Conceptualizing Offending, Victimization, and Gender: Three Studies on Juveniles

by

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ABSTRACT

General theories of crime have frequently been used to explain a variety of offending and victimization experiences for a wide range of samples. However, feminist criminologists question whether the same causal mechanisms exert similar effects for males and females—a criticism that points to the need for sex-specific analyses. Toward that end, this dissertation examines variables derived from several different general theories of crime in three separate studies. Each of the studies uses split-sample analyses to investigate potential sex-based differences. The first study uses three-level meta-analytic methods to determine if predictor variables derived from general theories explain victimization for both adolescent males (n = 138,848) and adolescent females (n = 176,611). Additionally, it examines both within-dataset and between-dataset differences. The second study uses a sample of high school students in Arizona (n = 2,738 males, n = 2,932 females). It examines the role of parental social ties in explaining the overlap of adolescent dating violence (ADV) offending and victimization. The third study uses two waves of a longitudinal dataset of high-risk adolescents (n = 182 males, n = 203 females). It focuses on the relationship between negative emotions and delinquency, and the role of avoidant coping. In each of the studies, both gender-neutral and gender-specific explanations of offending and victimization were found. In the first study, while predictor variables derived from criminological theory explained victimization for both males and females, larger effect sizes were found for risky lifestyle variables. In the second study, an overlap between ADV offending and victimization was found for both males and females, and social ties explained some of the overlap. However, paternal attachment was only significant for females, and involvement was only significant for males. In the third

study, avoidant coping was associated with an increase in substance abuse, and anger was associated with an increase in violent behavior for both males and females. Avoidant coping partially mediated the relationship between anger and substance use, but only for males. Implications for practice and future research are discussed.

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INTRODUCTION

While estimates of the extent of adolescent offending and victimization vary widely according to methodology and definition, a consistent finding is that those who are between the ages of 13 and 18 are most likely to offend and experience victimization. While juvenile arrests have decreased at a greater rate than young adult arrests, adolescent crime rates are higher for most types of offenses (Puzzanchera, 2019). The National Crime Victimization Survey (NCVS) reported that 1.85% of 12 to 17-year-olds surveyed experienced violent victimization in 2017, compared to 1.66% of 18 to 24-year-olds, and 1.49% of 25 to 34-year-olds (Morgan & Truman, 2018). Another representative study, the National Survey of Children's Exposure to Violence (NatSCEV), which includes a sample of 4,503 adolescents aged 17 and under, found that 37.3% of respondents had experienced physical victimization, 5% had experienced sexual victimization, and 27.1% had experienced property victimization in 2014 (Finkelhor et al., 2015). These statistics point to the importance of research on this segment of the life-course.

Offending and victimization experiences also vary within adolescent demographics. While males are more likely to commit violent and property offenses, females are more likely to commit status offenses. Additionally, males are more likely to be victims of physical and property victimization, and females are more likely to experience sexual victimization (Finkelhor et al., 2015). With the exception of arson, adolescents older than 15 are more likely to be arrested for every other offense

(Puzzanchera, 2019). While youth in the 10-13 age range are more likely to experience physical victimization, older youth are more likely to experience sexual and property victimization (Finkelhor et al., 2015), and younger youth are more likely to be victimized at school (Musu-Gillette et al., 2019). Differences have also been observed for sexual orientation, with gay, lesbian, and bisexual youth more likely than heterosexual youth to be both physically assaulted and bullied on school property (Musu-Gillette et al., 2019).

Victimization at school is one of the unique types of adolescent victimization. While a school environment may seem like it would protect from violent victimization, rates have been found to be higher in school settings, with 33 in 1,000 youth being violently victimized in school, and 21 in 1,000 being victimized outside of school (Musu-Gillete et al., 2019). While intimate partner violence is usually thought of as an issue affecting adults, adolescents commit acts of violence on and are victimized by intimate partners, known as adolescent dating violence. While the definitions and measurements of dating violence among teens vary widely, studies have found that between 10% and 30% of teens who have been in romantic relationships have either perpetrated or been victim of a physical act of violence by a partner (National Institute of Justice, 2016).

An arrest for an offense during adolescence can negatively affect educational aspirations, job seeking, and relationships in adulthood (Sweeten, 2006). Additionally, victimization in adolescence has been linked to a wide variety of negative outcomes. Those who are victimized as a youth are more likely to experience repeated victimization into adulthood (Menard, 2000) and are more likely to abuse substances (Kilpatrick et al., 2000) and violently offend (Riveria & Widom, 1990) than those who are not victimized.

Mental health issues are also common, with studies consistently finding that rates of PTSD, depression, and anxiety are higher in those who have experienced victimization in childhood or adolescence (Turner et al., 2006). Victimization causes financial loses for the victim through theft victimization as well as hospital bills and therapy for those who are violently victimized (Miller et al., 1996). Those who are victimized at school may avoid school out of fear, leading to lower educational attainment or even dropping out completely (Beauvais et al., 1996). The effects of adolescent victimization on these outcomes have been found to be stronger than those of adult victimization (Menard, 2002).

Juvenile offending and victimization are pervasive problems, and although much inter-disciplinary research has been conducted, several questions remain unanswered. This dissertation seeks to examine why some individuals are more likely to offend and be victimized than others using both gendered and criminological perspectives. Three separate studies will be conducted, each one addressing specific research questions:
Study 1: Which predictors derived from criminological theories explain juvenile victimization? Are mean effect sizes similar for males and females?
Study 2: Can parental social bonds explain both adolescent dating violence perpetration and victimization? Do the effects of social bonds differ by sex?
Study 3: Are negative emotions associated with increased delinquency? Does avoidant coping mediate this relationship? Are pathways similar for males and females?

The literature review presented below provides a brief overview of what we know about the adolescent offending and victimization thus far, and the extent to which

existing explanations differ by sex. Subsequently, a more thorough outline of each of the three studies is presented.

Criminological Theory

It is clear that offending and victimization during adolescence has detrimental negative consequences. While a variety of general criminological theories have been used to explain adolescent offending, much of the early research on victimization focused on demographic characteristics to explain why some groups were victimized at a higher rate than others. Hindelang et al. (1978) developed the integrated lifestyle theory of victimization, where different lifestyles and activities explained why some demographic groups were more likely to be victimized than others. For example, young male adolescents are most likely to be victimized because they are more likely to spend evenings away from home as opposed to senior citizens, who are more likely to spend evenings at home.

Scholars have also used a risk/protective factor approach to explain juvenile offending and victimization. The main idea behind this paradigm is that factors exist on a continuum and either increase or decrease the likelihood of a negative outcome (Arthur et al., 2002). While there is no consensus as to how many factors exist (Sampson & Lauritsen, 1994; Taylor et al. 2007), these factors are cumulative, with more risk factors present indicating a higher likelihood for a negative outcome. Risk and protective factors have been identified in a variety of domains, such as individual (personality characteristics, mental health, and psychosocial adjustment), family (family violence, family characteristics, familial SES), peer (gang membership, peer delinquency, social

networks), school (school achievement, involvement in pro-social activities), and community (neighborhood poverty, opportunities for employment).

Offending and victimization have a documented overlap, and those who are involved in criminal activity are also the most likely to be victimized (Gottfredson, 1981). Although victim-only and offender-only groups do exist, a non-trivial proportion of victims also engage in offending. This overlap has led scholars to argue that criminological theories should be able to explain victimization and offending (Hindelang, 1976). While tests using criminological theory to explain victimization have had mixed results, and differences between offender-only and victim-only groups do exist (Schreck et al., 2008), some criminological theories have merit in explaining both offending and victimization. This next section will outline several prominent criminological theories and their utility in predicting adolescent offending and victimization.

Routine Activities

One of the most prevalent theories used to explain crime is routine activity theory (RAT). This theory suggests that three elements exist for crime to take place: A motivated offender, a suitable target, and the lack of a capable guardian (Cohen & Felson, 1979). Although available evidence suggests RAT better predicts offending (Pauwels and Svensson, 2011), the theory has also been used to explain adolescent victimization. The idea is that those who have routines that are "risky" including offending, being around delinquent peers (Shreck & Fisher, 2004), gang membership (Taylor et al., 2008), and the lack of parental supervision, are more likely to be victimized (Lauritsen et al., 1992; Nofziger, 2009). Additionally, it has been argued that

experiencing victimization may influence someone to change their routine activities as to avoid repeat victimization. Turanovic and Pratt (2014) found that self-control influenced changes in risky lifestyles in order to avoid repeat victimization, and Carson et al. (2013) found that switching schools prevented re-victimization. Although not all studies have found this relationship (Averdijk, 2011; Bunch et al., 2013), routine activity theory has received considerable support in explaining offending and victimization in the adolescent stage of the life-course.

Self-control

As one of the most widely tested criminological theories, Gottfredson and Hirschi's (1990) general theory of crime has consistently shown to explain a variety of offending outcomes (Pratt & Cullen, 2000). The main premise is that inadequate levels of self-control—which Gottfredson and Hirschi argue are primarily developed through parenting practices in childhood—coupled with opportunity, produce crime. Characteristics of low self-control include impulsivity, shortsightedness, and the inability to consider future consequences. Self-control and the effect on victimization is usually explained through a risky lifestyles framework. Someone who is impulsive and lives in the moment is likely to be involved with risky activities, places, or people, and therefore, put themselves at greater risk for victimization (Pratt et al., 2014; Reisig & Golladay, 2019; Schreck, 1999). Additionally, self-control has explained victimization independent of risky lifestyles. Schreck et al., (2002) found that adolescents with low self-control were more likely to be victimized in non-risky situations as well. However, low self-control has not always increased victimization risk; for example, Fagan and Mazerolle

(2011) found that having low self-control actually protected against repeat victimization in a sample of adolescents. Gibson (2012) discovered that self-control predicted violent victimization for adolescents living in non-disadvantaged neighborhoods, but for those living in the worst neighborhoods, self-control was no longer important in explaining victimization.

Social Bond Theory

Using another application of control theory, Hirschi (1969) theorized that bonds to prosocial others, including attachment to family and peers, involvement in structured activities, commitment to prosocial activities, and the belief about what is right and wrong, would prevent people from engaging in delinquency. The mechanisms that allow these bonds to protect against delinquency have also been found to protect against victimization. Being bonded to parents may lead to spending more time with parents, and this supervision may then provide guardianship against both offending and victimization. Likewise, those that have beliefs that are incompatible with crime may be more likely to avoid places where offending takes place, decreasing risk. Gibson (2012) found that adolescents that were more attached to parents had a decreased victimization risk, and Mass et al. (2010) found that females that were more bonded to parents were less likely to use alcohol, which therefore decreased teen dating violence risk. Being involved with prosocial activities may decrease victimization risk as these prosocial activities may be less likely to be attended by delinquent peers. Gottfredson and Gottfredson (1985) found a negative relationship between commitment to school and victimization. However, not all research has revealed social bonds to significantly predict victimization. Chen (2009)

used social bonds as a mediating factor between offending and victimization but found that regression coefficients remained the same whether or not social bonding variables were added. Despite the influential effect parents have in their lives of their children, more attention has been paid to social bonds outside the home, suggesting the need for additional research examining parental social bonds.

Social Disorganization Theory

Disorganized neighborhoods are characterized by low socioeconomic status, ethnic heterogeneity, and residential mobility (Shaw & McKay, 1942) and have been found to be criminogenic. Social disorganization has been extended to explain victimization as well (Sampson & Groves, 1989), as adolescents who spend time in disorganized areas have been found to be at greater risk. These areas may expose adolescents to a greater number of motivated offenders who frequent these areas, and in a disorganized community with few jobs available, a youth with money in their pockets may make an attractive target (Spano et al., 2008). Social disorganization has also been used to explain victimization in schools. For example, minority students are more likely to be victimized at school, as students may be distrustful, have decreased communication with, and less likely to come to the assistance of someone of a different race or culture than them. Residential mobility has also been used in the school context. Someone who constantly switches schools may not be able to able to rely on other students as a form of social support that guards against victimization (Schreck et al., 2003). Again, not all studies have found support for social disorganization theory, calling for further examination.

General Strain

Another perspective is Agnew's (1992, 2006) general strain theory. The main tenant of strain theory, which has been used to explain a wide variety of delinquent acts, is that the presentation of a negative stimuli, the removal of a positive stimuli, or failing to achieve a positively valued stimuli may cause someone to feel negative emotions. In order to relieve these negative emotions, including anger, anxiety and depression, maladaptive coping mechanisms, including offending, may be used. Generally, victimization has been used as the independent variable in this model, as a source of negative stimuli (Baron 2009; Hay & Evans, 2006). Additionally, Iratzoqui (2018) merged general strain theory and the risky lifestyles framework and predicted that maladaptive coping may include activities such as running away and substance use that would make victimization more likely. A test of this hypothesis revealed that certain negative emotions (depression and hopelessness, but not fear) led to maladaptive coping behaviors that increased victimization risk. The victim-offender overlap has also been used as an outcome, and Zavala & Spohn (2013) found that vicarious strains predicted both offending and victimization, while anticipated strains only predicted victimization.

Gender and Criminological Theory

One of the fundamental questions of feminist criminology is whether explanations of crime differ for males and females. Traditionally, mainstream criminologists have used gender as a control variable in their analyses, rather than examining unique influences of variables of interest as suggested by scholars focused on gendered pathways to crime.

Feminist criminologists warn against the "add gender and stir approach," and that important gendered factors have been found to explain criminal behavior (Belknap & Holsinger, 2006; Daly, 1989; Reisig et al., 2006). Scholars who study gender and adolescent victimization argue that like offending, victimization may also have specific gendered explanations (Henson et al., 2010; Jensen & Brownfield, 1986).

There are two ways to study the influence of gender on explanations of offending and victimization. The first is that males and females are differently exposed to a risk factor. For example, males are more likely to have delinquent peers than females (Simons et al., 1980) and having peers that are also motivated offenders may explain why males have higher victimization risks. A second way that explanations may be gendered is that the effect of the independent variable on the dependent variable differs for males and females. For example, it has been found that social bonds to parents are more influential in predicting offending for females than for males (Heimer & DeCoster, 1999). Therefore, even though males and females may have similar levels of social bonds, the effect of social bonds on the outcome may be stronger for females.

Some studies indicate that males are more likely to be victimized than females simply because they are more likely to engage in risky activities and routines (Bunch et al., 2015; Jensen & Brownfield, 1986; Lauritsen et al., 1992), or have delinquent lifestyles (Henson et al., 2010). For example, females are more likely to engage in extracurricular activities at school that are also attended by adults, such as sports, theater, student government, and school committees, providing greater guardianship. Simply by having these structured activities as part of their daily routine, females may have less

opportunity to offend and be better protected from school victimization (Peguero & Popp, 2012; Popp & Peguero, 2011). Similarly, females may be subject to more indirect supervision than males when socializing with their peers. Parents want to know what their daughter is doing and who she is with, and simply having more guardianship may explain why girls are less likely to be involved in delinquency (Augustyn & McGloin, 2013) which may work similarly for victimization.

While the influence of routine activities on males' victimization is usually explained using differing exposure, the effects of routine activities have also been found to differ. Felson et al. (2012) found that engaging in night life explained victimization for males, but not for females, and Henson et al. (2010) found that online lifestyles predicted victimization for males only. However, the opposite has also been found to be true, with Like-Halisip and Moisky (2011) finding that routine activities were a better predictor of victimization for females than males and Tillyer et al. (2010) finding that school-based risk factors were more influential in predicting sexual assault victimization for females, and protective factors were weaker.

Social bonds have been found to be more influential in explaining offending for females because of the way they are socialized to put the greatest importance on social relationships with others. Scholars have found this to also be true of victimization, as Wilcox et al. (2009) found that attachment was significantly more important in explaining school theft victimization for females than males. Additionally, Maas et al. (2010) found that bonding to parents predicted teen dating victimization for females but not males. The involvement component of social bonds has also found to differ for males

and females. Popp and Peguro (2011) and Wilcox et al. (2009) found that the specific activities that males and females take part in are important. While student clubs may provide a protective factor for females, participating in school sports increased victimization risk for males.

Not all research indicates that males and females have unique victimization risks. Peterson et al. (2018) found that levels of self-control did not significantly differ by gender and worked equally well in explaining violent victimization. Similarly, Turanovic et al. (2015) found that the integration of self-control and routine activities explained victimization for both males and females, and risky lifestyles orientations have been found to be equally useful in predicting the victimization of both genders (Bjarnason et al. 1999; Henson et al., 2010). However, the fact that a non-trivial number of studies have found differences in both exposure and effects proves that gender should be continued to be examined with regards to offending and victimization.

Purpose of Dissertation

While scholars have identified support for a variety of criminological theories in predicting adolescent offending and victimization, there is still more work to be done. For example, it is unknown if key variables suggested by general theories explain offending and victimization for both adolescent males and females. In order to shed some light on this important topic, three separate studies will be conducted. To determine which theories best explain juvenile victimization, Study One will use meta-analytic procedures to determine if predictors of adolescent victimization that are derived from criminological theory vary by sex. Effect sizes will be computed separately by gender to determine the

utility of gender-neutral theories in predicting victimization. Since parental factors have been found to be so influential in the lives of children, Study Two will examine the victim-offender overlap of adolescent dating violence (ADV) using Hirschi's (1969) social bond theory. There have been mixed findings with regard to the influence of parental bonds on adolescent victimization, and ADV offending and victimization is important to study because it has been found that adolescents are less likely to "age" out of this type of violence relative to other types (Leadbeater et al., 2014). Study Three will examine the relationship between negative emotions and delinquency using a general strain theory framework. Additionally, it will explore the role of avoidant coping in this relationship. This next section will further detail the purpose and methods for each of these studies.

Study 1: Juvenile Victimization, Criminological Theory, and Gender: A Meta-analysis

While many studies have been conducted on the causes of juvenile victimization, there is a lack of consensus as to whether predictors derived from general criminological theories, such as self-control, social bonds, routine activities, and general strain can explain victimization for both male and female adolescents. In order to help rectify this, this study will include a meta-analysis that focuses on gendered explanations of juvenile victimization. A literature search will be conducted in order to identify potential published and unpublished material in criminology, psychology, social work, and sociology online databases. In order to be eligible, several criteria for inclusion were developed:

1. The study must be a quantitative study that has a measure of victimization (violent, sexual, theft, or dating – not emotional victimization or bullying) as the dependent variable.
2. The study has to have at least one independent variable that is consistent with criminological theory, including self-control, routine activities, social bond, or social disorganization. Those using a repeat victimization or risky lifestyles framework are also included.
3. The study has to use a sample of adolescents. While some studies have several respondents that are older than 18, they will be included if the mean age is 18 or less.
4. The effect sizes (which can be either bivariate or multivariate – separate studies for each will be conducted) have to examine the relationship between the independent variable and victimization separately for males and females.

Once the literature search is completed, studies will be coded with multivariate and bivariate effect sizes separately. Studies will be coded according to independent variable, dependent variable type, dependent variable measurement, follow-up time, sample location, sample type, and study design. Independent variables will be grouped into the theory that they represent (for example: alcohol use and offending will be part of the "risky lifestyles" group) but examined separately. Bivariate measures will use Pearson correlation coefficients, and multivariate measures will use adjusted odds ratios, so each study included will need to be able to be translated into *r* or *Aor* if they are not already in that format.

Once studies are coded, a three-level meta-analysis will be estimated RStudio (using separate analyses for bivariate and multivariate statistics). Separate analyses will be run for males and females to determine mean effect sizes for each one of the independent variables. Once this is done, moderator analyses will be run to see if effect sizes differ depending on sample and methodology characteristics. For the sample characteristics, the following moderators will be used: sample type (i.e., high risk, general) sample location (North American or non-North American), and DV type (i.e., violent, sexual, property, dating, mixed). For the methodology characteristics, the following moderators will be used: study design (i.e., cross-sectional or longitudinal), DV follow-up time (i.e., one year or less, more than one year), whether the study controls for competing explanations, and whether it is published. After these analyses are run, mean effect sizes will determine which are the strongest predictors of victimization for males and females. Implications for research, theory, and prevention will then be discussed.

Study 2: Victim-Offender Overlap in Adolescent Dating Relationships

ADV offending and victimization during the teenage years has been found to be present in approximately 20% of adolescent relationships (Wincentak et al., 2017). Like other forms of victimization, ADV offending and victimization are highly correlated, with reciprocal violence (being both victim and offender) being a factor in about 50% of violent relationships (Gray & Foshee, 1997). Unlike other forms of violent victimization that are predominately male, ADV affects males and females at approximately equal rates (Archer, 2000). This is an especially large problem because adolescents who commit violence against their partners typically do not “age out” of these acts. Unlike teens who

commit other acts of violence and then desist in early adulthood, ADV offenders frequently continue to offend into adulthood with ongoing acts of intimate partner violence (Leadbeater et al., 2014).

ADV has often been explained using the risk/protective factor paradigm, with certain individual, family, school, and community factors either making an adolescent more or less likely to experience a negative outcome (Lösel & Farrington, 2012). Breaking from tradition, this study will use Hirschi's (1969) social bond theory, which has received considerable support as an explanation for adolescent offending (see e.g., Krohn & Massey, 1980), but has not been tested as extensively in a victimization context. Hirschi (1969) posited that an individual will be more likely to engage in delinquent activity when their bonds to conventional society were weakened using four elements: Attachment to prosocial people, commitment in prosocial activities, involvement, which is the amount of time someone spends on prosocial activities, and the belief in the moral validity of shared social values. However, Hirschi (1969) did not consider whether and how these elements could protect against victimization. Other scholars have predicted that these elements may operate within a routine activity framework (Cohen & Felson, 1979). Those who are more involved in prosocial activities may be monitored more closely, and those that are invested in prosocial activities, such as sports, schools, and volunteering, may be less likely to spend time with delinquent peers and on unstructured activities, reducing victimization risk (Wilcox et al., 2009).

To date, the link between familial social bonds and victimization in adolescence has not been well established, and previous tests have produced mixed results. For

example, Schreck and Miller (2004) found that while children living with warm and accepting families were victimized less, attachment to mothers and fathers did not reduce victimization risk. Additionally, Lee (2015) found that attachment predicted violent offending, but not violent victimization, over time. These previous tests examined violent victimization, which included victimization by family members, and it is possible that familial bonds may be more important in explaining victimization by dating partners. Leadbeater et al. (2018) have called for more research examining parental factors and ADV, so this study will focus specifically on social bonds to parents rather than peers or institutions. Because ADV is a problem that equally affects males and females, and scholars are not in agreement as to whether social bond theory can equally explain offending and victimization for both sexes (Richards & Branch, 2012), a gendered component will also be included.

To examine these questions, Study Two will use data from the 2018 Arizona Youth Survey, which is a cross-sectional study that examines risky behaviors of Arizona youth representative of all 15 counties in the state. The sample will be limited to those aged 15 to 18 because dating has been found to be normative at age 15 (Furman & Rose, 2015), and the research question examines juveniles, rather than young adults. The study sample differs on almost all variables compared to the full sample, with those in the full sample both offending and being victimized more than the study sample. This may be explained by the full sample including those who are 19 and 20, and the fact that the most "at risk" respondents for offending and victimization may be more likely to leave school, and thus not be part of the study as they get older.

This study will use two dependent variables, *ADV offending* and *ADV victimization*, which are dichotomous measures that asks the respondent if they have physically assaulted/been physically assaulted by a boyfriend or girlfriend in the past 12 months. For the independent variables, a scale will be created for Hirschi's (1969) social bonding elements: *attachment to father*, *attachment to mother*, *involvement* in prosocial activities, and *commitment* to prosocial activities. Because this study is focused on how parental bonds influence dating violence, separate measures for *parental beliefs* and *child beliefs* will be included. Risky activities are one of the most robust predictors of adolescent victimization (Henson et al., 2010), so measures for *alcohol* use, *self-reported offending, antisocial peers, and witnessing violence* will be included as control variables. Demographic factors of *race/ethnicity, age*, and *SES* will also be included. Because this study is interested in two dependent variables that are hypothesized to be related, analyses will be done using bivariate probit models, which is a method commonly used in studies that examine both offending and victimization (Flexon et al., 2016; Jennings et al., 2011; Posick, 2013; Reisig & Holtfreter, 2018). When this is completed, implications for theory, research, and practice will then be discussed.

Study 3: Negative Emotions, Avoidant Coping, and Delinquency: Direct and Indirect Effects

General strain theory (GST) has received considerable support in explaining offending and other delinquent behaviors in adolescence (Agnew, 2006). Agnew (1992) originally hypothesized that either the presence of negative stimuli, the removal of positive stimuli, or the failure to achieve positively valued goals may cause negative

emotions. In order to relieve these negative emotions, someone will either cope pro-socially (e.g., therapy) or maladaptively, with maladaptive coping being more likely to include crime. GST has also been used to explain differences in offending for males and females. For example, it has been found that males are more likely to experience anger as a negative emotion when responding to negative stimuli, rather than depression or anxiety (Broidy & Agnew, 1997; Daniels & Holtfreter, 2019). Anger has been found to be more likely than other negative emotions to be relieved by maladaptive coping, and thus crime is more likely in those that experience anger, explaining the gender gap in crime. Scholars have also hypothesized that the process of general strain theory is different for males and females (Broidy & Agnew, 1997). For example, Piquero and Sealock (2004) found that strain was associated with depression in males only.

