THE ROLE OF CULTURAL VARIABLES IN THE VICTIMIZATION-DELINQUENCY OVERLAP AMONG LATINO YOUTH: A GENERAL STRAIN THEORY PERSPECTIVE

A dissertation presented

By

Rebecca M. Cudmore

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ABSTRACT OF DISSERTATION

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Abstract

Although criminological research has provided support for the relationship between victimization and delinquency more broadly, little is known about the relationship between victimization and delinquency (i.e. the victimization-delinquency overlap) among certain ethno-racial minorities, including Latino adolescents. Among Latinos, important cultural factors include familial support, immigration, and acculturation/enculturation. Previous research has emphasized the importance of taking into account stressors related to immigration and the acculturation process. These findings highlight the importance of examining these cultural factors to further our understanding of the victimization-delinquency overlap among Latino youth. Extending this body of literature to include factors salient to Latinos is particularly timely given the recent rapid growth of this population in the United States.

One approach for conceptualizing the victimization-delinquency overlap is to examine the relationship within a general strain theory (GST) framework. However, there are several gaps in the GST literature that this study intends to address. First, a more nuanced, culturally-sensitive understanding of the victimization-delinquency overlap among Latino youth will be gained from the proposed study. Second, the concept of victimization will be expanded to include a measure of polyvictimization, which has not been examined in previous GST studies. Finally, this study proposes to evaluate the role of several key emotions as mediators in the GST process.

The findings of this study are important for shaping policy and clinical practice, including school- and family-based interventions, and mental health treatment. The overarching goal of research on the victimization-delinquency overlap, and GST more specifically, is to better understand how victimized individuals go on to commit crime and thus develop prevention programs to dissuade criminal behavior. It is important to consider, however, that a one-size-fits-all approach to crime
prevention may not be most effective. Thus, incorporating cultural factors into the study of GST among Latino youth can help elucidate which cultural factors protect these adolescents from engaging in criminal activity and provide recommendations for relevant crime prevention policy.
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In the past 10 years the Latino population has grown considerably, in part due to increases in immigration (Humes, Jones, & Ramirez, 2011). However, there is a lack of emphasis on Latinos within violence and criminological research to reflect these demographics shifts. For context, according to the Bureau of Justice Statistics, in 2015, the rate of violent crime victimization per 1,000 persons age 12 and older was 18.6 for the general population, 17.4 for Whites, and 16.8 for Hispanics (Truman & Morgan, 2016). Data from the National Survey of Children’s Exposure to Violence (NatSCEV) suggest the delinquency rate for those 10 and older is 40.5% for the general population, 40.1% for Whites, and 43.0% for Hispanics (D. Finkelhor, personal communication, February 20, 2017). Based on NatSCEV data we also know that approximately 18.1% of male youth and 13.3% of female youth in the U.S. experience both victimization and delinquency (Cuevas, Finkelhor, Shattuck, Turner, & Hamby, 2013). Despite general understanding of the rates and processes involved in the victimization-delinquency overlap more broadly, there is still very little known about the shared relationship between victimization and delinquency among Latino youth. Thus, more information is needed to understand the relationship between victimization and offending among this underserved and understudied population.

Public perceptions as well as early theoretical perspectives assumed that criminals and victims were distinct groups (Fagan, Piper, & Cheng, 1987). Perspectives in criminology tended to focus on predicting criminal behavior or predicting victimization. However, the existence of a link between victimization and delinquency among children and adults is supported by a substantial body of recent research (see Jennings, Piquero, & Reingle, 2012 for a review). In addition, studies have found that victims and offenders share many characteristics and risk factors (Broidy, Daday, Crandall, Sklar, & Jost, 2006; Gottfredson, 1981; Jennings, Higgins, Tewksbury, Gover, & Piquero, 2010; Lauritsen,
Laub, & Sampson, 1992; Lauritsen, Sampson, & Laub, 1991). Research also shows that youth who experience both delinquency and victimization (compared to primarily delinquency or primarily victimization) showed greater levels of mental health problems (Cuevas, Finkelhor, Turner, & Ormrod, 2007). Understanding the victimization-delinquency overlap is important because individuals who experience both delinquency and victimization are more vulnerable and at-risk. Identifying those at greatest risk for delinquency and/or victimization may aid in the development of preventative and treatment efforts.

Although it is apparent that victims and offenders are similar in many ways, and may even represent a homogenous group (Fagan et al., 1987), the underlying mechanism linking these experiences is not entirely clear. Perspectives in criminology have typically focused on how criminal involvement increases the risk of victimization (Lauritsen et al., 1991; Sampson & Lauritsen, 1990) or how common underlying factors cause both victimization and offending (Gottfredson & Hirschi, 1990; Schreck, 1999). However, these approaches ignore a subset of individuals for whom delinquency or risky behavior has little or no role in their victimization or cases in which the delinquent behavior does not precede the victimization (Cuevas et al., 2007). An alternative approach is to view victimization as a cause of subsequent delinquency. General strain theory (GST) provides a promising theoretical framework that links victimization and delinquency in a causal chain without attributing them to a third underlying factor (Agnew, 2007; Agnew & White, 1992). Specifically, GST proposes that strain (often in the form of victimization) produces negative emotions which in turn invoke delinquent methods of coping.

Agnew’s theory draws attention to the importance of clusters of victimization experience, which he refers to as strain clustering. Although the theory recognizes the importance of examining multiple victimizations, GST studies often fail to consider the full extent of victimization experiences...
(e.g. Hay, Meldrum, & Mann, 2010; Patchin & Hinduja, 2010). Research suggests that a measure of polyvictimization is a better predictor of deleterious outcomes than individual measures of victimization (Finkelhor, Ormrod, & Turner, 2007b; H. A. Turner, Finkelhor, & Ormrod, 2010). Polyvictimization has been defined as “a measure of the total number of recent victimization types a child experience[s]” (Finkelhor et al., 2007b, p. 13). In relation to the focus of this dissertation on Latinos, recent findings confirm that polyvictimization predicts a number of negative outcomes (i.e., lower school performance and psychological distress) among Latino adolescents above and beyond individual types of victimization (Sabina & Cuevas, 2013). Until recently (Cudmore, Cuevas, & Sabina, 2015) studies have not specifically examined the impact of this conceptualization of polyvictimization on delinquency among Latino adolescents.

Most importantly, studies of GST using Latino samples fail to include cultural variables that may play an important role in the relationship between victimization and delinquency. Research highlights the importance of considering culture-specific analysis of youth victims (Comas-Diaz & Fontes, 1995; Marin, 1993). Among Latinos, some of these cultural variables include the importance placed on family, the process of acculturation, and immigration status (Berry, Phinney, Sam, & Vedder, 2006). In addition, research emphasizes the importance of taking into account stressors related to immigration and the acculturation process (Berry et al., 2006). Given previous research indicating certain culture-specific factors (e.g. enculturation, immigrant status, family support) protect Latino youth from the deleterious effects of victimization on negative affect (e.g. Bauman & Summers, 2009), these factors may be important moderators in the victimization-delinquency relationship proposed by GST, particularly in the relationship between victimization and negative affect. GST recognizes that a number of factors condition the key theoretical relationships between strain, negative affect, and delinquent coping. However, empirical tests of GST have not explored whether key
cultural variables impact those relationships. If a GST model is to adequately explain the relationship between victimization and delinquency among Latino youth, it must incorporate factors relevant for this population. Consequently, models that do not include these relevant moderating variables may be misspecified.

This dissertation seeks to help fill the gap in the violence and victimization literature by utilizing GST to explain: (1) the mediating mechanisms through which victimization impacts delinquency and (2) the moderating process that may impact the victimization-delinquency overlap among Latino youth. Previous studies of GST have not utilized measures of polyvictimization, thus seriously overestimating the impact of individual victimization experiences; therefore this dissertation uses a measure of polyvictimization to more comprehensively capture the extent of victimization. Additionally, although studies of GST are abundant, little is known about how the theory applies to specific populations such as Latino adolescents. The importance of culturally-relevant factors has not yet been incorporated in the GST theoretical model. Therefore, the proposed model will examine the role that cultural factors play in the relationship between victimization, negative affect, and delinquency. Finally, although several tests of GST have included Latinos in their samples, previous studies have relied on non-representative samples of Latino youth in the U.S. or on a limited number of GST-related variables (Hoskin, 2013; Jennings, Piquero, Gover, & Pérez, 2009; Pérez, Jennings, & Gover, 2008; Rodriguez & Belshaw, 2010). Thus, the data used in this dissertation is more inclusive of the diversity of the Latino population in the U.S. and better able to make generalizations.

In chapter 2, I begin with a review of the relevant literature on GST. This literature focuses on the role of negative affect, gender, and culture-specific conditional variables in studies of GST. At the end of the chapter I present the hypotheses that will guide analysis. In chapter 3, I describe the dataset, sampling strategy, measures, and analytic strategy used in the current study. Chapter 4
presents the results from the analysis, including measurement models, structural components, and mediating and moderating effects. Finally, chapter 5 discusses the results from the analyses, implications for theory and policy, limitations of the study, and suggestions for future research.
CHAPTER 2: LITERATURE REVIEW

General Strain Theory

There are a number of potential theoretical explanations for the widely established victimization-delinquency overlap. General strain theory (GST) provides one theoretical framework for understanding this overlap. GST draws on findings from the stress literatures in psychology and sociology in order to identify sources of strain that may lead to criminal behavior (Agnew, 2006b). Agnew (2006b) explains that earlier strain theories typically focused on a limited number of strains, with particular emphasis on an individual’s inability to achieve a goal. For instance, one form of classical strain theory links delinquency to an inability to achieve monetary success (Merton, 1968). Agnew (1985, 1992, 2001, 2006a) argues that strain can have a number of different sources, including but not limited to, economic failure. In this way, Agnew combines strain theory’s focus on inability to achieve one’s goals with the stress literature’s emphasis on the loss of things we value and negative treatment by others (Agnew, 2006b). In short, GST proposes that strain produces negative emotions, which in turn increase the likelihood that one will cope through delinquent behavior.

Agnew (2006b) defines strains as “events or conditions that are disliked by individuals” (p.4). According to Agnew (2006b) there is a broad range of strains that can contribute to crime by increasing negative emotions and thus creating pressure to cope with strains through criminal behavior. The three general types of strain identified by GST include: 1) the failure to achieve positively valued goals, including monetary, autonomy, and status goals; 2) the loss of a positively valued stimulus, such as a significant relationship or loved one; 3) and the presentation of a negative stimulus, such as abuse.

According to GST, experiences of strain will be accompanied by negative emotional reactions (i.e., negative affect; Agnew, 2006b). Agnew argues that negative affect produced by strain increases
the likelihood of crime for several reasons. First, because negative emotions are so unpleasant they create pressure to correct perceived injustices; one method is through illegitimate coping (i.e., delinquency). Second, they reduce one’s ability to use legal coping mechanisms to handle stressors because highly emotionally dysregulated individuals are less able to assess their situation and communicate with others (factors that are important for prosocial coping). Finally, negative affect reduces the perceived cost of illegal coping strategies. For instance, angry individuals can experience a sense of power that makes them less likely to assess the long-term negative consequences of criminal behavior. Several negative emotions have been highlighted in the GST literature, including anger, frustration, jealousy, malicious envy, depression, and fear. However, research suggests that the key negative emotions may be anger, depression, and fear because they create pressure for corrective action that can be alleviated by engaging in delinquent behavior (Agnew, 2006b).

Agnew (2001) argues that not all strains are equally likely to lead to delinquency. GST suggests that straining events will lead to crime only to the extent that they are: 1) seen as unjust, 2) seen as high in magnitude, 3) associated with low social control, and 4) create pressure or incentive for criminal coping. Some types of victimization are thought to act as strains leading to delinquency because they are high in magnitude, seen as unjust because of violated justice norms, and provide justification for crime for victims.

Although strains are unpleasant, GST must address the question of why they increase crime. Agnew (2006b) indicates that strains make individuals feel unpleasant and thus create pressure for some corrective action to remove the negative feelings (e.g. anger, fear, depression, anxiety). Crime is just one of many coping strategies and Agnew (1992) suggests only some strained individuals will choose the delinquent strategy. These individuals determine that delinquent behavior can aid in their coping process. For instance, crime may allow individuals to reduce or escape from their strains (e.g.
running away from home). Crime may also allow individuals to seek revenge on someone who wronged them (e.g. assaulting an abuser in retaliation). Finally, crime may allow individuals an opportunity to temporarily alleviate or escape from their negative emotions, for instance, by engaging in illegal drug and alcohol abuse. Agnew (2013) suggests that the likelihood of criminal coping, as opposed to legal coping, depends on individual characteristics and social resources (e.g. problem solving skills).

Research from outside criminology is also useful for understanding why strain can lead to criminal coping. Traumatic stress literature indicates that psychological trauma can hinder information processing and result in aggression or avoidance (Hartman & Burgess, 1993). Research also suggests that trauma causes hyper-arousal resulting in increased attention to potentially threatening information and decreased attention to alternative information in a given situation (Chemtob, Roitblat, Hamada, Carlson, & Twentyman, 1988). Thus, traumatized individuals are more likely to interpret ambiguous stimuli as threatening, seek additional evidence for threat, and react based on that perception of the situation. This research suggests that individuals who have experienced trauma have greater sensitivity to threat, more hostile attributions, and increased aggressive behaviors. Studies on the coping process also suggest that differential coping strategies may reflect differences in an individual’s circumstances (Coyne & Downey, 1991). Individuals who have experienced strain in the form of victimization may have learned maladaptive methods of coping with stressors by the very nature of their exposure to victimization (Pearlin, 1989). Thus, when they experience strain and the resulting negative emotions, the only coping mechanisms familiar to them are delinquent. Taken together, this body of literature suggests that victimized individuals may have both internal and external factors making them more likely to turn to crime in order to cope with the negative emotions caused by strain.
A large body of literature has tested GST. Agnew’s (1985) first revision of classical strain theory utilizes data from the Youth in Transition survey to examine the impact of environmental aversion (i.e. parental punitiveness, mean teachers, dissatisfaction with school) on anger and several measures of delinquency, including serious delinquent acts (e.g. robbery), interpersonal aggression (e.g. serious fights), and status offenses (e.g. skipping school). Results indicate that adolescents located in aversive environments experience more anger, which in turn has a significant positive effect on all three measures of delinquency. In addition, these findings hold up even after controlling for social control and subcultural-deviance variables, lending support for GST.

Other researchers have shown general support for GST (Aseltine, Gore, & Gordon, 2000; Baron, 2004; Mazerolle, 1998; Paternoster & Mazerolle, 1994; Piquero & Sealk, 2010; Tittle, Broidy, & Gertz, 2008). Overall, most tests of GST find a statistically positive relationship between measures of strain and measures of delinquency. Where the evidence is equivocal, however, is in the underlying functions of the mediating and moderating factors implied by GST (Agnew 2006). For instance, a diverse set of measures of negative affect have been used in the literature, with some studies finding that negative emotions mediate the relationship between strain and delinquency (Aseltine et al., 2000; Bao, Haas, & Pi, 2004; Watts & McNulty, 2013) and others finding no mediation effect (Baron, 2004; Patchin & Hinduja, 2010; Peck, 2013). The inclusion of moderating factors, including gender, has also been inconsistent in studies of GST—-with some studies including them and others omitting them. When conditioning variables are included in tests of GST, some moderators work and others do not. For instance, social support is a factor that has been included in several studies with conflicting results (See for instance, Green & Diaz, 2007; Hoskin, 2013; Moon, Hays, & Blurton, 2009; Paternoster & Mazerolle, 1994). Given previous inconsistencies regarding the
mechanisms connecting strain to delinquency in the literature, this research seeks to clarify the key relationships proposed in GST.

**GST and Victimization**

Studies suggest that victims and offenders share many characteristics and risk factors (Broidy et al., 2006; Gottfredson, 1981; Jennings et al., 2010; Lauritsen et al., 1992; Lauritsen et al., 1991). Although it is apparent that victims and offenders are similar in many ways, the underlying mechanism linking these experiences is not entirely clear. Perspectives in criminology typically focus on how criminal involvement increases the risk of victimization (Sampson & Lauritsen, 1990) or how common underlying factors cause victimization and offending (Schreck, 1999). For instance, routine activities theory and subcultural theories emphasize how risky lifestyles and environmental conditions create opportunities for victimization and offending (Anderson, 1999; Schreck, Stewart, & Osgood, 2008; Smith & Ecob, 2007; Taylor, Freng, Esbensen, & Peterson, 2008). In addition, researchers have argued that individuals who are low in self-control are at increased risk for crime victimization (Gottfredson & Hirschi, 1990; Schreck, 1999). These theories focus on how crime causes victimization. A distinctive approach is to view victimization as a cause of subsequent delinquency. GST provides one such approach for conceptualizing the relationship between victimization and offending.

