestral identity, therefore choosing the "other Latino" option. Nevertheless, dealing with missing data is a considerable challenge when dealing with subgroups. Implementing KNN imputation for missing data was the favorable option in terms of bias and sample size. However, the missing data patterns were difficult to determine the extent of the problem of missing data. This study did conduct the Little's MCAR test and that was determined not the case (Little, 1988). Therefore, the limitation was to determine the extent of whether the missing data was MAR or NMAR (Tierney & Cook, 2018).

Apart from the samples, certain variables had to be adjusted to fit the best model for this study. To honor the spirit of statistical rigor, each of the independent predictor variables were tested to ascertain a minimum acceptable level of internal reliability of $\alpha = .70$. Therefore, variables such as neighborhood perception and sensation seeking were adjusted to be measured using a single survey item. Lastly, neighborhood socioeconomics were not considered in this study. Various types of neighborhoods can be identified, including mixed communities, characterized by the presence of diverse racial groups, and homogenous neighborhoods mostly composed of a single ethnic group (Estrada-Martínez et al., 2013). In addition, other researchers should caution the results of this study as most

of the statistical outcome of the variables measured resulted in small effect sizes, which is limited toward practical application or generalizations.

Future Research Directions

Future research should aim to investigate various aspects of intra-ethnic Latino samples, including the associations between delinquent peers, the number of delinquent peers, gender disparities, the nature of school trouble, the nature of school engagement, the extent of violent and nonviolent delinquent behaviors, and the socioeconomic status of the neighborhood. Researchers should further seek to understand why Puerto Ricans score significantly higher among several of the risk factor variables indicated from this research. Further investigation is imperative to understanding some of the outcomes of this study, such as the findings that Cubans/Cuban Americans and Central/South Americans were predicted to not be significant for violent outcomes and that Cubans/Cuban Americans, Central/South Americans, and other Latinos were not predicted to show delinquency. Also, future studies should more closely examine the understanding of parental engagement and family dynamics. Previous studies show mixed results when including family dynamics (McGlamory-Evans, 2019) whereas this study showed that parental engagement was a significant predictor of violence but not delinquency.

The research findings revealed that female adolescents of Latino descent exhibited a higher inclination towards engaging in violent and delinquent behavior compared to their male counterparts. This observation aligns with the broader pattern observed in the sample in certain research (Smokowski et al., 2017). However, this is not consistent with most of the criminological research on gender (Bondy et al., 2019;

Bostaph, 2010; Harris-McKoy & Cui, 2013; Steketee et al., 2013). Future research should prioritize the examination of sex differences within Latino subgroups and explore how these differences may vary between other intra-ethnic communities.

Future research should experiment to examine internal reliability scales for measuring neighborhood perception and sensation seeking. This study, due to not meeting rigorous internal reliability minimums, had to adjust to only one survey item, as was done in previous research, to measure neighborhood perception and sensation seeking (Estrada-Martínez et al., 2017; Lydon-Staley & Geier, 2018).

The final recommendation, which holds significant importance, is the necessity for future research studies that are disaggregated and that concentrate on more Latino intra-ethnic and generational groups. The ramifications of this work are constrained in scope. Specifically, researchers should consider measuring subgroups of Latinos by nationality. Finally, a time series analysis on the level of violence and delinquency differs between different cohort Waves of data.

Conclusion

The Latino sample in the United States is experiencing significant exponential growth (Hockenberry & Puzzanchera, 2016). This is evident in the Latino adolescent community, which accounts for a large proportion of those who are adjudicated (Hockenberry & Puzzanchera, 2016). The issue of crime and delinquency is a matter of great concern for both the general public and policymakers due to the adverse depiction of Latinos in the media (Catalano, 2013; Kunovich, 2017). This study utilized Sampson and Laub's (1993) age-graded theory as frameworks to investigate the role of life course risk factors in predicting both violent and nonviolent delinquent actions within intra-

ethnic Latino youth (i.e., Mexicans/Mexican Americans, Cubans/Cuban Americans, Puerto Ricans, Central/South Americans, and other Latinos).

Previous research on the life course has commonly grouped individuals of Latino descent based on their nationality or generational status (Estrada-Martínez et al., 2017; Jennings et al., 2010; Jennings et al., 2016; Jiang & Peguero, 2017; Maldonado-Molina et al., 2009). The purpose of this study was to examine life course risk factors as predictors of violent and delinquent behaviors between Latino youth groups (i.e., Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos). Also, more importantly, this study disaggregated the variance of violence and delinquency of these six intra-ethnic Latino subgroups. The results of this research showed that predictors of violence and delinquency varied significantly between Mexicans/Mexican Americans, Puerto Ricans, Cubans/Cuban Americans, Central/South Americans, and other Latinos. The present discovery validates the hypotheses put forth by previous scholars who argued that there exist underlying ethnic influences within combined research investigations, and noteworthy outcomes are obscured among merged samples (Chen & Zhong, 2013).

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