Despite prior research, several unanswered questions persist in the GST literature that this study will attempt to address. First, several questions surrounding gender are still prevalent. Potential gendered pathways from negative emotions to outcomes have not been consistent across studies (Benedini & Fagan, 2020; Sigfusdottir et al., 2008). While previous studies have examined the role of gender in general strain theory using one variable and one stage of the relationship (i.e., source of strain, negative emotions, coping), this study will examine the potential sex-based differences at each stage.

Next, instead of deeming coping to be either pro-social or maladaptive, this study will incorporate the avoidant coping style literature to help explain the role of coping in general strain theory. In avoidant coping, strategies are used to try and repress the source of the stress, including using substances, telling themselves it is not important, and trying

to avoid dealing with the source of stress (Roth & Cohen, 1986), and are more likely to be produce negative outcomes such as substance abuse (Eftekhari et al. 2004). Avoidant coping has been found to be gendered (Eschenbeck et al. 2007), but researchers are not in agreement as to whether males or females are more likely to cope in an avoidant manner (Kort-Butler, 2009). While Kort-Butler (2009) incorporated avoidant coping into general strain theory, she used coping styles to explain the development of negative emotions, rather than their potential effect on offending.

In order to examine these issues, this study will use LONGSCAN data, which is a longitudinal dataset that follows high-risk youth from age four to age 18. Two waves will be used (age 16 and age 18) in order to time order the variables with a sample of 182 males and 203 females. *Internalizing emotions* and *anxiety*, as measured by the Trauma Symptom Checklist for Children will be used to assess negative emotions at age 16. *Avoidant coping* at age 18 will be included as a mediating variable. S*ubstance use* will be modeled as a categorical latent variable consisting of cigarette use, alcohol use, and marijuana use at age 18. Finally, *violent behavior* will use a variety score of sixdifferent behaviors at age 18. Analyses will be performed by structural equation modeling using MPlus, and implications for practice and future research will be discussed.

Organization of Dissertation

The remainder of this dissertation is organized as follows: chapter two presents Study One, which is a meta-analysis that examines the utility of various criminological theories in predicting victimization for both boys and girls. Chapter three presents Study Two, which examines familial bonds and the ADV victim-offender overlap. Chapter four

presents Study Three, which examine the relationship between negative emotions and delinquency using a GST framework and a mediating variable of avoidant coping. Finally, chapter five will bring these three studies together and discuss implications for theory, research, and policy.

References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*, 47-88.

Agnew, R. (2006). General strain theory: Current status and directions for further research. In Cullen, F. T., Wright, J. P., & Blevins, K. R. (eds.) *Taking stock: The status of criminological theory, vol.15*, 101-123.

Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin, 126*, 651-680.

Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni Jr, A. J. (2002). Measuring risk and protective factors for use, delinquency, and other adolescent problem behaviors: The Communities That Care Youth Survey. *Evaluation Review, 26*, 575-601.

Augustyn, M. B., & McGloin, J. M. (2013). The risk of informal socializing with peers: Considering gender differences across predatory delinquency and substance use. *Justice Quarterly, 30*, 117-143.

Averdijk, M. (2011). Reciprocal effects of victimization and routine activities. *Journal of Quantitative Criminology, 27*, 125-149.

Baron, S. W. (2009). Street youths' violent responses to violent personal, vicarious, and anticipated strain. *Journal of Criminal Justice, 37*, 442-451.

Beauvais, F., Chavez, E. L., Oetting, E. R., Deffenbacher, J. L., & Cornell, G. R. (1996). Drug use, violence, and victimization among White American, Mexican American, and American Indian dropouts, students with academic problems, and students in good academic standing. *Journal of Counseling Psychology, 43*, 292-299.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology, 1*, 48-71.

Benedini, K. M., & Fagan, A. A. (2020). From Child Maltreatment to Adolescent Substance Use: Different Pathways for Males and Females? *Feminist Criminology*, 15, 147-173.

Bjarnason, T., Sigurdardottir, T. J., & Thorolindsson, T. (1999). Human, agency, capable guardians, and structural constraints: A lifestyle approach to the study of violent victimization. *Journal of Youth and Adolescence, 28*, 105-119.

Broidy, L., & Agnew, R. (1997). Gender and crime: A general strain theory perspective. *Journal of Research in Crime and Delinquency, 34,* 275-306.

Bunch, J., Clay-Warner, J., & Lei, M. (2015). Demographic characteristics and victimization risk: Testing the mediating effects of routine activities. *Crime and Delinquency, 61,* 1181-1205.

Bunch, J. Clay-Warner, J., & McMahon-Howard, J. (2013). The effects of victimization on routine activities. *Criminal Justice and Behavior, 4*, 574-592.

Carson, D. C., Esbensen, F. A., & Taylor, T. J. (2013). A longitudinal analysis of the relationship between school victimization and student mobility. *Youth Violence and Juvenile Justice, 11*, 275-295.

Chen, X. (2009). The link between juvenile offending and victimization: The influence of risky lifestyles, social bonding, and individual characteristics. *Youth Violence and Juvenile Justice, 7*, 119-135.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review, 44*, 588-608.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law & Women's Studies, 2*, 11-52.

Daniels, A. Z., & Holtfreter, K. (2019). Moving beyond anger and depression: The effects of anxiety and envy on maladaptive coping. *Deviant Behavior, 40*, 334-352.

Eftekhari, A., Turner, A. P., & Larimer, M. E. (2004). Anger expression, coping, and substance use in adolescent offenders. *Addictive Behaviors, 29,* 1001-1008.

Eschenbeck, H., Kohlmann, C. W., & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences, 28,* 18-26.

Fagan, A. A., & Mazerolle, P. (2011). Repeat offending and repeat victimization: Assessing similarities and differences in psychosocial risk factors. *Crime and Delinquency, 57*, 732-755.

Felson, R. B, Savolainen, J., Berg, M. T., & Ellonen, N. (2012). Does spending time in public settings contribute to the adolescent risk of violent victimization? *Journal of Quantitative Criminology, 29,* 273-293.

Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2015) Prevalence of childhood exposure to violence, crime, and abuse: Results from the National Survey of Children's Exposure to Violence. *JAMA Pediatrics, 169,* 746-754.

Flexon, J. L., Meldrum, R. C., & Piquero, A. R. (2016). Low self-control and the victim–offender overlap: A gendered analysis. *Journal of Interpersonal Violence, 31,* 2052-2076.

Furman, W., & Rose, A. J. (2015). Friendships, romantic relationships, and peer relationships. In R. M. Lerner, M. H. Borenstein, & T. Leventhal (Eds.), *Handbook of child psychology and developmental science* (p. 1-43). John Wiley & Sons.

Gibson, C. L. (2012). An investigation of neighborhood disadvantage, low self-control, and violent victimization among youth. *Youth Violence and Juvenile Justice, 10,* 41-63.

Gottfredson G. D. & Gottfredson, D. C. (1985). *Schools and delinquency*. Plenum.

Gottfredson, M. R. (1981). On the etiology of criminal victimization. *Journal of Criminal Law and Criminology, 72,* 714-726.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.

Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violent profiles. *Journal of Interpersonal Violence, 12,* 126-141.

Hay, C., & Evans, M. M. (2006). Violent victimization and involvement in delinquency: Examining predictions from general strain theory. *Journal of Criminal Justice, 34,* 261-274.

Heimer, K., & De Coster, S. (1999). The gendering of violent delinquency. *Criminology, 37,* 471-487.

Henson, B., Wilcox, P., Reyns, B. W., & Cullen, F. T. (2010). Gender, adolescent lifestyles, and violent victimization: Implications for routine activity theory. *Victims and Offenders, 5,* 303-328.

Hindelang, M. J. (1976). *Criminal victimization in eight American cities: A descriptive analysis of common theft and assault*. Ballinger.

Hindelang, M. J., Gottfredson, M. R., & Garofalo, J. (1978). *Victims of personal crime*. Ballinger

Hirschi. T. (1969). *Causes of delinquency*. University of California Press.

Iratzoqui, A. (2018). Strain and opportunity: A theory of repeat victimization. *Journal of Interpersonal Violence*, *33*, 1366-1387.

Jennings, W. G., Park, M., Tomsich, E. A., Gover, A. R., & Akers, R. L. (2011). Assessing the overlap in dating violence perpetration and victimization among South Korean college students: The influence of social learning and self-control. *American Journal of Criminal Justice*, *36*, 188-206.

Jensen, G., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activities. *Violence and Victims, 1*, 85-99.

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology*, *68*, 19-30.

Kort-Butler, L. A. (2009). Coping styles and sex differences in depressive symptoms and delinquent behavior. *Journal of Youth and Adolescence, 38*, 122-136.

Krohn, M. D., & Massey, J. L. (1980). Social control and delinquent behavior: An examination of the elements of the social bond. *The Sociological Quarterly*, *21*, 529-544.

Lauritsen, J. L., Laub, J. H., & Sampson, R. J. (1992). Conventional and delinquent activities: Implications for the prevention of violent victimization among adolescents. *Violence and Victims, 7*, 91-108.

Leadbeater, B. J., Connolly, J., & Temple, J. R. (2018). Changing your status in a changing world: It is complicated! A developmental systems framework for understanding dating violence in adolescents and young adults. In Wolfe, D. A., & Temple, J. R. (eds.) *Adolescent dating violence: Theory, research, and prevention*, 2-23. Academic Press.

Leadbeater, B. J., Thompson, K., & Sukhawathanakul, P. (2014). It gets better or does it? Peer victimization and internalizing problems in the transition to young adulthood. *Development and Psychopathology, 26*, 675-688.

Lee, W. (2015). A longitudinal study of victimization among South Korean youth: The integrative approach between lifestyle and control theory. *Children and Youth Services Review*, *58*, 200-207.

Like-Haislip, T. Z., & Miofsky, K. T. (2011). Race, ethnicity, gender, and violent victimization. *Race and Justice, 1*, 254-276.

Lösel, F., & Farrington, D. P. (2012). Direct protective and buffering protective factors in the development of youth violence. *American Journal of Preventive Medicine, 43,* 8-23.

Maas, C. D., Fleming, C. B., Herrenkohl, T. I., & Catalano, R. F. (2010). Childhood predictors of teen dating violence victimization. *Violence and Victims, 25,* 131-149.

Menard, S. W. (2000). The "normality" of repeat victimization from adolescence through early adulthood. *Justice Quarterly, 17,* 543-574.

Menard, S. W. (2002). *Short and long-term consequences of adolescent victimization*. U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Miller, T. R., Cohen, M. A., and Wiersema, B. (1996). *Victim costs and consequences: A new look*. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice

Morgan, R. E., & Truman, J. L. (2018). *Criminal victimization, 2017*. Washington DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Musu-Gillette, L., Zhang, A., Wang, K., Zhang, J., and Oudekerk, B.A. (2019). *Indicators of school crime and safety: 2018*. U.S. Department of Justice, Office of Justice Programs. National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics

National Institute of Justice (n.d.). *Teen dating violence.* https://nij.ojp.gov/topics/crimes/teen-dating-violence

Nofziger, S. (2009). Deviant lifestyles and violent victimization at school. *Journal of Interpersonal Violence, 9,* 1494-1517.

Pauwels, L. J. R., & Svensson, R. (2011). Exploring the relationship between offending and victimization: What is the role of risky lifestyles and low self-control? A test in two urban samples. *European Journal of Criminal Policy Research 17*, 163-177.

Peguero, A. A., & Popp, A. M. (2012). Youth violence at school and the intersection of gender, race, and ethnicity. *Journal of Criminal Justice, 40,* 1-9.

Peterson, S., Lasky, N. V., Fisher, B. S., & Wilcox, P. (2018). Gendered opportunity and school-based victimization: an integrated approach. *Youth Violence and Juvenile Justice, 16,* 137-155.

Piquero, N. L., & Sealock, M. D. (2004). Gender and general strain theory: A preliminary test of Broidy and Agnew's gender/GST hypotheses. *Justice Quarterly, 21,* 125-158.

Popp, A. M., & Peguero, A. A. (2011). Routine activities and victimization at school: The significance of gender. *Journal of Interpersonal Violence, 26,* 2413-2436.

Posick, C. (2013). The overlap between offending and victimization among adolescents: Results from the second international self-report delinquency study. *Journal of Contemporary Criminal Justice, 29,* 106-124.

Pratt, T. C., & Cullen, F. T. (2000). The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology, 38,* 931-964.

Pratt, T. C., Turanovic, J. J., Fox, K. A., & Wright, K. A. (2014). Self-control and victimization: A meta-analysis. *Criminology, 52,* 87-116.

Puzzanchera, C. (2019). *Arrests of juveniles in 2018 reached lowest levels in nearly four decades.* https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2018.pdf

Reisig, M. D., & Golladay, K. A. (2019). Violent victimization and low self-control: The mediating effect of risky lifestyles. *Violence and Victims, 34,* 157-174.

Reisig, M. D., & Holtfreter, K. (2018). The victim–offender overlap in late adulthood. *Journal of Elder Abuse and Neglect, 30,* 144-166.

Reisig, M. D., Holtfreter, K., & Morash, M. (2006). Assessing recidivism risk across female pathways to crime. *Justice Quarterly, 23,* 384-405.

Richards, T. N., & Branch, K. A. (2012). The relationship between social support and adolescent dating violence: A comparison across genders. *Journal of Interpersonal Violence, 27,* 1540-1561.

Rivera, B., & Widom, C. S. (1990). Childhood victimization and violent offending. *Violence and Victims, 5,* 19-35.

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist, 41,* 813-819.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology, 94,* 774-802.

Sampson, R. J., & Lauritsen, J. L. (1994). Violent victimization and offending: Individual-, situational-, and community-level risk factors. In Reiss, A. J. & Roth, J. A. (eds.) *Understanding and preventing violence, vol. 3.* Washington DC: National Academy Press.

Schreck, C. J. (1999). Criminal victimization and low self-control. An extension and test of a general theory of crime. *Justice Quarterly 16,* 633-654.

Schreck, C. J., & Fisher, B. S. (2004). Specifying the influence of family and peers on violent victimization: Extending routine activities and lifestyles theories. *Journal of Interpersonal Violence, 19,* 1021-1041.

Schreck, C. J., Miller, J. M., & Gibson, C. L. (2003). Trouble in the school yard: A study of the risk factors of victimization at school. *Crime and Delinquency, 49,* 460-484.

Schreck, C. J., Stewart, E. A., & Osgood, D. W. (2008). A reappraisal of the overlap of violent offenders and victims. *Criminology, 46,* 871-906.

Schreck, C. J., Wright, R. A., & Miller, J. M. (2002). A study of individual and situational antecedents of violent victimization. *Justice Quarterly, 19,* 159-180.

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

Sigfusdottir, I. D., Asgeirsdottir, B. B., Gudjonsson, G. H., & Sigurdsson, J. F. (2008). A model of sexual abuse's effects on suicidal behavior and delinquency: The role of emotions as mediating factors. *Journal of Youth and Adolescence, 37,* 699-712.

Simons, R. L., Miller, M. G., & Aigner, S. M. (1980). Contemporary theories of deviance and female delinquency: An empirical test. *Journal of Research in Crime and Delinquency, 17,* 42-57.

Spano, R., Freilich, J. D., & Bolland, J. (2008). Gang membership, gun carrying, and employment: Applying routine activities theory to violent victimization among inner city, minority youth living in extreme poverty. *Justice Quarterly, 25,* 381-410.

Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly, 23*, 462-480.

Taylor, T. J., Freng, A., Esbensen, F. A., & Peterson, D. (2008). Youth gang membership and serious violent victimization: The importance of lifestyles and routine activities. *Journal of Interpersonal Violence, 23*, 1441-1464.

Taylor, T. J., Peterson, D., Esbensen, F. A., & Freng, A. (2007). Gang membership as a risk factor for adolescent violent victimization. *Journal of Research in Crime and Delinquency, 44*, 351-380.

Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice, 38*, 1071-1081.

Turanovic, J. J., & Pratt, T. C. (2014). "Can't stop, won't stop": Self-control, risky lifestyles, and repeat victimization. *Journal of Quantitative Criminology, 30*, 29-56.

Turanovic, J. J., Reisig, M. D., & Pratt, T. C. (2015). Risky lifestyles, low self-control, and violent victimization across gendered pathways to crime. *Journal of Quantitative Criminology, 31*, 183-206.

Turner, H., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science and Medicine, 62*, 13-27.

Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency, 46*, 245-269.

Wincentak, K., Connolly, J., & Card, N. (2017). Teen dating violence: A meta-analytic review of prevalence rates. *Psychology of Violence, 7*, 224-241.

Zavala, E., & Spohn, R. E. (2013). The role of vicarious and anticipated strain on the overlap of violent perpetration and victimization: A test of general strain theory. *American Journal of Criminal Justice, 38*, 119-140.

CHAPTER 2

JUVENILE VICTIMIZATION, CRIMINOLOGICAL THEORY, AND GENDER: A META-ANALYSIS

While adolescent offending and victimization has been decreasing overall (Morgan & Truman, 2018), victimization in this segment of the life-course presents an issue for many social institutions, including the criminal justice system, public health, and education (Beauvais et al., 1996; Rivera and Widom, 1990; Turner et al. 2006), and negative effects of victimization have many deleterious consequences that persist into adulthood (Menard, 2002). Early on, victimization was explained via involvement in risky lifestyles (Hindelang et al. 1978). Explanations for victimization now include general theories of crime (e.g., self-control) integrated with the risky lifestyles perspective (Schreck, 1999; Turanovic & Pratt, 2014). Criminological theories have had some success in explaining a wide variety of victimization experiences in juveniles, but results are mixed. For example, some studies found null effects and some found that general theories were not able to explain victimization without including risky lifestyles.

General theories of crime are purported to explain offending and victimization across sociodemographic groupings (e.g. age, sex, race, and ethnicity), but feminist criminologists question their use with female populations (Daly, 1992; Belknap & Holsinger, 2006). Prior tests have supported both gendered and gender-neutral explanations (Daigle et al., 2007; Pratt & Cullen, 2000). Since understanding which factors increase victimization risk is important for prevention, the notion that researchers'

opinions diverge in which factors are most influential and whether they are similar for both males and females is troubling. In order to shed some light on this issue, the goal of this study is to use meta-analytic methods to examine mean effect sizes of key causal mechanisms identified by several criminological theories, explore sex differences, and assess whether differences in sample characteristics and research design influence outcomes. A unique feature of this meta-analysis is that it will use a three-level hierarchal design. This research design is used often in other disciplines such as psychology but is still novel in criminological research. This design improves upon traditional meta-analytic methods by examining both within- and between- study differences as well as mean effect sizes for variables of interest. Assessing this variance allows for stronger conclusions about moderator analyses than the typical meta-analytical method.

Literature Review

Criminological Theory and Adolescent Victimization

In criminological research, there are several empirical "facts" that are largely agreed upon, such as the age-crime curve, the gender gap in offending, and the victim/offender overlap. Over the past five decades, studies that examine the overlap between offending and victimization have almost unanimously found that those who are involved in offending are more likely to be victimized (Jennings et al., 2012). Support for the overlap has been demonstrated for a wide variety of offense and victimization types, such as violent, property, sexual, and dating violence (Maldonado-Molina et al., 2010; Widom, 1989) in both youth and adult populations (Jennings et al., 2012). Because of this

overlap, researchers have increasingly used criminological theory to predict victimization. While some theoretical tests find that general theories of crime are better predictors of offending (Pauwels & Svensson, 2011), others have found that they also explain victimization (Gibson, 2014; Schreck et al., 2002).

Cohen and Felson (1979) originally used routine activity theory to explain crime concentration at a macro level. It has since successfully been applied to individual level of offending (Osgood et al., 1996), and is one of the most frequently tested theories with regards to juvenile victimization. Youth who lack sufficient supervision, are around motivated offenders, and who are suitable targets are at greater risk of victimization that those who lack one of those three elements (Tillyer et al., 2011). Routine activity is often examined in conjunction with risky lifestyles, and it has been found that engaging in substance use, unstructured socializing, gang membership, and other "risky" activities increase the likelihood that teens will become attractive targets to motivated offenders in the absence of capable guardianship (Hindelang et al., 1978; Taylor et al., 2008; Tillyer et al., 2010).

Another general theory of crime that has been examined in conjunction with the risky lifestyles framework is low self-control. As originally articulated, Gottfredson and Hirschi's (1990) general theory of crime purported that crime is a product of low self-control—which is characterized by impulsivity and lack of future orientation—and opportunity, a notion that has received considerable empirical support across a variety of offending outcomes (Pratt & Cullen, 2000). Extending this perspective to victimization, Schreck (1999) theorized that those who possess characteristics of low self-control

including impulsivity, a lack of future orientation, and the desire for immediate gratification may be less likely to consider their safety, and therefore more likely to engage in risky activities that increase victimization risk. Empirical tests have shown support for low self-control explanation for victimization among adults and adolescents and in a wide variety of contexts (Pratt et al., 2014). While the strongest support has been reported for studies that assess the relationship between self-control and risky lifestyles, direct effects of self-control on victimization have also been demonstrated (Schreck et al., 2002).

Along with self-control theory, Hirschi's (1969) social bond theory has been used to help explain why some individuals seem to be protected from victimization. While bonds to parents have been theorized to protect against victimization because they may provide a form of guardianship (Schreck & Fisher, 2004), adolescents may also choose not to engage in risky activities that are conducive to victimization in fear that they may negatively affect their bonds to prosocial others. Bonding elements in the school context have been also been examined. For example, those who are more involved with prosocial activities such as academics, sports, and school clubs may also have adults other than parents who provide guardianship, and these youth may be less likely to have the time for unstructured socializing and be less likely to come into contact with motivated offenders (Wilcox et al., 2009). School achievement has also been found to be important, as those who do better in school spend more time studying and less time getting into trouble (Pusch, 2019).

While social disorganization theory was originally designed to explain aggregate crime rates, it has also been extended to victimization. Elements of disorganized neighborhoods such as residential mobility, ethnic heterogeneity and high poverty rates may prevent residents from coming together in order to supervise the neighborhood and prevent crime (Osgood & Chambers, 2000; Sampson & Groves, 1989), therefore increasing victimization risk for area youth. Disorganized neighborhoods are likely to be home to youth gangs. While some adolescents in disadvantaged neighborhoods may join gangs to protect against victimization, victimization rates are actually higher for gang members than non-gang members (Taylor et al., 2007), likely due to their involvement in risky activities such drug sales (Esbensen & Winfree, 1998) and the process of being "beat in" to join the gang (Decker & Van Winkle, 1996).

Gender, Criminological Theory, and Adolescent Victimization

"General" theories of crime are purported to explain offending across sociodemographic groups such as sex, race, and ethnicity. Feminist criminologists have questioned their application to female populations on the basis that there are unique gendered factors missing from general theories, such as abuse histories, that are more typical for female offenders (Daly, 1992; Belknap & Holsinger, 2006). While general theories such as routine activity theory, self-control, social bond and social disorganization have been supported in explaining female, as well as male, offending, sex differences in both base rates and explanatory mechanisms have also found to exist, leaving unanswered questions for criminologists. If gendered factors exist for explaining offending, they likely also exist in explaining victimization.

While some studies have found that general theories of crime such as self-control and routine activity theory explain juvenile victimization regardless of sex (Bjarnason et al., 1999; Peterson et al., 2018; Turanovic et al., 2015), others have found sex-specific differences. For example, males are more likely to be involved in risky lifestyles such as offending, delinquent peers, and gang membership than females, increasing male risk of victimization (Bunch et al., 2015; Jensen & Brownfield, 1986; Lauritsen et al., 1992). Social bonds tend to be more influential for females (Maas et al., 2010; Wilcox et al., 2009). Additionally, females are more supervised more closely than their male counterparts, and this guardianship decreases their risk of victimization (Augustyn & McGloin, 2013). Specific activities that are conducive to victimization may also be gendered. For example, engaging in nightlife and school sports increase victimization risk for males but not females (Felson et al., 2013; Wilcox et al., 2009), and using public transportation increases victimization risk for females but not males (Like-Haislip & Moifsky, 2011). In sum, it is clear that research to date has not found conclusive results for either gender-neutral or gender-specific explanations of juvenile victimization. For this reason, a meta-analysis is necessary to shed much-needed light on the discrepancies in the extant literature.