One of GST’s primary contributions to the strain literature is the addition of several new categories of strain, including the presentation of negative stimuli (Agnew, 2002). GST recognizes a number of victimization experiences (considered negative stimuli) that are likely to cause delinquency and have been neglected by other theories of crime (Agnew, 2002). Empirical tests of GST include a wide variety of victimization types, and the results provide strong support for the victimization-delinquency relationship. Studies suggest that childhood and adolescent crime victimization (e.g. theft,
assault) and maltreatment (e.g. parental neglect) significantly increase the likelihood of engaging in a range of delinquent outcomes, with some evidence that the effects persist into adulthood (Agnew, 1985, 2002; Agnew & White, 1992; Hay & Evans, 2006; Jackson, Hanson, Amstadter, Saunders, & Kilpatrick, 2013; Mersky, Topitzes, & Reynolds, 2012; Moon, Morash, McCluskey, & Hwang, 2009; Sigfusdottir, Kristjansson, & Agnew, 2012; Thornberry, Henry, Ireland, & Smith, 2010; Watts & McNulty, 2013). A link has also been established between peer victimization (i.e., peer bullying, peer rejection) and delinquency (Hay et al., 2010; G. E. Higgins, Piquero, & Piquero, 2011; Jackson et al., 2013; H. Jang, Song, & Kim, 2014; Moon, Blurton, & McCluskey, 2008; Sigfusdottir et al., 2012). There is also mixed support for the impact of childhood and adolescent sexual abuse on delinquency (Aseltine et al., 2000; Watts & McNulty, 2013).

Appropriately measuring victimization in models of GST is a complex issue within this body of literature. Previous studies are often limited by considering only one type of victimization (e.g. physical abuse; Hay & Evans, 2006) or examining the individual effects of each type of victimization. For instance, a recent study by Watts and McNulty (2013) included only childhood physical and sexual abuse in their measure of victimization strain. Other studies have solely used measures of bullying victimization (Hay et al., 2010; H. Jang et al., 2014; Patchin & Hinduja, 2010). Including only one or a few types of victimizations that youth experience has significant limitations. Without controlling for a wide range of victimization experiences, the impact of a specific form of victimization may be overestimated (H. A. Turner et al., 2010). For instance, studies that solely measure the impact of physical abuse on mental health outcomes may overestimate the impact of physical abuse because those outcomes may actually be related to the co-occurrence of physical abuse and other types of abuse (e.g. sexual abuse). In addition, including only one type or a limited number
of victimization types can underestimate the full burden of victimization exposure that youth experience (H. A. Turner et al., 2010).

Agnew points to the fact that strains have a cumulative impact on delinquency and that the timing and conditions of strain (e.g. clustering, accumulation) are important predictors of criminal coping. Agnew (1992) describes the clustering of strains as the occurrence of multiple strains in a relatively short period of time. Thus, stressful life events clustered in time will have a more significant negative impact on delinquent coping than those strains more evenly dispersed in time. This may be because the clustering of strains within a short period of time will overwhelm an individual’s coping resources (G. W. Brown & Harris, 1978; Thoits, 1983). A similar concept, accumulation of strains is conceptualized as the process by which the impact of newer strains is dependent on the residual impact from older strains. Several studies of GST have included measures of these conditions of strain in order to test their independent contribution. For instance, Slocum, Simpson, and Smith (2005) found that clustering of strains in time was consistently related to non-violent delinquency, drug use, and violent behavior, but that accumulation of strains only helped to predict drug use. Botchkovar and Broidy (2010) also found that strains accumulated over a close period of time and associated with anger increased the likelihood of delinquent coping.

Agnew (1985) also indicates that adolescents located in aversive environments from which they cannot escape are more likely to be delinquent. Polyvictimization is thus expected to increase one’s involvement in delinquency because the individual will be exposed to more than one aversive domain (e.g. school, home, etc.) that may deplete their coping resources and make it more difficult to escape adversity. This is also consistent with De Coster and Kort-Butler (2006) findings that stress can spillover to other life domains (e.g. home, school).
Although studies from other disciplines have recently highlighted the deleterious effects of polyvictimization, the concept has not been widely used in evaluating GST or within a GST framework. The experiencing of multiple types of victimization across a specific period of time has been referred to as polyvictimization (Finkelhor, Ormrod, & Turner, 2007a; Finkelhor et al., 2007b) and multi-type maltreatment (Higgins & McCabe, 2000). Research conducted with children suggests that multiple forms of victimization are common. For instance, in a nationally representative study of children and adolescents, 80% of the youth had experienced one form of victimization and 66% had experienced more than one type of victimization in their lifetime (Clemmons, DiLillo, Martinez, DeGue, & Jeffcot, 2003). In a similar study, the authors found that of the 71% of youth who reported at least one type of victimization experience, 69% reported more than one type of victimization (H. A. Turner et al., 2010).

Empirical studies of polyvictimization point to the harmful effects of experiencing a large number of different victimization types. For instance, children who experience multiple types of victimization have been shown to exhibit increased trauma symptoms (i.e., anger, depression, and anxiety) substantially beyond the influence of individual victimizations (Finkelhor et al., 2007a, 2007b; H. A. Turner et al., 2010). These findings suggest that some individuals may experience high levels of cumulative exposure to multiple forms of victimization and that research examining multiple types of victimizations is important for a comprehensive understanding of the overall effect of victimization (Finkelhor et al., 2007a, 2007b; H. A. Turner et al., 2010). To date, studies of GST have not utilized this conceptualization of polyvictimization. This is problematic because the inclusion of single-type victimizations does not control for the co-occurrence of other types of victimization, nor does it allow for measurement of clustering and accumulation of stress highlighted by Agnew. In addition, given empirical findings indicating that polyvictimization is associated with higher levels of
psychological distress, it is logical to assume that polyvictimization would significantly impact the GST-related processes (Cuevas et al., 2007).

**Negative Affective States**

One of the underpinnings of GST is that strain increases the likelihood of delinquency because it produces negative feelings, which in turn increase the need for corrective action that can be achieved through crime. GST assumes that the primary negative emotion in this process is anger because it is an unpleasant emotion and is thus associated with a strong desire to respond to the perceived injustice of the strain (Agnew, 2006b). In addition, angry individuals are less able to utilize legal coping strategies and less concerned with the costs of crime (Agnew, 2006b). Studies utilizing measures of anger produce mixed findings. A number of studies find that anger mediates the relationship between strain and delinquency (Bao et al., 2004; Brezina, 1998; Broidy, 2001; Mazerolle, Piquero, & Capowich, 2003; Moon, Hays, et al., 2009; Pérez et al., 2008; Sigfusdottir, Farkas, & Silver, 2004). For instance, Ganem (2010) uses vignettes to assess negative emotions and the extent to which participants feel they would have engaged in a criminal act as a result. Findings indicate that anger is most likely to result from a personal, intentional, and unjustified affront and that anger significantly predicts intentions to hit someone. Other research shows minimal or no support for the mediating effect of anger (Moon, Hays, et al., 2009; Patchin & Hinduja, 2010; Wallace, Patchin, & May, 2005).

GST also predicts that depression will be associated with strain and will increase the likelihood of engaging in crime (Agnew, 2006b). Because depression is an unpleasant emotion, it will produce pressure for corrective action. Agnew (2006b) suggests that, like anger, depression decreases one’s ability to use legal coping mechanisms and reduces the perceived costs of crime. However, unlike anger, depression is associated with lethargy and thus less activity (Agnew, 2006b). Therefore, depression is expected to be less likely than anger to result in criminal activity (primarily aggressive
acts) because depressed individuals may lack the necessary energy. Studies of GST that include depression have also produced mixed results. Watts and McNulty (2013) find that the effect of childhood abuse on offending behavior works largely through depression. By contrast, other studies suggest that depression is not significantly related to delinquency and does not mediate the relationship between strain and delinquency (De Coster & Heimer, 2005; Peck, 2013). Some researchers suggest that depression is associated with inwardly directed coping and delinquency, such as suicidal behavior or substance abuse (Sigfusdottir & Silver, 2008). Other studies find that depression actually has a negative statistical relationship with measures of delinquency. For instance, in a study of GST among middle school adolescents in Korea, Moon, Morash, et al. (2009) find that depression is significantly and negatively related to property delinquency. Finally, some studies point to the co-occurrence of depression and other emotions such as anger, fear, and anxiety (Ngo & Paternoster, 2013; Sigfusdottir et al., 2004). Taken together, these findings suggest that the role of depression in GST is still ambiguous.

Anxiety has also been used as a measure of negative affect in GST studies. As with depression, studies utilizing measures of anxiety produce mixed findings (Hol list, Hughes, & Schaible, 2009; Kort-Butler, 2010). For instance, Aseltine et al. (2000) find no support for anxiety as a mediating factor in the relationship between stressful life events and delinquency in youth. However, some studies indicate that anxiety may co-occur with other emotions, such as anger and depression, to impact delinquency (Bao et al., 2004; Ngo & Paternoster, 2013). GST studies do not often include a measure of anxiety and therefore it is still unclear whether anxiety may work independently or alongside other emotions to produce illegitimate coping responses to strain.

Studies have documented that victimization can lead to a variety of negative emotions, including anger, depression, suicidal thoughts, frustration, and anxiety (Brezina, 1998; Carson,
Sullivan, Cochran, & Lersch, 2009; Hay & Evans, 2006; Moon et al., 2008; Peck, 2013; Wallace et al., 2005; Watts & McNulty, 2013). However, research testing the underlying role of negative affect in the victimization-delinquency relationship has been inconclusive. For instance, while some studies provide support for a full mediation GST model (Brezina, 1998; Hay & Evans, 2006; S. J. Jang & Johnson, 2003), others show that negative affect only partially mediates the relationship between victimization and delinquency (Carson et al., 2009; Manasse & Ganem, 2009; Moon et al., 2008; Moon, Hays, et al., 2009; Pérez et al., 2008; Watts & McNulty, 2013).

One limitation of this research is the discrepancy in how negative affect is conceptualized and measured in GST studies and is likely one reason for the mixed findings. In one early study, Agnew (1985) used factor analysis to create a scale measuring anger from nine items included in the Youth in Transition survey. Items included things like losing one’s temper, feeling irritated, and holding grudges. Subsequent studies tended to follow suit, combining items from questions included in secondary data sets (e.g. Supplemental Victimization Survey; National Youth Survey) or developing their own questions which were combined into scales measuring aspects of negative emotions (Broidy, 2001; Manasse & Ganem, 2009; Ngo & Paternoster, 2013; Peck, 2013; Piquero & Sealock, 2000; Sigfusdottir et al., 2004). These measures of negative emotions can be problematic because they are not based on validated measures. However, several studies have utilized established, validated measures of negative emotions in order to overcome this measurement issue (Aseltine et al., 2000; Lin, Cochran, & Mieczkowski, 2011; Sigfusdottir & Silver, 2008). For instance, Aseltine et al. (2000) used the five-item hostility subscale of the Symptom Checklist-90 to measure anger and 10 items derived from the Symptom Checklist-90 to measure anxiety (Derogatis, 1977). Studies using validated measures of negative emotions may produce considerably different outcomes than studies relying on newly developed questions intended to measure certain emotions.
Studies that utilize a range of emotions are also uncommon. However, given the complex nature of these emotions, it is important to clarify how these central emotions work together and independently to impact delinquency. Although anger appears to be most strongly related to delinquent coping, there is reason to believe that depression and anxiety are also important. However, the contribution of anxiety and depression may not be as straightforward as anger. Therefore, the current study seeks to elucidate the role that three negative affect variables central to GST have in relation to each other and to their impact on delinquency. This study also explores the variations in the mediating role of negative affect by gender.

**GST and Gender**

The original conceptualization of GST did not specifically address the issue of gender; however, Broidy and Agnew (1997) further developed GST in order to explain the relationship between gender and crime. The authors hypothesize four ways GST may explain disparity in crime rates between males and females. The first hypothesis is that males simply experience more strain than females. However, they note this hypothesis is not supported by the research. In fact, females tend to experience as much, or more, strain than males. Although it should be noted that, if victimization strain is to be considered separately, males experience more victimization than females (Lauritsen & Heimer, 2009). The second hypothesis states that types of strains vary across the sexes, with those experienced by males being more conducive to crime. In addition, it is suggested that males and females interpret strain differently. The third hypothesis is that males and females have different emotional responses to crime and that the male response tends to be more conducive to crime. It is proposed that males and females experience the same amount of anger but women also experience guilt. In addition, males may externalize emotional responding while females internalize emotional responding. Finally, males and females may differ in their likelihood of responding to strain and
negative affect with criminal coping. Amounts of social support and exposure to opportunities for crime for males and females can help explain the differential likelihood of delinquency across the sexes. The authors conclude that gender differences in crime are a function of the types of strains experienced, the emotional response to strain, and the use of criminal coping in response to strain and anger among males and females (Broidy & Agnew, 1997).

The issue of gender differences in crime has been addressed in many applications of GST. Although some studies find no differences in the causal process from strains through emotional reactions to crime between males and females (Hay et al., 2010; Hoffmann & Su, 1997), most of the studies specifically testing gender in the GST process do find significant differences. However, results from these studies diverge on the actual role of gender in the GST theoretical model. For instance, some studies find that males and females experience different types of strain (Jang 2007) and others find that they respond differently to similar types of strains (Drapela, 2006; Jang, 2007; Piquero & Sealock 2004; Al-Badayneh et al., 2012)—findings that support Broidy and Agnew’s (1997) hypotheses.

Studies from the GST literature have produced mixed findings regarding the relationship between victimization as strain, specifically, and delinquency for males and females. For instance, one study showed that childhood sexual abuse was significantly and positively associated with self-reported crime for males but not females (Watts & McNulty, 2013). Another study examining the relationship between experiences of physical abuse, sexual pressure, and victimization found that these negative stimuli were significantly and positively associated with delinquency among females but not males (Robbers, 2004). Conversely, Hay et al. (2010) found that while exposure to traditional bullying and cyber bullying was not significantly different between males and females, exposure to cyber
bullying was associated with an increased likelihood of engaging in internalized delinquent coping (i.e. self-harm and suicidal ideation) for males.

In an attempt to explain differential rates in criminal behavior between males and females, some studies examine the gendered role of emotions in the GST process. Findings from these studies can be divided in to those supporting the idea that males and females experience different emotions or clusters of emotions in reaction to strain (Al-Badayneh, Al-Khattar, Al-Kresha, & Al-Hasan, 2012; Broidy, 2001; Joon Jang, 2007; Kaufman, 2009; Piquero & Sealock, 2004) and those that show males and female vary in how they respond to those emotions (De Coster & Cornell Zito, 2010; Posick, Farrell, & Swatt, 2013). For instance, using a convenience sample of university students, Broidy (2001) examined the extent to which strain lead to anger and other negative emotions (e.g. depression, frustration, guilt) among males and females. Findings indicated that although males and females experienced similar levels of strain, they responded with different clusters of emotions (i.e. males responded with anger; females responded with other negative emotions). Conversely, in a study conducted in Iceland, Sigfusdottir and Silver (2008) found that females were more likely to respond to negative emotion with self-directed behavior (i.e. suicidal behavior) while males were more likely to respond with other-directed behavior (i.e. delinquency). This finding is in line with research suggesting that while males tend to show externalized reactions to strain, females tend to demonstrate internalized reactions to stress (Aneshensel, 1992; Leadbeater, Blatt, & Quinlan, 1995; Pearlin, 1989).

Another body of literature indicates that the conditional factors in the GST model are contingent upon gender (Topitzes et al 2012; Jennings et al 2009). Robbers (2004) found that the moderating effect of social support was only significant for females; thus, when females fail to achieve goals and have high levels of social support their likelihood of delinquency decreases. Kaufman
(2009) found that social support had a significantly larger impact on reducing the relationship between strain and depression for females than it did for males.

GST research that examines the entire theoretical model by gender tends to find a significant difference between males and females on one or more variables (Al-Badayneh et al., 2012; Broidy, 2001; De Coster & Cornell Zito, 2010; Drapela, 2006; Joon Jang, 2007; Kaufman, 2009; Piquero & Sealock, 2004). However, despite theoretical claims, the literature remains equivocal about the specific mechanism of gender differences in the GST model. Therefore, further research is needed to provide a more thorough, gendered understanding of GST. In addition, previous research has not explored gendered models of GST using samples of Latino youth, specifically.

**GST and Latinos**

It is vital to establish whether GST is general enough to explain crime in all subgroups of the population. Although GST has been the subject of much empirical testing, there has been less effort to understand the degree to which strain differentially affects specific racial and ethnic groups. The ways in which individuals cope with strain, both legitimately and illegally, may be in part influenced by the degree of strain experienced by that subgroup of the population as well as the availability of coping resources for that group. Individuals from minority groups may encounter different relative amounts of stressors as well as different kinds of stressors than Whites. In fact, research suggests individuals from ethnic and racial minorities are more likely than Whites to experience economic deprivation (Massey & Denton, 1993; Wilson, 1987), unemployment and underemployment (D. Williams & Collins, 1995; Wilson, 1996), criminal victimization (Truman & Morgan, 2016), and acculturative stress (Portes & Rumbaut, 2006; Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998). It should not be assumed that theoretical explanations for crime generalize to ethnic and racial minority populations. Therefore, the
current study tests the generalizability of GST among Latino youth in order to examine whether the theory operates differently in the Latino population.

Although tests of GST have included Latinos in their samples (e.g. Akins, Smith, & Mosher, 2010; Piquero & Sealock, 2010), research focusing on how processes highlighted by GST operate among this population is limited. In addition, GST research utilizing national samples of youth are limited. Several studies have attempted to test GST with exclusively Latino samples (Hoskin, 2013; Jennings et al., 2009; Pérez et al., 2008; Rodriguez & Belshaw, 2010). Pérez et al. (2008) find support for the impact of strain on delinquency and conclude that GST generalizes to Latino adolescents. Jennings et al. (2009) examine gender differences in GST-related processes among southwestern Mexican-American adolescents. Results show that the majority of the direct effects of strain persist after accounting for negative affect and the authors therefore conclude that the results provide mixed support for the moderating effect of negative emotions proposed by GST. Hoskin (2013) uses data from a sub-sample of Latino youth within the National Longitudinal Study of Adolescent Health (Add Health) to test the relationship between perceived prejudice at school and involvement in violent behavior. Although the results provide support for GST, the author does not measure negative affective states or victimization. Finally, Rodriguez and Belshaw (2010) use secondary data from the National Survey of Adolescents to compare Latinos and Whites on measures of GST and find that Latino youth are less likely than White youth to react to strain with delinquency. Although this study begins to address the concept of multiple measures of victimization, it does not evaluate the polyvictimized individuals (Finkelhor et al., 2007b).

**Culture-specific Conditioning Factors**

GST assumes that certain variables condition the effect of strain on delinquent outcomes. This is in line with findings from the stress literature indicating that not all who experience stress react with
negative outcomes and, furthermore, stressful experiences can sometimes actually promote one’s
capacity for coping (Haan, 1982). Therefore, conditions must be present that explain why stressful
experiences lead to distress and criminal coping for some individuals. Kessler, Price, and Wortman
(1985) suggest that differences in “vulnerability factors” (e.g. social support) help explain individual
suggest that the combination of strain, negative affect, and coping are not enough to understand why
some individuals commit crime; instead, research must consider additional individual factors, such as
one’s connectedness to other people. This may be of particular importance for understanding criminal
behavior among Latinos, as they are thought to place greater emphasis on family and community
(Keefe, Padilla, & Carlos, 1979; Mindel, 1980; Valenzuela & Dornbusch, 1994).

Studies of GST have typically examined five types of conditioning factors thought to promote
criminal coping: poor coping skills and resources, low levels of conventional social support, low social
control, association with criminal others and beliefs favorable to crime, and exposure to situations in
which the cost of crime is low and the benefit is high (Agnew, 2006b). Agnew (2006) indicates that
studies of conditioning variables provide mixed support, with some finding the variable in question
significantly influences the effect of strain on crime, while others do not. For instance, Robbers (2004)
used data from the National Youth Survey to test the role of social support in GST. Findings showed
that social support significantly moderated the relationship between some strains (i.e. failure to
achieve positively valued goals) and delinquency but not others (i.e. loss of a positively valued
stimulus; presentation of a negative stimulus). Despite equivocal findings, it is important to consider
the role that moderating variables have in the strain-crime chain.

Although some studies of GST have incorporated moderating variables in an attempt to explain
individual differences in stress response, these studies have not specifically considered the role that
variables relevant to particular ethnic/racial populations have in the GST model. Thus, the current study considers the importance of moderating factors that may be particularly salient for Latino youth, including family support, Latino orientation (i.e. maintenance of culture-of-origin), Anglo orientation (i.e. integration into host culture), and immigration status. The relationship between stress and response hinges on the resources available to facilitate coping. As with other moderators suggested in GST, culturally relevant moderators may be able to help explain the availability of resources and thus an individual’s response to strain (i.e. delinquent or prosocial).

It is important to note that these factors have not been entirely ignored by the GST literature. For instance, although family support has only been explicitly included in several studies, it has been included as an aspect of social support in the literature. Specific measures of acculturation and immigration status as conditional factors have been left out of the literature. However, both may be conceived in terms of one’s social ties to the community, which has been examined previously. This dissertation, however, is the first to conceptualize these factors as culture-specific variables and in terms of their value for the experience of Latino youth.

**Family support.** Social support is considered one type of coping resource and is defined as a “fund” of resources people can use to handle stressors (Thoits, 1995, p. 64). The importance of social support is not a new concept. Studies from the 1970s began to highlight the positive influence of social support on health outcomes (Caplan, 1974; Cassel, 1974, 1976; Cobb, 1976). Collectively, this body of literature tends to show that people with elaborate social networks and mutually supportive relationships engage in better coping behaviors in response to stress and have more emotional stability than individuals with fewer social networks (Liem & Liem, 1978). In addition, even the perception of emotional support from others is associated with better mental and physical health outcomes and is thought to buffer against the negative impact of strains on these outcomes (Thoits, 1995). Social
support can come from a family, friends, community, or significant others. However, support provided by family is particularly relevant for Latinos.

One of the most important cultural factors for Latinos is the emphasis placed on family, or familism (Huck et al., 2012; Marin, 1993). Familism refers to values, behaviors, and family structures that emphasize the importance of maintaining a strong extended family network (Coohey, 2001). Studies have demonstrated that familism may act as a protective factor against negative outcomes for Latino victims. Familism has been associated with increased academic well-being, psychological well-being, and decreased risk of depression, and anxiety (DeGarmo & Martinez, 2006; Harker, 2001; Osborne & Rhodes, 2001; Perreira, Fuligni, & Potochnick, 2010).

Although studies of GST that include measures of family support are uncommon (e.g. see Holt & Espelage, 2005; Moon, Hays, et al., 2009), a larger group of studies include measures of social support more broadly, which include support from family, friends, and others. These studies provide mixed findings for the role of social support. While some studies have shown that social support attenuates the relationship between strain and delinquency (Kort-Butler, 2010; Robbers, 2004), at least one study found that social support actually strengthens the strain-delinquency relationship (Moon, Hays, et al., 2009). Finally, Paternoster and Mazerolle (1994) find no empirical support for the importance of social support as a moderator in GST.

Although there is some evidence for the importance of social support, and family support more specifically (Holt & Espelage, 2005), in studies of GST, these findings are primarily limited to Caucasian samples. Given research on the protective role of familism, or family support, among Latinos, it is important to consider this potential moderating factor in a study of GST among this population. It is possible that family support will attenuate the relationship between strain, negative affect, and delinquency for Latinos in a way that is not present for Caucasians.
**Immigration status.** In 2012, 35.5% of Latinos living in the U.S. were foreign-born (Krogstad & Lopez, 2014). Despite the large population of Latinos in the U.S., we know relatively little about the risks or protective factors of Latino immigrants relative to victimization and offending. Immigrant youth face unique stressors in comparison to non-immigrant youth born in the U.S. (Dettlaff, Earner, & Phillips, 2009), including but not limited to language barriers and discrimination (Vera, 2013), which may impact how they cope with victimization.

Although the concept of immigration status has not been incorporated into GST literature, prior research has examined the relationship between immigration status and mental health outcomes among Latinos. Some studies find that Mexican immigrants (youth and adult) have significantly fewer mental health disorders than Mexican Americans born in the U.S. (see Escobar, Hoyos Nervi, & Gara, 2000 for a review). Other studies find no difference between immigrant and U.S.-born Latinos on risk for psychological distress and psychiatric disorders (Bridges, de Arellano, Rheingold, Danielson, & Silcott, 2010; Pena et al., 2008), particularly when accounting for Anglo and Latino orientation in multivariate models (Cuevas, Sabina, & Bell, 2012).

Other studies have focused on the relationship between immigration status and risk behaviors. One study compared three groups of adolescents (i.e. Latinos born in the U.S., immigrant Latinos, and native non-Latino whites) on risk behaviors and found no significant difference in their level of risk-taking behavior (Brindis, Wolfe, McCarter, Ball, & Starbuck-Morales, 1995). Vaughn, Salas-Wright, DeLisi, and Maynard (2014) use data from waves I and II of the National Epidemiological Survey on Alcohol and Related Conditions to examine the relationship between immigration and antisocial behaviors among immigrants from Asia, Latin America, Africa, and Europe. After controlling for a number of confounding factors, results show that immigrants from all regions are significantly less likely to engage in violent and nonviolent antisocial behavior than native-born Americans. In addition,
native-born Americans are three times more likely to report violent behavior than immigrants from Latin America.

The phenomenon of better mental health outcomes for immigrants has been termed the “immigrant paradox” and it is believed that Latino immigrants bring some sort of natural protection against mental health problems when they enter the U.S. and that this process diminishes the longer they live in the U.S. (Vera, 2013). The exact mechanism of this protective effect of immigration is not entirely clear. The role of immigration may be intertwined with the process of assimilation into American culture, which has been termed acculturative stress. For instance, Holleran and Waller (2003) suggest that Mexican Americans who attempt to assimilate into American culture experience more mental health distress than those who maintain their cultural identity. Research also shows that resilience is highest among recent Latino immigrants and diminishes in later generations (Vera, 2013). In addition, as discussed above, the family unit is of central importance to many Latino immigrants and thus linked to greater social support. The maintenance of traditional Latino values may also promote protective traits (Vega & Kolody, November 1998). Another perspective is that immigrants have different expectations about education and income and may thus be less likely to become demoralized when they do not reach these goals (Vega & Kolody, November 1998).

Given the dearth of studies testing GST among non-Caucasian samples, it is not surprising that immigration has not been incorporated into models of GST. Research on the immigrant paradox suggests that being a Latino immigrant in the U.S. may be a protective factor against a number of negative outcomes, for reasons that may include increased family support, maintenance of cultural ties, traditional Latino values, and differential expectations. Thus, models of GST could incorporate immigration status as a protective conditioning factor. Specifically, given the research on the
relationship between immigration and lower psychological distress, we would expect immigration to mitigate the relationship between victimization and negative affect.

**Acculturation and enculturation.** Latino families living in the United States differ in the importance placed on integration into the mainstream/host culture (acculturation) and maintenance of their culture-of-origin (enculturation). Acculturation has been defined as the changes one experiences when they enter a new cultural context (Cabassa, 2003). The bidimensional framework of acculturation suggests that minority and majority cultural identities can exist independent of each other (Cabassa, 2003). For instance, individuals can adopt the customs of a new culture while preserving elements of their culture of origin (Berry, 1997). One potential explanation for the protective role of retaining one’s culture-of-origin is offered by segmented assimilation theory. This theory suggests that as generational status increases, assimilation into the host culture increases and individuals may lose traditional values and beliefs (Miller & Gibson, 2011).

A number of studies have examined the extent to which acculturation impacts outcomes such as mental health symptoms. Research examining the role of acculturation in psychological functioning among adults suggests that Anglo orientation is associated with poorer psychological functioning (Caetano, Schafer, Clark, Cunradi, & Raspberry, 2000; Cuevas et al., 2012; Garcia, Hurwitz, & Kraus, 2004). Although there is less known about the process of acculturation among victimized Latinos, studies tend to confirm the role of acculturation as a risk factor for psychological distress (Bauman & Summers, 2009; Berry et al., 2006; Kaplan & Marks, 1990).

Research has produced mixed findings regarding the link between acculturation and delinquency, with some studies showing that less acculturated adolescents are more likely to be involved in gangs (Lopez & Brummett, 2003; Ventura Miller, Barnes, & Hartley, 2009); and others finding that higher levels of acculturation are linked to delinquency and violent offending (Brook,
Whiteman, Balka, Win, & Gursen, 1998; Buriel, Calzada, & Vasquez, 1982; Morenoff & Astor, 2006; Samaniego & Gonzales, 1999; Vega, Khoury, Zimmerman, Gil, & Warheit, 1995; Wall, Power, & Arbona, 1993). Fridrich and Flannery (1995) find that acculturated Latinos report significantly more delinquency than Caucasians, recent Latino immigrants, and unacculturated-by-choice Latinos (i.e. U.S. born Latinos who continue to speak another language). In addition, recently immigrated Latino youth report significantly more parental monitoring than the acculturated youth. The authors suggest that parental monitoring might be more valued in traditional Mexican-American homes than in Caucasian homes or acculturated Mexican-American homes. J. L. Williams, Aiyer, Durkee, and Tolan (2013) examine the moderating role of ethnic identity on the relationship between stress and antisocial behavior among Latinos. Findings reveal that high levels of ethnic identity attenuate the effect of stress on antisocial outcomes. The authors suggest that ethnic identity could help increase resilience among Latinos in the face of stress.

One recent study attempts to incorporate strains related to the process of acculturation into a GST framework. Pérez et al. (2008) use data from the Mexican-American Drug Use and Dropout Study to examine how acculturation strains (i.e. nativity, English proficiency, intergenerational conflict, perceived discrimination) impact delinquency. The findings indicate that the relationship between acculturation and delinquent behavior is non-linear and depends on the degree of Hispanic concentration. Specifically, the effect of acculturation strains is more pronounced in areas with lower Latino presence, possibly because the pressure to assimilate to the host culture is greater in these areas. Although this study did not incorporate acculturation as a moderating factor in the GST model, these findings suggest that acculturation is an important mechanism in the strain-delinquency relationship among Latinos.
Overall, empirical findings suggest the process of acculturation to host culture tends to be associated with negative outcomes, while enculturation is often associated with positive outcomes. However, it is important to understand the underlying theoretical reasons for these findings. If we conceptualize acculturation in terms of social ties, we might expect those with higher levels of acculturation to show lower levels of psychological distress or delinquent behavior—higher levels of acculturation would be assumed to include denser ties within one’s host community. Conversely, acculturation could be viewed as a transition from one’s culture of origin to the host culture and it may be this transition that disrupts established social ties. Therefore, becoming more acculturated may be related to a loss of social connection and the protective factors associated with ties to the culture-of-origin. In line with empirical findings, this dissertation adopts the second hypothesis that there is something inherently disruptive about the process of acculturation and it should thus be linked to worse outcomes.

**Research Questions**

Literature concerning how specific mechanisms proposed by GST apply to Latino youth is incomplete. This is an important oversight given that research suggests GST mechanisms may operate differently for different racial and ethnic groups (Akins et al., 2010; Peck, 2013). Previous studies have relied on non-representative samples of Latino youth in the United States (Jennings et al., 2009), or on a limited number of GST-related variables (Hoskin, 2013; Pérez et al., 2008). The Dating Violence among Latino Adolescents (DAVILA) study surveyed a national sample of Latino youth to examine various forms of victimization and delinquency. The current dissertation aims to expand on existing research by examining the link between polyvictimization and delinquency using the DAVILA study data.
This dissertation seeks to make several key contributions to the violence and victimization literature. First, this work examines a range of emotions through which victimization may impact delinquency among Latino youth. Second, this dissertation is the first to use this conceptualization of polyvictimization in an analysis of GST. Third, this study incorporates culture-specific conditioning variables in order to better understand the moderating process that may impact the victimization-delinquency overlap among Latino youth. And finally, this dissertation utilizes a dataset that is more inclusive of the diversity of the Latino population in the U.S. and thus better able to make generalizations.

**Question 1:** What is the relationship between polyvictimization and delinquency among Latino adolescents?

*Hypothesis 1:* Polyvictimization will have a significant positive effect on delinquency among Latino adolescents.

**Question 2:** What is the relationship between negative affect and delinquency among Latino adolescents?

*Hypothesis 2a:* Depression will have a significant positive effect on delinquency among Latino adolescents.

*Hypothesis 2b:* Anxiety will have a significant positive effect on delinquency among Latino adolescents.

*Hypothesis 2c:* Anger will have a significant positive effect on delinquency among Latino adolescents.

**Question 3:** To what extent does negative affect mediate the relationship between polyvictimization and delinquency among Latino adolescents?
**Hypothesis 3:** The effect of polyvictimization on delinquency among Latino adolescents will be mediated by negative affect.

**Hypothesis 3a:** The effect of polyvictimization on delinquency among Latino adolescents will be mediated by depression.

**Hypothesis 3b:** The effect of polyvictimization on delinquency among Latino adolescents will be mediated by anxiety.

**Hypothesis 3c:** The effect of polyvictimization on delinquency among Latino adolescents will be mediated by anger.

**Question 4:** To what extent do cultural factors (e.g. family support, acculturation, enculturation, and immigration status) moderate the relationship between polyvictimization and delinquency among Latino adolescents?

**Hypothesis 4:** The effect of polyvictimization on delinquency among Latino adolescents will be moderated/conditioned by cultural variables.

**Hypothesis 4a.** The relationship between polyvictimization and delinquency will be attenuated for those with higher levels of family support.

**Hypothesis 4b.** The relationship between polyvictimization and delinquency will be strengthened for those with higher levels of acculturation.

**Hypothesis 4c.** The relationship between polyvictimization and delinquency will be attenuated for those with higher levels of enculturation.

**Hypothesis 4d.** The relationship between polyvictimization and delinquency will be attenuated for immigrants.
Question 5: To what extent do cultural factors (e.g. family support, acculturation, enculturation, and immigration status) moderate the relationship between polyvictimization and negative affect among Latino adolescents?

Hypothesis 5: The effect of polyvictimization on negative affect among Latino adolescents will be moderated/conditioned by cultural variables.

Hypothesis 5a. The relationship between polyvictimization and negative affect will be attenuated for those with higher levels of family support.

Hypothesis 5b. The relationship between polyvictimization and negative affect will be strengthened for those with higher levels of acculturation.

Hypothesis 5c. The relationship between polyvictimization and negative affect will be attenuated for those with higher levels of enculturation.

Hypothesis 5d. The relationship between polyvictimization and negative affect will be attenuated for immigrants.

Question 6: To what extent do cultural factors (e.g. family support, acculturation, enculturation, and immigration status) moderate the relationship between negative affect and delinquency among Latino adolescents?

Hypothesis 6: The effect of negative affect on delinquency among Latino adolescents will be moderated/conditioned by cultural variables.