Current Study

In the past few decades, a large body of research has focused on identifying mechanisms that increase victimization in adolescence. While this work has enhanced our understanding, inconsistencies in the literature persist. Additionally, there is not a consensus as to whether these theories can be equally applied to males and females, and

the wide variety of sample and research design characteristics may potentially affect these findings. For example, self-control theory was first applied to violent offending (Gottfredson & Hirschi, 1990), but has since found success explaining property offending and fraud (Holtfreter et al., 2008). It is not apparent whether variables derived from criminological theory can also explain various types of victimization, including violent, dating violence, sexual, and property victimization. Pratt et al. (2010) notes scholars will often write a qualitative review in order to "take stock" of research that has been completed on a topic. While these may be useful in offering an overview on the topic, meta-analyses have the benefit of providing a mean effect size of the relationship between the independent and dependent variable. Such an effort focused on theoretically derived predictors, gender, and juvenile victimization has not yet been undertaken, which is surprising considering the volume of research that exists and the potential of the findings to improve crime prevention efforts. For these reasons, a meta-analysis that provides mean effect sizes and examines whether findings depend on sample and research design characteristics is warranted. This study will explore three distinct but inter-related research questions, all of which have implications for theory, research, and policy:

1. Which variables derived from general theories of crime exert the strongest effect on juvenile victimization?
2. Are the significance and magnitude of effect sizes similar for males and females?
3. Are effects moderated by research design and sample characteristics?

Methods

Criteria for Inclusion

Before the search commenced, several criteria for inclusion, which are based on well- established practices (Borenstein et al., 2011), were developed in order to aid in the search process. Studies were not restricted by time or location but were restricted to the English language. The following five criteria were used to determine whether a study could be included in the meta-analysis.

Adolescent Sample

Because adolescents and adults may have distinct risk factors for victimization, only those that contained all-youth samples were included. However, several studies included several 19 or 20-year-olds. The decision was made to include these studies if the mean age was 18 or less, even if several young adults were included, in order to include as many studies as possible in the meta-analysis. Some studies were retrospective, and asked adults as their experiences as children or youth. These were included, as they examined adolescent victimization rather than adult victimization.

Quantitative Analysis

To be included, the study had to employ quantitative methods using either a cross-sectional or longitudinal design. Qualitative and theoretical pieces were excluded. The study had to contain either bivariate or multivariate relationships between predictor variables and a measure of victimization, and could be measured using correlation coefficients, chi-squares, standardized beta coefficients (both linear and non-linear such as negative binomial or logistic regressions), or odds ratios (unadjusted for the bivariate

effect sizes and adjusted for the multivariate). If the study did not include the information that allowed the effect to be converted into one of these metrics, it was excluded. For example, several studies included unstandardized beta coefficients and did not include standard deviations to allow them to be standardized. Additionally, those that only included prevalence or rates of victimization were excluded because they did not examine the relationship between a predictor variable and victimization. For this reason, those that predicted victimization trajectories or performed a CFA or latent class analysis without then predicting victimization using independent variables were also excluded.

Both published and unpublished studies were included. There is some concern with including unpublished studies in meta-analyses, as they are not subject to the rigorous peer-review process as those published in academic journals. A larger issue exists in excluding these studies, as this may introduce publication bias. Since studies with significant results are more likely to be published, this may artificially inflate the effect sizes of the meta-analysis (Egger & Smith, 1998).

Criminal Victimization Dependent Variable

In order to be eligible for inclusion, the study had to have a measure of criminal victimization as the dependent variable. Many studies used victimization to predict another outcome (e.g. delinquency, mental health outcomes), and these studies were excluded. Victimization was operationalized as a form of criminal victimization, such as violent, sexual, or property. Several studies used bullying as a measure of victimization, and contained different forms of bullying, such as verbal and physical. Meta-analytic methods have previously been used to examine bullying (Cook et al., 2010), so while

both bullying and criminal victimization may have similar risk factors, the decision was made to exclude studies that examined bullying. An exception was made for studies that examined forms of bullying separately, and effect sizes were included for forms of bullying that could be considered criminal, such as punching. Only studies that measured actual victimization were included. This measure came from several sources, such as self-report, peer-report, and official data. Several studies used fear of victimization, or perceptions of the extent of victimization (i.e. in a school), and these were excluded.

Predictor Domains

To be included in the meta-analysis, the study had to have at least one independent variable that was consistent with one of the following criminological theories: social bond theory, social disorganization theory, self-control theory, routine activity theory, or the risky lifestyles framework. Because prior victimization did not fit into any of these categories, it was examined as its' own predictor domain. While other theories could have potentially been included, they did not have enough studies using the theory to warrant inclusion in a meta-analysis. Those that only included demographic characteristics were excluded, as the demographics most at-risk for victimization are largely agreed-upon, unlike predictors drawn from criminological theory. Because the focus of the study is theoretically derived variables that may explain victimization, rather than success of intervention programs targeting adolescent victimization, those that examined intervention programs were excluded. An exception was made for those that included a control that was consistent with one of the criminological theories listed above.

Separate Effects Sizes by Sex

Because gender is the main focus of this meta-analysis, studies had to contain separate effect sizes for males and females in the form of separate regression analyses or correlation tables. This means that studies that only include gender as a control variable or in an interaction term were not included. This was not a concern for studies examining only male samples or only female samples, and these were all included.

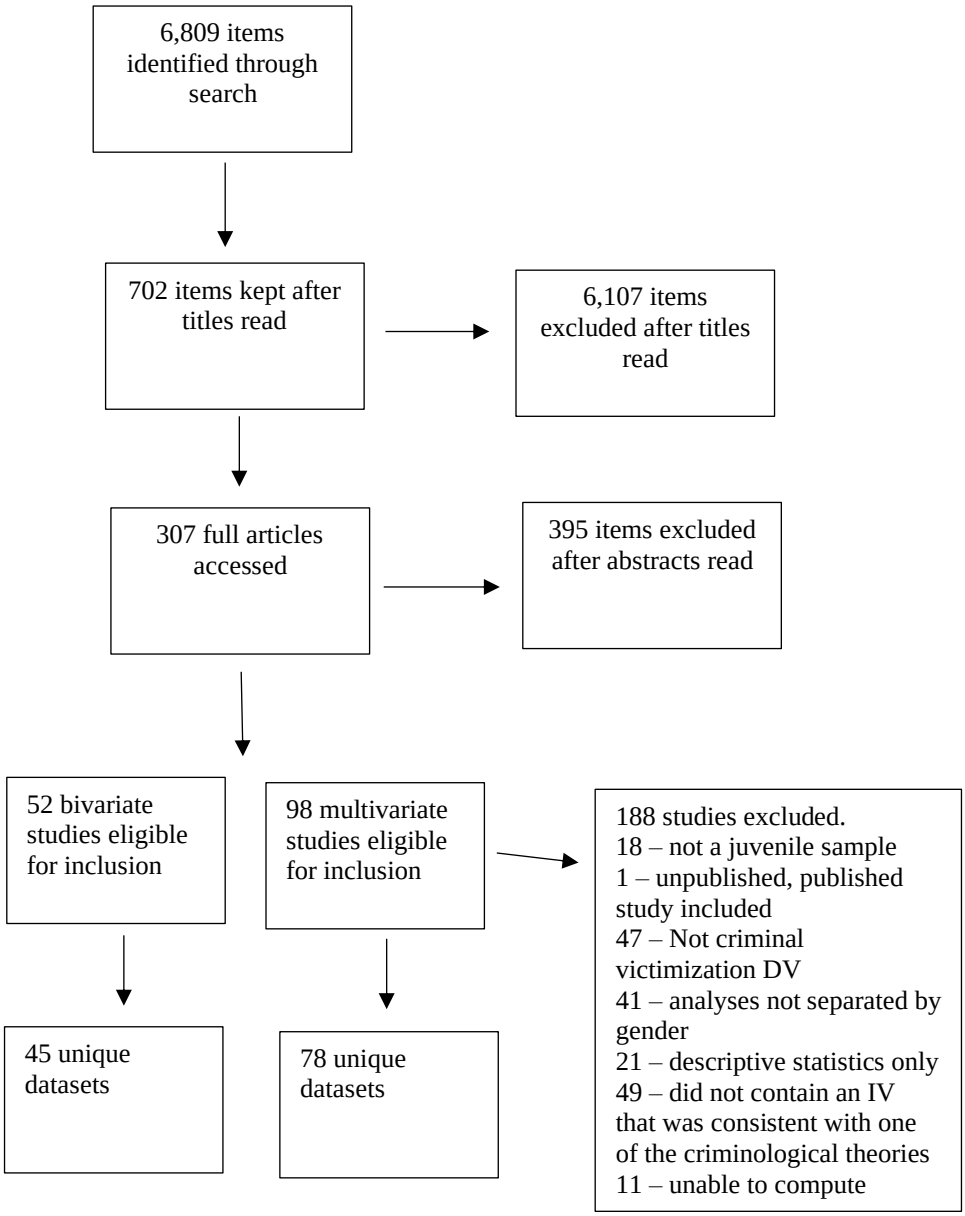
Search Methods

The search for relevant studies was conducted from January 2019 to September 2019 and proceeded in several steps. First, the following electronic databases were searched: Academic Search Premier, Criminal Justice Abstracts, Family Studies Abstracts, National Criminal Justice Reference Service Abstracts Database, ProQuest Theses and Dissertations, PsychARTICLES, PsychINFO, SocINDEX, and Sociological Abstracts. The search was conducted using four sets of keywords using the Boolean search tool: The first was sample type, and used "juvenile OR child OR youth OR adolescent" the second used the outcome variable "victimization." The third was type of victimization, and keywords included "physical OR violent OR sexual OR theft OR dating OR criminal" The fourth covered the gendered component of the study, and included "gender OR boy OR girl OR female OR male." These keywords were restricted to the abstract. Some databases, but not all, allowed the search to be narrowed further. For instance, when available, the search was limited to journal articles, dissertations and theses, and reports, and only those using quantitative methods. Some databases allowed search items to samples under the age of 18, and literature was restricted to English

language only when available. There were no restrictions for time period, and articles were found from year 1979 to year 2019. The second step involved examining reference lists of meta-analyses and systematic reviews conducted on similar topics for studies that were missed (Assink et al., 2019; Barth et al., 2013; Garthe et al., 2017; McGeough & Sterzing, 2018; Pratt et al., 2014; Vezina & Hebert, 2007). The third step involved contacting 20 scholars who research juvenile victimization to ask whether they had any unpublished material that met the search criteria. In total, all of the researchers responded to the inquiry, but no unpublished works were identified that were not found in the search strategies highlighted above. In total, 6,809 studies were identified.

After all potential materials were identified, the title was read for each study. A total of 6,107 studies were eliminated due to being irrelevant. The abstracts were read of the 702 remaining studies, and 307 full articles were accessed. Once they were read more thoroughly and coded, 18 studies were eliminated for not having a juvenile sample, 47 were eliminated for not having a criminal form of victimization as the dependent variable, 49 were eliminated because they did not have an independent variable that was consistent one of the criminological theories discussed above, 41 were eliminated for not having separate effect sizes for boys and girls, 21 were eliminated for containing descriptive statistics only, and 11 were eliminated for not having information to calculate coefficients into one of the methods explained above. Because several of the unpublished studies were later published, one unpublished study was excluded so that it did not appear in the meta-analysis twice. A PRISMA flow diagram (Liberati et al., 2009) of the literature search can be found in figure 2.1.

Figure 2.1 – PRISMA Flowchart of Included studies



Data Extraction and Coding

A codesheet was developed and studies were coded by their outcome characteristics, research design characteristics, and sample characteristics along with the independent variables and subsequent coefficients. As noted, coefficients were coded separately for males and females. Bivariate statistics rely solely on the relationship between the independent and dependent variable and do not account for spurious variables which causes them to be inflated compared to multivariate statistics. Because of this, it is problematic to use both interchangeably in the same meta-analysis (Pratt et al., 2010). However, there are strengths and weaknesses associated with using both, and the large number of studies that can be included allow for both bivariate and multivariate statistics to be examined in separate meta-analyses. Therefore, separate codesheets were filled out for studies that included both correlation and regression tables.

Victimization Outcome Characteristics

Studies were coded according to the type of victimization: physical, sexual, property, dating, or mixed. If a study examined more than one type of victimization, separate effect sizes were coded for each. In several cases, dating victimization was separated by physical and sexual dating violence, so these were coded as physical and sexual rather than just dating violence. For moderator analyses, the length of follow-up time was recorded as well. These were separated into one year or less and over one year, which include those that had ever been victimized. While reporting source was originally going to be coded, the vast majority of studied used self-reports rather than peer or parent reports or official statistics, so these were not able to be examined separately.

Research Design Characteristics

Studies were coded for whether they used a cross-sectional or longitudinal design. Additionally, since coefficients in multivariate analyses may depend on whether spurious variables are controlled for in the regression, a moderator of whether the study contained competing theories was coded. For example, if a study only included a self-control independent variable and demographics for controls, competing theories were not present. However, if the controls contained both demographics and risky lifestyles, then it was determined that a competing theory was controlled for. A moderator of statistical model (i.e. logistic, ordinary least squares, or negative binominal regression) was also included, and will be discussed further shortly.

Sample Characteristics

Because victimization is higher in samples of offending juveniles rather than general samples, sample type was also included as a moderator. Most studies used a school sample, but general samples were also present. These were combined into one category defined as *low-risk*, as victimization would likely be less likely for members of these samples. Other study types included incarcerated samples, CPS samples, homeless samples, probation samples, and samples created from youth in mental health facilities. These were combined into one category called *high-risk*. While it would have been beneficial to examine these high-risk samples separately, there were not enough studies that used each sample type. A moderator was also included for which country the sample was derived from. Again, there were not enough studies to examine each country

separately, so this moderator was divided into *North American* samples and *Non-North American* samples.

Predictor Domains

As noted, independent variables were included if they were drawn from criminological theory. It is important to note that these do not represent a full test of theory, but rather, variables that could derived from criminological theory. These independent variables were not necessarily completely consistent between studies (i.e., studies using different scales to measure self-control, or some studies using a continuous measure and some studies using a dichotomous measure of alcohol use), however, it was ensured that the underlying concepts were similar. While it would have been beneficial to examine more criminological theories, only the theories identified below were tested in enough studies to be included in the meta-analysis.

Social Bond Theory. The predictors in this domain are consistent with Hirschi's (1969) social bond theory, which protects adolescents against victimization. *Attachment to mother* and *attachment to father* included independent variables that measured closeness and communication with the mother and the father. Several studies did not report separate measures for mother and father, so *attachment to parents* is also included. Similarly, *attachment to peers* measures the connection that respondents share with their friends. *Prosocial involvement* is a measure of how involved in prosocial activities the respondent is, and combines measures of school activities, sports teams, volunteering, and religious services. While it would have been beneficial to examine each separately, as prosocial activities have been found to have gendered effects (Wilcox et al., 2009), the

number of effect sizes was not large enough to examine this. *School achievement* measures the respondent's grades in school, and *school attachment* measures how connected the respondent feels to their school. *Prosocial belief* measures how morally wrong the respondent feels items related to violence and offending are. Some studies included a measure of how acceptable responding to violence was, and these studies had their coefficients reversed from positive to negative so that they could be included in the *prosocial belief* predictor.

Social Disorganization Theory. The predictors in this domain examine the neighborhoods in which subjects live and spend time. *Poverty* is measured as the percentage of households below the poverty line in the neighborhood that the subject resides in rather than whether the subject's household lives below the poverty line. *Neighborhood crime* is measured using crime rates in the neighborhood that the subject resides in or spends time in. Neighborhood disorder does not measure crime rates, but rather, signs of disorder consistent with broken windows (Wilson & Kelling, 1982), such as broken windows, garbage, unkempt yards, and the like.

Routine Activity Theory. While criminological research has often lumped routine activity theory and risky lifestyles together, researchers have warned against doing this, as risky lifestyles attempt to explain how someone's risk for victimization increases, and routine activity theory explains the victimization event itself (Pratt & Turanovic, 2016). This study will use two separate domains rather than combining the two. The routine activity theory domain consists of the three elements that make up RAT (Cohen & Felson, 1979). *Exposure* measures how often the subject spends time in places

where victimization is more likely, such as outside the home at night and visiting nightclubs. *Monitoring* measures how much the subject is monitored by their parents, and *target attractiveness* measures the amount of money and expensive clothes the subject walks around with as well as physical stature, with smaller individuals being more attractive targets.

Self-control Theory. The majority of studies used Grasmick et al.'s self-control scale (1993). One study uses a measure called "criminal propensity" which is similar to Grasmick et al.'s scale. Several studies use individual traits that make up self-control, such as impulsivity.

Risky Lifestyles. *Alcohol use* is defined as whether or not the subject uses alcohol, with higher scores indicating greater alcohol use. *Drug use* is defined in the same way. Some studies separated different drugs, such as marijuana use or cocaine use, but the majority of studies combined drugs. *Substance use* combines both alcohol and drugs in the same measure. *Sexual risk taking* contains two different variables: engaging in sexual activity under the influence of alcohol or drugs and engaging in unprotected sexual activity. *Gang involvement* measures whether the subject is currently or has ever been part of a gang. *Exposure to violence* measures the amount of violence the subject has witnessed, rather than experienced for themselves, and includes measures of both community and violence in the home. *Unstructured activities* measures how often the subject hangs around with peers in absence of adult supervision, not doing anything in particular.

Prior Victimization. Prior victimization does not uniquely fit into any single predictor domain, rather, it reflects a documented risk factor. *Prior sexual victimization* measures the extent of sexual victimization in childhood and adolescence before the dependent variables for each study was measured, and *prior physical victimization* is measured in the same way. Several studies did not separate sexual and physical victimization in their prior victimization measure, so a variable called *prior combined victimization* is also included.

Effect Sizes

Effect Size Conversion

This meta-analysis uses correlation coefficients converted into Fisher's *z* scores as the common effect size. This method is commonly used in meta-analyses that examine the relationship between two continuous variables, and is used because the results are easy to interpret and formulas are available to convert types of statistics into *r* values. However, there is concern with using correlation coefficients because meta-analytic methods assume that the sample is normally distributed and the sampling variances are known. Because these conditions are rarely satisfied, meta-analysis experts recommend transforming *r* correlations into Fisher's *z* (Borenstein et al., 2011).

The vast majority of bivariate statistics in studies were correlation coefficients, and they were converted into Fisher's *z* scores using the following formula: $z = .5ln[(1+r) – (1-r)]$. The small number of bivariate studies that used chi-square statistics were converted using the following statistic: $r = \sqrt{}/(\chi_2/ N)$. For the multivariate studies, the majority of studies used standardized beta coefficients or adjusted odds ratios. These

were converted into *r* correlations, and then Fisher's *z* scores, for inclusion in the meta-analysis. While beta coefficients are not the same as *r* correlations, Peterson and Brown (2005) noted that in certain conditions, beta coefficients can accurately be used to impute missing correlation coefficients. As they suggested, standardized beta coefficients falling between -.5 and .5 were transformed into *r* correlation coefficients using the following formula $r = .98\beta + .05\lambda$ where λ is 1 when the beta coefficient is positive and 0 when it is negative. Beta coefficients higher than .5 or lower than -.5 were excluded because as values become more extreme, they become less accurate. Non-linear models were converted using the formula $r = t / \sqrt{t^2 = n - 2}$ (Pratt et al., 2014). Logistic regressions that presented findings in odds ratios were common in the included studies. Much like beta coefficients, Bonett (2007) suggested that while exact conversion of odds ratios to *r* correlation coefficients was not possible, they could be approximated for the purpose of meta-analysis using the following formula: $(OR_{3/4} - 1)/(OR_{3/4} - 1)$ (Digby, 1983). Several of the studies only included unstandardized beta coefficients. These were converted into standardized beta coefficients using the following formula: $b'_k = b_k \times (SD_{xk} / SD_y)$.

There is limited consensus as to whether statistics from different types of multivariate regression models can be used in the same meta-analysis. Some caution against combining OLS, negative binomial, and logistic regression coefficients because the dependent variable is measured differently in each method (Borenstein et al., 2011). In this particular meta-analysis, about two-thirds of the included studies use a dichotomously measure of victimization, a third use a continuous measure, and a handful use a count measure. While conversions between metrics may not be exact, Borenstein et

al. (2011) caution that only using studies that measure the dependent variable in the same way may introduce more bias to the meta-analysis than converting all possible coefficients. Because it is desirable to retain as many studies as possible, the decision was made to include studies that measured victimization all three ways, and include the measurement of the dependent variable as a moderator.

Independence of Effect Sizes

An important assumption when conducting meta-analyses is that effect sizes are independent of each other. However, most studies have multiple effect sizes for each independent variable, especially in multivariate models. One solution for this is to aggregate all the effect sizes for the independent variable in the study. For example, if there are five separate models that contain a coefficient for self-control, the mean of these would be taken so that there would only be one effect size for self-control. However, there are several problems that result from aggregating effect sizes, including reducing statistical power, and may mask important moderating differences. To address these issues, this meta-analysis will use a three-level design rather than a traditional meta-analytical design. This model will assess the variance at three different levels: the sampling variance of effect sizes (level one), variance between effect sizes in a study (level two) and variance between datasets (level three) (Cheung, 2014; Assink & Wibbelink, 2016).

Analytic Strategy

Datasets were created using Microsoft Excel. A separate dataset was created for each predictor variable, one for males and one for females, and one for bivariate statistics

and one for multivariate statistics. Because some studies used the same dataset (for example, 15 studies included in the meta-analysis use AddHealth data), coding is done by dataset rather than study so that each individual is not included more than once.

The analyses were completed using the metaphor package for the R environment (Viechtbauer, 2010) and instructions provided by Assink and Wibbelink (2016). A mixed effects design and a five percent significance level were used, consistent with other meta-analyses using these methods (Assink et al., 2019). First, mean effect sizes were estimated for each predictor variable separately for males and females, and separately for bivariate and multivariate effect sizes. The model estimate and p-value tell us if the predictor variable significantly predicts victimization. The variance components suggest that there may be some variation both between and within studies.

After the mean effect sizes were calculated, two likelihood ratio tests that remove level two in one and level three in the other were performed in order to determine if there was significant variation both within and between studies. This compares the full model and the reduced model, and is one-sided test, so a p-value of less than .1 is considered significant. Next, the variance of all three levels was assessed. If variance at either level two or level three was significantly different than zero, moderating analyses were performed.

Moderators were tested by comparing those that have a certain characteristic (for example, being published) with those that are not (being unpublished). A significant p-value (two-sided) in the "test of moderators" line of the output means that studies that were published were significantly different than studies that are not. This can also be

done with moderators with more than two categories, for example, victimization type and continuous moderators, and number of parameters.

Results

Descriptive Statistics

In total, 238 bivariate effect sizes and 1142 multivariate effect sizes were included. The descriptive statistics tables show the moderator analyses and the number of unique datasets that have each of the moderator analyses. For the moderator of victimization type, some of datasets had more than one type of victimization, so the numbers add up to more than 100%. The classification of "mixed" under publication status and control for competing theories was for the AddHealth dataset, which had individual studies that were both unpublished and published, as well as controlling for competing theories. The descriptive statistics are presented in Table 2.1.

Table 2.1 – Descriptive Statistics

Moderator Variable	BV Females (*k* = 48, *n* = 93,385)	BV Males (*k* = 40, *n* = 59,885)	MV Females (*k* = 75 *n* = 167,866)	MV Males (*k* = 58 *n* = 78,963)
Measurement of DV				
Physical	21 (43.8%)	22 (55%)	35 (46.7%)	32 (55.2%)
Sexual	9 (18.8%)	4 (10%)	17 (22.7%)	10 (17.4%)
Dating	23 (47.9%)	17 (42.5%)	32 (42.7%)	20 (34.5%)
Property	0 (0%)	1 (2.5%)	1 (1.3%)	3 (5.2%)
Mixed	4 (8.3%)	2 (5%)	2 (2.6%)	2 (3.4%)
Sample Type				
Low Risk	41 (85.4%)	35 (87.5%)	63 (84%)	51 (87.9%)
High Risk	7 (14.6%)	5 (12.5%)	12 (16%)	7 (12.1%)
Research Design				
Cross-sectional	37 (77.1%)	31 (77.5%)	56 (74.7%)	44 (75.9%)
Longitudinal	11 (22.9%)	9 (22.5%)	19 (25.3%)	14 (24.1%)
Follow-up Time				
12M or Less	22 (45.8%)	19 (47.5%)	46 (61.3%)	38 (65.5%)
More than 12M	26 (54.2%)	21 (52.5%)	29 (38.7%)	20 (34.5%)
Publication Status				
Published	42 (87.5%)	36 (90%)	69 (92%)	52 (89.7%)
Unpublished	7 (14.6%)	5 (12.5%)	7 (9.3%)	7 (12.1%)
Geographical Location				
North America	40 (83.3%)	32 (80%)	57 (76%)	43 (74.1%)
Non-North America	8 (16.7%)	8 (20%)	18 (24%)	15 (25.9%)
Competing Theories				
Yes	-	-	45 (60%)	35 (60.3%)
No	-	-	30 (40%)	24 (41.4%)
Statistical Model				
OLS Regression	-	-	18 (24%)	15 (25.9%)
Logistic Regression	-	-	53 (70.1%)	39 (67.2%)
NB Regression	-	-	5 (6.7%)	5 (8.6%)

k = unique datasets, *n* = sample size

Some moderators add up to more than 100% if the dataset meets more than one category

Main Effects

Bivariate Effects for Females

Mean bivariate effect sizes for independent variables predicting victimization for females are presented in Table 2.2. Each of the significant predictors had a relationship with victimization in the expected direction. The only negative relationship with victimization was prosocial belief (z = -.188). The risky activities domain had a number of significant positive relationships, including alcohol use (z = .282), deviant peers (z = .301), drugs (z = .274), offending (z = .376), and sexual risk taking (z =.400). Both prior victimization measures, physical (z = .131) and sexual (z = .262) also had significant positive relationships with victimization.