Hypothesis 6a. The relationship between negative affect and delinquency will be attenuated for those with higher levels of family support.

Hypothesis 6b. The relationship between negative affect and delinquency will be strengthened for those with higher levels of acculturation.
Hypothesis 6c. The relationship between negative affect and delinquency will be attenuated for those with higher levels of enculturation.

Hypothesis 6d. The relationship between negative affect and delinquency will be attenuated for immigrants.

Question 7: Does a full model of GST remain constant across gender?
CHAPTER III: METHODS

Participants

The Dating Violence among Latino Adolescents (DAVILA) study obtained a national sample of 1,525 Latino adolescents living across the United States. Trained professionals from an experienced survey-research firm completed telephone interviews between September 2011 and February 2012. Eligible households included those with Latino adolescents between 12 and 18 years of age. Caregivers were interviewed prior to the youth in order to assess eligibility of household participants and to obtain consent for adolescent participation. Caregivers were also asked questions about household demographics. The overall response rate (i.e., ratio of completed and partial interviews to all interviews, non-interviews, and a proportion of cases of unknown eligibility) was 36.2%. The minimum cooperation rate (i.e., ratio of completed and partial interviews to all interviews, refusals, and break-offs) for the sample was 55.0% based on the standard AAPOR calculations (American Association for Public Opinion Research, 2009).

The sample was evenly split between female and male youth (50.7% and 49.3% respectively). The average age of respondents was 14.9 years (SD = 1.88) and the breakdown was similar across grades in school. A majority of the adolescents were born in the U.S. (76.1%) with three quarters of their interviews being conducted in English (74.9%). By contrast, 22.1% of parents completed the survey in English. Mode caregiver education level was less than high school (35.2%) with modal household income being between $10,000 and $19,999 (26.8%). More than half of the caregivers interviewed were married (69.2%). Table 1 provides detailed demographic data, which is publically available from the data archive.

Table 1
Sample Demographics ($N = 1,525$)

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<th>Full Sample</th>
<th>Males</th>
<th>Females</th>
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## Child/Adolescent Demographics

### Gender
- Female: 773 (50.7)
- Male: 752 (49.3)

### Age (12-18)
- Mean: 14.9 (1.88) For Female; 14.9 (1.9) For Male; 14.8 (1.9) Overall

### Grade
- 5-8th: 496 (33.2) For Female; 244 (33.2) For Male; 252 (33.2) Overall
- 9-12th: 920 (61.5) For Female; 448 (61.0) For Male; 472 (62.1) Overall
- H.S. Graduate: 65 (4.3) For Female; 33 (4.5) For Male; 32 (4.2) Overall
- Home Schooled: 4 (0.3) For Female; 3 (0.4) For Male; 1 (0.1) Overall
- Not in School: 8 (0.5) For Female; 6 (0.8) For Male; 2 (0.3) Overall
- Other: 2 (0.1) For Female; 1 (0.1) For Male; 1 (0.1) Overall

### Birth Country
- U.S. born citizen: 1,139 (76.1) For Female; 573 (77.8) For Male; 566 (74.5) Overall
- Mexico: 268 (17.9) For Female; 126 (17.1) For Male; 142 (18.7) Overall
- Other: 90 (6.0) For Female; 38 (5.2) For Male; 52 (6.8) Overall

### Interview Language
- English: 1,142 (74.9) For Female; 584 (77.7) For Male; 558 (72.2) Overall
- Spanish: 383 (25.1) For Female; 168 (22.3) For Male; 215 (27.8) Overall

### Employment Status
- Employed Full-time: 14 (0.9) For Female; 11 (1.5) For Male; 3 (0.4) Overall
- Employed Part-time: 99 (6.5) For Female; 53 (7.1) For Male; 46 (6.0) Overall
- Seasonal employment (e.g. summer): 11 (0.7) For Female; 6 (0.8) For Male; 5 (0.7) Overall

## Household/Parent Demographics

### Household Income
- Under $9,999: 156 (12.3) For Female; 80 (12.7) For Male; 76 (11.9) Overall
- $10,000 – $19,999: 340 (26.8) For Female; 161 (25.6) For Male; 179 (27.9) Overall
- $20,000 – $29,999: 277 (21.8) For Female; 149 (23.7) For Male; 128 (20.0) Overall
- $30,000 – $39,999: 174 (13.7) For Female; 80 (12.7) For Male; 94 (14.7) Overall
- $40,000 – $49,999: 111 (8.7) For Female; 52 (8.3) For Male; 59 (9.2) Overall
- $50,000 – $59,999: 71 (5.6) For Female; 35 (5.6) For Male; 36 (5.6) Overall
- $60,000 – $69,999: 33 (2.6) For Female; 17 (2.7) For Male; 16 (2.5) Overall
- $70,000 – $79,999: 26 (2.1) For Female; 14 (2.2) For Male; 12 (1.9) Overall
- $80,000 or more: 83 (6.5) For Female; 42 (6.7) For Male; 41 (6.4) Overall

### Parental Education Level
- Less than high school: 534 (35.2) For Female; 256 (34.3) For Male; 278 (36.2) Overall
- High school graduate: 520 (34.3) For Female; 249 (33.3) For Male; 271 (35.3) Overall
- Some college/trade school: 187 (12.3) For Female; 88 (11.8) For Male; 99 (12.9) Overall
- Two-year college graduate: 88 (5.8) For Female; 50 (6.7) For Male; 38 (5.0) Overall
- Four-year college graduate: 109 (7.2) For Female; 61 (8.2) For Male; 48 (6.3) Overall
- Some graduate school: 17 (1.1) For Female; 11 (1.5) For Male; 6 (0.8) Overall
- Graduate degree: 60 (4.0) For Female; 32 (4.3) For Male; 28 (3.7) Overall

### Parent Relationship Status
- Single (never married): 181 (12.1) For Female; 80 (10.8) For Male; 101 (13.3) Overall
- Married: 1,038 (69.2) For Female; 518 (70.1) For Male; 520 (68.3) Overall
<table>
<thead>
<tr>
<th>Cohabitating/committed relationship</th>
<th>126 (8.4)</th>
<th>70 (9.5)</th>
<th>56 (7.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divorced</td>
<td>63 (4.2)</td>
<td>31 (4.2)</td>
<td>32 (4.2)</td>
</tr>
<tr>
<td>Separated</td>
<td>63 (4.2)</td>
<td>26 (3.5)</td>
<td>37 (4.9)</td>
</tr>
<tr>
<td>Widowed</td>
<td>25 (1.7)</td>
<td>14 (1.9)</td>
<td>11 (1.5)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (0.2)</td>
<td>0 (0.0)</td>
<td>3 (0.4)</td>
</tr>
</tbody>
</table>

**Procedures**

Telephone numbers were drawn from two sampling frames to represent a national sample of families with Latino children. Initially, probability samples of households with telephones were generated from a national Random Digit Dialing sample of high density (80% or higher) “Hispanic blocks” in order to draw a random sample of numbers using census-based hundred-blocks. This sampling frame was modified due to the difficulty in obtaining participants with the high-density RDD (which accounts for 7.2% of the sample). As a result, the subsequent sampling procedure dialed telephone numbers that were randomly selected from a list of Latino surnames. Although this sampling procedure does not guarantee that all individuals with Latino surnames are of that ethnicity, or that all Latinos will have identifiably-ethnic surnames, this is an accepted method for targeting Latino populations (Sabina & Cuevas, 2013).

When a residence was reached, the interviewer asked about the total number of age-eligible Latinos currently living in the household. If there was more than one eligible adolescent, the next/most recent birthday method was used to select the participant (Salmon & Nichols, 1983). When an age-eligible adolescent was identified and agreed to participate, they were assessed in their preferred language (either Spanish or English) using the various study instruments. The interview lasted on average approximately 12 minutes for caregivers and 33 minutes for adolescent respondents.

**Measurement of Variables**

Non-copyrighted measures are included in full (see Appendix). Items from the Brief Symptom
Delinquency. The endogenous variable in the current study was a measure of self-reported delinquency in the previous year. The DAVILA Study utilized a shortened version of the Frequency of Delinquent Behavior (FDB) instrument in order to collect information regarding delinquent behavior in the past year (Dahlberg, Toal, & Behrens, 1998). This format included 13 questions asking participants to indicate how many times in the past year they committed each delinquent act. Delinquent acts included personal crimes, property crimes, and substance use. Each of the original 13 items was a count of number of times the delinquent act occurred. For each item, a dichotomous variable was created to represent whether or not a delinquent act was committed. The original FDB has shown adequate test-retest reliability of .71 (1 year interval) and moderate correlations with peer-nominated aggression (Loeber & Stouthamer-Loeber, 1987).

Victimization. The full scope of victimization experiences, termed polyvictimization, was used as the measure of strain in the current study. Victimization data was collected using participant responses to the Juvenile Victimization Questionnaire (JVQ). The JVQ is an instrument developed to comprehensively evaluate childhood victimization experiences (Hamby, Finkelhor, Ormrod, & Turner, 2005). The JVQ has shown strong psychometric properties including high test-retest reliability (between 79% - 100% agreement across two administrations), high internal consistency (alpha of .80; Finkelhor, Hamby, Ormrod, & Turner, 2005) and adequate internal consistency for the DAVILA sample (alpha of .73). Due to time constraints, the DAVILA Study queried 17 of the original 34 screener questions for the JVQ, covering four of the original five victimization categories: conventional crime, child maltreatment, sexual abuse, and peer/sibling victimization (witnessed violence was excluded). In this study, polyvictimization was a continuous count variable of each different type of victimization queried by the JVQ, regardless of the number of actual episodes of
abuse. Before administering the JVQ, “time bounding” was introduced in order to help participants define the past year and avoid inappropriately including or excluding events within the 1-year time frame (Hamby et al., 2005). The screener questions asked whether a particular victimization event occurred within the previous year. If the victimization was endorsed, follow-up questions were asked in order to obtain more detailed information.

**Negative affect.** General strain theory identifies negative affect as a key mediating variable between strain and delinquency (Agnew, 1992). The DAVILA Study utilized the Brief Symptom Inventory (BSI) to assess current symptoms of depression, anxiety, and hostility\(^1\). It should be noted, the definition of hostility in the BSI is reflective of the negative affect state of anger, including both the emotional expression of anger (such as feeling annoyed or irritated or having urges to break things) as well as the behavioral expression (such as getting into frequent arguments; Derogatis, 1992). The items included in the BSI measure of hostility overlap with items Agnew has included in his measure of anger in previous research (e.g. losing temper easily and feeling irritated by small things; Agnew, 1985). Respondents were asked to indicate how much a particular symptom had bothered or distressed them within the past 7 days. The scale score was calculated using the BSI scoring criteria and converting the raw scores to their published T-scores (Derogatis, 1993).

**Family support.** A measure of family support was included in the model in order to examine the moderating effect predicted by GST (Agnew, 2013). The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure social support. The MSPSS includes 12 items assessing social support from significant others, family, and friends. For the purpose of the current study, only items related to support from family members were included. DAVILA participants were asked to respond to each item on a Likert-type scale ranging

\(^1\) Hostility will be used as a proxy for anger. In the current dissertation, the term *anger* will be used to be consistent with general strain theory literature.
from 1 (very strongly disagree) to 7 (very strongly agree).

Anglo and Latino Orientation. Anglo (acculturation) and Latino (enculturation) orientation were measured using the Brief-ARSMA-II, which consists of questions intended to measure one’s minority and majority cultural identity (Bauman, 2005). These questions assess an individual’s Anglo orientation and Mexican orientation, although none of the questions specifically refer to Mexican culture. Given the use of the instrument with the Latino population in general (Cuéllar, Arnold, & Maldonado, 1995), I referred to the Mexican orientation scale as Latino orientation. The Brief-ARSMA-II includes 12 items that assess one’s linguistic ability and preference, as well as one’s personal associations. Both the Anglo and Latino orientation scales are composed of six non-overlapping items. Respondents were asked to report the degree to which each statement accurately described them on a scale from 1 (not at all) to 5 (almost always) with high scores being associated with greater Anglo or Latino orientation.

Immigration Status. Immigration status was determined by asking the parent/caregiver in which country the adolescent participant was born. This variable was then converted into a dichotomous measure of whether or not the adolescent is an immigrant.

Control variables. A parent/caregiver provided the basic demographic information. To minimize the possibility of spuriousness, my analyses included the following control variables: household socioeconomic status, child age, and gender. Caregiver education level and income categories were converted to z-scores and combined to establish an estimate of relative household socioeconomic level (SES).

Modeling Strategy

This dissertation used structural equation modeling to estimate a full model of GST. First, there is the conceptual appropriateness of SEM, as it is a confirmatory technique, and as such the preferred
approach to evaluate an already well-established conceptual framework such as GST. A structural equation approach also allows for both a measurement model and a structural model. SEM provides a test of overall fit that helps compare competing models and subsequently evaluate the best model. The benefit of using an SEM approach rather than merely creating scales of observed items is that SEM allows each observed item to retain its own unique variance (Acock, 2013). In addition, SEM has benefits over using regression analyses in that it can test an overall model in addition to individual coefficients, as well as it better handles measurement error in comparison to regression that pools it into an aggregated error term, resulting in greater statistical power (Tabachnick & Fidell, 2007).

Given the size and complexity of the proposed model, I initially used linear regression to test for interaction effects. A series of hierarchical (sequential) linear regression models were conducted to determine the impact of the moderating variables on the measures of negative affect and delinquency. The nonsignificant moderating variables were then trimmed from the model. Only the significant moderators were then incorporated into the final structural equation model.

In order to determine the most appropriate method of measuring negative affect in a statistical model of GST, initial analyses examined two competing measurement models of negative affect. The first model (i.e. the one-factor model) was developed by creating one latent variable of negative affect from all the observed items of depression, anxiety, and anger. The second model (i.e. the three-factor model) was composed of three latent variables of depression, anxiety, and anger, constructed from their respective observed items. The final and best-fitting measurement model of negative affect was then added to the full SEM model.

After choosing the best fitting measurement models of polyvictimization, negative affect, and delinquency, I used those measurement pieces to develop a full path model to predict delinquency among Latino youth. The path component is intended to show the linkages between the exogenous
constructs, the control variables, and the endogenous delinquency latent variable. The initial model was a test of the appropriateness of GST among Latino youth given the dearth of empirical tests of the theory among this population. After testing the initial model, a second model was estimated with additional moderators; these included cultural variables (i.e. acculturation, enculturation, immigration status, and family support) and gender. The final SEM model included latent variables for polyvictimization, acculturation, enculturation, family support, negative affect, and delinquency. The other variables in the model were dichotomous. The full model was assessed for goodness of fit. It should be noted that listwise deletion was used to delete any cases with missing data. Given the low percentage of missing data (11.7%), imputation techniques were not warranted. All analyses were conducted in Stata 14.1.

**Power Analysis**

The current study analyzes secondary data, and thus the sample size has been pre-determined. Determining sample size adequacy, given a particular choice of alpha and power, is complex with structural equation modeling because there are many factors that can effect estimation and sample size (Westland, 2010). Using established approaches (MacCullum, Browne, & Sugawara, 1996) for sample size calculation provides a value that is sufficient for model fit testing but not for parameter estimations. In order to meet the minimum threshold of 0.8 for statistical power, a minimum sample size of 579 is required to detect effects and a minimum sample size of 1,523 is required for model structure (Westland, 2010). The current study had a total sample size of 1,525 and was adequate to achieve a minimum .80 statistical power.
CHAPTER IV: RESULTS

Variable Descriptions

Descriptive statistics for all the scale variables in the model are provided in Table 2. Further, frequency rates by gender for each of the delinquency and victimization items are presented in Tables 3 and 4, respectively (see Appendix). Delinquency scores ranged from 0 to 8, with a mean of 1.14 and a standard deviation of 1.75. The most frequent delinquent act within this sample was hitting, slapping, or shoving another child, while the least frequent delinquent act was hitting, slapping, or shoving a boyfriend or girlfriend. Polyvictimization had a minimum of 0 and a maximum of 12, with a mean of 1.17 and a standard deviation of 1.81. The most frequent type of victimization was being hit by another child, including a sibling. The least frequent type of victimization was being sexually abused by another child or teen.

Table 2

<table>
<thead>
<tr>
<th>Variable Descriptives (N = 1,525)</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>Scale Reliability</th>
</tr>
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<tbody>
<tr>
<td>Delinquent Acts</td>
<td>1.14</td>
<td>1.75</td>
<td>0-8</td>
<td>0.86</td>
</tr>
<tr>
<td>T-Score Depression</td>
<td>44.63</td>
<td>9.19</td>
<td>36-80</td>
<td>0.81</td>
</tr>
<tr>
<td>T-Score Anxiety</td>
<td>43.51</td>
<td>9.37</td>
<td>35-80</td>
<td>0.73</td>
</tr>
<tr>
<td>T-Score Hostility</td>
<td>44.27</td>
<td>8.84</td>
<td>34-79</td>
<td>0.75</td>
</tr>
<tr>
<td>Polyvictimization</td>
<td>1.17</td>
<td>1.81</td>
<td>0-12</td>
<td>0.73</td>
</tr>
<tr>
<td>Family Support</td>
<td>6.14</td>
<td>1.19</td>
<td>1-7</td>
<td>0.85</td>
</tr>
<tr>
<td>Acculturation</td>
<td>4.07</td>
<td>.64</td>
<td>1-5</td>
<td>0.62</td>
</tr>
<tr>
<td>Enculturation</td>
<td>3.36</td>
<td>.99</td>
<td>1-5</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Regression Analysis

Before running the SEM model with polyvictimization as the exogenous variable, it was important to explore the relationship between victimization and delinquency. An ordinary least squares regression was conducted to determine the impact of a dichotomous measure of victimization, controls, cultural variables, and negative affect variables on delinquency. As expected, victimization
was significantly associated with delinquency ($\beta = .60, p < .00$), indicating that having experienced any type of victimization increased the likelihood of engaging in delinquent behavior.

A series of hierarchical (sequential) linear regression models were conducted to determine the impact of the moderating variables on the measures of negative affect and delinquency (see Tables 5-9 in Appendix). The nonsignificant moderating variables were then trimmed from the model. Results from the final regression model are presented in Table 10. Polyvictimization remained statistically significant in all models. Only one cultural variable (family support) moderated the relationship between polyvictimization and negative affect ($\beta = .07, p < .01$ for anger; $\beta = .08, p < .01$ for depression). Three of the cultural variables moderated the link between depression and delinquency: immigrant status ($\beta = .05, p < .05$), acculturation ($\beta = .07, p < .01$), and enculturation ($\beta = -.06, p < .01$). Gender only moderated the main relationship between polyvictimization and delinquency ($\beta = -.06, p < .05$). Based on the results of the preliminary analyses, the only moderators retained in the final SEM model were: family support by polyvictimization on anger and depression; polyvictimization by gender on delinquency; depression by immigrant on delinquency; depression by acculturation; and depression by enculturation on delinquency.

Table 10

<table>
<thead>
<tr>
<th>Predictors</th>
<th>$B$ (SE)</th>
<th>$\beta$</th>
<th>$B$ (SE)</th>
<th>$\beta$</th>
<th>$B$ (SE)</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.10 (.02)</td>
<td>.10***</td>
<td>.09 (.02)</td>
<td>.09***</td>
<td>.09 (.02)</td>
<td>.09***</td>
</tr>
<tr>
<td>SES</td>
<td>.02 (.04)</td>
<td>.01 (.04)</td>
<td>.01 (.04)</td>
<td>.01 (.04)</td>
<td>.01 (.04)</td>
<td>.01 (.04)</td>
</tr>
<tr>
<td>Female</td>
<td>-.38 (.09)</td>
<td>-.11***</td>
<td>-.49 (.09)</td>
<td>-.14***</td>
<td>-.50 (.08)</td>
<td>-.14***</td>
</tr>
<tr>
<td>Victimization</td>
<td>.37 (.03)</td>
<td>.36***</td>
<td>.30 (.03)</td>
<td>.29***</td>
<td>.29 (.03)</td>
<td>.28***</td>
</tr>
<tr>
<td>Acculturation</td>
<td>.08 (.07)</td>
<td>.03 (.07)</td>
<td>.04 (.07)</td>
<td>.01 (.07)</td>
<td>.07 (.07)</td>
<td>.02 (.07)</td>
</tr>
<tr>
<td>Enculturation</td>
<td>-.05 (.05)</td>
<td>-.03 (.04)</td>
<td>-.03 (.04)</td>
<td>-.02 (.04)</td>
<td>-.03 (.04)</td>
<td>-.02 (.04)</td>
</tr>
<tr>
<td>Family Support</td>
<td>-.23 (.04)</td>
<td>-.15***</td>
<td>-.12 (.04)</td>
<td>-.08**</td>
<td>-.13 (.04)</td>
<td>-.09***</td>
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<td></td>
<td>-10 (0.11)</td>
<td>-02 (0.11)</td>
<td>-09 (0.11)</td>
<td>-02 (0.11)</td>
<td>-04 (0.11)</td>
<td>-01 (0.11)</td>
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<tr>
<td>------------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Immigrant</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Anger</td>
<td>0.4 (0.01)</td>
<td>0.18*** (0.01)</td>
<td>0.4 (0.01)</td>
<td>0.17*** (0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.1 (0.01)</td>
<td>0.03 (0.01)</td>
<td>0.1 (0.01)</td>
<td>0.03 (0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>0.1 (0.01)</td>
<td>0.06 (0.01)</td>
<td>0.1 (0.01)</td>
<td>0.06 (0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vic x Gender</td>
<td>-0.06 (0.02)</td>
<td>-0.06* (0.02)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep x Accult</td>
<td>0.02 (0.01)</td>
<td>0.07** (0.01)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep x Encult</td>
<td>-0.01 (0.00)</td>
<td>-0.06** (0.00)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep x Imm</td>
<td>0.01 (0.00)</td>
<td>0.05* (0.00)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ R²</td>
<td>0.04***</td>
<td></td>
<td></td>
<td></td>
<td>0.01***</td>
<td></td>
</tr>
<tr>
<td>Model R²</td>
<td>0.23***</td>
<td>0.27***</td>
<td></td>
<td></td>
<td>0.28***</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001

**Measurement Models**

My full model included latent variables for the following variables: polyvictimization, negative affect (i.e. anger, depression, anxiety), delinquency, acculturation, enculturation, and family support. For the sake of visual clarity, item numbers are presented in the figures in this section. For full item descriptions, see Appendix.

**Delinquency.** I used confirmatory factor analysis (CFA) to assess the measurement properties of the delinquency scale with the current sample. As shown in Figure 1, the 13 observed variables all loaded significantly (p < .001) and the standardized loadings ranged from .43 to .69. Although the fit of the model was not ideal, it was satisfactory: X²(65) = 649.21, p < .001, RMSEA = .077, and CFI = .901. The RMSEA was higher than the ideal range of less than .05, but still a reasonably close fit at less than .08. My CFI was above the recommended cutoff of .90, indicating my model did 90.1% better than a null model in which we assume the items are all unrelated to each other. Although the model could have been improved statistically and modification indices indicated several possible changes, the proposed covariances did not make sense conceptually.
Negative affect. Two measurement models were developed and compared to see which had a better fit for the data. The Akaike Information Criteria (AIC) and the Bayesian Information Criteria (BIC) were examined in order to determine the best-fitting model (see Table 11). The one-variable model was comprised of 17 observed variables that all loaded significantly (all loadings, $p < .001$; see Figure 2). The fit of the model was not ideal: $X^2(119) = 1396.02$, $p < .001$, RMSEA = .09, and CFI = .86. The AIC for the one-variable model was 53502.58 and the BIC is 53773.29. The three-variable model consisted of three latent variables (anger, anxiety, and depression) that all loaded significantly (all loadings, $p < .001$). The fit of the three-variable model was also not ideal: $X^2(116) = 959.73$, $p < .001$, RMSEA = .07, and CFI = .90, but it was an improvement from the one-variable model. The AIC for the three-variable model was 53072.30 and the BIC is 53358.92. Based on both the AIC and the BIC, it appeared that the three-variable model was the best fitting model for the data.

Table 11  
*Comparison between Measurement Models of Negative Affect*

<table>
<thead>
<tr>
<th></th>
<th>One-Variable Model</th>
<th>Three-Variable Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ MS (df)</td>
<td>1396.02 (119)**</td>
<td>959.73 (116)**</td>
</tr>
<tr>
<td>$X^2$ BS (df)</td>
<td>8870.23 (136)**</td>
<td>8870.23 (136)**</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.09</td>
<td>0.07</td>
</tr>
<tr>
<td>CFI</td>
<td>0.85</td>
<td>0.90</td>
</tr>
</tbody>
</table>
After choosing the three-variable model of negative affect, each individual negative affect latent variable was examined separately. For depression, the significant chi-squared test indicated the model was acceptable: $X^2(9)=155.115, p < .001$, RMSEA = .104, and CFI = .949 (see Figure 3). Although the RMSEA was much higher than .05, the CFI was excellent. For anxiety, the model had a better fit: $X^2(9)=70.393, p < .001$, RMSEA = .067, and CFI = .962 (see Figure 4). The RMSEA was not ideal but the CFI was excellent. Finally, for anger, the model had a less than ideal fit: $X^2(5)=130.649, p < .001$, RMSEA = .129, and CFI = .932 (see Figure 5). Again, although the RMSEA was much higher than .05, the CFI was within the cutoff of .90. Although the models have could been improved statistically by correlating the error terms for particular items (as determined by the modification indices; Acock, 2013), this did not make sense conceptually.
Figure 3

Chi-square(9) = 155.12
$p < 0.001$
RMSEA = 0.10
CFI = -0.95
SRMR = 0.04

Figure 4

Chi-square(9) = 70.39
$p < 0.001$
RMSEA = 0.07
CFI = 0.96
SRMR = 0.03
**Victimization.** CFA results showed that the initial 15 observed variables all loaded significantly ($p < .001$) and the standardized loadings ranged from .14 to .64. The significant chi-squared test indicated the model was not a perfect fit and the initial model was less than satisfactory: $X^2(119) = 911.77$, $p < .001$, RMSEA = .066, and CFI = .729. The RMSEA was higher than its ideal range of .05 or less and the CFI was much lower than its acceptable range of .90. Further study of the individual items identified a pair of items that were problematic. Items gs1r and gs2r dealt with adults inappropriately touching the participant’s genitals. Each item was endorsed by only five individuals, respectively, representing less than 1%. Given the low n for these items, the decision was made to drop them from the model. In addition, modification indices indicated several possible changes for my model. Allowing error terms for several specific items to be correlated made conceptual sense in this case because participants may have been endorsing different items for the same event. For instance, item dc4r asked whether participants had ever been attacked with a weapon and item fp1r asked whether participants had ever been attacked by a gang. It is possible that given the similarity in items,
participants endorsed both items as reference to one event involving both a weapon and a gang. In addition, these items have a high likelihood of being connected. Thus, I allowed the error terms for four pairs of items to be correlated. These changes substantially improved the model: $X^2(86) = 468.1, p < .001$, RMSEA = .054, and CFI = .859 (see Figure 6). Although the CFI remained under the recommended cutoff of .90, the RMSEA was close to .05. My model did 85.9% better than a null model and was a reasonably close fit (<.08).

**Family Support.** As shown in Figure 7, the four observed variables loaded significantly ($p < .001$) and the standardized loadings ranged from .73 to .84. The fit of the model was acceptable: $X^2(2) = 18.88, p < .001$, RMSEA = .08, and CFI = .99. The RMSEA was higher than the ideal range of less than .05, but still less than .08. My CFI was much higher than the recommended cutoff.
Acculturation. CFA results showed that the initial six observed variables all loaded significantly ($p < .001$) and the standardized loadings ranged from .37 to .63. The initial model was a poor fit: $X^2(9) = 271.56, p < .001$, RMSEA = .138, and CFI = .774. Modification indices indicated several possible changes for my model. The error terms for items b_4 (“I associate with Anglos”) and b_12 (“My friends are of Anglo orientation”) were allowed to covary given the similarity in wording of the items. The add error covariance substantially improved the model: $X^2(8) = 40.67, p < .001$, RMSEA = .052, and CFI = .972 (see Figure 8). Both the RMSEA and the CFI were in the appropriate range.
Enculturation. As shown in Figure 9, all six items loaded significantly ($p < .001$) and the standardized loadings ranged from .63 to .84. The model is not an ideal fit: $X^2(9) = 486.57$, $p < .001$, RMSEA = .187, and CFI = .891. Although the RMSEA is much higher than the accepted cutoff of .08, the CFI is close to the accepted cutoff of .90. Although covariances were suggested statistically, they did not make sense conceptually.
Structural Model

Model fit. After developing the measurement models and conducting preliminary regression analyses to exclude non-significant moderating variables, the structural paths were added to create the full structural model. The full model includes one exogenous indicator (i.e. victimization), three mediating variables (i.e. depression, anxiety, and anger), four cultural variables (i.e. acculturation, enculturation, immigration status, family support), four moderating variables (i.e. family support by polyvictimization; depression by acculturation; depression by enculturation; depression by immigrant), and three control variables (i.e. gender, age, and SES). Figure 10 presents the full structural equation model (with observed measurement items removed for simplicity) and standardized coefficients from the full model are detailed in Table 12 (Appendix). Goodness of fit was determined by examining the RMSEA and CFI. It is recommended that the RMSEA be .05 or less for a good fit and less than .08 for a reasonably close fit (Acock, 2013). It is recommended that the CFI be above .90 or .95 (Acock,
2013). Initial results indicate that fit of the full model is acceptable: \(X^2(2230) = 7638.69, p < .001,\) \(\text{RMSEA} = .04,\) and \(\text{CFI} = .78.\)

Figure 10

* \(p < .05, \) ** \(p < .01, \) *** \(p < .001\)

**Control variables.** The full model controlled for gender, age, and SES. There was a significant relationship between gender and delinquency \((B = -.11, z = -4.14, p < .001),\) indicating that females were less likely to engage in delinquent behavior. There was also a significant relationship between age and delinquency \((B = .13, z = 4.72 p < .001),\) indicating that older adolescents were more likely to engage in delinquent acts. The association between SES and delinquency was not significant.

**Victimization.** Examination of the relationship between polyvictimization and the negative affect variables reveals that polyvictimization was significantly associated with depression \((B = .44, z = 13.62, p < .001),\) anxiety \((B = .47, z = 14.86, p < .001),\) and anger \((B = .52, z = 16.62, p < .001).\) This
indicates that polyvictimization is associated with statistically significant increases in feelings of depression, anxiety, and anger. Polyvictimization also had a statistically significant association with delinquency, with a standardized path coefficient of $B = .29$ ($z = 6.88, p < .001$). Thus, experiencing polyvictimization was associated with a statistically significant increase in delinquent behavior.

**Negative affect.** Results showed only anger was significantly associated with delinquency, with a standardized path coefficient of $B = .49$ ($z = 3.96, p < .001$). Therefore, feelings of anger are associated with an increase in delinquent behavior. Depression and anxiety were not significantly associated with delinquency. The covariances between the error terms of the negative affect variables were also significant. The covariance between the error terms for depression and anxiety was $B = .86$ ($z = 45.73, p < .001$); between depression and anger was $B = .66$ ($z = 25.51, p < .001$); and between anger and anxiety was $B = .84$ ($z = 38.10, p < .001$). This accounts for the covariance of the three emotions due to their co-existence as well as the fact that they are derived from the same measure (i.e. the BSI).

**Cultural variables.** Examination of the relationship between the cultural variables and delinquency revealed that only family support had a statistically significant direct association with delinquency ($B = -.09, z = -2.80, p < .01$). This indicates that increased family support is associated with a decrease in delinquent behavior. Acculturation, enculturation, and immigrant status were not significantly related to delinquency.

**Mediation.** In order to test whether negative affect mediated the relationship between polyvictimization and delinquency, I included a direct path from polyvictimization to delinquency and indirect paths from polyvictimization to all three negative affect variables to delinquency (see Figure 10). Table 13 shows the unstandardized effects of polyvictimization on delinquency through mediators. As stated previously, only anger was directly and significantly associated with delinquency.
(B = 0.12, p < 0.001). In addition, polyvictimization continued to have a significant relationship with delinquency (B = 0.46, p < 0.001).

Table 13
Unstandardized Effects of Polyvictimization on Delinquency through Mediators

<table>
<thead>
<tr>
<th></th>
<th>M1 = Depression</th>
<th>M2 = Anxiety</th>
<th>M3 = Anger</th>
<th>Delinquency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coef.</td>
<td>SE</td>
<td>Coef.</td>
<td>SE</td>
<td>Coef.</td>
</tr>
<tr>
<td>Polyvic</td>
<td>1.29***</td>
<td>0.14</td>
<td>2.32***</td>
<td>0.25</td>
</tr>
<tr>
<td>M1 = Depression</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>M2 = Anxiety</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>M3 = Anger</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Indirect Effect of Polyvic 0.25*** 0.05
Total Effect of Polyvic 0.71*** 0.08

Abbreviations: Polyvic = Polyvictimization; Coef. = coefficient; SE = standard error
* p < .05, ** p < .01, *** p < .001

Post-estimation results revealed that 65.0% of the effect of polyvictimization on delinquency was direct after controlling for the mediators. By contrast, 34.8% of the effect was indirect. Thus, even after controlling for depression, anxiety, and anger, the majority of the effect of polyvictimization on delinquency was a direct effect, and there was a sizable but smaller percentage of the effect that was indirect.

Table 14 shows the partial indirect effects of polyvictimization on delinquency. Post-estimation analysis showed that the total indirect effect of polyvictimization on delinquency through depression, anxiety, and anger was significant (B = 0.25, p < 0.001). Further analysis of the partial indirect effects revealed that the specific indirect effect of polyvictimization on delinquency as mediated by anger was 0.26 (p < .001). The partial indirect effects of polyvictimization on delinquency through depression and anxiety were not significant.
Table 14

*Standardized Partial Indirect Effects of Polyvictimization on Delinquency*

<table>
<thead>
<tr>
<th>Path</th>
<th>Coefficient</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvic → Depression → Delinquency</td>
<td>-0.04</td>
<td>0.05</td>
<td>[-0.15, 0.06]</td>
</tr>
<tr>
<td>Polyvic → Anxiety → Delinquency</td>
<td>-0.06</td>
<td>0.09</td>
<td>[-0.24, 0.13]</td>
</tr>
<tr>
<td>Polyvic → Anger → Delinquency</td>
<td>0.26***</td>
<td>0.07</td>
<td>[0.13, 0.39]</td>
</tr>
</tbody>
</table>

*Abbreviations: Polyvic = polyvictimization; SE = standard error; CI = confidence interval*  
* p < .05, ** p < .01, *** p < .001

There are two key findings from this mediation analysis. First, when accounting for the mediating variables, the direct effect of polyvictimization on delinquency remains significant. Second, anger was the only negative affect variable that significantly mediated the relationship between polyvictimization and delinquency. Taken together, these results indicate that the impact of polyvictimization on delinquency is partially mediated by anger.