Table 2.2 – Bivariate Mean Effects – Females (*k* = 48, *n* = 93,385)

Predictor	#Studies	#E.S.	Mean z	95% C.I.	%Var. Level 1	Level 2 Var.	%Var. Level 2	Level 3 Var.	%Var. Level 3
Social Bond									
Belief	3	6	-.188*	[-.315, -.06]	32.39	.000	.000	.005*	67.610
Involvement	2	5	-.017	[-.293, .258]	16.46	.024**	66.75	.026	
Parental Attachment	3	4	-.241	[-.077, .292]	1.51	.109***	98.49	.000	.000
Paternal Attachment	2	2	-.038	[-.571, .496]	3.83	.002	48.09	.002	48.09
Peer Attachment	2	4	.052	[-.281, .047]	26.50	.002	25.38	.003	48.12
School Achievement	5	5	-.101	[-.346, .145]	0.70	.019	49.65	.019	49.65
Routine Activity									
Monitoring	8	10	-.088	[-.313, .137]	.96	.031**	37.48	.051	61.56
Risky Lifestyles									
Alcohol	14	17	.282***	[.203, .306]	1.51	.012**	58.69	.008	39.8
Deviant Peers	8	14	.301***	[.209, .392]	9.29	.000	3.22	.012**	87.49
Drugs	13	18	.274***	[.198, .351]	1.62	.017**	84.93	.003	13.45
Exposure to Violence	4	5	.276	[-.007, .559]	4.84	.000	.000	.040	95.16
Gang Involvement	2	3	.392	[-.128, .911]	7.14	.026*	68.92	.009	23.94
Offending	24	35	.376***	[.302, .450]	1.50	.007***	23.13	.023**	75.37
Sexual Risk Taking	7	8	.400***	[.280, .520]	.89	.019	99.11	.000	.000
Prior Victimization									
Prior Physical Victimization	3	7	.131**	[.068, .194]	40.49	.003*	59.51	.000	.000
Prior Sexual Victimization	4	6	.262*	[.023, .502]	6.51	.000	.000	.033*	93.49

Note: *k* = unique datasets, *n* = sample size
*$p < .05$, **$p < .01$, ***$p < .001$.

Bivariate Effects for Males

The bivariate mean effect sizes for males are presented in Table 2.3. Again, all the significant relationships were in the expected directions. Two of the social bond variables, belief (z = -.277) and school achievement (z = -.138) had a significant negative relationship with victimization. The only other significant negative relationship was with monitoring (z = -.110). Most of the risky lifestyle variables had a significant positive relationship with victimization, including alcohol use (z = .227), deviant peers (z = .242), drugs (z = .254), exposure to violence (z = .322), gang involvement (z = .456), and offending (z = .375). For the bivariate analyses, offending, alcohol, deviant peers, drugs, and prosocial belief significantly predicted victimization for both males and females. Sexual risk taking, prior physical abuse, and prior sexual abuse are significant only for females, and school achievement, monitoring, exposure to violence, and gang involvement are significant only for males.

Table 2.3 – Bivariate Mean Effects – Males (*k* = 40, *n* = 59,885)

Predictor	#Studies	#E.S.	Mean z	95% C.I.	%Var. Level 1	Level 2 Var.	%Var. Level 2	Level 3 Var.	%Var. Level 3
Social Bond									
Belief	3	4	-.277**	[-.385, -.169]	79.01	.000	.000	.001	20.99
Parental Attachment	3	4	-.062	[-.281, .15]	9.95	.016*	90.05	.000	.000
Peer Attachment	2	2	-.008	[-.311, .296]	100	.000	.000	.000	.000
School Achievement	6	6	-.138***	[-.176, -.099]	27.04	.000	36.48	.000	36.48
Social Disorganization									
Neighborhood Disorder	2	2	.273	[-.186, .732]	100	.000	.000	.000	.000
Routine Activity									
Monitoring	7	8	-.110*	[-.211, -.009]	6.29	.012	93.71	.000	.000
Risky Lifestyles									
Alcohol	9	10	.227**	[.009, .82]	1.94	.007	15.79	.034	82.27
Deviant Peers	7	9	.242***	[.144, .341]	20.05	.000	.000	.010	79.95
Drugs	7	8	.254**	[.107, .401]	2.94	.009	33.15	.017	63.91
Exposure to Violence	5	5	.322*	[.053, .591]	7.50	.021	46.25	.021	46.25
Gang Involvement	2	3	.456*	[.046, .865]	12.28	.011	48.62	.009	39.09
Offending	19	25	.375***	[.263, .487]	1.96	.012***	22.69	.041**	75.35
Substance use	2	2	.350	[-.796, 1.495]	33.82	.006	33.09	.006	33.09
Prior Victimization									
Prior Physical Victimization	2	3	.045	[-.098, .189]	77.03	.001	22.97	.000	.000

Note: *k* = unique datasets, *n* = sample size
*$p < .05$, **$p < .01$, ***$p < .001$.

Multivariate Effects for Females

For the most part, the multivariate effect sizes are smaller than the bivariate effect sizes, which is expected, given the multivariate effect sizes control for other influences. The multivariate effect sizes for females are presented in Table 2.4. Parental attachment was the only variable with a significant negative effect on victimization (z = -.072). In the social disorganization domain, neighborhood crime had a significant positive association with victimization (z = .054), and in the routine activity domain, exposure had a significantly positive relationship with victimization (z = .059). Like the bivariate analysis, risky lifestyles was the domain with the greatest number of significant predictors including alcohol (z = .095), drugs (z = .066), exposure to violence (z = .106), gang involvement (z = .227), offending (z = .114), and sexual risk taking (z = .093). Similar to the bivariate analysis, both prior sexual (z = .219) and prior physical victimization (z = .210) significantly predicted victimization.

Table 2.4 – Multivariate Mean Effects - Females (*k* = 75, *n* = 167,866)

Predictor	#Studies	#E.S.	Mean z	95% C.I.	%Var. Level 1	Level 2 Var.	%Var. Level 2	Level 3 Var.	%Var. Level 3
Self-Control									
Self-Control	3	12	-.044	[-.117, .028]	60.39	.000	0	.002	36.61
Social Bond									
Belief	4	6	.040	[-.065, .145]	44.18	.004	55.82	.000	0
Involvement	4	23	.218	[-.039, .475]	1.23	.013***	18.30	.056***	80.47
Maternal Attachment	4	17	-.063	[-.150, .023]	17.76	.000	0	.003*	82.24
Parental Attachment	8	16	-.072*	[-.131, .013]	21.23	.000	4.48	.004*	74.29
Paternal Attachment	4	17	-.042	[-.115, .30]	35.61	.000	0	.003*	65.39
Peer Attachment	4	9	-.058	[-.148, .032]	21.02	.010**	76.66	.000	2.32
School Achievement	7	31	-.078	[-.157, .001]	4.24	.000	0	.009***	95.76
School Attachment	3	13	-.045	[-.092, .001]	70.70	.000	0	.000	29.30
Social Disorganization									
Neighborhood Crime	2	7	.054***	[.048, .060]	100	.000	0	.000	0
Neighborhood Disorder	4	13	.053	[-.017, .124]	77.58	.002	18.66	.000	3.76
Poverty	4	11	-.007	[-.031, .016]	55.23	.000	44.77	.000	0
Routine Activity									
Exposure	6	30	.059*	[.008, .110]	72.24	.000	0	.002	27.76
Monitoring	12	28	.009	[-.038, .056]	29.38	.000	6.42	.003*	64.20
Target Suitability	2	7	.032	[-.059, .124]	38.24	.001	19.87	.002	41.89
Risky Lifestyles									
Alcohol	30	81	.095***	[.041, .148]	7.35	.006***	47.88	.006**	44.77
Deviant Peers	7	45	.094	[-.009, .197]	10.74	.000	1.58	.016***	87.68
Drugs	26	69	.066**	[.022, .109]	49.77	.004***	50.23	.000	0
Exposure to Violence	9	32	.106***	[.067, .145]	90.09	.000	9.91	.001	0
Gang Involvement	7	21	.227**	[.087, .367]	13.67	.004***	25.55	.011*	60.78
Offending	24	82	.114***	[.070, .159]	21.83	.008***	69.46	.001	8.71
Sexual Risk Taking	9	40	.093*	[.000, .185]	100	.000	0	.008	0
Substance use	3	4	.095	[-.098, .287]	100	.000	0	.000	0
Unstructured Socializing	5	11	.035	[-.103, .174]	6.04	.000	2.77	.012	91.19
Prior Victimization									
Prior All Victimization	4	7	.122	[-.096, .341]	5.68	.000	0	.029**	94.32
Prior Physical Victimization	14	30	.210**	[.076, .345]	2.42	.000	0	.042***	99.58
Prior Sexual Victimization	8	20	.219*	[.031, .406]	12.20	.000	0	.045*	87.80

Note: *k* = unique datasets, *n* = sample size *$p < .05$, **$p < .01$, ***$p < .001$.

Multivariate Effects for Males

The multivariate analyses for males are presented in Table 2.5. Similar to the multivariate effects for females, males had one variable that had a significant negative relationship with victimization (school attachment at z = -.065). Exposure had a significant positive relationship with victimization (z = .286). As with females, many of the risky lifestyles variables are significant, including deviant peers (z = .138), drugs (z = .038), exposure to violence (z = .111), gang involvement (z = .205), and offending (z = .149). For the multivariate analyses, exposure, drugs, exposure to violence, gang involvement, offending, and prior physical victimization have significant relationships with victimization for both males and females. Parental attachment, neighborhood crime, alcohol, sexual risk taking, and prior sexual victimization are significant only for females, and school attachment and deviant peers are significant only for males.

Table 2.5 - Multivariate Mean Effects – Males (*k* = 58, *n* = 78,963)

Predictor	#Studies	#E.S.	Mean z	95% C.I.	%Var. Level 1	Level 2 Var.	%Var. Level 2	Level 3 Var.	%Var. Level 3
Self-Control									
Self-Control	3	8	-.044	[-.128, .040]	72.79	.000	0	.002	27.21
Social Bond									
Belief	4	6	.066	[-.054, .186]	6.56	.009*	93.44	.000	0
Involvement	5	27	.036	[-.055, .127]	100	15.28	0	.009***	84.72
Maternal Attachment	4	18	-.03	[-.068, .009]	64.76	.000	0	.001	35.24
Parental Attachment	6	13	-.025	[-.056, .006]	90.73	.000	0	.000	9.27
Paternal Attachment	4	18	.000	[-.006, .007]	100	.000	0	.000	0
Peer Attachment	2	4	-.058	[-.148, .032]	70.15	.01	29.85	.000	0
School Achievement	8	32	-.032	[-.068, .004]	23.39	.000	0	.001***	76.61
School Attachment	2	11	-.065***	[-.08, -.051]	100	.000	0	.000	0
Social Disorganization									
Neighborhood Crime	3	9	.114	[-.036, .264]	56.98	.000	0	.009	43.02
Neighborhood Disorder	4	13	.021	[-.009, .051]	100	.000	0	.000	0
Poverty	4	11	.03	[-.053, .113]	17.77	.000	0	.003*	82.23
Routine Activity									
Exposure	7	27	.047**	[.018, .076]	42.19	.001**	49.25	.000	8.56
Monitoring	10	20	.000	[-.054, .055]	25.31	.001*	11.08	.004*	63.61
Risky Lifestyles									
Alcohol	19	42	.045	[-.013, .104]	7.69	.005***	40.78	.006**	51.53
Deviant Peers	9	35	.138*	[.020, .256]	4.50	.003***	9.66	.024***	85.83
Drugs	15	30	.038*	[.000, .077]	41.48	.003***	58.52	.000	0
Exposure to Violence	6	20	.111***	[.074, .149]	88.52	.001	11.48	.000	0
Gang Involvement	8	23	.205*	[.047, .362]	15.80	.001	3.43	.019**	88.76
Offending	18	52	.149***	[.111, .188]	21.67	.009***	78.33	.000	0
Substance Use	5	7	.008	[-.015, .031]	43.52	.000	5.15	.000	51.33
Unstructured Activities	5	7	.077	[-.045, .199]	5.85	.000	0	.007*	94.15
Prior Victimization									
Prior Physical Victimization	10	18	.286**	[.001, .442]	4.27	.000	.99	.044**	94.74
Prior Sexual Victimization	5	9	.092	[-.002, .186]	44.66	.000	.000	.004	55.34

Note: *k* = unique datasets, *n* = sample size
*$p < .05$, **$p < .01$, ***$p < .001$

Moderating Effects

Moderator analyses were completed for every predictor variable that showed significant variation at level two (variation of effect sizes within the same dataset) or level three (variation of effect sizes between datasets). All the tables for moderating analyses are presented in Appendix 1. For the bivariate moderator effects for females, the only moderator that was significant is follow-up time for belief (f = 9.767, p = .035). This means that the relationship between belief and victimization is significantly different depending on the length of the follow-up period. None of the moderators were significant for the bivariate effect sizes for males, indicating that there was no variation within datasets or between datasets for sample characteristics or research design.

There was more variation both within and between datasets for the multivariate analyses, and therefore, many more moderators were tested. For females, the number of parameters in the model was a significant moderator for the paternal attachment (f = 5.069, p = .041) and gang (f = 10.071, p = .005) predictor variables, and victimization type was significant for the paternal attachment variable only (f = 5.424, p = .018). Follow-up time was significant for the relationships between maternal attachment (f = 8.054, p = .012), paternal attachment (f =11.744 , p = .004), and school achievement (f = 29.819, p = <.001) and victimization, and whether the study was cross-sectional or longitudinal only mattered for the prior physical victimization variable. For the monitoring (f = 8.026, p = .009) and gang variables (f = 7.026, p = .016), relationships between the predictor and victimization were significantly different depending on if the study used a low-risk or high-risk sample. Whether or not the study included competing

explanations was significant for maternal attachment (f = 7.434, p = .016), paternal attachment (f = 11.848, p = .004), and gang membership (f = 5.977, p = .024), and the type of statistical model (logistic regression, OLS regression, ect.) made a significant difference in school achievement (f = 68.369, p = <.001), deviant peers (f = 90.398 , p = <.001), and offending (f = 3.126, p = .049). Finally, publication status significantly moderated school achievement (f = 68.396, p = <.001), monitoring (f = 11.599, p = .002), and deviant peers (f = 138.031, p = <.001). For girls, geographical location did not significantly moderate any of the predictor variables.

Like the females, males also had a number of significant moderators for the multivariate analyses. The number of parameters in a model mattered for the gang variable only (f = 15.201, p = <.001), and victimization type was significant for monitoring (f = 5.437, p = .007) only. Follow-up time was significant for school achievement (f = 5.549, p = .025) and prior physical victimization (f = 4.896, p = .042), and whether the study was cross-sectional or longitudinal was important for the school achievement predictor variable (f = 7.029, p = .011). Sample type significantly moderated alcohol use (f = 6.219, p = .017) and offending (f = 7.142, p = .010), and statistical model mattered for monitoring (f = 4.552, p = .026) and offending (f = 5.615, p = .006). Whether competing theories are included was significant for gang membership (f = 4.373, p = .049), and publication status was significant for school achievement (f = 6.789, p = .014). As with females, none of the predictor variables were moderated by geographical location.

Discussion

Implications for Theory

Predictors Derived from Criminological Theory

While victimization scholars have found support for a variety of criminological theories explaining juvenile victimization, previous results have been mixed, and some studies have reported null effects. While this meta-analysis computed mean effect sizes of variables derived from criminological theories, rather than fully testing theory, the results point to limitations with explaining juvenile victimization with some theoretically driven variables in the absence of risky lifestyles variables. Self-control, which has direct and indirect effects on victimization in other contexts (Schreck, 1999), did not significantly predict juvenile victimization in any of the models in this study. This may be because prior studies have found stronger support when the relationship between self-control and victimization is mediated by risky lifestyles, rather than when the direct effect of self-control on victimization is examined. Similarly, routine activity theory—especially when integrated with low self-control--has received support in a variety of victimization contexts (Holtfreter et al., 2008; Jennings et al., 2012) but did not fare so well in this meta-analysis. Again, this may be because this meta-analysis only examined direct, rather than mediating, effects. A small number of social bond variables significantly predicted victimization in this study, which is consistent with previous research demonstrating a protective effect (Schreck & Fisher, 2004).

In this meta-analysis, the risky lifestyle variables had the strongest and most consistent effects on victimization outcomes across models for both sexes. This suggests

that risky lifestyles may put someone in situations with dangerous people that may increase their victimization risk. Theoretically derived variables from general theories of crime may better explain offending, and these variables should be integrated with risky lifestyles to help explain victimization. This particular finding may also be an artifact of the juvenile sample that was used in this meta-analysis. In research that examines offending and victimization over the life course, Menard (2012) found that offending was a better predictor of juvenile victimization than of adult victimization, so it is possible that risky lifestyles are especially important for juveniles. In fact, offending was the only variable that was significant in each of the models tested and had among the largest effect sizes. Another widely established correlate of victimization is prior victimization, where those who are victimized in childhood are more likely to continue to be victimized in adolescence and adulthood (Widom et al., 2008). This study also found support for the cycle of repeat victimization, with large, significant effect sizes for the prior victimization variables, especially for females.

Gender-Neutral vs. Gender-Specific Explanations

One of the questions plaguing feminist criminology is whether the risk factors for male and female criminal behavior and victimization are similar, or whether gendered explanations exist. Much like past research, this study finds support for both hypotheses. For the most part, predictors were similar for males and females. Again, the juvenile sample might help explain this finding. In her original study examining the pathways to adult female offending, Daly (1992) found important factors in childhood and adolescence, but also important experiences in adulthood, such as intimate partner

violence, that explained different types of offending. While Daly's study examined offending rather than victimization, a similar element could be at work here. It could be that there are important gendered experiences that occur in adulthood that may explain different types of victimization for adult men and women. Some of the pathways in Daly's study revealed limited victimization.

However, the significance of several variables in this meta-analysis were revealed to be sex-specific. While prior physical and sexual victimization were significant for females in both models, prior physical victimization was only significant for males, and only in the multivariate model. While some previous work has found similar patterns of repeat victimization from childhood to adolescence for both males and females (Benedini et al., 2016), gendered explanations have also been identified. For example, Pittenger et al. (2018) found that females were more likely than males to experience sexual re-victimization in adolescence. However, like discussed previously, factors in adulthood may also play a role in gender differences. Werner et al. (2016) established that child sexual victimization was actually a better predictor for adult sexual victimization for males but not females.

Surprisingly, the social disorganization predictor domain was one of the least influential, with only neighborhood crime significantly predicting victimization, and only for females. Again, this may be because this study examined direct effects, while indirect effects have been found to be more influential. While Antunes et al. (2019) also found that neighborhood disorder only predicted victimization for females, prior research supports the notion that neighborhood conditions are also important in predicting the

victimization of males. Although their sample used adults instead of juveniles, Lauritsen & Carbone-Lopez (2011) also found gender differences when using neighborhood conditions to explain victimization. They reported that neighborhood disadvantage better explained men's stranger victimization than women's and hypothesized that this could be due to the "code of the street" behavioral expectations in these disadvantaged communities. Zimmerman and Messner (2010) found that in less disadvantaged neighborhoods, the rates of violent crime for males were much higher than those of females, but in neighborhoods characterized by high levels of concentrated disadvantage, violent crime rates were similar for males and females. Although similar effects were not observed in this meta-analysis, the extant literature suggests that social disorganization variables should continue to play a role in understanding sex differences in juvenile victimization.

Implications for Research

While the majority of effects were robust, moderating effects were found for almost every one of the moderators for at least one predictor variable. For example, for female multivariate effects, the effect sizes for parental attachment were significantly different depending on the type of victimization that was examined. These findings demonstrate that researchers should be cognizant of how design and sample characteristics may influence their findings. It is not enough to say that a factor predicts juvenile victimization, but a certain factor might predict victimization in one context and not another. The significant moderating effects offer direction as to the focus of future research. Now that it has been established that peer attachment for females differently

influences different types of victimization, scholars should continue to seek answers as to why this is the case.

Recall that it was not possible to account for integrated theory in this study. While the meta-analysis did control for whether a competing theory was included in the study, it did not take integrated explanations of adolescent victimization, such as the interaction of self-control and routine activity theory, into consideration. While it would have been beneficial to include interactions of theories as their own separate predictor domains, there were not enough effect sizes to do so. Given that this meta-analysis found support for a number of predictors derived from general theories, future studies should continue developing this line of research by examining integrated explanations of victimization on different samples of adolescents.

Additionally, this meta-analysis focused specifically on sex differences, but explanations for juvenile victimization have also been found to differ depending on other demographic characteristics, such as race/ethnicity (Peguero et al., 2015). Given the intersections of both gender and race/ethnicity, it was concerning that very few studies performed split-sample analyses for race/ethnicity as well as sex. At the same time, this is not surprising given the lack of minority representation in many studies. Future research should examine predictors of adolescent victimization and the ways in which these predictors vary across gender, race, and ethnicity. Identifying samples with greater variability in race and ethnicity is an important first step.

Implications for Prevention

The findings of this study suggest that reducing youth involvement in risky activities, such as substance use, might reduce victimization risk, and similar effects for males and females suggest that this strategy has potential for both sexes. School-based substance use prevention programs have failed in the past, likely due to the fact that they over-exaggerated health risks related to drug and alcohol use and assumed that youth would make choices to use substances based on this alone (Griffin & Botvin, 2010). However, theoretically derived prevention programs involving resistance training and competence enhancement programs have been found to be more effective (Griffin & Botvin, 2010). These programs are best delivered using the RNR framework, where interventions should be directed at those that are at highest risk, focus on specific needs, and use cognitive behavioral techniques (Bonta & Andrews, 2016).

However, some of the findings from this meta-analysis support the use of gender-specific prevention programs. One of these is the strong relationship between prior victimization and future victimization, especially for females. This suggests that interventions should focus on reducing the impact of negative life events such as victimization during childhood in order to prevent future victimization. Lee and Jo (2017) noted that interventions using a general strain framework and peer-relations to reduce the negative emotions experienced as a result of strain from victimization may be beneficial to reduce repeat victimization for females.

Limitations

One of the main concerns when conducing meta-analyses involves the publication bias, or the "file cabinet effect." Scholars may be more likely to submit their work to

academic journals, making it more likely to be published, if there are significant, rather than null, results. This may artificially inflate effect sizes. Several tests for detecting publication bias have been developed, including trim and fill methods (Duval & Tweedie, 2000), Eggers tests (Eggeret al., 1997) and rank order correlations (Begg & Mazumdar, 1994). However, the accuracy of these tests has been questioned by meta-analytic scholars, and it has limitations for three-level models (Assink & Wibbelink, 2016). Therefore, methods to address publication bias were not performed. While theses and dissertations were included and researchers were contacted for unpublished studies, several significant moderating effects for publication status suggest that publication bias may be a concern.

A related limitation is the number of studies and effect sizes for some of the predictor variables and the effect that this may have on statistical power. While tests to determine whether sufficient statistical power exists to perform other types of quantitative analyses, no such test exists for meta-analytic methods. While power increases with sample size, and it is preferable to have more studies rather than fewer, scholars are not in agreement with how many effect sizes and studies are needed to perform a meta-analysis (Assink & Wibbelink, 2016). Because it is a rather new technique, researchers should continue to examine if and how publication bias and statistical power can be assessed for three-level models.

Conclusion

In sum, while questions surrounding the utility of criminological theory in explaining adolescent victimization and sex differences still exist, this meta-analysis has

helped to take stock of the research so far and provides mean effect sizes for several important predictors of juvenile victimization. Youth involvement in crime and victimization has shown a huge decrease over the past several decades and has the potential to decrease even more. Hopefully, scholars' continued examination of factors that influence victimization will help to continue to add to the development of a theoretically informed framework for explaining victimization, and will simultaneously aid efforts to improve prevention and treatment programs for high-risk youth.