**Interactions.** Preliminary regression analyses were conducted to exclude moderating variables that were not significant. Only those that were significant in the preliminary analyses were included in the full model. These included: family support by victimization on depression and anger, depression by acculturation on delinquency, depression by enculturation on delinquency, and depression by immigrant status on delinquency. Although these interactions were significant in the preliminary regression analysis, only one interaction was significant in the full SEM. Delinquency had a significant association with the depression by acculturation interaction ($B = .06, z = -2.17, p < .05$).

In order to specifically examine the moderator effect, I conducted a slope analysis in which I categorized the acculturation variable with a high/low split to determine how the moderating effect was operating within the model (Tabachnick & Fidell, 2007). Table 15 shows the $B$ coefficients (raw regression weights) for delinquency by levels of acculturation in order to examine the direction of the depression by acculturation interaction. As shown, the association between depression and delinquency was only significant for individuals with high levels of acculturation ($B = .02, z = 2.14, p$...
< .05). What this indicates is that higher levels of depression increase involvement in delinquent behavior among highly acculturated youth.

Table 15

<table>
<thead>
<tr>
<th></th>
<th>Acculturation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Depression</td>
<td>0.02*</td>
</tr>
</tbody>
</table>

Values reported are unstandardized B weights.
* p < .05, ** p < .01, *** p < .001

**Gender.** After establishing the final full model, the structural model was split into one model for males and one model for females. The two models were then compared in order to determine whether one model was a better fit for the data. The Akaike Information Criteria (AIC) and the Bayesian Information Criteria (BIC) were examined in order to determine the best-fitting model (Acock, 2013; see Table 16). The fit of the model for males was not ideal: \(X^2(2170) = 5335.82, p < .001\), \(\text{RMSEA} = .05\), and \(\text{CFI} = .75\). The AIC for the male model was 78173.26 and the BIC was 79113.41. The fit of the model for females was also not ideal: \(X^2(2170) = 5277.63, p < .001\), \(\text{RMSEA} = .05\), and \(\text{CFI} = .76\). The AIC for the female model was 73462.97 and the BIC was 74409.01. Based on both the AIC and the BIC, it appeared that the model for females was a slightly better fitting model for the data. However, given the comparable RMSEA and CFI values, these differences were minimal.

Table 16

<table>
<thead>
<tr>
<th>Comparison between Full Models for Males and Females</th>
<th>Male Model</th>
<th>Female Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X^2) MS (df)</td>
<td>5335.82 (2170)***</td>
<td>5277.63 (2170)***</td>
</tr>
<tr>
<td>(X^2) BS (df)</td>
<td>14971.23 (2257)***</td>
<td>14957.62 (2257)***</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>CFI</td>
<td>0.75</td>
<td>0.76</td>
</tr>
<tr>
<td>AIC</td>
<td>78173.26</td>
<td>73462.97</td>
</tr>
<tr>
<td>BIC</td>
<td>79113.41</td>
<td>74409.01</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001
In order to test whether the structural relationships between the variables were identical for males and females, the full model was split on the gender variable (see Figures 11 and 12). As shown in Table 17 (Appendix), consistent with the full model, polyvictimization had a significant, positive relationship with depression for both males ($\beta = .92, z = 6.28, p < .000$) and females ($\beta = 2.05, z = 5.42, p < .000$). Further, the impact of polyvictimization on depression was significantly ($p < .05$) stronger for females than for males. The relationship between polyvictimization and anxiety was significant and positive for both males ($\beta = 1.78, z = 7.30, p < .000$) and females ($\beta = 3.49, z = 5.36, p < .000$), and this relationship was significantly ($p < .05$) stronger for females than for males. Similarly, polyvictimization had a significant, positive relationship with anger for both males ($\beta = 2.30, z = 7.99, p < .000$) and females ($\beta = 4.10, z = 4.89, p < .000$). The impact of polyvictimization on anger was not statistically different between males and females.

Figure 11

Male Model with Significant Paths
Consistent with the full model, age had a significant, positive relationship with delinquency for both males ($\beta = .01, z = 3.98, p < .000$) and females ($\beta = .01, z = 2.12, p < .000$). The impact of age on delinquency was not statistically different between males and females. Polyvictimization had a significant, positive relationship with delinquency for both males ($\beta = .31, z = 3.74, p < .000$) and females ($\beta = .79, z = 4.26, p < .000$). The impact of polyvictimization on delinquency was significantly ($p < .05$) stronger for females than for males. In the full model, anger had a significant, positive relationship with delinquency. However, in the split model, anger was only significantly related to delinquency for females ($\beta = .10, z = 2.76, p < .01$). In the full model, family support had a significant, negative relationship with delinquency. However, in the split model, family support was only significantly related to delinquency for males ($\beta = -.03, z = -3.48, p < .000$).
Interestingly, there is a three-way interaction between polyvictimization, family support, and gender. Specifically, while the victimization by family support interaction term predicting depression was not significant in the full model, family support significantly moderated the relationship between victimization and depression for males ($\beta = -.01, z = -1.98, p < .05$), but not for females. Finally, while the depression by acculturation interaction term was significant in the full model, it was not significant in either the male or the female models.
CHAPTER V: DISCUSSION AND CONCLUSION

Discussion

This dissertation used data from the Dating Violence among Latino Adolescents (DAVILA) Study in order to develop a more nuanced, culturally-sensitive understanding of the victimization-delinquency overlap among Latino youth using a GST framework. It sought to expand the concept of victimization to include multiple types of victimization, conceptualized as polyvictimization, which has not been examined in the previous GST studies. In addition, it explored the relevance of three measures of negative affect (i.e. depression, anxiety, and anger) in the GST model among Latino youth. It also included a number of culturally-relevant moderators that have been left out of previous GST studies and were hypothesized to be of particular importance for Latinos. Finally, this dissertation sought to understand how the theoretical pathways proposed in GST vary for male and female Latino youth.

Overall, results from this dissertation both support and raise questions about the generalizability of GST to the Latino population. The results provide partial support for the hypothesized role of culturally-relevant variables in the GST process. Most importantly, this research confirmed that, as with white and general populations, polyvictimization is an appropriate construct for understanding the link between victimization and delinquency among Latinos. In addition, results from this study show anger is the key construct mediating the victimization-delinquency overlap among Latino youth. This is consistent with propositions from GST and policy that promotes positive coping strategies.

This analysis confirmed the hypothesis that polyvictimization would be positively and significantly associated with delinquency. Consistent with expectations (Agnew, 2006b), Latino youth who experienced polyvictimization, or more than one type of victimization, were more likely to
engage in self-reported delinquent acts. This relationship remained while controlling for a number of relevant variables (i.e. gender, age, SES) as well as the negative affect and cultural variables. Therefore, this confirmed the importance of using a more thorough concept of polyvictimization as presentation of a negative stimulus proposed in GST. This is important because previous GST studies may have overestimated the importance of individual victimization experiences (e.g. physical abuse) on mental health and delinquency outcomes because those outcomes were likely related to the co-occurrence of the individual victimization measured and other types of victimization not measured (H. A. Turner et al., 2010). Future research should thus consider utilizing comprehensive measures of victimization rather than individual types of victimization in models testing GST.

Analysis of the structural components of the models for males and females showed the relationship between polyvictimization and delinquency was significantly stronger for females. Therefore, although both males and females who experience polyvictimization are likely to utilize delinquent coping behaviors, it appears this relationship is stronger for Latinas. This suggests that victimized Latina youth are more likely to engage in delinquent means of coping with this particular source of strain. These results are surprising given Broidy and Agnew’s (1997) finding that males are more likely than females to respond to anger and strain with criminal behavior. Thus, while that may be true for Caucasians, it does not appear to hold up for Latino youth. In addition, this is in contrast to research suggesting males are more likely than females to show externalized reactions to stress and strain (Aneshensel, 1992; Leadbeater et al., 1995; Pearlin, 1989).

Another goal of this study was to examine the role of negative affect in the relationship between polyvictimization and delinquency. Given the inconsistent findings regarding the role of negative affect due to measurement and conceptualization problems, this study chose to compare two possible measurement models for negative affect before proceeding to the full test of GST. First, two
competing measurement models of negative affect (i.e. a one-variable model and a three-variable model) were tested before inclusion in the full structural model predicting delinquency. Analysis of the measurement models of negative affect revealed that a three-variable model was a better fit for the data than a one-variable model. The three-variable model used observed items of depression, anxiety, and anger to fit three separate latent variables. This model provided more specificity by grouping individual observed items by their respective indicator (depression, anxiety, and anger). This suggests that these items do naturally load onto three separate latent variables rather than one, more general, indicator of negative affect. All three latent negative affect variables were then included in the full model to determine whether depression, anxiety, and/or anger mediate the relationship between polyvictimization and delinquency.

Polyvictimization was significantly and positively associated with all three negative affect variables. While the relationship between polyvictimization and anger was consistent for males and females, the relationship between polyvictimization and both depression and anxiety was significantly stronger for females. This suggests females are more likely to react to victimization with feelings of depression and anxiety than are males. This is consistent with previous research showing that females tend to be more likely to respond to strain with depression and anxiety (Al-Badayneh et al., 2012; Robbers, 2004; Sigfusdottir & Silver, 2008). The research regarding the gendered relationship between strain and anger has been inconsistent in the literature, with some studies showing females are more likely to respond with anger (Campbell, 1994; Piquero & Sealock, 2004) and others showing no gender differences (Broidy, 2001; Kaufman, 2009). However, taken together, these results regarding the links from victimization to negative emotions across gender and among Latino youth are largely consistent with research with other samples.
Analysis of the relationship between the negative affect variables and delinquency showed that only anger was significantly associated with delinquency. In the full model, anger partially mediated the relationship between polyvictimization and delinquency. This suggests polyvictimization is associated with an increase in one’s feelings of anger, which is in turn associated with an increase in self-report delinquent coping behaviors. Although Agnew indicates anger will fully mediate the relationship between strain and delinquency, the results found here are consistent with a large number of studies that find support for a partial mediation model (Carson et al., 2009; Cudmore et al., 2015; Manasse & Ganem, 2009; Pérez et al., 2008; Watts & McNulty, 2013). Some studies have found that anger is only related to certain delinquency outcomes (e.g. interpersonal aggression) but not others (e.g. delinquency, marijuana use; Harnish, Aseltine, & Gore, 2000). It is possible that anger may play a lesser role in the strain-delinquency connection among Latino youth or that it may only relate to certain delinquent coping strategies.

Splitting the model to examine the role of gender revealed an interesting finding regarding the mediating role of anger. While anger was significantly and positively associated with delinquency for females, there was no association for males. For females who experience polyvictimization, their delinquent behavior is, in part, a reaction to feelings of anger. Conversely, victimized males engage in delinquent behaviors for reasons not directly related to anger, depression, or anxiety. This is consistent with results from the model fit comparing the models for males and females—the female model was a better fit for the data than the male model. This contrasts with studies that typically find anger to have a stronger association with delinquency for males than females (Sigfusdottir & Silver, 2008). Therefore, given that the mediating effect of negative emotions is a central tenant of GST (Agnew, 2006b), it appears the mechanisms proposed in the theory have more application for females when
using a sample of Latino youth. There must be other mechanisms at work explaining the higher rate of delinquency among male Latino youth that are not considered in GST.

Contrary to the hypotheses, findings from the full model indicated that depression and anxiety were not significantly associated with delinquency. Although anger is the more common negative affect measure included in tests of GST, previous studies have included measures of both anxiety and depression (e.g. Aseltine et al., 2000; De Coster & Heimer, 2005; Hollist et al., 2009; Kort-Butler, 2010; Moon, Morash, et al., 2009; Peck, 2013; Watts & McNulty, 2013). However, taken as a whole, these studies have produced mixed findings regarding the importance of depression and anxiety in the GST model as well as the direction of the relationship, if any, between these measures of negative affect and delinquency.

In order to further investigate potential explanations for these null findings, the bivariate relationship between latent measures of depression and anxiety was tested. The covariance between depression and anxiety was .88 ($z = 60.51$, $p < .001$). Thus, there is a large and statistically significant relationship between feelings of depression and feelings of anxiety, indicating that increased feelings of depression are associated with increased feelings of anxiety. The significant covariance suggests that the amount of overlap in their variances might have prevented each from making a unique contribution to delinquency in the full model. This also suggests that depression and anxiety might be similar enough to combine into one latent indicator. Similarly, in their study of GST, Aseltine et al. (2000)’s measures of depression and anxiety had significant overlap and so only the measure of anxiety was used for the analysis. Although a statistical argument can be made for combining the anxiety and depression scales into one measure, they are qualitatively two distinct sets of symptoms. Therefore, despite the co-occurrence of depression and anxiety, it makes more conceptual sense for them to remind separate measures.
As hypothesized, findings revealed that the acculturation/depression interaction was significantly associated with delinquency. Subsequent analysis found a moderating effect where the association between depression and delinquency was only significant for individuals with high levels of acculturation. This indicates that highly acculturated Latino youth who experience depression are more likely to engage in delinquent behavior. This relationship does not exist for the low acculturated youth. This suggests that acculturation and acceptance of Anglo culture may act as a risk factor for delinquent coping in response to symptoms of depression. This raises the question of why depressed Latino youth are more likely to rely on delinquent coping strategies if they are more assimilated into American culture.

In order to contextualize these findings, it is important to consider the demographic characteristics of the adolescents and caregivers sampled in the DAVILA study. It is possible that the measure of acculturation used in this study was a proxy for acculturative stress involved with assimilating to the Anglo culture. Interestingly, during the interview, while 79.5% of the caregivers preferred to speak Spanish, 74.9% of the adolescents preferred to speak English. This suggests that the youth surveyed in the DAVILA study were generally more acculturated than their caregivers, potentially creating acculturative discrepancy between the two generations. It is possible that the youth’s level of acculturation is not what matters; instead, it may be the discrepancy in level of acculturation between caregiver and child that matters. Discrepancy in levels of acculturation between youth and caregivers could potentially create additional sources of strain within the household, thus weakening the youth’s ability to cope appropriately with feelings of depression. This also adds at least some loose support to the idea that acculturation into the mainstream host culture may be associated with poorer outcomes because it signals a break from the family’s culture of origin.
Another implication of these results is that assimilation into Anglo culture, while caregivers continue to maintain traditional culture values and language, may signal a loosening of the relationship between adolescent and caregiver. Questions on the Brief-ARSMA-II assessed among other things, whether youth prefer speaking in English, reading books in English, and writing letters in English. The highly acculturated adolescents were those who tended to prefer thinking, speaking, and engaging in English. Given the high percentage of caregivers who elected to speak Spanish during the DAVILA interviews, it is likely that many of these caregivers are not comfortable speaking English. Therefore, language discrepancies in the home may make it difficult for parents to fully monitor their children. It would be rather difficult for a native Spanish speaker who is not comfortable speaking English to adequately monitor their child’s social media accounts in English or be fully engaged in their school performance. For instance, parents with limited English language abilities may be unable to review their children’s social media accounts for indications that the adolescent is experiencing psychological distress. Highly acculturated youth may also feel less comfortable discussing their psychological distress with less acculturated parents. Therefore, the moderating impact of acculturation on the relationship between depression and delinquency may be due to less parental monitoring between highly acculturated youth and less acculturated caregivers. In contrast, youth with lower levels of acculturation that experience symptoms of depression may be subject to more parental engagement and thus be less likely to engage in delinquent coping. Future research should more explicitly explore how a discrepancy between caregiver-child levels of acculturation and enculturation impact psychological and delinquency outcomes.

Previous research has shown assimilation into Anglo culture to be associated with poorer psychological outcomes. However, studies have produced mixed findings regarding the link between acculturation and delinquent outcomes (Brook et al., 1998; Buriel et al., 1982; Lopez & Brummett,
While some studies have shown acculturation to be negatively associated with delinquency, others find acculturation to be significantly and positively associated with delinquency and violent offending. Findings from this study can add to this body of literature. It is possible that rather than a direct effect, acculturation works as a moderator for other variables linked to delinquency. Therefore, future research should explore incorporating variables measuring one’s level of integration in to mainstream culture as moderating factors rather than solely as independent variables.

Although family support had a direct, negative association with delinquency in the full model, this relationship only remained for males in the split model. This indicates that family support is a protective factor against delinquency, but only for males. This result is surprising given findings from the literature showing females are more likely than males to perceive social support (R. J. Turner & Noh, 1983; Vaux, 1988; Wilcox-Rountree & Warner, 1999; Windle, 1992) and more likely to utilize social support to handle stress (Burke & Weir, 1978; Windle, 1992). As one type of social support, family support then would be expected to be more relevant for females. One possible explanation relates to the socialization process of Latino children and gender roles held by Latino parents. Perhaps Latino parents are less willing to discuss delinquency prevention strategies with their teenage daughters because they expect them to be prosocial. Conversely, adolescent males may be expected to have some involvement in these activities. Thus adolescent males whose parents provided support and discussed methods of remaining prosocial may be less likely to engage in delinquency. Another potential conclusion is that Latino girls receive support from other sources not limited to the family (e.g. peers, teachers). This might explain why family support is not as salient for Latino females as it is for Latino males.
Theoretical Implications

The current study contributes theoretically to the GST literature by being one of only a small number of studies that focuses on Latino adolescents. This allowed for an evaluation of the extent to which GST generalized to other cultural groups, which is not well understood and has not been sufficiently evaluated. Important theoretical contributions will be expanded upon in this section.

First, this dissertation confirmed that many of the same processes at work in Caucasian samples are relevant with Latinos. Polyvictimization, used as a measure of negative stimuli, was significantly and positively association with delinquent behavior. This relationship remained after including a number of additional control variables and variables of interest. This is in line with a large body of literature concluding that adolescent victimization significantly increases the likelihood of engaging in a range of delinquent outcomes.

The role of anger in the GST model presented interesting results. While results from the full model indicated anger mediated the relationship between polyvictimization and delinquency, this effect only remained for females when the model was split on gender. This suggests that females are driving the anger to delinquency association. However, as Broidy and Agnew (1997) suggest, female anger is also associated with feelings of guilt. Therefore, this may explain why females commit less crime than men, all else being equal. Unfortunately, I was unable to include a measure of guilt in the current study to test the co-occurrence of anger and guilt among Latino youth.

The implication of this finding is that, among Latino youth, the GST framework appears to be a better theoretical explanation of female delinquency than male delinquency. The fact that males in the sample had higher rates of both victimization and delinquency suggests that there are either aspects of the theory that were unable to be tested here or gaps in the theory that cannot explain male delinquency among Latino males. In order to address the first possibility, it is important to note that
while the link between polyvictimization and delinquency was present for males, this association did not work through any of the negative emotions tested in this dissertation. It is likely that some other factor is working to mediate the polyvictimization-delinquency link for males. As Agnew and White (1992) point out, variables present in other theories (e.g. social control, differential association) are also worth considering in models of GST. Specifically, strain may lead to low social control and association with delinquent peers, which in turn, lead to delinquency. Thus the process from polyvictimization to delinquency may operate through these other untested mediators for males.

In addition, the current study focused on the presentation of a negative stimulus and did not include the other two types of strain proposed in GST. The more robust relationship between polyvictimization and delinquency for females suggests that victimization may be a more salient strain for Latino females than it is for Latino males. This is in line with feminist theory suggesting female delinquency is rooted in early victimization experiences (L. M. Brown, Chesney-Lind, & Stein, 2007). It is possible other strains have a more salient relationship with delinquency among Latino males.

Findings from this research also imply that GST might not be adequate enough to explain the relationship between victimization and delinquency among Latino males. Returning to the concept of the victimization-delinquency overlap, it is possible that other theoretical explanations better describe the underlying mechanism linking victimization and delinquency (Gottfredson & Hirschi, 1990; Lauritsen et al., 1991; Sampson & Lauritsen, 1990; Schreck, 1999). Another potential conclusion from these results is that delinquency and victimization are co-existing experiences for males. Specifically, Latino males become involved in experiences that raise both the risk of victimization and delinquency. Therefore, any link between victimization and delinquency is not related to the emotional experience of victimization. This conclusion is similar to the interactional theory of delinquency, suggesting most independent variables are reciprocally related to delinquency (Thornberry, 1987).
Findings from this analysis can contribute to the understanding about the role of gender in GST, particularly, whether it is the emotional experience of strain or the emotional expression of strain that is gendered. In the female model, polyvictimization was significantly and positively associated with all three negative emotions. However, equality of coefficients analysis showed there was a significant difference between the polyvictimization-anger and polyvictimization-anxiety links. Specifically, females were more likely ($p < .05$) to respond to polyvictimization with anxiety than anger. For females, anger is the emotion linking polyvictimization to delinquency. The fact that females are more likely to experience anxiety in response to polyvictimization might explain why they have lower levels of delinquency than males in the sample. In addition, given that males and females experience all three emotions in response to polyvictimization, it is evident that the emotional response to strain is not gendered. However, because only females respond to anger with delinquency, the results suggest that emotional expression is gendered.

This study was the first to explicitly incorporate cultural factors into a GST model. Considering research highlighting the importance of considering cultural risk and protective factors for victimization and delinquency among Latinos, the exclusion of such factors in previous studies with this population is a vital omission. Findings here suggested that acculturation is a relevant conditioning factor for Latino youth. Specifically, depression is associated with delinquent behavior among highly acculturated youth. It is likely depression did not mediate the relationship between polyvictimization and delinquency because the depression-delinquency relationship was only present for the more highly acculturated youth. Conversely, this suggests depression may not be an important mechanism in the polyvictimization-delinquency chain among less acculturated individuals.

The significant association between depression and delinquency for highly acculturated Latino youth suggests that they behave in a more similar manner to Caucasian American youth than Latino
adolescents with low levels of acculturation. One possible explanation is that those who are more assimilated have greater access to delinquent behaviors (e.g. illegal substances) and thus utilize delinquent means of coping with depression. Another interpretation is that the behaviors and emotional reactions of youth may shift as part of the acculturation process. Future research should explore the GST mechanisms among Latino youth for different types of delinquent behavior in order to determine whether there are different depression-delinquency links that are more important for high versus low acculturated Latino youth.

In the current study, acculturation and family support were statistically significant in the GST model. These cultural variables are thus important factors to consider and incorporate in future studies of GST with Latino youth. The broader implication of these findings is that culture does play a role in GST. It is very likely that a number of other cultural factors not included in this study could also be of importance. Future studies of GST with Latinos might consider incorporating measures of acculturative stress, cultural identity, as well as neighborhood-level variables such measure of ethnic enclaves and peer context. Given these preliminary results showing that “culture matters,” future studies should continue to expand the notion of how culture, at the micro and macro-level, contextualizes and enhances GST.

**Policy Implications**

Findings from this dissertation offer a number of implications for policy and practice. First, this study examined the relationship between polyvictimization and delinquency. Significant findings have helped further our understanding of how the full scope of victimization experiences connects to delinquency among Latino youth. Prevention programs should focus on identifying polyvictims because they are the most vulnerable to negative outcomes, including psychological distress and delinquency. This would require schools and other relevant stakeholders to conduct thorough
evaluations of the full spectrum of victimization experiences. Following thorough evaluation, programs can identify those at the highest risk and provide interventions that reduce risk for further victimization and in turn decrease the likelihood of subsequent criminal behavior.

Second, this study specified the role of negative emotion in the victimization-delinquency overlap and provided another intervention target for delinquency prevention among Latino youth. Anger appears to be the emotion linking polyvictimization to delinquency, particularly for females. Clinical assessment can help identify the emotional reactions to victimization and thus provide targeted delinquency prevention.

Findings regarding the role of cultural factors in the victimization-delinquency overlap can help drive crime prevention policy for Latino youth. For instance, results highlight the importance and utility of making culture-specific prevention efforts as well as provide a better understanding of how services may need to be tailored for Latino youth, beyond language accommodation. Specifically, attention needs to be paid to the acculturation process among Latino youth as it seems to be a salient factor in the link between polyvictimization and delinquency. Thus, guidance counselors in schools and others working with Latino youth should be encouraged to explore this issue with any Latino youth who is at risk for victimization and/or delinquency.

One potential conclusion from these findings is that one’s level of acculturation helps, in part, determine how Latino youth express and cope with emotion (delinquent versus appropriate coping). Youth in more Latino-oriented families might experience higher levels of family cohesiveness and thus feel more comfortable turning to family for support in response to victimization and psychological distress. Therefore, prevention programing may benefit from exploring ways in which family cohesiveness can be strengthened for more Anglo-oriented youth. As mentioned above, one potential explanation for the importance of acculturation relates to the concept of cultural discrepancy
in families; specifically, youth who are highly acculturated living with parents who have continued to maintain their traditional culture. An implication of this conclusion is that specific attention should be paid to the cultural traditions and values held by youth and other members of their families. It may be that the process of acculturation actually matters less when parents are also highly acculturated. In fact, what could put youth at risk for delinquent coping is actually the discrepancy in cultural values between parent and child. If this is the case, treatment providers working with at-risk Latino youth should work on strengthening the bond between parents and children in these situations. One specific area of focus could be increasing the rate of monitoring behavior and social media presence among Spanish-speaking caregivers and their English-speaking children. Increased parental monitoring in families with cultural discrepancy could help caregivers identify adolescents experiencing psychological distress and intervene to decrease the likelihood of delinquent coping.

In addition, although family support did not buffer the relationship between strain and negative emotions or delinquency, there was a direct protective role of family support for delinquency among males. Therefore, family support is an important factor for preventing delinquency among this population. At the primary prevention level, programs can be put in place to strength family ties and teach caregivers the importance of providing support and supervision of youth children. As children age, mentoring programs can be put in place for children who do not have strong relationships with family members or those without prosocial caregivers. Given the salience of family support for Latino males, boys at risk should be connected with mentors as early as possible. Finally, the best prevention and intervention programs for Latino youth at risk for victimization and/or delinquency are those that engage and incorporate family members.

Limitations
This dissertation contributes to the GST literature by being the only study to utilize a national sample of Latino youth. Despite its strengths, this study also has limitations worth noting. Regarding the data, the DAVILA study is cross-sectional and thus faces potential challenges with causal ordering. GST maintains that strains will cause negative emotions, which in turn lead to subsequent delinquent coping behaviors. However, the current study cannot assure that the variables operate in that order. It is important to note that GST assumes the reaction to strain is relatively instantaneous, and thus traditional longitudinal designs, which often include time periods of several months to more than a year, may miss the relationship between strain and delinquency (Agnew & White, 1992).

One of the contributions of GST to the criminological theory literature is its inclusion of additional sources of strain, including failure to achieve positively valued goals, the loss of a positively valued stimulus, and the presentation of a negative stimulus (Agnew, 2006b). This analysis included polyvictimization as a measure of the presentation of a negative stimulus, but it was unable to account for the other two types of strain. Thus, there is a chance that the participants were simultaneously experiencing other types of strain that might have been equally important in the GST chain. As noted previously, this may be especially true for Latino males.

The variable for immigrant status was somewhat limited. The original question in the DAVILA study asked what country the adolescent participant was born in and then a variable was constructed to indicate whether he or she is an immigrant. The survey did not query how long the adolescent had lived in the United States. Research on what has been termed the “immigrant paradox” suggests that Latino immigrants have protective factors against mental health problems that diminish the longer they live in the U.S. Therefore, a more useful variable would have been a measure of how long the participant had lived in the U.S. in order to account for length of time in this country; however, the acculturation variable does in part account for that effect.
Finally, the accuracy and reliability of recall for events and one’s own behavior are always potential issues in self-report studies. In general, self-report studies are susceptible to memory deterioration and distortion. It is possible that participants identified events that took place outside the identified time period specified during the interview. However, time bounding was used during the interviews to help participants define specified time periods and minimize the possibility of inappropriately including or excluding events (Sabina & Cuevas, 2013). Despite these potential limitations, self-reports are a dominant method of data collection in the social sciences (Schwarz, 2007).

**Future Research**

Future research should continue to examine the utility of GST for Latino male youth. Findings from this study show that GST generalizes to Latino youth, but more so for females. This raises several important questions. First, why does the model function differently for male and female Latino youth? And second, are there other factors mediating the polyvictimization-delinquency relationship for Latino male youth? One potential mediating or moderating factor useful to consider would be the role of acculturative stress. Latino males may face higher levels of acculturative stress, thus leading to higher levels of delinquency. It would also be useful to include a measure of bias crime victimization, something that is particularly relevant for any minority group. It is possible that other types of victimization experiences not included in this study would lead to delinquency through the process proposed in GST.

Future research should consider replicating these findings with a sample of Latino adults. Although these results provide information about the extent to which GST generalizes to Latino youth, it cannot be assumed these same results would apply to Latino adults.
Additional studies of GST among Latinos should incorporate additional measures of strain that were unable to be tested here. Findings from this study indicate that the victimization-delinquency overlap does indeed work through the GST pathways for adolescent Latinas. However, victimization is only one of GST’s key strains. It is unclear whether these same pathways would hold up with additional measure of strain.

Future research should examine whether combining depression and anxiety into an overall construct is a better fit for the data than measuring them separately. It is possible that a better indicator of the two emotions (depression and anxiety) will make a significant contribution to the full model predicting delinquency. It is also possible that these emotions might interact with other emotions to produce delinquency. Finally, depression and anxiety may just not be relevant in the polyvictimization-delinquency chain for Latino youth. Therefore, further analysis may be able to help elucidate the importance of depression and anxiety in GST models for Latino youth.

In order to address issues with causal ordering, further studies should consider utilizing a micro-longitudinal design. Because GST proposes strain will have a contemporaneous effect on strain, the lag time between waves in typical longitudinal studies would likely miss those discrete relationships. Therefore, methodological designs that include shorter periods between data collection periods (e.g. days or weeks) may be able to better capture changes in reaction to strain and negative emotions.

The current study examined how the strain-delinquency process operates at the micro level. However, individual differences in many of the key variables measured in this study may also reflect the larger context in which one lives, particularly for the cultural variables. For instance, the individual impact of acculturation on one’s coping process may differ depending on the neighborhood in which one lives and the peers one associates with. It is possible that acculturation interacts with levels of
Latino concentration to impact the individual’s coping process (Pérez et al., 2008). Therefore, future studies of the role of cultural factors in GST could utilize multi-level modeling approaches to address issues like neighborhood and peer groups.

**Conclusion**

The three primary conclusions from this dissertation are 1) the applicability of GST among the Latino population; 2) the relevance of polyvictimization as a measure of victimization in GST; and 3) the mediating mechanisms through which polyvictimization impacts delinquency. First, this research expands our knowledge of how GST applies to an understudied population. Findings indicate that GST works similarly among Latino youth as it does among other populations. Therefore, while we do not need to make changes to the theory, we can expect some aspects of the theory to function somewhat differently among Latinos (e.g. anger).

Second, this study was the first to use this conceptualization of polyvictimization in a test of GST. While GST researchers have vacillated about the importance of employing a composite index of strain, research from the victimization literature has concluded that including only one type or a limited number of victimization types can underestimate the full burden of victimization exposure that youth experience (H. A. Turner et al., 2010). Therefore, this study confirmed the importance of including a comprehensive measures of victimization rather than individual types of victimization in models testing GST. Finally, consistent with previous GST research, results showed that anger was the key construct mediating the polyvictimization-delinquency overlap among Latino youth. In addition, the relationship between anger and delinquency was particularly salient for females.
References


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doi:10.1080/01639625.2012.748626


## Appendix

### Table 3

*Descriptives for Delinquency Variables (N = 1,525)*

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td><strong>Any delinquent acts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Break/damage or destroy something belonging to school</td>
<td>13.8 (210)</td>
<td>16.8 (126)</td>
<td>10.9 (84)</td>
</tr>
<tr>
<td>Take something from a store without paying for it</td>
<td>14.2 (217)</td>
<td>15.6 (117)</td>
<td>12.9 (100)</td>
</tr>
<tr>
<td>Take money at home that did not belong to you</td>
<td>14.8 (226)</td>
<td>15.4 (116)</td>
<td>14.2 (110)</td>
</tr>
<tr>
<td>Take anything at school from the teacher or other kids</td>
<td>13.8 (210)</td>
<td>16.1 (121)</td>
<td>11.5 (89)</td>
</tr>
<tr>
<td>Hit, slap, or shove one of your parents or other grown-ups</td>
<td>6.0 (92)</td>
<td>5.5 (41)</td>
<td>6.6 (51)</td>
</tr>
<tr>
<td>Hit, slap, or shove other kids or got into a physical fight</td>
<td>20.7 (316)</td>
<td>24.3 (183)</td>
<td>17.2 (133)</td>
</tr>
<tr>
<td>Hit, slap, or shove a boyfriend/girlfriend</td>
<td>5.3 (80)</td>
<td>3.5 (26)</td>
<td>7.0 (54)</td>
</tr>
<tr>
<td>Write things or spray paint on walls or sidewalks or cars</td>
<td>9.4 (143)</td>
<td>11.8 (89)</td>
<td>7.0 (54)</td>
</tr>
<tr>
<td>Carry a weapon</td>
<td>9.0 (137)</td>
<td>12.5 (94)</td>
<td>5.6 (43)</td>
</tr>
<tr>
<td>Avoid paying for things such as movies, bus, food</td>
<td>12.5 (191)</td>
<td>14.9 (112)</td>
<td>10.2 (79)</td>
</tr>
<tr>
<td>Smoke marijuana</td>
<td>14.5 (221)</td>
<td>17.7 (133)</td>
<td>11.4 (88)</td>
</tr>
<tr>
<td>Take other drugs (not prescribed)</td>
<td>6.4 (98)</td>
<td>7.7 (58)</td>
<td>5.2 (40)</td>
</tr>
<tr>
<td>Hurt someone badly enough to need bandages or care</td>
<td>5.8 (89)</td>
<td>7.2 (54)</td>
<td>4.5 (35)</td>
</tr>
</tbody>
</table>