References

Note: * = Included in the meta-analysis

*Alleyne-Green, B., Grinnell-Davis, C., Clark, T. T., Quinn, C. R., & Cryer-Coupet, Q. R. (2016). Father involvement, dating violence, and sexual risk behaviors among a national sample of adolescent females. *Journal of Interpersonal Violence, 31*, 810-830.

*Ames, M. & Leadbeater, B. (2017). Overweight and isolated: The interpersonal problems of youth who are overweight from adolescence into young adulthood. *International Journal of Behavioral Development, 41*, 390-404.

*Andrews, L. M. (2004). *The utility of routine activities theory in relation to child sexual abuse* [Unpublished doctoral dissertation]. Sam Houston State University.

Assink, M., van der Put, C. E., Meeuwsen, M. W. C. M., de Jong, N. M., Oort, F. J., Stams, G. J. J. M., & Hoeve, M. (2019). Risk factors for child sexual abuse victimization: A meta-analytic review. *Psychological Bulletin, 145*, 459-489.

Assink, M., & Wibbelink, C. J. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology, 12*, 154-174.

Antunes, M. J. L., Ahlin, E. M., Emmert, A. D., & Manasse, M. (2019). Gender differences in youth exposure to community violence: A partial test of power-control theory. *Feminist Criminology, 15*, 123-146.

Augustyn, M. B., & McGloin, J. M. (2013). The risk of informal socializing with peers: Considering gender differences across predatory delinquency and substance use. *Justice Quarterly, 30*, 117-143.

*Avgoustis, E. (2001). *The importance of childhood emotional neglect to adolescent dating violence: Is insecure attachment style a risk factor?* [Unpublished doctoral dissertation]. York University.

*Baron, S. W., Forde, D. R., & Kennedy, L. W. (2007). Disputatiousness, aggressiveness, and victimization among street youths. *Youth Violence and Juvenile Justice, 5*, 411-425.

Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: a systematic review and meta-analysis. *International Journal of Public Health, 58*, 469-483.

Beauvais, F., Chavez, E. L., Oetting, E. R., Deffenbacher, J. L., & Cornell, G. R. (1996). Drug use, violence, and victimization among White American, Mexican American, and American Indian dropouts, students with academic problems, and students in good academic standing. *Journal of Counseling Psychology, 43*, 292-299.

*Beaver, K. M., Wright, J. P., DeLisi, M., Daigle, L. E., Swatt, M. L., & Gibson, C. L. (2007). Evidence of a gene X environment interaction in the creation of victimization: Results from a longitudinal sample of adolescents. *International Journal of Offender Therapy and Comparative Criminology*, *51*, 620-645.

Begg, C. B., & Mazumdar, M. (1994). Operating characteristics of a rank correlation test for publication bias. *Biometrics 50*, 1088-1101.

*Begle, A. M., Hanson, R. F., Danielson, C. K., McCart, M. R., Ruggiero, K. J., Amstadter, A. B., Resnick, H. S., Saunders, B. E., & Kilpatrick, D. G. (2011). Longitudinal pathways of victimization, substance use, and delinquency: Findings from the National Survey of Adolescents. *Addictive Behaviors*, *36*, 682-689.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology*, *1*, 48-71.

Benedini, K. M., Fagan, A. A., & Gibson, C. L. (2016). The cycle of victimization: The relationship between childhood maltreatment and adolescent peer victimization. *Child Abuse and Neglect*, *59*, 111-121.

*Bjarnason, T., Sigurdardottir, T. J., & Thorlindsson, T. (1999). Human agency, capable guardians, and structural constraints: A lifestyle approach to the study of violent victimization. *Journal of Youth and Adolescence, 28*, 105-119.

*Blom, H., Högberg, U., Olofsson, N., & Danielsson, I. (2014). Strong association between earlier abuse and revictimization in youth. *BMC Public Health*, *14*, 715-725.

Bonett, D. G. (2007). Transforming odds ratios to correlations for meta-analytic research. *American Psychologist, 62*, 254-255.

Bonta, J., & Andrews, D. A. (2016). *The psychology of criminal conduct*. Taylor & Francis.

Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2011). *Introduction to meta-analysis*. John Wiley & Sons.

*Bramsen, R. H., Lasgaard, M., Koss, M. P., Elklit, A., & Banner, J. (2012). Adolescent sexual victimization: A prospective study on risk factors for first time sexual assault. *European Child and Adolescent Psychiatry, 21,* 521-526.

*Bramsen, R. H., Lasgaard, M., Koss, M. P., Shevlin, M., Elklit, A., & Banner, J. (2013). Testing a multiple mediator model of the effect of childhood sexual abuse on adolescent sexual victimization. *American Journal of Orthopsychiatry, 83,* 47.54.

*Brooks-Russell, A., Foshee, V. A., & Ennett, S. T. (2013). Predictors of latent trajectory classes of physical dating violence victimization. *Journal of Youth and Adolescence, 42,* 566-580.

Bunch, J., Clay-Warner, J., & Lei, M. K. (2015). Demographic characteristics and victimization risk: Testing the mediating effects of routine activities. *Crime & Delinquency, 61,* 1181-1205.

*Buzy, W. M., McDonald, R., Jouriles, E. N., Swank, P. R., Rosenfield, D., Shimek, J. S., & Corbitt-Shindler, D. (2004). Adolescent girls' alcohol use as a risk factor for relationship violence. *Journal of Research on Adolescence, 14,* 449-470.

*Carbone-Lopez, K., Esbensen, F. A., & Brick, B. T. (2010). Correlates and consequences of peer victimization: Gender differences in direct and indirect forms of bullying. *Youth Violence and Juvenile Justice, 8,* 332-350.

*Chen, F. R., Rothman, E. F., & Jaffee, S. R. (2017). Early puberty, friendship group characteristics, and dating abuse in US girls. *Pediatrics,* https://doi.org/10.1542/peds.2016-2847

Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: a structural equation modeling approach. *Psychological Methods, 19,* 211-229.

*Chiodo, D., Crooks, C. V., Wolfe, D. A., McIsaac, C., Hughes, R., & Jaffe, P. G. (2012). Longitudinal prediction and concurrent functioning of adolescent girls demonstrating various profiles of dating violence and victimization. *Prevention Science, 13,* 350-359.

*Christiansen, E. J., & Evans, W. P. (2005). Adolescent victimization: Testing models of resiliency by gender. *The Journal of Early Adolescence, 25,* 298-316.

*Clark, V. A. (2010). *Correlates and consequences of offending and victimization: An analysis of intimate partner violence among adolescents* [Unpublished doctoral dissertation]. The Pennsylvania State University.

*Cleveland, H. H., Herrera, V. M., & Stuewig, J. (2003). Abusive males and abused females in adolescent relationships: Risk factor similarity and dissimilarity and the role of relationship seriousness. *Journal of Family Violence, 18,* 325-339.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44, 588-608.

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: a meta-analytic investigation. *School Psychology Quarterly*, *25*, 65-83.

*Cyr, M., McDuff, P., & Wright, J. (2006). Prevalence and predictors of dating violence among adolescent female victims of child sexual abuse. *Journal of Interpersonal Violence, 21,* 1000-1017.

Daigle, L. E., Cullen, F. T., & Wright, J. P. (2007). Gender differences in the predictors of juvenile delinquency: Assessing the generality-specificity debate. *Youth Violence and Juvenile Justice, 5,* 254-286.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law and Women's Studies, 2,* 11-52.

Decker, S. H., & Van Winkle, B. (1996). *Life in the gang: Family, friends, and violence*. Cambridge University Press.

*Dhami, M. K., Hoglund, W. L., Leadbeater, B. J., & Boone, E. M. (2005). Gender-linked risks for peer physical and relational victimization in the context of school-level poverty in first grade. *Social Development, 14,* 532-549.

Digby, P. G. (1983). Approximating the tetrachoric correlation coefficient. *Biometrics, 39,* 753-757.

*DuPont-Reyes, M. J., Fry, D., Rickert, V. I., Bell, D. L., Palmetto, N., & Davidson, L. L. (2014). Relationship violence, fear, and exposure to youth violence among adolescents in New York City. *Journal of Interpersonal Violence, 29,* 2325-2350.

Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis. *Biometrics, 56,* 455-463.

*Eaton, D. K., Davis, K. S., Barrios, L., Brener, N. D., & Noonan, R. K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence, and early initiation of risk behaviors among US high school students. *Journal of Interpersonal Violence, 22*, 585-602.

Egger, M., & Smith, G. D. (1998). Bias in location and selection of studies. *British Medical Journal, 316*, 61-67.

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal, 315*, 629-634.

*Ellonen, N., & Aaltonen, M. (2012). Association between drinking and victimization among Finnish adolescents: estimating the extent of the spurious effect. *Nordic Studies on Alcohol and Drugs, 29*, 125-138.

*Engström, A. (2018). Associations between risky lifestyles and involvement in violent crime during adolescence. *Victims and Offenders, 13*, 898-920.

*Epstein-Ngo, Q. M., Cunningham, R. M., Whiteside, L. K., Chermack, S. T., Booth, B. M., Zimmerman, M. A., & Walton, M. A. (2013). A daily calendar analysis of substance use and dating violence among high risk urban youth. *Drug and Alcohol Dependence, 130*, 194-200.

Esbensen, F. A., & Winfree, L. T. (1998). Race and gender differences between gang and non-gang youths: Results from a multisite survey. *Justice Quarterly, 15*, 505-526.

*Fang, X., & Corso, P. S. (2007). Child maltreatment, youth violence, and intimate partner violence: Developmental relationships. *American Journal of Preventive Medicine, 33*, 281-290.

*Fehon, D. C., Grilo, C. M., & Lipschitz, D. S. (2001). Gender differences in violence exposure and violence risk among adolescent inpatients. *The Journal of Nervous and Mental Disease, 189*, 532-540.

*Felson, R. B., Savolainen, J., Berg, M. T., & Ellonen, N. (2013). Does spending time in public settings contribute to the adolescent risk of violent victimization? *Journal of Quantitative Criminology, 29*, 273-293.

*Gagné, M. H., Lavoie, F., & Hébert, M. (2005). Victimization during childhood and re-victimization in dating relationships in adolescent girls. *Child Abuse and Neglect, 29*, 1155-1172.

Garthe, R. C., Sullivan, T. N., & McDaniel, M. A. (2017). A meta-analytic review of peer risk factors and adolescent dating violence. *Psychology of Violence, 7*, 45-57.

*Gertseva, A. (2009). *The power and utility of latent growth modeling applied to longitudinal data for assessing the developmental synchrony of offending and victimization* [Unpublished doctoral dissertation]. Washington State University.

Gibson, C. L. (2012). An investigation of neighborhood disadvantage, low self-control, and violent victimization among youth. *Youth Violence and Juvenile Justice, 10*, 41-63.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.

*Gover, A. R., Jennings, W. G., & Tewksbury, R. (2009). Adolescent male and female gang members' experiences with violent victimization, dating violence, and sexual assault. *American Journal of Criminal Justice, 34*, 103-115.

Grasmick, H. G., Tittle, C. R., Bursik Jr, R. J., & Arneklev, B. J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency, 30*, 5-29.

Griffin, K. W., & Botvin, G. J. (2010). Evidence-based interventions for preventing substance use disorders in adolescents. *Child and Adolescent Psychiatric Clinics, 19*, 505-526.

*Grych, J. H. & Kinsfogel, K. M. (2010). Exploring the role of attachment style in the relation between family aggression and abuse in adolescent dating relationships. *Journal of Aggression, Maltreatment, and Trauma, 19*, 624-640.

*Halpern, C. T., Oslak, S. G., Young, M. L., Martin, S. L., & Kupper, L. L. (2001). Partner violence among adolescents in opposite-sex romantic relationships: Findings from the National Longitudinal Study of Adolescent Health. *American Journal of Public Health, 91*, 1679-1685.

*Han, S. C. (2015). *Family aggression, prosocial friends, and the risk of dating and friend victimization in late adolescence* [Unpublished Master's Thesis]. University of Southern California.

*Hartinger-Saunders, R. M., Rine, C. M., Wieczorek, W., & Nochajski, T. (2012). Family level predictors of victimization and offending among young men: Rethinking the role of parents in prevention and interventions models. *Children and Youth Services Review, 34*, 2423-2432.

*Hawkins, D. L., (2000). *The contribution of child maltreatment and gender-role attitudes to aggressive teen relationships* [Unpublished Doctoral Dissertation]. York University.

*Haynie, D. L., & Piquero, A. R. (2006). Pubertal development and physical victimization in adolescence. *Journal of Research in Crime and Delinquency, 43*, 3-35.

*Hébert, M., Moreau, C., Blais, M., Lavoie, F., & Guerrier, M. (2017). Child sexual abuse as a risk factor for teen dating violence: Findings from a representative sample of Quebec youth. *Journal of Child and Adolescent Trauma, 10*, 51-61.

*Henson, B., Wilcox, P., Reyns, B. W., & Cullen, F. T. (2010). Gender, adolescent lifestyles, and violent victimization: Implications for routine activity theory. *Victims and Offenders, 5*, 303-328.

*Herbel, K. F. (2002). *Personality predictors of confluence of risk in adolescent females living in group homes* [Unpublished Doctoral Dissertation]. University of California Riverside.

Hindelang, M. J., Gottfredson, M. R., & Garofalo, J. (1978). *Victims of personal crime: An empirical foundation for a theory of personal victimization*. Ballinger.

Hirschi, T. (1969) *Causes of delinquency*. University of California Press.

*Hoglund, W. L. (2007). School functioning in early adolescence: Gender-linked responses to peer victimization. *Journal of Educational Psychology, 99*, 683-699.

Holtfreter, K., Reisig, M. D., & Pratt, T. C. (2008). Low self-control, routine activities, and fraud victimization. *Criminology, 46*, 189-220.

*Howard, D. E., Beck, K., Kerr, M. H., & Shattuck, T. (2005). Psychosocial correlates of dating violence victimization among Latino youth. *Adolescence, 40*, 319-331.

*Howard, D. E., Debnam, K. J., & Wang, M. Q. (2013). Ten-year trends in physical dating violence victimization among US adolescent females. *Journal of School Health, 83*, 389-399.

*Howard, A. L., Kimonis, E. R., Muñoz, L. C., & Frick, P. J. (2012). Violence exposure mediates the relation between callous-unemotional traits and offending patterns in adolescence. *Journal of Abnormal Child Psychology, 40*, 1237-1247.

*Howard, D. E., & Wang, M. Q. (2003). Risk profiles of adolescent girls who were victims of dating violence. *Adolescence, 38*, 1-14.

*Howard, D. E., Wang, M. Q., & Fang, Y. (2007). Psychosocial factors associated with reports of physical dating violence among US adolescent females. *Adolescence, 42*, 449-460.

*Hukriede, C. (2016). *Gender differences in factors contributing to frequency of victimization among youth in residential placement* [Unpublished doctoral dissertation]. University of North Dakota.

*Ihongbe, T. O., Cha, S., & Masho, S. W. (2017). Age of sexual debut and physical dating violence victimization: sex differences among US high school students. *Journal of School Health, 87*, 200-208.

Jennings, W. G., Piquero, A. R., & Reingle, J. M. (2012). On the overlap between victimization and offending: A review of the literature. *Aggression and Violent Behavior, 17*, 16-26.

Jensen, G., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activities. *Violence and Victims, 1*, 85-99.

*Jo, Y., & Lee, B. (2018). Self-control, risky lifestyles, and violent victimization: A longitudinal study of the youth in South Korea. *International Journal of Law, Crime and Justice, 55*, 27-39.

*Karlsson, M. E., Temple, J. R., Weston, R., & Le, V. D. (2016). Witnessing interparental violence and acceptance of dating violence as predictors for teen dating violence victimization. *Violence Against Women, 22*, 625-646.

*Kast, N. R., Eisenberg, M. E., & Sieving, R. E. (2016). The role of parent communication and connectedness in dating violence victimization among Latino adolescents. *Journal of Interpersonal Violence, 31*, 1932-1955.

*King, G., Flisher, A. J., Noubary, F., Reece, R., Marais, A., & Lombard, C. (2004). Substance abuse and behavioral correlates of sexual assault among South African adolescents. *Child Abuse and Neglect, 28*, 683-696.

*Koo, D. J., Peguero, A. A., & Shekarkhar, Z. (2012). Gender, immigration, and school victimization. *Victims and Offenders, 7*, 77-96.

*Koposov, R., & Ruchkin, V. (2011). Exposure to community violence, psychopathology, and personality traits in Russian youth. *Depression Research and Treatment, 2011*, 1-15.

Lauritsen, J. L., & Carbone-Lopez, K. (2011). Gender differences in risk factors for violent victimization: An examination of individual-, family-, and community-level predictors. *Journal of Research in Crime and Delinquency, 48*, 538-565.

Lauritsen, J. L., Laub, J. H., & Sampson, R. J. (1992). Conventional and delinquent activities: Implications for the prevention of violent victimization among adolescents. *Violence and Victims, 7*, 91-108.

Lee, B., & Jo, B. (2017). Correlates of repeat victimization and sex differences in South Korean youth. *Journal of Interpersonal Violence*, https://doi.org/10.1177/0886260517708760

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Annals of Internal Medicine, 151,* 65-94.

Like-Haislip, T. Z., & Miofsky, K. T. (2011). Race, ethnicity, gender, and violent victimization. *Race and Justice, 1*, 254-276.

*Liu, C. (2014). *Relations between childhood violence exposure and dating violence victimization in the treatment seeking low-income, urban African-American girls* [Unpublished doctoral dissertation]. Palo Alto University.

*Loeber, R., Kalb, L., & Huizinga, D. (2001). *Juvenile delinquency and serious injury victimization*. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

*Ma, T. L., & Bellmore, A. (2012). Peer victimization and parental psychological control in adolescence. *Journal of Abnormal Child Psychology, 40*, 413-424.

*Maas, C. D., Fleming, C. B., Herrenkohl, T. I., & Catalano, R. F. (2010). Childhood predictors of teen dating violence victimization. *Violence and Victims, 25*, 131-149.

Maldonado-Molina, M. M., Jennings, W. G., Tobler, A. L., Piquero, A. R., & Canino, G. (2010). Assessing the victim-offender overlap among Puerto Rican youth. *Journal of Criminal Justice, 38*, 1191-1201.

*Manseau, H., Fernet, M., Hébert, M., Collin-Vézina, D., & Blais, M. (2008). Risk factors for dating violence among teenage girls under child protective services. *International Journal of Social Welfare, 17*, 236-242.

*Mawby, R. I. (1979). The victimization of juveniles: A comparative study of three areas of publicly owned housing in Sheffield. *Journal of Research in Crime and Delinquency, 16*, 93-116.

*Maxwell, C. D., Robinson, A. L., & Post, L. A. (2003). The nature and predictors of sexual victimization and offending among adolescents. *Journal of Youth and Adolescence, 32*, 465-477.

*McDonell, J., Ott, J., & Mitchell, M. (2010). Predicting dating violence victimization and perpetration among middle and high school students in a rural southern community. *Children and Youth Services Review*, *32*, 1458-1463.

McGeough, B. L., & Sterzing, P. R. (2018). A systematic review of family victimization experiences among sexual minority youth. *The Journal of Primary Prevention*, *39*, 491-528.

*Meinck, F., Cluver, L. D., & Boyes, M. E. (2017). Longitudinal predictors of child sexual abuse in a large community-based sample of South African youth. *Journal of Interpersonal Violence, 32*, 2804-2836.

Menard, S. W. (2002). *Short and long-term consequences of adolescent victimization*. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Menard, S. W. (2012). Age, criminal victimization, and offending: Changing relationships from adolescence to middle adulthood. *Victims and Offenders*, *7*, 227-254.

*Mitchell, K. J., & Finkelhor, D. (2001). Risk of crime victimization among youth exposed to domestic violence. *Journal of Interpersonal Violence, 16*, 944-964.

*Mitra, M., Mouradian, V. E., & McKenna, M. (2013). Dating violence and associated health risks among high school students with disabilities. *Maternal and Child Health Journal, 17*, 1088-1094.

*Mmari, K., Lantos, H., Blum, R. W., Brahmbhatt, H., Sangowawa, A., Yu, C., & Delany-Moretlwe, S. (2014). A global study on the influence of neighborhood contextual factors on adolescent health. *Journal of Adolescent Health, 55*, S13-S20.

*Moon, B., Morash, M., Jeong, S., & Yoon, H. S. (2016). Gender differences in the routine activities associated with risks for larceny in South Korea. *International Journal of Offender Therapy and Comparative Criminology, 60*, 1327-1343.

Morgan, R. E., & Truman, J. L. (2018). *Criminal victimization, 2017.* U.S. Department of Justice, Office of Justice Programs. Bureau of Justice Statistics.

*Morris, A. M., Mrug, S., & Windle, M. (2015). From family violence to dating violence: Testing a dual pathway model. *Journal of Youth and Adolescence, 44,* 1819-1835.

*Mueller-Johnson, K., Eisner, M. P., & Obsuth, I. (2014). Sexual victimization of youth with a physical disability: An examination of prevalence rates, and risk and protective factors. *Journal of Interpersonal Violence, 29,* 3180-3206.

*Muftic, L. R., & Moreno, R. D. (2010). Juvenile homicide victimization differences and similarities by gender. *Youth Violence and Juvenile Justice, 8,* 386-398.

*O'Brien, J. E., Li, W., Givens, A., & Leibowitz, G. S. (2017). Domestic minor sex trafficking among adjudicated male youth: Prevalence and links to treatment. *Children and Youth Services Review, 82,* 392-399.

*O'Keefe, M. (1998). Factors mediating the link between witnessing inter-parental violence and dating violence. *Journal of Family Violence, 13,* 39-57.

Osgood, D. W., & Chambers, J. M. (2000). Social disorganization outside the metropolis: An analysis of rural youth violence. *Criminology, 38,* 81-116.

Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review,* 61, 635-655.

*Pabayo, R., Molnar, B. E., & Kawachi, I. (2014). The role of neighborhood income inequality in adolescent aggression and violence. *Journal of Adolescent Health, 55,* 571-579.

*Parker, E. M., Johnson, S. L., Debnam, K. J., Milam, A. J., & Bradshaw, C. P. (2017). Teen dating violence victimization among high school students: A multilevel analysis of school-level risk factors. *Journal of School Health, 87,* 696-704.

Pauwels, L. J. R., & Svensson, R. (2011). Exploring the relationship between offending and victimization: What is the role of risky lifestyles and low self-control? A test in two urban samples. *European Journal of Criminal Policy Research 17*, 163-177.

*Pedersen, W. (2001). Adolescent victims of violence in a welfare state: Sociodemography, ethnicity and risk behaviors. *British Journal of Criminology, 41,* 1-21.

*Pedersen, W., Wichstrøm, L., & Blekesaune, M. (2001). Violent behaviors, violent victimization, and doping agents: A normal population study of adolescents. *Journal of Interpersonal Violence, 16,* 808-832.

Peguero, A. A., & Popp, A. M. (2012). Youth violence at school and the intersection of gender, race, and ethnicity. *Journal of Criminal Justice, 40,* 1-9.

Peguero, A. A., Popp, A. M., & Koo, D. J. (2015). Race, ethnicity, and school-based adolescent victimization. *Crime and Delinquency, 61,* 323-349.

Peterson, R. A., & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology, 90,* 175-181.

Peterson, S., Lasky, N. V., Fisher, B. S., & Wilcox, P. (2018). Gendered opportunity and school-based victimization: an integrated approach. *Youth Violence and Juvenile Justice, 16,* 137-155

Pittenger, S. L., Pogue, J. K., & Hansen, D. J. (2018). Predicting sexual revictimization in childhood and adolescence: A longitudinal examination using ecological systems theory. *Child Maltreatment, 23,* 137-146.

Pratt, T. C., & Cullen, F. T. (2000). The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology, 38,* 931-964.

Pratt, T. C., Cullen, F. T., Sellers, C. S., Winfree, L. T. Jr., Madensen, T. D., Daigle, L. E., Fearn, N. E., & Gau, J. M. (2010). The empirical status of social learning theory: A meta-analysis. *Justice Quarterly, 27,* 65-793.

Pratt, T. C., & Turanovic, J. J. (2016). Lifestyle and routine activity theories revisited: The importance of "risk" to the study of victimization. *Victims and Offenders, 11,* 335-354.

Pratt, T. C., Turanovic, J. J., Fox, K. A., & Wright, K. A. (2014). Self-control and victimization: A meta-analysis. *Criminology, 52,* 87-116.

*Pusch, N. (2019). Protective factors for violent victimization in schools: a gendered analysis. *Journal of School Violence, 18,* 597-612.

*Reidy, D. E., Smith-Darden, J. P., & Kernsmith, P. D. (2016). Behavioral and mental health correlates of youth stalking victimization. *American Journal of Preventative Medicine, 51,* 1007-1014.

*Reingle, J. M., Jennings, W. G., Maume, M. O., & Komro, K. A. (2013). The substance-related etiology of teen dating violence victimization: does gender matter? *Women and Criminal Justice, 23,* 185-208.

*Reuter, T. R., Sharp, C., Temple, J. R., & Babcock, J. C. (2015). The relation between borderline personality disorder features and teen dating violence. *Psychology of Violence, 5,* 163-173.

*Rich, C. L., Gidycz, C. A., Warkentin, J. B., Loh, C., & Weiland, P. (2005). Child and adolescent abuse and subsequent victimization: A prospective study. *Child Abuse and Neglect, 29,* 1373-1394.

*Richards, T. N., & Branch, K. A. (2012). The relationship between social support and adolescent dating violence: A comparison across genders. *Journal of Interpersonal Violence, 27,* 1540-1561.

*Richards, T. N., Branch, K. A., & Ray, K. (2014). The impact of parental and peer social support on dating violence perpetration and victimization among female adolescents: A longitudinal study. *Violence and Victims, 29,* 317-331.

Rivera, B., & Widom, C. S. (1990). Childhood victimization and violent offending. *Violence and Victims, 5,* 19-35.

*Rivera-Rivera, L., Allen-Leigh, B., Rodríguez-Ortega, G., Chávez-Ayala, R., & Lazcano-Ponce, E. (2007). Prevalence and correlates of adolescent dating violence: Baseline study of a cohort of 7960 male and female Mexican public school students. *Preventive Medicine, 44,* 477-484.

*Rothman, E. F., Stuart, G. L., Greenbaum, P. E., Heeren, T., Bowen, D. J., Vinci, R., ... & Bernstein, J. (2011). Drinking style and dating violence in a sample of urban, alcohol-using youth. *Journal of Studies on Alcohol and Drugs, 72,* 555-566.

*Rowe, L. S., Jouriles, E. N., & McDonald, R. (2015). Reducing sexual victimization among adolescent girls: A randomized controlled pilot trial of My Voice, My Choice. *Behavior Therapy, 46,* 315-327.

*Russell, M., Cupp, P. K., Jewkes, R. K., Gevers, A., Mathews, C., LeFleur-Bellerose, C., & Small, J. (2014). Intimate partner violence among adolescents in Cape Town, South Africa. *Prevention Science, 15,* 283-295.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology, 94,* 774-802.

*Sanderson, M., Coker, A. L., Roberts, R. E., Tortolero, S. R., Reininger, P. H. (2004). Acculturation, ethnic identity, and dating violence among Latino ninth-grade students. *Preventative Medicine, 39,* 373-383.

Schreck, C. J. (1999). Criminal victimization and low self-control: An extension and test of a general theory of crime. *Justice Quarterly, 16,* 633-654.

*Schreck, C. J., Burek, M. W., Stewart, E. A., & Miller, J. M. (2007). Distress and violent victimization among young adolescents: Early puberty and the social interactionist explanation. *Journal of Research in Crime and Delinquency, 44,* 381-405.

Schreck, C. J., & Fisher, B. S. (2004). Specifying the influence of family and peers on violent victimization: Extending routine activities and lifestyles theories. *Journal of Interpersonal Violence, 19,* 1021-1041.

Schreck, C. J., Wright, R. A., & Miller, J. M. (2002). A study of individual and situational antecedents of violent victimization. *Justice Quarterly, 19,* 159-180.

*Sears, H. A., Byers, E. S., & Price, L. (2007). The co-occurrence of adolescent boys' and girls' use of psychologically, physically, and sexually abusive behaviors in their dating relationships. *Journal of Adolescence, 30,* 487-504.

*Shen, A. C. T., Chiu, M. Y. L., & Gao, J. (2012). Predictors of dating violence among Chinese adolescents: The role of gender-role beliefs and justification of violence. *Journal of Interpersonal Violence, 27,* 1066-1089.

*Shlafer, R. J., McMorris, B. J., Sieving, R. E., & Gower, A. L. (2013). The impact of family and peer protective factors on girls' violence perpetration and victimization. *Journal of Adolescent Health, 52,* 365-371.

*Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA, 286,* 572-579.

*Spriggs, A. L., Halpern, C. T., Herring, A. H., & Schoenbach, V. J. (2009). Family and school socioeconomic disadvantage: Interactive influences on adolescent dating violence victimization. *Social Science and Medicine, 68,* 1956-1965.

*Stogner, J., Miller, J. M., Fisher, B. S., Stewart, E. A., & Schreck, C. J. (2014). Peer group delinquency and sexual victimization: Does popularity matter? *Women & Criminal Justice, 24,* 62-81.

Taylor, T. J., Freng, A., Esbensen, F. A., & Peterson, D. (2008). Youth gang membership and serious violent victimization: The importance of lifestyles and routine activities. *Journal of Interpersonal Violence, 23*, 1441-1464.

Taylor, T. J., Peterson, D., Esbensen, F. A., & Freng, A. (2007). Gang membership as a risk factor for adolescent violent victimization. *Journal of Research in Crime and Delinquency, 44*, 351-380.

*Thompson, M. P., Sims, L., Kingree, J. B., & Windle, M. (2008). Longitudinal associations between problem alcohol use and violent victimization in a national sample of adolescents. *Journal of Adolescent Health*, *42*, 21-27.

Tillyer, M. S, Tillyer, R., Ventura Miller, H., & Pangrac, R. (2011). Reexamining the correlates of adolescent violent victimization: The importance of exposure, guardianship, and target characteristics. *Journal of Interpersonal Violence*, *26*, 2908-2928.

*Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice, 38*, 1071-1081.

*Troop-Gordon, W., & Kopp, J. (2011). Teacher–child relationship quality and children's peer victimization and aggressive behavior in late childhood. *Social Development, 20*, 536-561.

Turanovic, J. J., & Pratt, T. C. (2014). "Can't stop, won't stop": Self-control, risky lifestyles, and repeat victimization. *Journal of Quantitative Criminology, 30*, 29-56.

Turanovic, J. J., Reisig, M. D., & Pratt, T. C. (2015). Risky lifestyles, low self-control, and violent victimization across gendered pathways to crime. *Journal of Quantitative Criminology, 31*, 183-206.

Turner, H. A., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science and Medicine*, *62*, 13-27.

*Tyler, K. A., Hoyt, D. R., & Whitbeck, L. B. (2000). The effects of early sexual abuse on later sexual victimization among female homeless and runaway adolescents. *Journal of Interpersonal Violence, 15*, 235-250.

*Tyler, K. A., Whitbeck, L. B., Hoyt, D. R., & Cauce, A. M. (2004). Risk factors for sexual victimization among male and female homeless and runaway youth. *Journal of Interpersonal Violence*, *19*, 503-520.

*Vaughn-Jensen, J. (2015). *Could teacher support help break the cycle of violence?* [Unpublished doctoral dissertation]. Texas A&M University.

Vézina, J., & Hebert, M. (2007). Risk factors for victimization in romantic relationships of young women: A review of empirical studies and implications for prevention. *Trauma, Violence, and Abuse*, *8*, 33-66.

*Vézina, J., Hébert, M., Poulin, F., Lavoie, F., Vitaro, F., & Tremblay, R. E. (2011). Risky lifestyle as a mediator of the relationship between deviant peer affiliation and dating violence victimization among adolescent girls. *Journal of Youth and Adolescence*, *40*, 814-824.

*Vézina, J., Hébert, M., Poulin, F., Lavoie, F., Vitaro, F., & Tremblay, R. E. (2015). History of family violence, childhood behavior problems, and adolescent high-risk behaviors as predictors of girls' repeated patterns of dating victimization in two developmental periods. *Violence Against Women*, *21*, 435-459.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*, 1-48.

*Watts, S. J., Tetzlaff-Bemiller, M. J., & McCutcheon, J. C. (2017). MAOA, drug selling, and violent victimization: Evidence of a gene×environment interaction. *Criminal Justice Review*, *42*, 368-383.

Werner, K. B., McCutcheon, V. V., Challa, M., Agrawal, A., Lynskey, M. T., Statham, D. J., Conroy, E., Madden, P. A. F., Henders, A. K., Todarov, A. A., & Heath, A. C. (2016). The association between childhood maltreatment, psychopathology, and adult sexual victimization in men and women: Results from three independent samples. *Psychological Medicine*, *46*, 563-573.

*Whitbeck, L. B., Hoyt, D. R., & Yoder, K. A. (1999). A risk-amplification model of victimization and depressive symptoms among runaway and homeless adolescents. *American Journal of Community Psychology*, *27*, 273-296.

Widom, C. S. (1989). The cycle of violence. *Science*, *244*, 160-166.

Widom, C. S., Czaja, S. J., & Dutton, M. A. (2008). Childhood victimization and lifetime revictimization. *Child Abuse and Neglect*, *32*, 785-796.

*Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency*, *46*, 245-269.

Wilson, J. Q., & Kelling, G. L. (1982). Broken windows. *Atlantic Monthly, 249*, 29-38.

*Windle, M. (1994). Substance use, risky behaviors, and victimization among a US national adolescent sample. *Addiction, 89*, 175-182.

*Windle, M., & Mrug, S. (2009). Cross-gender violence perpetration and victimization among early adolescents and associations with attitudes toward dating conflict. *Journal of Youth and Adolescence, 38*, 429-439.

*Wolfe, D. A., Scott, K., Wekerle, C., & Pittman, A. L. (2001). Child maltreatment: Risk of adjustment problems and dating violence in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 282-289.

*Xing, X., Wang, M., Zhang, Q., He, X., & Zhang, W. (2011). Gender differences in the reciprocal relationships between parental physical aggression and children's externalizing problem behavior in China. *Journal of Family Psychology, 25*, 699-708.

*Yan, F. A., Howard, D. E., Beck, K. H., Shattuck, T., & Hallmark-Kerr, M. (2010). Psychosocial correlates of physical dating violence victimization among Latino early adolescents. *Journal of Interpersonal Violence, 25*, 808-831.

Young, A., Grey, M., Abbey, A., Boyd, C. J., & McCabe, S. E. (2008). Alcohol-related sexual assault victimization among adolescents: Prevalence, characteristics, and correlates. *Journal of Studies of Alcohol and Drugs, 69*, 39-48.

*Young, D. A. (1991). *Conventional bonds to family and school, association with delinquent peers, gender, and victimization: An exploratory study of delinquency background variables with student victimization* [Unpublished doctoral dissertation]. University of Southern California.

*Zavala, E. (2018). Target congruence theory and the victim-offender overlap among male youths. *Victims and Offenders, 13*, 1013-1032.

*Zavala, E., Spohn, R. E., & Alarid, L. F. (2019). Gender and serious youth victimization: Assessing the generality of self-control, differential association, and social bonding theories. *Sociological Spectrum, 39*, 53-69.

Zimmerman, G. M., & Messner, S. F. (2010). Neighborhood context and the gender gap in adolescent crime. *American Sociological Review, 75*, 958-980.

CHAPTER 3

VICTIM-OFFENDER OVERLAP IN ADOLESCENT DATING RELATIONSHIPS

Adolescent dating violence (or ADV) is defined as the use of violence against a past or present dating partner among individuals aged 12 to 18 (National Institute of Justice, n.d.). It includes various types of abuse, such as physical (e.g., shoving, hitting, and kicking), psychological (e.g., threatening and putting down emotionally), sexual (e.g., forcing a partner to engage in a sexual act), and stalking (e.g., in-person and/or electronically; Center for Disease Control, 2014). In contrast to other types of violence that predominantly affects males, such as gang violence, peer victimization, robbery, and homicide (Puzzanchera, 2019), ADV affects both sexes (Archer, 2000). Research has found that males commit more serious acts of ADV, but females are actually more likely to perpetrate violence toward dating partners (Foshee, 1996; Swahn, et al., 2008). In terms of frequency, ADV occurs in approximately 20% of teenage dating relationships (Wincentak et al., 2017), and it is often reciprocal in nature (Gray & Foshee, 1997). Parties frequently victimize each other during a violent episode. Research into the risk factors of ADV is especially crucial because unlike other types of violence, adolescents are less likely to "age out," and they may continue to use violence in romantic relationships as adults (Leadbeater et al., 2014).

Previous research on ADV (both offending and victimization) has primarily focused on the influence of risk and protective factors, variations in self-control, and differential routine activities (see Jennings et al., 2012 for a review). To date, little research has focused on the effects of social ties, such as familial factors. This is

surprising given the important role that many parents play in the lives of their children, especially in terms of regulating their behavior (e.g., when they are allowed to leave the home and with whom). Hirschi's (1969) social control theory provides a potentially useful theoretical framework when it comes to ADV, but whether social bonds influence boys and girls differently remains an open question (Chapple et al., 2005; Hart & Mueller, 2013), and scholars have recommended that factors associated with ADV be assessed separately by sex (Foshee et al., 2004; Jackson, 1999; Vézina et al., 2011).

This study has three objectives. First, it will determine the extent of the overlap between ADV offending and victimization. Next, it will determine whether social ties partially explain ADV offending and ADV victimization. Lastly, it will determine whether the influence of social bonds on ADV offending and ADV victimization varies across the sexes. To accomplish these objectives, this study will use data from the 2018 Arizona Youth Survey. This cross-sectional dataset consists of students from middle and high schools located throughout Arizona. Bivariate probit models will be estimated to assess the effects of social ties on offending and victimization simultaneously. To examine potential gender differences, multivariate models will be estimated using male and female subsamples. The results will shed light on the role of social ties in preventing ADV.

Literature Review

The Extent and Nature of Adolescent Dating Violence

While it is estimated that about 20% of adolescent dating relationships involve violence (Wincetak et al., 2017), estimates vary from 1.4% to 53% depending on how

dating violence is defined (Garthe et al., 2016; Hamby & Turner, 2013; Vagi et al., 2015). While studies reporting lower estimates usually only include physical and sexual violence, estimates are generally higher when psychological forms of abuse (both face-to-face and electronic) are included (Ybarra et al., 2016). Estimates also vary across samples consisting of different age groups and genders (Taylor & Mumford, 2016). Unlike other forms of youth violence that have been decreasing in recent decades (Puzzanchera, 2019), rates of ADV have remained relatively stable (Howard et al., 2013; Rothman & Xuan, 2014).

The Centers for Disease Control and Prevention's (2014) definition of physical dating violence includes acts such as hitting, choking, kicking, shoving, and scratching a dating partner. Sexual dating violence includes coercing or forcing someone to engage in an unwanted sex act. ADV is correlated with other types of youth violence. Adolescents who have been the victim of child maltreatment, physical or sexual abuse by parents or other adults, or physical abuse from peers are more likely to be a victim of ADV (Hamby et al., 2012). Much like other forms of adolescent violence, peers influence ADV offending and victimization. Adolescents often meet their romantic partners within their peer group (Brown, 1999). Dating behaviors, both positive and negative, may be learned from peers (Bandura, 1986). In comparison, the familial context has not been studied as extensively as peers. Nevertheless, research shows that witnessing conflict in the home is an important predictor of ADV (Vézina & Hébert, 2007). Deviant behaviors, such as substance use and delinquency, have also be found to be related to ADV (Howard & Wang, 2005; Vagi et al., 2013).

There are various costs associated with ADV. Although it is difficult to put the cost in terms of dollars, intimate partner violence among adults has been estimated to cost approximately $9.3 billion annually, which includes both healthcare and loss of productivity (McLean & Bocinski, 2017). Along with the financial costs associated physical injury, ADV victims often experience mental health problems, such as depression, anxiety, and PTSD (Williams & Martinez, 1999). Mental health problems and the emotional turmoil associated with ADV has also been linked to poor school performance (Banyard & Cross, 2008), continued involvement in violent relationships in adulthood (Manchikanti Gómez, 2011), and increased substance use (Silverman et al., 2001). In sum, the financial and social costs associated with ADV are substantial.

The Victim-Offender Overlap in an Adolescent Dating Context

Violence in adult romantic relationships has been found to be reciprocal in that many victims also act as perpetrators (Klevens et al., 2002; Haller & Miles, 2003). While not examined as frequently, ADV seems to be similar in this regard. For example, Gray and Foshee (1997) found that 66% of adolescents involved in dating violence reported both committing ADV and being a victim of it. Although scant, the available evidence indicates that the victim-offender overlap is apparent in relationships involving ADV.

Some of the early pioneers of criminology observed that many offenders were also victims, and vice versa (Von Hentig, 1948; Wolfgang 1958). Since then, overlap between these two groups has been found among many different crime types, including violent crime (Klevens et al., 2002; Silver et al., 2011; Wittebrood & Nieuwbeerta, 1999), property crime (Posick, 2013; Van Dijk & Steinmetz, 1983), vandalism

(Tewksbury & Mustaine, 2000), cybercrime (Marcum et al., 2013) and sexual offenses (Jennings et al., 2014). While research on this overlap is sparse, overlap in dating violence among adult samples has been reported (see Jennings et al., 2012 for a review). In terms of age, overlap research most often focuses on adolescents because this group has high offending and victimization rates (Flexon et al., 2016; Jensen & Brownfield, 1986; Schreck et al., 2008). Nevertheless, evidence of the victim-offender overlap has been found using a variety of different samples, including incarcerated individuals (Toman, 2019), older adults (Reisig & Holtfreter, 2018), gang members (Taylor et al., 2007; 2008), and college students (Holtfreter et al., 2010; Jennings et al., 2011). Additionally, overlap has been observed in samples including different cultural backgrounds (Moldonado-Molina et al., 2010; Reingle & Moldonado-Molina, 2012), and samples from countries around the world (Averdijk et al., 2016; Jennings et al., 2011; Klevens et al., 2002; Paterson et al., 2007). The victim-offender overlap is one of the well-established facts in criminology, along with the age-crime curve and gender gap in offending.

While the co-occurrence of offending and victimization is commonly observed, the actual amount of overlap has been found to vary. When it comes to violent crimes, the overlap is relatively large: 50% of homicide victims had arrest records (Broidy et al., 2006), 45.7% of sex offenders had been sexually victimized (Jennings et al., 2014), and 45% those perpetrating an assault were assaulted previously (Lauritsen et al., 1992). Property crime also has a considerable overlap. For example, Kerstens and Jansen (2016) found that 26.8% of auction fraud offenders were also victims (also see Lauritsen et al.,

1992). Another way overlap is empirically assessed is the magnitude of bivariate correlations. Prior research shows that such estimates differ from study to study, ranging from 0.18 (Reisig & Holtfreter, 2018) to 0.62 (Jensen & Brownfield, 1986), depending on sample characteristics and definition of dating violence. Although estimates of ADV overlap are in short supply, evidence from research on intimate partner violence shows that victimization and offending are correlated at 0.44 (Tillyer & Wright, 2014), with 28.3% of males and 39.5% of females reporting both offending and victimization (Richards et al., 2017).

Explaining Adolescent Dating Violence Overlap

Early studies of the victim-offender overlap examined the role of risky lifestyles (Hindelang et al., 1978), such as criminal activity, deviant peers, and substance use (Jensen & Brownfield, 1986; Sampson & Lauritsen, 1990). More contemporary tests have used a related framework—routine activity theory—to explain the link between offending and victimization (Schreck et al., 2008; Taylor et al., 2008). Another approach involves the use of social interaction theory. Verbal disputes are often antecedents to violent crime, and those who have behavioral tendencies to provoke others are more likely to be involved in a verbal conflict. These verbal disputes can escalate into physical altercations, and the aggressors may end up as the victims (Berg & Felson, 2016, 2019; Felson et al., 2018). Self-control theory has also received considerable attention (Forde & Kennedy, 1997; Gover et al., 2011; Holtfreter et al., 2010; Taylor et al., 2019), with researchers finding that individuals with poor self-control are more likely to get

themselves into situations where there are criminal opportunities and where the risk of victimization is high.

Family elements are influential in adolescence (Esbensen et al., 1999; Schreck & Fisher, 2004). One of the ways that families affect behavior is through social ties. Strong bonds to prosocial family members may prevent problem behaviors in adolescence by providing a form of social control (Hirschi, 2004). This social control may then increase inhibitions and make one less likely to commit an act that others disapprove of. Additionally, those with strong ties may want to spend more time with family members. In turn, this increases guardianship and decreases time spent with deviant peers, which reduces opportunities for offending (Li, 2004; Osgood et al., 1996). Since scholars began using shared risk factors for offending and victimization, social ties to family have also been applied to victimization. Much like how strong ties to family provide a form of protection from offending opportunities, they also reduce exposure to people who might do criminal harm (Schreck & Fisher, 2004). Studies have found support for family ties ability to explain victimization (Lauritsen et al., 1992), with parental warmth and closeness being among the strongest predictors (Esbensen et al., 1999; Schreck & Fisher, 2004).

One way to explain why social ties protect adolescents from victimization is to apply Hirschi's (1969) social control theory. While Hirschi originally argued that strong attachment, high involvement, strong commitment, and conventional beliefs explain why juvenile males do not engage in delinquency, it has been applied to a variety of offending contexts using both male and female samples (Chapple et al., 2005; Smith & Paternoster,

1987). While research that tests the effects of family bonds on victimization is sparse, bond elements in other contexts, including school and peers, have been shown to help explain juvenile victimization (Foshee et al., 2013; Hart & Mueller, 2013; Jenkins, 1997; Özbay & Özcan, 2006).

The use of general crime theories to explain female offending and victimization has been criticized for not taking important gendered factors into account, such as abuse history (Daly, 1992). Hagan et al. (1987) argued that females are subject to more social control when compared to males, which accounts for the gender gap in crime. In addition to research finding differences in base rates of social control for males and females, Chapple et al. (2005) found that the effects of social bonds on violent offending were moderated by gender. The following sections describe how each of Hirschi's (1969) four social bonding elements may be gendered in the context of ADV.

Attachment

Attachment captures the closeness, warmth, and ability to communicate with another (Hirschi, 1969). This might involve teachers, peers, or parents. An adolescent who feels a strong attachment to their parents often benefit from the guardianship their parents provide. They may prefer to spend time with their parents rather than their peers, and therefore have fewer offending opportunities because they are protected from motivated offenders (Schreck et al., 2004). Additionally, a close relationship with parents may lead adolescents to be more open and communicative with their parents about who they are spending time with and what they are doing, providing additional guardianship even when the parent is not around (Schreck & Fisher, 2004). Adolescents who are

strongly attached to prosocial parents may refrain from engaging in crime because they do not want to harm the relationship by doing something their parent disapproves of. Since offending is highly correlated with victimization (see Jennings et al., 2012 for a review), refraining from engaging in crime may also prevent adolescents from being victimized.

Although social control theory is widely considered to be a general theory of criminal behavior, with similar causal mechanisms for males and females, scholars have identified several ways that attachment to parents may differ for females. In a patriarchal society, females may be socialized to put more importance on social relationships and focus more on the feelings of others (Canter, 1982; Gilligan, 1993). Attachment has been found to be a stronger protective factor for females than males, as females may be more worried about the effect delinquency may have on their relationships with their parents. Additionally, unequal power relations between males and females may lead the latter to be monitored more closely in patriarchal families, therefore decreasing offending opportunities and victimization risks (Gutman & Eccles, 2007; Hagan et al., 1987). For example, Schnurr and Lohman (2013) found that parental monitoring significantly decreased ADV offending for females but not males. Females with weak attachments to their parents may be more likely to be experience ADV victimization because they may believe that they do not deserve to be loved and treated with respect, and thus may be more willing to tolerate an abusive partner (Alleyne-Green et al., 2016; Cleveland et al., 2003; Vézina & Hébert, 2007). Additionally, a lack of closeness with parents may

prevent females from developing skills that will help them enter non-violent relationships as they age (Magdol et al., 1998).

For the most part, attachment to the same-sex parent (i.e., mother-daughter or father-son), rather than the opposite-sex parent, tends to be more influential in explaining delinquency and victimization (Cleveland et al., 2003; Hoeve et al., 2012; Magdol et al., 1998). For example, while mothers influenced the behavior of their daughters, attachment to fathers had no effect on ADV for females (Alleyne-Greene et al., 2016; Cleveland, 2003). However, while it would seem that attachment to parents should provide stronger protection against ADV offending and victimization for females, not all studies report this relationship. Some research did not find gender differences, and some found that attachment was more important for males (Foshee et al., 2001; Kast et al., 2016; Lavoie et al., 2002). These contradictory findings suggest that further examination is necessary.