### Table 4

*Descriptives for Victimization Variables (N = 1,525)*

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (n)</td>
<td>% (n)</td>
<td>% (n)</td>
</tr>
<tr>
<td><strong>Attack with a weapon</strong></td>
<td>6.0 (91)</td>
<td>8.5 (64)</td>
<td>3.5 (27)</td>
</tr>
<tr>
<td><strong>Attack without a weapon</strong></td>
<td>14.5 (221)</td>
<td>18.7 (140)</td>
<td>10.5 (81)</td>
</tr>
<tr>
<td><strong>Racial attack</strong></td>
<td>3.8 (58)</td>
<td>5.6 (42)</td>
<td>2.1 (16)</td>
</tr>
<tr>
<td><strong>Hit, beat, or attacked by adult</strong></td>
<td>4.4 (67)</td>
<td>4.0 (30)</td>
<td>4.8 (37)</td>
</tr>
<tr>
<td><strong>Called names by adult</strong></td>
<td>12.2 (186)</td>
<td>8.6 (65)</td>
<td>15.7 (121)</td>
</tr>
<tr>
<td><strong>Neglect</strong></td>
<td>1.6 (25)</td>
<td>2.3 (17)</td>
<td>1.0 (8)</td>
</tr>
<tr>
<td><strong>Gang attack</strong></td>
<td>4.7 (72)</td>
<td>7.9 (59)</td>
<td>1.7 (13)</td>
</tr>
<tr>
<td><strong>Peer assault (including by sibling)</strong></td>
<td>21.5 (327)</td>
<td>21.2 (159)</td>
<td>21.8 (168)</td>
</tr>
<tr>
<td><strong>Picked on by another kid (including by sibling)</strong></td>
<td>12.3 (188)</td>
<td>11.8 (89)</td>
<td>12.8 (99)</td>
</tr>
<tr>
<td><strong>Called names by another kid</strong></td>
<td>13.0 (198)</td>
<td>11.7 (88)</td>
<td>14.3 (110)</td>
</tr>
<tr>
<td><strong>Hit or slapped by a boyfriend/girlfriend</strong></td>
<td>2.4 (36)</td>
<td>3.9 (29)</td>
<td>1.0 (7)</td>
</tr>
<tr>
<td><strong>Sexual abuse by another child or teen (including sibling)</strong></td>
<td>1.5 (23)</td>
<td>2.3 (17)</td>
<td>1.0 (6)</td>
</tr>
<tr>
<td><strong>Attempted sexual intercourse by anyone</strong></td>
<td>3.2 (49)</td>
<td>2.0 (15)</td>
<td>4.4 (34)</td>
</tr>
<tr>
<td><strong>Sexual behavior with anyone over age of 18</strong></td>
<td>6.2 (95)</td>
<td>7.7 (58)</td>
<td>4.8 (37)</td>
</tr>
<tr>
<td><strong>Stalked by anyone</strong></td>
<td>8.5 (130)</td>
<td>6.7 (50)</td>
<td>10.4 (80)</td>
</tr>
<tr>
<td>Predictors</td>
<td>Anger $B$ (SE)</td>
<td>Anger $\beta$</td>
<td>Anxiety $B$ (SE)</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>---------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Age</td>
<td>.09 (.11)</td>
<td>.02 (.11)</td>
<td>.02 (.12)</td>
</tr>
<tr>
<td>SES</td>
<td>.03 (.20)</td>
<td>.00 (.20)</td>
<td>.01 (.23)</td>
</tr>
<tr>
<td>Female</td>
<td>2.15 (.42)</td>
<td>1.22 (.42)</td>
<td>.12*** (.46)</td>
</tr>
<tr>
<td>Victim</td>
<td>1.48 (.13)</td>
<td>.29*** (.14)</td>
<td>.31*** (.14)</td>
</tr>
<tr>
<td>Accult</td>
<td>1.03 (.34)</td>
<td>.07** (.39)</td>
<td>.03 (.37)</td>
</tr>
<tr>
<td>Encul</td>
<td>-.60 (.22)</td>
<td>-.07** (.24)</td>
<td>-.06* (.24)</td>
</tr>
<tr>
<td>FamSupport</td>
<td>-1.94 (.19)</td>
<td>-2.11*** (.21)</td>
<td>-2.06*** (.21)</td>
</tr>
<tr>
<td>Immigrant</td>
<td>-.26 (.54)</td>
<td>-.31 (.60)</td>
<td>-.01 (.60)</td>
</tr>
<tr>
<td>Vic x Gender</td>
<td>-.13 (.12)</td>
<td>-.03 (.14)</td>
<td>-.10 (.13)</td>
</tr>
<tr>
<td>Vic x Accult</td>
<td>.32 (.20)</td>
<td>.04 (.22)</td>
<td>.13 (.21)</td>
</tr>
<tr>
<td>Vic x Encult</td>
<td>-.11 (.13)</td>
<td>-.02 (.15)</td>
<td>.16 (.14)</td>
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<tr>
<td>Vic x Fam</td>
<td>.20 (.08)</td>
<td>.07** (.09)</td>
<td>.13 (.09)</td>
</tr>
<tr>
<td>Vic x Imm</td>
<td>.04 (.14)</td>
<td>.01 (.16)</td>
<td>.14 (.16)</td>
</tr>
</tbody>
</table>

$\Delta R^2$ .006* .00 .00 .00 .001

Model $R^2$ .23*** .24*** .17*** .18*** .23*** .23***

* $p < .05$, ** $p < .01$, *** $p < .001$
Table 6
Multiple Regression Model with Victimization Moderators Predicting Delinquency (N = 1,396)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>(B) (SE)</th>
<th>(β)</th>
<th>(B) (SE)</th>
<th>(β)</th>
<th>(B) (SE)</th>
<th>(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.10 (.02)</td>
<td>.10***</td>
<td>.09 (.02)</td>
<td>.09***</td>
<td>.09 (.02)</td>
<td>.09***</td>
</tr>
<tr>
<td>SES</td>
<td>.02 (.04)</td>
<td>.01 (04)</td>
<td>.01 (.04)</td>
<td>.01 (04)</td>
<td>.01 (.04)</td>
<td>.01 (04)</td>
</tr>
<tr>
<td>Female</td>
<td>-.38 (.09)</td>
<td>-.11***</td>
<td>-.49 (.09)</td>
<td>-.14***</td>
<td>-.50 (.08)</td>
<td>-.14***</td>
</tr>
<tr>
<td>Victimization</td>
<td>.37 (.03)</td>
<td>.36***</td>
<td>.30 (.03)</td>
<td>.29***</td>
<td>.30 (.03)</td>
<td>.29***</td>
</tr>
<tr>
<td>Acculturation</td>
<td>.08 (.07)</td>
<td>.03 (07)</td>
<td>.04 (.07)</td>
<td>.01 (07)</td>
<td>.05 (.07)</td>
<td>.01 (07)</td>
</tr>
<tr>
<td>Enculturation</td>
<td>-.05 (.05)</td>
<td>-.03 (05)</td>
<td>-.03 (.05)</td>
<td>-.02 (05)</td>
<td>-.02 (.05)</td>
<td>-.01 (05)</td>
</tr>
<tr>
<td>Family Support</td>
<td>-.23 (.04)</td>
<td>-.15***</td>
<td>-.12 (.04)</td>
<td>-.08**</td>
<td>-.14 (.04)</td>
<td>-.09***</td>
</tr>
<tr>
<td>Immigrant</td>
<td>-.10 (.11)</td>
<td>-.02 (11)</td>
<td>-.09 (.11)</td>
<td>-.02 (11)</td>
<td>-.09 (.11)</td>
<td>-.02 (11)</td>
</tr>
<tr>
<td>Anger</td>
<td>.04 (.01)</td>
<td>.18***</td>
<td>.04 (.01)</td>
<td>.17***</td>
<td>.04 (.01)</td>
<td>.17***</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.01 (.01)</td>
<td>.03 (01)</td>
<td>.01 (.01)</td>
<td>.03 (01)</td>
<td>.01 (.01)</td>
<td>.03 (01)</td>
</tr>
<tr>
<td>Depression</td>
<td>.01 (.01)</td>
<td>.06 (01)</td>
<td>.01 (.01)</td>
<td>.06 (01)</td>
<td>.01 (.01)</td>
<td>.06 (01)</td>
</tr>
<tr>
<td>Vic x Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.06 (.03)</td>
<td>-.06***</td>
</tr>
<tr>
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\(ΔR^2\)              | .04***       |          | .00               |
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**Multiple Regression Model with Anger Moderators Predicting Delinquency (N = 1,396)**

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<th>B   (SE)</th>
<th>β</th>
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* \( p < .05 \), ** \( p < .01 \), *** \( p < .001 \)
Table 12
Coefficients for Full Structural Equation Model Paths, Standardized

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* p < .05, ** p < .01, *** p < .001
Table 17
Coefficients for Full Model and for Model Split on Gender

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<tr>
<td>Dep x Acculturation</td>
<td>.00</td>
<td>.03</td>
<td>Dep x Acculturation</td>
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<td>.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Based on Paternoster, Brame, Mazerolle, and Piquero (1998). $p$ value only provided for variables in which both the male and female models were significant.
Frequency of Delinquent Behavior*

Lots of kids do things that they are not supposed to or that get them into trouble. Tell me how many times you have done any of the following things in the last year, even if you did not get caught. Remember when I say in the last year I mean from [current MONTH -1] 2010 up to now.

Remember, if at any point you do not want to continue the survey please let me know and I will discontinue. If circumstances change during the course of our call and you would like me to call back, just say “OK, you're welcome” and I'll call you back on another day.

How many times in the last year did you….

1 Gave response Range: 0 to 97; 97= 97 times or more
98 Don’t know
99 Refused

1. On purpose break or damage or destroy something belonging to a school? (D1)
3. Take something from a store without paying for it? (D3)
4. Take money at home that did not belong to you like from your mother’s purse or your parents’ dresser? (D4)
5. Take anything at school from the teacher or other kids that did not belong to you? (D5)
7. Hit, slap, or shove one of your parents or other grown-ups? (D7)
8. Hit, slap, or shove other kids or got into a physical fight with them? (D8)
9. Hit, slap, or shove a boyfriend/girlfriend or someone with whom you went on a date? (D9)
11. Write things or spray paint on walls or sidewalks or cars when you were not supposed to do that (Also known as “tagging”)? (D11)
13. Carry a weapon with you? (D13)
14. Avoid paying for things such as movies, bus or subway rides, or food? (D14)
17. Smoke marijuana? (D17)
18. Take any other drugs (that were not prescribed medication or taken not following the prescription)? (D18)
19. Hurt someone badly enough to need bandages or care from a doctor? (D19)

*Item numbers used in figures presented in parentheses.
**Juvenile Victimization Questionnaire (JVQ)**

Now I am going to ask you some questions about negative experiences that may have happened to you in the past year [From CURRENT MONTH-1 2010 to CURRENT MONTH & YEAR]. Before we begin, I want to remind you that your answers are completely confidential. If there is a particular question that you don't want to answer, that's O.K. But it is important that you be as honest as you can, so that the researchers can get a better idea of the kinds of things that Latino youth sometimes experience so they can be helped. Remember, if at any point you do not want to continue the survey please let me know and I will discontinue. If circumstances change during the course of our call and you would like me to call back, just say “OK, you're welcome” and I'll call you back on another day.

*m Module A: CONVENTIONAL CRIMES*

<table>
<thead>
<tr>
<th>Question</th>
<th>Code</th>
<th>Answer 1</th>
<th>Answer 2</th>
<th>Don't Know</th>
<th>Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC4) Sometimes people are attacked WITH sticks, rocks, guns, knives, or other things that would hurt. In the last year, did anyone hit or attack you on purpose WITH an object or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else? (dcr4)</td>
<td>1</td>
<td>YES</td>
<td>2</td>
<td>NO</td>
<td>98 (vol) Don’t know</td>
</tr>
<tr>
<td>DC5) In the last year, did anyone hit or attack you WITHOUT using an object or weapon? (dc5r)</td>
<td>1</td>
<td>YES</td>
<td>2</td>
<td>NO</td>
<td>98 (vol) Don’t know</td>
</tr>
<tr>
<td>DC8) In the last year, were you hit or attacked because of your skin color, religion, or where your family comes from? Because of a physical problem you have? Or because someone said you are gay? (dc8r)</td>
<td>1</td>
<td>YES</td>
<td>2</td>
<td>NO</td>
<td>98 (vol) Don’t know</td>
</tr>
</tbody>
</table>

*m Module B: CHILD MALTREATMENT – Section E*

Next, we ask about grown-ups who take care of you. This means parents, babysitters, adults who live with you, or others who watch you.

<table>
<thead>
<tr>
<th>Question</th>
<th>Code</th>
<th>Answer 1</th>
<th>Answer 2</th>
<th>Don’t Know</th>
<th>Refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM1) Not including spanking on your bottom, in the last year, did a grown-up in your life hit, beat, kick, or physically hurt you in any way? (em1r)</td>
<td>1</td>
<td>YES</td>
<td>2</td>
<td>NO</td>
<td>98 (vol) Don’t know</td>
</tr>
</tbody>
</table>
**EM2)** In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn’t want you? (em2r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>

**EM3)** When someone is neglected, it means that the grown-ups in their life didn’t take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, did you get neglected? (em3r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>

**Module C: PEER AND SIBLING VICTIMIZATIONS – Section F**

**FP1)** Sometimes groups of kids or gangs attack people. In the last year, did a group of kids or a gang hit, jump, or attack you? (fp1r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>

**FP2)** (If yes to P1, say: “Other than what you just told me about…..”) In the last year, did any kid, even a brother or sister, hit you? Somewhere like: at home, at school, out playing, in a store, or anywhere else? (fp2r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>

**FP4)** In the last year, did any kids, even a brother or sister, pick on you by chasing you or grabbing your hair or clothes or by making you do something you didn’t want to do? (fp4r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>

**FP5)** In the last year, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn’t want you around? (fp5r)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>NO</td>
</tr>
<tr>
<td>98</td>
<td>(vol) Don’t know</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>(vol) Refused</td>
<td></td>
</tr>
</tbody>
</table>
FP6) In the last year did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?
(fp6r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

Module D: SEXUAL VICTIMIZATIONS – Section G

GS1) In the last year, did a grown-up YOU KNOW touch your private parts when you didn’t want it or make you touch their private parts? Or did a grown-up YOU KNOW force you to have sex? (gs1r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

GS2) In the last year, did a grown-up you did NOT KNOW touch your private parts when you didn’t want it, make you touch their private parts or force you to have sex? (gs2r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

GS3) Now think about kids your age, like from school, a boyfriend or girlfriend, or even a brother or sister. In the last year, did another child or teen make you do sexual things? (gs3r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

GS4) In the last year, did anyone TRY to force you to have sex, that is sexual intercourse of any kind, even if it didn’t happen? (gs4r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

GS7) In the last year, did you do sexual things with anyone 18 or older, even things you both wanted? (gs7r)
1 YES
2 NO
98 (vol) Don’t know
99 (vol) Refused

HST1) In the last year, have you ever been STALKED by anyone? For example, has anyone ever followed or spied on you and you were afraid or worried that they would hurt you? (hst1r)
1 YES
2    NO
98   (vol) Don’t know
99   (vol) Refused

*Item numbers used in figures presented in parentheses.
**Brief Acculturation Rating Scale for Mexican-Americans - II**

Ok, now I am going to read a list of statements that deal with Anglo and Latino languages and cultures. Please indicate how the statement describes you, using a scale of 1 to 5 where 1 means not at all, 2 means very little, 3 means moderate, 4 means very often and 5 means almost always.

So for the first statement [Item] would you give that a 1, 2, 3, 4, or 5? (Read descriptions if necessary)

[NOTE: (VOL) Don't know = 98; (VOL) Refused = 99]

<table>
<thead>
<tr>
<th>Items</th>
<th>Not at all</th>
<th>Very little</th>
<th>Moderate</th>
<th>Very often</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I speak Spanish. (b_1)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I speak English. (b_2)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I enjoy speaking Spanish. (b_3)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I associate with Anglos. (b_4)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I enjoy English language movies. (b_5)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I enjoy Spanish language TV. (b_6)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I enjoy Spanish language movies. (b_7)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>8. I enjoy reading books in Spanish. (b_8)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>9. I write letters in English. (b_9)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. My thinking is done in the English language. (b_10)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. My thinking is done in the Spanish language. (b_11)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. My friends are of Anglo origin. (b_12)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*Item numbers used in figures presented in parentheses.*
Multidimensional Scale of Perceived Social Support*

This next section is about how much support you get from your family, friends and other people you know. I’m going to read a statement, please listen to each one carefully, and tell me how much you agree or disagree with the statement. I’m going to use a scale of 1 to 7. Where 1 means very strongly disagree and 7 means very strongly agree. You can tell me any number from 1 to 7. If you have any questions please ask. So the first one is [1st statement], (Interviewer, read as necessary: on a scale of 1 meaning very strongly disagree to 7 meaning very strongly agree which number would you give that statement: 1, 2, 3, 4, 5, 6, or 7?)

SCALE:
1 very strongly disagree
2
3
4
5
6
7 very strongly agree
98 Don’t know
99 Refused

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me. (qn_3)
4. I get the emotional help and support I need from my family. (qn_4)
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family. (qn_8)
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions. (qn_11)
12. I can talk about my problems with my friends.

*Item numbers used in figures presented in parentheses.