Involvement

Hirschi (1969) defined involvement as the time spent on prosocial activities. For adolescents, this usually involves working on homework assignments, extracurricular activities (e.g., sports and clubs), volunteering, and after-school employment. Hirschi explained that those who are not busy with conventional activities have more time for delinquent ones. This notion has been applied to victimization too. Prosocial activities attract prosocial people, so adolescents may be less likely to encounter motivated offenders if they are involved in conventional activities. Additionally, adults who are present at these activities, such as coaches and bosses, may provide a form of

guardianship that prevents victimization (Jenkins, 1997; Popp & Peguero, 2012; Wilcox et al., 2009).

Involvement in prosocial activities may be gendered in two ways. Different types of activities may provide different opportunities for offending and victimization (Wilcox et al., 2009). Males are more likely to be involved in school sports, which are more violent (Fredricks & Eccles, 2005), while females are more likely to be involved with band, choir, and drama club (Agnich et al., 2017). Being involved in a school activity that goes against gender stereotypes (i.e. boys being involved in drama club rather than football) may increase victimization risk, as they may be bullied for violating gender stereotypes. Such harassment can escalate into physical violence (Agnich, 2017; Peguero, 2009). While research on involvement in prosocial activities and ADV is scarce, Schnurr and Lohman (2008, 2013) found that involvement in school activities such as being a class officer and participating in extracurricular activities did not significantly predict ADV offending for either males or females. These activities may increase the opportunity of meeting and getting into a relationship with a partner, and there may be less adult supervision during the after-school hours when these activities take place (Felson, 1986).

Commitment

The commitment element of the bond captures how dedicated adolescents are to achieving adult status through academic and career aspirations (Hirschi, 1969). Commitment to prosocial institutions, such as work and school, are important stakes in conformity that may prevent offending, as strongly committed adolescents will not want to jeopardize school and career aspirations by engaging in crime (Khron & Massey,

1980). Again, since offending and victimization are highly correlated, it is likely that avoiding crime would prevent victimization as well. Those who offend are involved in risky lifestyles which includes having deviant peers who may become motivated offenders if the opportunity arises (Schreck & Fisher, 2004). While not tested specifically on ADV, Jennings et al. (2010) found that commitment to school decreased victimization, while others found no effect of commitment on victimization (Taylor et al., 2007, 2008; Zavala et al., 2019). In a familial context, commitment of parents to their children's aspirations has also been examined. Parental expectations have been found to influence the behavior of their children, especially when parents effectively communicate their expectations (Nash et al., 2005; Nelson et al., 1999).

For parental commitment, parental expectations have been argued to be more influential on the actions of females. Because females place greater importance on their relationships with others, they will not want to damage their relationships with their parents by not conforming to their expectations. However, previous tests of the effect of commitment on offending have found similar effects for males and females (Mrug & McCay, 2013; Topitzes et al., 2013). The relationship between parental commitment and victimization has not been yet been examined, suggesting the need for additional research.

Belief

The fourth element in social control theory is the belief in conventional values (Hirschi, 1969). Individuals who possess prosocial beliefs rather than those favorable to crime are more likely to refrain from delinquency because breaking the law is contrary to

their personal morals (Krohn & Massey, 1980). This may extend to ADV victimization, as adolescents who lack prosocial beliefs might be accepting of partners with similar beliefs, such as the belief that violence is an acceptable way to deal with conflict in relationships. Research shows that these beliefs are correlated with ADV (Malik et al., 1997; de Puy et al., 2014; Riggs & O'Leary, 1989). Parental beliefs have also been found to be influential. Since parents are the main socialization agents of their children, adults who hold definitions favorable to dating violence are likely to pass these beliefs on to their children and to reinforce these behaviors, which their children in turn model (O'Keefe, 1998).

Adolescent females tend to hold more prosocial beliefs than adolescent males (Beutel & Johnson, 2004). Such beliefs have been found to be negatively related victimization among females. However, research has also found that males hold beliefs regarding dating violence that are more prosocial than those of females (Windle & Mrug, 2009). Additionally, the effect of beliefs on ADV offending have also found to be more influential for males (Foshee et al., 1999; O'Keefe, 1998). Some studies have not found gender differences in prosocial beliefs (O'Keefe, 1997). Overall, a strong consensus has yet to form as to whether Hirschi's social control theory explains ADV offending and ADV victimization for both sexes.

Current Focus

Prior research has yet to settle whether social ties operate similarly for males and females in contexts. Additionally, it is surprising given the role parents play in their children's lives that the potential effects of parental bonds on ADV have yet to be

examined more fully. The necessity of such research is underscored by the deleterious consequences of ADV, which are more likely to continue into adulthood relative to other types of youth violence (Leadbeater et al., 2018). Additionally, the consequences of ADV victimization—mental health problems, substance use, and suicide ideation—can last well into adulthood (Hébert et al., 2019). Finally, school-based ADV prevention programs have been found to be largely ineffective at altering violent behavior (De La Rue et al., 2017). This study will add to the ADV research by examining three questions:

1. Is there an overlap between ADV offending and victimization? If so, what is the extent of the overlap?
2. Which social bonds elements best explain the overlap between ADV offending and victimization?
3. Are the effects of social ties on ADV offending and victimization gendered?

Methods

Procedure

Data for this study come from the 2018 Arizona Youth Survey (AYS), a cross-sectional study administered by the Arizona Criminal Justice Commission's Statistical Analysis Center every two years to 8th, 10th, and 12th grade students in each of Arizona's 15 counties. The survey, which was guided by the risk and protective factor model (Hawkins et al., 1992), was designed to collect data to help understand high-risk behaviors, including substance use, offending, bullying, and impaired driving. All schools (including public, private, and charter) were eligible to opt-in and participate in the survey. The survey was administered to students using both pencil and paper and

computer formats. The survey used passive parental consent forms, so parents were able to decline that their child participate in the study. In 2018, a total of 49,009 students from 246 schools in Arizona completed the survey.

The age of the respondents ranged from 11 to 19. However, since this study focused on adolescent dating violence, the study sample was restricted to those between 15 and 18, because age 15 is when dating is considered normative (Furman & Rose, 2015). Given the focus on the behavior of adolescents, 19-year-olds were dropped from the sample. Additionally, those with missing data on either of the dependent variables were dropped, leaving a total of 28,371 male and female participants. Next, because the sample size was very large, study participants were selected by taking a random subsample of 20% of the participants using sampling with replacements. To ensure that each of the 246 schools would be represented in the subsample, but the sample would still be representative of the larger population, 20% of the sample from each school was selected. After the subsample was taken, the final sample consisted of 2,738 males and 2,932 females. One drawback associated with using large data sets is that type 1 errors (i.e., false positives) are more likely. By systematically reducing the number of cases in a sample, researchers can reduce the chances of observing false positives (Pituch & Stevens, 2015).

Participants

To help determine how well the sample represented the Arizona population of youth, demographic characteristics of the sample were compared with population data from the 2015-16 National Center for Education Statistics (Arizona Criminal Justice

Commission, 2018; NCES; see Appendix A). The NCES reported that males made up 51% of the middle and high school students in Arizona, the sample contained a slightly higher percentage of females (51.7%) than males (48.3%). In the NCES, 44% of Arizona students were Hispanic, but the percentage of Hispanic study sample was slightly larger (46.5%). When compared to the population, black students were also slightly over-represented in the sample (8.1% versus 5.6%). The mean age of respondents was 16.4, and 43.7% of the sample qualified for a free or reduced-cost lunch. Demographic differences between the sample and the larger population of students was less than five percentage points, indicating that the sample was fairly representative of the larger population (Arizona Criminal Justice Commission, 2018).

Dependent Variables

This study uses two dependent variables: *adolescent dating violence offending* and *adolescent dating violence victimization*. To measure ADV offending, respondents are asked how many times they hit, slapped, pushed, or kicked a girlfriend or boyfriend in the past 12 months. This item was dichotomized so that "1" reflected any offending and "0" reflected no offending. ADV victimization is measured similarly, with "1" indicating one or more assaults by a girlfriend or boyfriend in the past 12 months and "0" indicating none. The dependent variables were dichotomized in order to examine the joint association of offending and victimization, consistent with other studies that examine this overlap (Flexon et al., 2016; Reisig & Holtfreter, 2018), which have shown similar findings using OLS and negative binomial regression.

Social Bond Scales

The items used to construct the social bond scales were adapted from the Communities that Care Survey (Arthur et al., 2002). These items were hypothesized to reflect the four elements of social ties (Hirschi, 1969). Two scales were used for parental attachments. *Maternal attachment* was created using three items: Do you feel very close to your mother? Do you share thoughts and feelings with your mother? Do you enjoy spending time with your mother? *Paternal attachment* was measured in the same way, but "mother" was replaced with "father." Survey items featured close-ended responses that ranged from 0 (*strongly disagree*) to 3 (*strongly agree*). The mean score of the survey items was calculated. For both variables, higher scores indicated a greater amount of attachment.

Involvement captured prosocial activity. Respondents were asked how many times in the past 12 months they had done the following: Participated in clubs, organizations, or activities at school? Done extra work on their own for school? Volunteered to do community service? A closed-ended response that ranged from 0 (*never*) to 7 (*more than 40 times*) was presented with each survey item. The mean score of the three items was calculated. Higher scores indicated a greater amount of involvement in prosocial activities.

Commitment included items that reflected how dedicated the respondent perceived their parents were to their prosocial activities. The items included: The rules in my family are clear; When I am not at home, one of my parents knows where I am and who I am with; If you drank some alcohol without your parents' permission, you would

be caught by your parents; My family has clear rules about drug and alcohol use; If you carried a handgun without your parents' permission, you would be caught by your parents; If you skipped school, you would be caught by your parents; My parents ask if I've gotten my homework done; and Would your parents know if you did not come home on time? Each question featured closed-ended responses (range from 0 = *strongly disagree* to 3 = *strongly agree*). The mean score of the eight items was calculated. Higher scale scores indicated higher levels of commitment.

The belief element was captured using two different scales: *parental belief*, which captured respondents' perceptions of their parents' belief about antisocial activities. Respondents were asked how wrong do your parents think it is for you to smoke cigarettes; have one or two alcoholic drinks nearly every day; drink alcoholic beverages regularly; use prescription drugs without a doctor telling you to take them; smoke marijuana; use illegal drugs besides marijuana; steal something worth more than $5; draw graffiti, write things, or draw pictures on buildings or other property (without the owner's permission); and pick a fight with someone. The second belief scale, *adolescent belief*, included respondents' personal attitudes towards antisocial behavior. Respondents were asked how wrong they think it is for someone their age to do four things: use prescription drugs without a doctor telling them to; use illegal drugs besides marijuana; take a handgun to school; and attack someone with the idea of seriously hurting them. All of the belief items were accompanied by closed-ended responses that ranged from 0 (*not wrong at all*) to 3 (*very wrong*). For both belief scales, the mean score of the items was calculated. Higher scale scores indicated stronger prosocial beliefs.

Scale Construction

Principal component analysis (PCA) was used to ensure that social bond scales possessed factor validity (see Table 3.1). The 31 survey items hypothesized to reflect six different elements of social bonds were entered into a PCA. Models were estimated for both the male and female subsamples. Using varimax rotation and the K1 criterion (eigenvalue > 1.0), the items loaded on the hypothesized six components (Thompson, 2004). In other words, six components were observed in both subsamples: paternal attachment, maternal attachment, involvement, commitment, adolescent belief, and parental belief. To evaluate internal consistency, Cronbach's alpha (α) estimates were calculated for the items used to construct each social bond variable. The alpha estimates ranged from .70 to .89, which indicated that the scales were internally consistent for both the male and female subsamples (Santos, 1999).

Table 3.1 – Principal Component Analysis for Social Bond Items

	Males (n = 2,738)		Females (n = 2,932)	
Scales and Items	**Factor Loading**	**Eigenvalue**	**Factor Loading**	**Eigenvalue**
1. Maternal Attachment (α = .885 males, .885 females)		1.915		1.835
Do you feel very close to your mother?	.833		.883	
Do you enjoy spending time with your mother?	.778		.845	
Do you share your thoughts and feelings with your mother?	.834		.837	
2. Paternal Attachment (α = .877 males, .894 females)		1.611		1.947
Do you feel very close to your father?	.880		.905	
Do you enjoy spending time with your father?	.823		.865	
Do you share your thoughts and feelings with your father?	.842		.865	
3. Involvement (α = .700 males, .716 females)		1.286		1.569
Done extra work on your own for school?	.795		.809	
Participated in clubs, organizations, or activities at school?	.800		.787	
Volunteered to do community service?	.776		.797	
4. Commitment (α = .839 males, .805 females)		4.320		3.581
My family has clear rules about drugs and alcohol	.710		.696	
When I am not at home, one of my parents knows where I am and who I am with?	.672		.637	
If you skipped school, would you be caught by your parents?	.739		.654	
If you carried a handgun without your parents permission, would you be caught?	.748		.612	
The rules in my family are clear	.570		.597	
Would your parents know if you did not come home on time?	.593		.629	
If you drank some alcohol without your parents permission, would you be caught?	.689		.683	
My parents ask if I have gotten my homework done	.428		.411	
5. Parental Belief (α = .866 males, .834 females)		7.012		6.481
Have 1 or 2 alcoholic drinks nearly every day	.769		.707	
Use illegal drugs besides marijuana	.716		.708	
Smoke cigarettes	.740		.710	
Use prescription drugs without a doctor telling you to	.706		.661	
Draw graffiti, write things, or draw pictures on buildings or property	.732		.668	
Steal something worth more than $5	.695		.688	
Drink alcoholic beverages	.694		.619	
Smoke marijuana	.673		.652	
Pick a fight with someone	.562		.571	
6. Adolescent Belief (α = .836 males, .806 females)		1.754		1.688
Use illegal drugs besides marijuana	.778		.734	
Attack someone with the intention of hurting them	.731		.740	
Use prescription drugs without a doctor telling you to	.742		.705	
Take a handgun to school	.728		.731	

Control Variables

Prior research has found that risky lifestyles influence ADV (Vagi et al., 2013). This study includes scales for four risky lifestyles. *Self-reported offending* included acts of delinquency. Respondents were asked how many times they had had committed 10 offenses during the 12 months leading up to the survey.[1] These items were dichotomized and summed to create a variety score (Sweeten, 2012). *Deviant peers* was developed using items capturing the frequency of interactions with antisocial friends. Respondents were asked how many of their four closest friends committed 12 antisocial acts over the past 12 months. Response sets ranged from 0 (*none of their four closest friends*) to 4 (*all four of their closest friends*).[2] The mean of these 12 items was calculated. *Alcohol use* captured how many times the respondent had consumed more than a few sips of alcohol in their life (0 = *never* to 5 = *20 or more times*). *Witnessing violence* captured how many times in the past 12 months respondents had witnessed someone being punched, hit or kicked; attacked with a weapon; and, shot at or threatened with a gun (0 = *never* to 5 = *10 or more times*). The mean of the three items was calculated for each case.

Several demographic variables were used as statistical control variables. *Low SES* captured whether respondents received free or reduced-cost lunch at school (0 = *no*, 1 =

[1] The ten items used to create this variety score were carried a handgun; sold illegal drugs; stolen something worth more than $5; stolen or tried to steal a motor vehicle; been arrested; attacked someone with the idea of seriously hurting them; been drunk or high at school; taken a handgun to school; been in a physical fight; threatened, and shot or stabbed someone.

[2] The twelve antisocial acts included in this scale were smoked cigarettes; tried alcohol when their parents did not know about it; used marijuana; used illegal drugs besides marijuana; sold illegal drugs; been suspended from school; dropped out of school; been in a physical fight; carried a handgun; stolen or tried to steal a motor vehicle; been arrested; and been members of a gang.

yes) (Ayers et al., 2019; Wu et al., 2020). *Age* was the age of the respondent (in years) at the time of the study. *Black* and *Hispanic* were coded dichotomously (0 = *no*, 1 = *yes*), and white participants served as the reference category.

Analytic Strategy

This study used the bivariate probit regression model, which has been used previously to examine the victim-offender overlap (Jennings et al., 2011; Reisig & Holtfreter, 2018; Silver et al., 2011; Toman, 2019). The bivariate probit model examines the joint association between two models using separate dichotomous dependent variables—in this case, ADV offending and ADV victimization. In addition to estimating effects of independent variables on each dependent variable, bivariate probit models estimate rho (ρ), which is the common error term between both dependent variables (Cameron & Trivedi, 2010). A significant rho indicates that the assumption that the two dependent variables are independent is violated. Using the bivariate probit model is preferred to estimating two separate regression models because the latter approach assumes that the error terms are not correlated. This may result in errors of inference (Ashford & Sowden, 1970). By estimating a common error term, the bivariate probit regression model focuses on the joint distribution on two outcome variables (e.g., ADV offending and ADV victimization), rather than examining each separately (Silver et al., 2011). Importantly, the tetrachoric correlation coefficients were estimated to determine the relationship between the two binary dependent variables for each of the two subsamples. The correlation coefficients for both subsamples were significant at the .001

level (two-tailed test), which indicated that bivariate probit regression was an appropriate data-analytic model to use.

The statistical modeling process began by estimating two constant-only models—one for offending and one for victimization—for each gender subsample. Next, bivariate probit models were estimated with sociodemographic control variables only. After that, models were estimated with the risky activities and sociodemographic control variables. Finally, full models were estimated for males and females that include social bond variables plus the full slate of statistical controls.

The assumption that standard errors were independent was likely violated because respondents were clustered within schools. To correct this, clustered robust standard errors were used (Nichols & Schaffer, 2007). The respondents were clustered in the 246 schools, far above the minimum threshold of 50 clusters (Kezdi, 2004). Bootstrapping with replacement, which treats the sample as the population and takes 1000 random subsamples, was used in this study. This creates a distribution of the means of the subsamples that is used to approximate the distribution of the larger population, which is more likely to give an accurate estimate than traditional sampling methods (Brownstone & Valetta, 2001; Stine, 1989). Because the amount of missing data was very minimal (less than 2% for each variable) listwise deletion was used. Variance inflation factor scores were less than two, indicating that harmful multicollinearity was not an issue (Mansfield & Helms, 1982).

Results

Descriptive Statistics

Descriptive findings for the subsamples are presented in Table 3.2. In order to examine gender differences of the sample, independent sample *t*-tests were used for the interval and ratio-level variables. Chi-square (χ_2) tests were estimated for the dichotomous variables. For females, 6.1% of the sample reported ADV offending, 7.8% reported ADV victimization, and 2.8% of females reported being both an offender and a victim. For males, 4.3% reported ADV offending, 9.7% reported ADV victimization, and 2.6% of males reported being both a victim and an offender. The percentage of respondents who reported being both an offender and victim of ADV were similar to previous studies using high school students (Coker et al., 2000), but lower when compared to studies using college student samples (Richards et al., 2016; Tillyer & Wright, 2014). While some previous studies that have found males and females to be equally violent (Molidor & Tolman, 1998), others found that females were more likely to be violent (O'Keefe, 1997; Temple et al., 2013). In this study, the females were significantly more likely to be offenders than males. Additionally, males were significantly more likely to be victims.

Consistent with previous research (Chapple et al., 2005), female participants had significantly higher scores than males on maternal attachment, involvement, commitment, parental belief, and adolescent belief. Males had significantly higher scores than females on paternal attachment. As for risky behaviors, females reported higher scores for alcohol use, which was contrary to previous research showing that alcohol use between ages 12 and 18 does not differ by gender (Johnston et al., 2020; Schulte et al., 2009). Males reported higher scores for self-reported offending, deviant peers, and

witnessing violence, all of which was consistent with previous research (Engstrom, 2018; Peterson et al., 2018; Walters, 2020). Finally, no significant gender differences were observed for low SES and race/ethnicity. However, males were slightly older than females. Descriptive statistics for the entire sample are provided in Appendix D.

Table 3.2 – Descriptive Statistics

	Males (n = 2,738)		Females (n = 2,932)				
Variable	**Mean or %**	**S.D.**	**Mean or %**	**S.D.**	**Minimum**	**Maximum**	***t*-test/ χ^2**
ADV Offending	4.3%	--	6.1%	--	0	1	9.19**
ADV Victimization	9.7%	--	7.8%	--	0	1	6.45*
Maternal Attachment	2.03	.803	2.09	.852	0	3	2.72**
Paternal Attachment	1.77	.900	1.64	.945	0	3	5.29***
Involvement	1.77	1.37	1.95	1.32	0	7	2.42*
Commitment	2.08	.625	2.19	.553	0	3	7.02***
Parental Belief	2.69	.468	2.76	.382	0	3	6.19***
Adolescent Belief	2.62	.607	2.72	.516	0	3	9.38***
Self-reported Offending	.779	2.18	.452	1.44	0	16	6.71***
Deviant Peers	.556	.764	.387	.556	0	4	9.57***
Witnessing Violence	.437	.680	.272	.482	0	4	10.59***
Alcohol Use	1.41	1.81	1.51	1.79	0	5	2.09*
Low SES	42.9%	--	44.5%	--	0	1	1.46
Age	16.4	1.09	16.3	1.12	15	18	3.40*
Hispanic	46.0%	--	47.0%	--	0	1	.443
Black	8.3%	--	7.7%	--	0	1	.654

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

Bivariate Findings

Table 3.3 presents bivariate correlation coefficients between variables used in the study for both males (below diagonal) and females (above diagonal). Correlations between the two dependent variables, ADV victimization and ADV offending, were significant and of similar magnitude for males and females. The evidence thus far indicated that the victim-offender overlap exists when it comes to ADV, and that the extent of the overlap appeared consistent with prior adolescent research (Flexon et al., 2016; Posick, 2013). Nearly all of the social bond variables were significantly correlated with both victimization and offending for males. The only exception was paternal attachment, which was not correlated with victimization. However, the direction of the observed relationship for involvement and both offending and victimization was positive, indicating that greater involvement in prosocial activities at school was related to higher involvement in ADV offending and ADV victimization. With but one exception (i.e., involvement), the social bond variables were significantly and negatively related with both ADV offending and ADV victimization.

Each of the risky lifestyles had a significant positive relationship with both ADV offending and ADV victimization for both males and females. When compared to the social bond estimates, the risky lifestyle correlations were stronger in magnitude. For the demographic variables, low SES had a significant positive relationship with victimization, but only for males. Hispanic was positively related to victimization for both males and females. Black was positively correlated with offending for both males and females, and for victimization for males only. While the bivariate correlations from

Table 3.3 were informative, it was necessary to estimate multivariate regression models to more rigorously evaluate the relationships between the variables of interest.

Table 3.3 – Bivariate Correlations

Variables	Y1	Y2	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14
Y1. ADV Offending	**1.00**	.36*	-.12*	-.11*	.02	-.16*	-.15*	-.17*	.32*	.29*	.22*	.17*	.02	-.02	.01	.06*
Y2. ADV Victimization	.37*	**1.00**	-.09*	-.09*	.03	-.15*	-.18*	-.18*	.25*	.23*	.29*	.13*	.05*	.01	.04*	.01
X1. Maternal Attachment	-.09*	-.07*	**1.00**	.32*	.02	.45*	.11*	.18*	-.20*	-.23*	-.15*	-.14*	-.03	-.01	.01	-.01
X2. Paternal Attachment	-.03	-.06*	.46*	**1.00**	.07*	.36*	.09*	.11*	-.13*	-.16*	-.10*	-.15*	-.08*	-.01	-.01	-.05*
X3. Involvement	.08*	.08*	.01	.01	**1.00**	.03	.00	.03*	.04*	.04*	.04	.04	-.09*	.08*	-.12*	.01
X4. Commitment	-.14*	-.14*	.48*	.42*	.02	**1.00**	.33*	.31*	-.25*	-.32*	-.17*	-.36*	-.02	-.12*	.00	-.01
X5. Parental Belief	-.20*	-.25*	.07*	.08*	-.05*	.27*	**1.00**	.38*	-.31*	-.30*	-.24*	-.35*	.00	-.07*	.04*	-.01
X6. Adolescent Belief	-.21*	-.27*	.13*	.11*	-.02	.25*	.49*	**1.00**	-.39*	-.41*	-.28*	-.42*	.02	.02	.02	-.02
X7. Self-reported Offending	.42*	.30*	-.11*	.10*	.05*	-.23*	-.29*	-.46*	**1.00**	.51*	.42*	.31*	.00	.00	-.02	.05*
X8. Deviant Peers	.25*	.27*	-.12*	-.14*	.03	-.29*	-.32*	-.44*	.57*	**1.00**	.40*	.39*	.05*	.02	.03	.04*
X9. Witnessing Violence	.28*	.41*	-.09*	-.07*	.09*	-.14*	-.33*	-.40*	.49*	.47*	**1.00**	.16*	.01	-.11*	.00	.06*
X10. Alcohol Use	.11*	.14*	-.07*	-.07*	.06*	-.22*	-.31*	-.28*	.32*	.41*	.23*	**1.00**	-.07*	.20*	-.03	-.01
X11. Low SES	.02	.01	-.05*	-.11*	-.04*	-.04*	-.01	-.01	.01	.02	.03	-.05*	**1.00**	-.04*	.35*	.06*
X12. Age	.02	.00	.02	-.02	.11*	-.12*	-.10*	-.03	.00	.03	-.04*	.17*	-.06*	**1.00**	-.01	-.02
X13. Hispanic	.02	.05*	-.02	-.04*	-.06*	-.06*	.01	.00	.03	.03	.03	.01	.36*	-.04*	**1.00**	-.15*
X14. Black	.05*	.04*	-.06*	-.06*	.03	-.03	.00	-.05*	.08*	.07*	.09*	-.05*	.04	-.02	-.11*	**1.00**

Note: Correlation coefficients for females are presented above the diagonal, and correlation coefficients for males are presented below the diagonal.
*$p < .05$ (two-tailed test)

Multivariate Findings

Four bivariate probit regression models were estimated for the male (Table 3.4) and female (Table 3.5) subsamples. In the constant-only models (Model 1), the disturbance parameters, or rho (ρ = .712 for males, ρ = .682 for females), and corresponding significant Wald tests (χ^2 = 181.79 for males, χ^2 = 201.34 for females) established that there was a relationship between ADV victimization and ADV offending. Overall, the findings from the bivariate probit regression models suggested that the association between offending and victimization remained significant but decreased 17.8% for males and 15.7% for females between Models 1 and Models 4. Bivariate probit regression models were also estimated for the full sample of males (*n* = 13,805; see Appendix E) and females (*n* = 14,566; see Appendix F).

In Model 4, neither of the parental attachment variables had a significant effect on either outcome for males. However, paternal attachment significantly decreased both the probability of ADV offending and ADV victimization among females. This is contrary to previous research that has found that relationships to fathers were not important in explaining dating violence for females (Alleyene-Green et al., 2016; Cleveland et al., 2003). The observed effect of paternal attachment on ADV may be explained in several ways. First, Benda and Corwyn (2002) noted that an absence of paternal attachment may be a proxy for an absentee father. It may be that those with low attachment to fathers may live in a single parent household. Perhaps such females do not receive adequate monitoring. Busy single mothers may not have the opportunity to screen the males that their daughters date and intervene if they have concerns with the relationship.

Additionally, females with low paternal attachment may model behaviors after their mothers. If females have only seen their mothers in abusive relationships, they may be more likely to choose abusive dating partners (McCloskey, 2013). Regardless of the interpretation, the data were clear: female participants with strong attachments to their fathers were less likely to abuse their dating partners and were also less likely to be abused themselves.

The unexpected positive effect of involvement for males observed in the bivariate analyses persisted in the regression models. What explains this relationship? It may be that involvement in school activities actually increased opportunities to offend and victimization risk in a dating context because dating partners may also be involved in these activities. In short, involvement entails dating partners spending more time together, which may result in increased conflict (Peguero & Popp, 2012, Popp & Peguero, 2011). Another potential explanation is that dating partners who are not both involved in school activities may experience conflict if either partner feels resentful that the other is spending time away from them.

While prior research has not examined commitment and ADV specifically, it was expected that females would be more likely to conform to their parent's expectations of behavior, and this would have a stronger effect on ADV than for males. Yet the effect of commitment of ADV offending and victimization for females was null. One explanation for this finding may be that the commitment measure, which captured prosocial behavior and educational attainment, did not reflect expectations of dating behavior. For males, commitment significantly decreased the probability of ADV offending.

Table 3.4 – Bivariate Probit Regression Models – Male Subsample (*n* = 2,738)

	Model 1			Model 2			Model 3			Model 4		
Variables	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**
DV 1: ADV Offending												
Maternal Attachment										-.053	(.073)	-.73
Paternal Attachment										.086	(.071)	1.20
Involvement										.087	(.035)	2.46*
Commitment										-.242	(.091)	-2.65*
Parental Belief										-.303	(.102)	-2.97**
Adolescent Belief										.089	(.107)	0.84
Self-reported Offending							.137	(.021)	6.65***	.134	(.023)	5.85***
Deviant Peers							.072	(.078)	.92	.054	(.085)	.63
Witnessing Violence							.269	(.067)	4.04***	.236	(.075)	3.14**
Alcohol							-.013	(.031)	-.43	-.033	(.031)	-1.06
Low SES				.022	(.091)	.24	.023	(.111)	.20	-.040	(.121)	-.33
Age				.039	(.041)	.97	.032	(.045)	.70	.002	(.048)	.05
Hispanic				.131	(.082)	1.60	.055	(.103)	.53	.116	(.110)	1.06
Black				.331	(.146)	2.27*	.102	(.197)	.52	.123	(.211)	.58
Constant	-1.72	(.046)	-37.49***	-2.47	(.686)	-3.62***	-2.76	(.766)	-3.61***	-1.38	(.971)	-1.42
DV 2: ADV Victimization												
Maternal Attachment										.024	(.066)	.38
Paternal Attachment										-.019	(.058)	-.33
Involvement										.045	(.028)	1.60
Commitment										-.156	(.091)	-1.71
Parental Belief										-.285	(.082)	-3.47***
Adolescent Belief										.039	(.081)	.49
Self-reported Offending							.049	(.018)	2.64**	.042	(.021)	2.03*
Deviant Peers							.120	(.056)	2.14*	.081	(.047)	1.43
Witnessing Violence							.565	(.059)	9.56***	.562	(.063)	8.84***
Alcohol							.018	(.021)	.88	-.003	(.024)	-.16
Low SES				-.026	(.086)	-.31	-.048	(.096)	-.49	-.097	(.099)	-.98
Age				-.002	(.027)	-.06	-.001	(.029)	-.05	-.032	(.033)	-1.00
Hispanic				.188	(.076)	2.46*	.133	(.085)	1.57	.170	(.084)	2.01*
Black				.269	(.121)	2.23	.058	(.154)	.38	.107	(.140)	.76
Constant	-1.29	(.042)	-31.11***	-1.38	(.454)	-3.05***	-1.86	(.494)	-3.77***	-.417	(.642)	-.65
LLP	-1256.9			-1218.5			-975.6			-1088.66		
Rho (ρ)	.712			.714			.603			.572		
Wald test of rho (χ_2)	181.79***			176.69***			85.42***			96.26***		

Note: Entries are unstandardized partial regression coefficients (*b*), robust standard errors clustered on classrooms (RSE), and *z*-tests.
*$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed test)

Table 3.5 – Bivariate Probit Regression Models – Female Subsample (*n* = 2,932)

	Model 1			Model 2			Model 3			Model 4		
Variables	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**	***b***	**(RSE)**	***z*-test**
DV 1: ADV Offending												
Maternal Attachment										-.009	(.054)	-.17
Paternal Attachment										-.141	(.047)	-2.98**
Involvement										.009	(.035)	.26
Commitment										-.125	(.080)	-1.56
Parental Belief										.053	(.119)	.45
Adolescent Belief										-.069	(.106)	-.65
Self-reported Offending							.126	(.028)	4.43***	.113	(.030)	3.82***
Deviant Peers							.349	(.068)	5.13***	.314	(.073)	4.29***
Witnessing Violence							.141	(.067)	2.10*	.121	(.065)	1.87
Alcohol							.084	(.023)	3.60***	.073	(.024)	3.05**
Low SES				.034	(.081)	.42	.026	(.099)	.27	-.008	(.101)	-.08
Age				-.026	(.037)	-.71	-.053	(.042)	-1.26	-.063	(.046)	-1.36
Hispanic				.074	(.089)	.83	.079	(.097)	.81	.088	(.099)	.89
Black				.361	(.114)	3.16**	.328	(.130)	2.53*	.273	(.131)	2.05*
Constant	-1.55	.04	-36.88***	-1.19	(.125)	-1.93	-1.27	(.696)	-1.83	-.536	(.772)	-.69
DV 2: ADV Victimization												
Maternal Attachment										.026	(.043)	.59
Paternal Attachment										-.130	(.045)	-2.89**
Involvement										.044	(.026)	1.72
Commitment										-.119	(.082)	-1.45
Parental Belief										-.208	(.092)	-2.27*
Adolescent Belief										-.131	(.097)	-1.35
Self-reported Offending							.079	(.027)	2.89**	.054	(.029)	1.84
Deviant Peers							.163	(.067)	2.42*	.131	(.074)	1.76
Witnessing Violence							.480	(.066)	7.24***	.431	(.063)	6.82***
Alcohol							.053	(.024)	2.25*	.034	(.024)	1.41
Low SES				.129	(.073)	1.77	.116	(.078)	1.51	.056	(.087)	.64
Age				.010	(.029)	.36	.029	(.034)	.87	.009	(.035)	.26
Hispanic				.114	(.068)	1.67	.132	(.074)	1.78	.150	(.083)	1.81
Black				.049	(.124)	.40	-.057	(.153)	-.37	-.108	(.160)	-.67
Constant	-1.41***	.04	-35.02***	-1.71	(.493)	-3.47***	-2.44	(.549)	-4.44***	-.731	(.638)	-1.15
LPL	-1374.1			-1331.9			-1150.1			-1086.2		
Rho (ρ)	.682			.689			.584			.575		
Wald test of rho (χ_2)	201.34***			187.35***			105.93***			96.61***		

Note: Entries are unstandardized partial regression coefficients (*b*), robust standard errors clustered on classrooms (RSE), and *z*-tests.
*$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed test)

Parental prosocial beliefs significantly decreased offending for males. Such beliefs were associated with lower probabilities of ADV victimization for both males and females. In contrast, adolescent prosocial beliefs did not have a significant effect on ADV outcomes for either gender. Because adolescent beliefs and parental beliefs were highly correlated in this study, models were re-estimated after removing the parental beliefs scale. In these trimmed models, the adolescent belief effects remained statistically insignificant.

Risky lifestyle variables were also included in Model 4. As expected, self-reported offending significantly increased both ADV offending and victimization for male and females. Given the generality of deviance, the finding that general forms of offending were related to offending in a dating context was not terribly surprising. Prior research has also found that adolescent dating violence was related to other types of offending (Kerr & Capaldi, 2011; Lavoie et al., 2002; Simon, 1997). Witnessing violence in the home or community was positively related to victimization for males and females, a pair of findings consistent with prior studies showing that observing parental conflict increases ADV (Karlsson et al., 2016; Temple et al., 2013). Alcohol use significantly predicted victimization for females, which is in line with prior research (Howard & Wang, 2003).

Overall, results indicated that more of the social bond variables were significantly related to ADV offending and victimization for males when compared to females, which is contrary to what some prior researchers argue—that personal relationships are more important for females and that social bonds will have greater effects on behavior

(Gilligan, 1982; Heimer & De Coster, 1999; Hueber & Betts, 2002). This study found that while the parental belief scale seemed to have general effects, paternal attachment was gender-specific. However, while prior research has found that attachment to the same-sex parent was more influential in predicting offending and victimization (Hoeve et al., 2012), this study found that attachment with fathers—rather than mothers—was important for females. In short, the findings were consistent with prior research that has found both gender-neutral and gender-specific explanations of ADV offending and victimization.

Discussion

The purpose of this study was to assess the victim-offender overlap in an adolescent dating context. To do so, samples of males and female adolescents from schools in Arizona were used. While the overlap between offending and victimization has been established for a variety of different crime types (Flexon et al., 2016; Posick, 2013; Reisig & Holtfreter, 2018), ADV has received scant attention. This study found evidence that a victim-offender overlap exists for ADV. While ADV has been examined using a variety of explanatory frameworks, Hirschi's (1969) social control theory has been overlooked. Indeed, this study found that several social bonds were related to ADV offending and victimization, even after controlling for risky lifestyle and demographic variables. Scholars have theorized that social bond variables should be a better predictor of offending and victimization for females because this segment of the population places greater value on personal relationships (Canter, 1982; Gilligan, 1993). On the contrary, this study found that a greater number of social bond variables predicted ADV for males

rather than females, which may indicate that these gender expectations are outdated. However, some of the social bonds were gendered. While parental belief was found to be largely gender-neutral, paternal attachment predicted ADV victimization and offending for females only, which was unexpected given previous research (Alleyne-Green et al., 2016; Cleveland et al., 2003).

Many of the school-based programs aimed at preventing ADV attempt to do so by changing attitudes about the acceptability of violence against women (Vézina & Hébert, 2007) and the importance of cultivating healthy relationships (Peskin et al., 2019). However, a recent meta-analysis found that while such programs do increase knowledge about ADV, they fail to significantly reduce offending and victimization (De La Rue et al., 2017). This suggests that ADV prevention programs have room for improvement. Most programs mainly target individual factors, such as rape myth acceptance and conflict resolution techniques. The findings from this study suggest that a broader focus—one that includes familial factors—may be beneficial. And while many ADV prevention programs are universal and directed at general youth populations, additional programming that targets high-risk youth—individuals with weak social bonds—could prove worthwhile (Hébert et al., 2019).

Since dating violence affects males and females, most ADV prevention programs have targeted both sexes. However, gendered programs have been implemented as well. For example, the "WiseGuyz" program aims to reduce ADV offending among males by deconstructing gender role expectations (Exner-Cortens et al., 2019). Prevention programs aimed at reducing dating violence by teaching males about healthy

relationships, substance use, and sexual risk taking was found to be more beneficial for males (Wolfe et al., 2009). The findings from this study suggest that programming directed at fathers of females may also be effective. Handbooks and blogs available for the parents of teens are available to give fathers tips on fostering relationships with their daughters and how to approach them to talk about negative life circumstances, such as ADV. These conversations might help build those much-needed bonds between adolescent females and their fathers (Love is Respect, 2020).

One of the limitations of this study concerns the use of cross-sectional survey data. Accordingly, it was not possible to time-order the independent and dependent variables. The relationships between the variables are correlational. For example, it cannot be ruled out that parental attachment is weakened after ADV victimization (see, e.g., Mueller et al., 2013). Future research that makes use of longitudinal designs to test the relationships observed in this study are certainly welcomed. Another potential limitation of the study involves the measurement of the dependent variables. Self-reports are generally a good way to gauge adolescent involvement in offending and victimization, especially in general youth samples (Hindelang et al., 1981). However, since there is social stigma surrounding violence against women, it is likely that some males underreported their involvement in ADV offending. Accordingly, it may be beneficial to use data triangulation methods, such as coupling both self-reports with official records to develop more valid ADV measures. Finally, future research should replicate this study using data from high-risk youth populations. School samples like the

one used here probably underrepresent some individuals who are most at-risk for dating violence—those who have dropped out of school (Fernández-Suárez et al., 2016).

Conclusion

Over the past several decades, research into the causes of violent behavior among youth and evaluations of successful prevention and intervention programs have helped scholars develop a greater understanding of this social problem. Such efforts may have contributed to a 48% decrease in juvenile violent crime arrests between the years 2008 and 2017 (Puzzanchera, 2019). However, the decrease of ADV offending and victimization is still lagging behind other types of youth violence. Research shows that ADV rates have decreased only slightly or remained stable over the past 20 years (Howard et al., 2012, 2013; Rothman & Xuan, 2014; Shaffer et al., 2018). While this study helped to shed some light onto the effects that social bonds have on ADV, future research into these and other risk/protective factors should continue. The negative consequences of ADV are well understood and include mental health problems, physical injury, substance use, and repeat victimization. Importantly, these adverse effects often can continue well into adulthood, even affecting the next generation of children (Hébert et al., 2019). These factors necessitate the continuation of ADV research.

References

Agnich, L. E., Kahle, L. L., Peguero, A. A., Murphy, J. L., Foroughi, O., & Nester, J. N. (2017). Does breaking gender stereotypes contribute to victimization at school? *Criminal Justice Studies*, *30,* 257-275.

Alleyne-Green, B., Grinnell-Davis, C., Clark, T. T., Quinn, C. R., & Cryer-Coupet, Q. R. (2016). Father involvement, dating violence, and sexual risk behaviors among a national sample of adolescent females. *Journal of Interpersonal Violence*, *31*, 810-830.

Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin*, *126,* 651-680.

Arizona Criminal Justice Commission (2018). *Arizona youth survey state report*. https://azcjc.gov/sites/default/files/pubs/AYSReports/2018/2018_Arizona_Youth_Survey_State_Report.pdf

Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J. J. (2002). Measuring risk and protective factors for use, delinquency, and other adolescent problem behaviors the communities that care youth survey. *Evaluation Review, 26,* 575–601.

Ashford, J. R., & Sowden, R. R. (1970). Multi-variate probit analysis. *Biometrics, 26,* 535-546.

Averdijk, M., Van Gelder, J. L., Eisner, M., & Ribeaud, D. (2016). Violence begets violence… but how? A decision-making perspective on the victim–offender overlap. *Criminology, 54,* 282-306.

Ayers, S., Jager, J., & Kulis, S. S. (2019). Variations in risk and protective factors on substance use among urban American Indian youth. *Journal of Ethnicity in Substance Abuse, 1,* 1-24.

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, *4*, 359-373.

Banyard, V. L., & Cross, C. (2008). Consequences of teen dating violence: Understanding intervening variables in ecological context. *Violence Against Women, 14,* 998-1013.

Benda, B. B., & Corwyn, R. F. (2002). The effect of abuse in childhood and in adolescence on violence among adolescents. *Youth and Society*, *33*, 339-365.

Berg, M. T., & Felson, R. B. (2016). Why are offenders victimized so often? In C. A. Cuevas & C. M. Rennison (Eds.), *The Wiley handbook on the psychology of violence* (p. 49-65). John Wiley & Sons.

Berg, M. T., & Felson, R. (2019). A social interactionist approach to the victim-offender overlap. *Journal of Quantitative Criminology, 36*, 153-181.

Beutel, A. M., & Johnson, M. K. (2004). Gender and prosocial values during adolescence: A research note. *Sociological Quarterly*, *45*, 379-393.

Broidy, L. M., Daday, J. K., Crandall, C. S., Sklar, D. P., & Jost, P. F. (2006). Exploring demographic, structural, and behavioral overlap among homicide offenders and victims. *Homicide Studies*, *10*, 155-180.

Brown, B. B. (1999). "You're going out with who?": Peer group influences on adolescent romantic relationships. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *Cambridge studies in social and emotional development. The development of romantic relationships in adolescence* (p. 291–329). Cambridge University Press.

Brownstone, D., & Valletta, R. (2001). The bootstrap and multiple imputations: harnessing increased computing power for improved statistical tests. *Journal of Economic Perspectives*, *15*, 129-141.

Cameron, A. C., & Trivedi, P. K. (2010). *Microeconometrics using Stata* (revised ed.). StataCorp LP.

Canter, R. J. (1982). Family correlates of male and female delinquency. *Criminology*, *20*, 149-168.

Center for Disease Control (2014). *Understanding teen dating violence*. https://www.cdc.gov/violenceprevention/pdf/teen-dating-violence-2014-a.pdf

Chapple, C. L., McQuillan, J. A., & Berdahl, T. A. (2005). Gender, social bonds, and delinquency: A comparison of boys' and girls' models. *Social Science Research*, *34*, 357-383.

Cleveland, H. H., Herrera, V. M., & Stuewig, J. (2003). Abusive males and abused females in adolescent relationships: Risk factor similarity and dissimilarity and the role of relationship seriousness. *Journal of Family Violence*, *18*, 325-339.

Coker, A. L., McKeown, R. E., Sanderson, M., Davis, K. E., Valois, R. F., & Huebner, E. S. (2000). Severe dating violence and quality of life among South Carolina high school students. *American Journal of Preventive Medicine*, *19*, 220-227.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law and Women's Studies*, *2*, 11-52.

De La Rue, L., Polanin, J. R., Espelage, D. L., & Pigott, T. D. (2017). A meta-analysis of school-based interventions aimed to prevent or reduce violence in teen dating relationships. *Review of Educational Research*, *87*, 7-34.

De Puy, J., Hamby, S. L., & Lindemuth, C. (2014). Teen dating violence in French-speaking Switzerland: Attitudes and experiences. *International Journal of Conflict and Violence*, *8*, 305-315.

Engström, A. (2018). Associations between risky lifestyles and involvement in violent crime during adolescence. *Victims and Offenders*, *13*, 898-920.

Esbensen, F. A., Deschenes, E. P., & Winfree Jr, L. T. (1999). Differences between gang girls and gang boys: Results from a multisite survey. *Youth and Society*, *31*, 27-53.

Exner-Cortens, D., Wright, A., Hurlock, D., Carter, R., Krause, P., & Crooks, C. (2019). Preventing adolescent dating violence: An outcomes protocol for evaluating a gender-transformative healthy relationships promotion program. *Contemporary Clinical Trials Communications*. https://doi.org/10.1016/j.conctc.2019.100484

Felson, M. (1986). Linking criminal choices, routine activities, informal control, and criminal outcomes. In D. B. Cornish, & R. V. Clarke (Eds.). In *The reasoning criminal: Rational choices perspectives and offending* (p. 119-128). Transaction.

Felson, R. B., Berg, M. T., Rogers, E. M., & Krajewski, A. (2018). Disputatiousness and the offender–victim overlap. *Journal of Research in Crime and Delinquency*, *55*, 351-389.

Fernández-Suárez, A., Herrero, J., Pérez, B., Juarros-Basterretxea, J., & Rodríguez-Díaz, F. J. (2016). Risk factors for school dropout in a sample of juvenile offenders. *Frontiers in Psychology*, *7*, 1-7.

Flexon, J. L., Meldrum, R. C., & Piquero, A. R. (2016). Low self-control and the victim–offender overlap: A gendered analysis. *Journal of Interpersonal Violence*, *31*, 2052-2076.

Forde, D. R., & Kennedy, L. W. (1997). Risky lifestyles, routine activities, and the general theory of crime. *Justice Quarterly*, *14*, 265-294.

Foshee, V. A. (1996). Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Education Research*, *11,* 275-286.

Foshee, V. A., Bauman, K. E., & Linder, G. F. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and the Family, 61,* 331-342.

Foshee, V. A., Benefield, T. S., Ennett, S. T., Bauman, K. E., & Suchindran, C. (2004). Longitudinal predictors of serious physical and sexual dating violence victimization during adolescence. *Preventive Medicine*, *39,* 1007-1016.

Foshee, V. A., Benefield, T. S., Reyes, H. L. M., Ennett, S. T., Faris, R., Chang, L. Y., Husson, A. & Suchindran, C. M. (2013). The peer context and the development of the perpetration of adolescent dating violence. *Journal of Youth and Adolescence*, *42*, 471-486.

Foshee, V. A., Linder, F., MacDougall, J. E., & Bangdiwala, S. (2001). Gender differences in the longitudinal predictors of adolescent dating violence. *Preventive Medicine*, *32*, 128-141.

Fredricks, J. A., & Eccles, J. S. (2005). Family socialization, gender, and sport motivation and involvement. *Journal of Sport and Exercise Psychology*, *27,* 3-31.

Furman, W., & Rose, A. J. (2015). Friendships, romantic relationships, and peer relationships. In R. M. Lerner, M. H. Borenstein, & T. Leventhal (Eds.), *Handbook of child psychology and developmental science* (p. 1-43). John Wiley & Sons.

Garthe, R. C., Sullivan, T. N., & McDaniel, M. A. (2017). A meta-analytic review of peer risk factors and adolescent dating violence. *Psychology of Violence*, *7,* 45-57.

Gilligan, C. (1993). *In a different voice: Psychological theory and women's development*. Harvard University Press.

Gover, A. R., Jennings, W. G., Tomsich, E. A., Park, M., & Rennison, C. M. (2011). The influence of childhood maltreatment and self-control on dating violence: A comparison of college students in the United States and South Korea. *Violence and Victims*, *23*, 296-318.

Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violent profiles. *Journal of Interpersonal Violence*, *12*, 126-141.

Gutman, L. M., & Eccles, J. S. (2007). Stage-environment fit during adolescence: Trajectories of family relations and adolescent outcomes. *Developmental Psychology*, *43*, 522-537.

Hagan, J., Simpson, J., & Gillis, A. R. (1987). Class in the household: A power-control theory of gender and delinquency. *American Journal of Sociology*, *92*, 788-816.

Haller, D. L., & Miles, D. R. (2003). Victimization and perpetration among perinatal substance abusers. *Journal of Interpersonal Violence*, *18*, 760-780.

Hamby, S., Finkelhor, D., & Turner, H. (2012). Teen dating violence: Co-occurrence with other victimizations in the National Survey of Children's Exposure to Violence (NatSCEV). *Psychology of Violence*, *2*, 111-124.

Hamby, S., & Turner, H. (2013). Measuring teen dating violence in males and females: insights from the National Survey of Children's Exposure to Violence. *Psychology of Violence*, *3*, 323-339.

Hart, C. O., & Mueller, C. E. (2013). School delinquency and social bond factors: Exploring gendered differences among a national sample of 10th graders. *Psychology in the Schools*, *50*, 116-133.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*, 64–105.

Hébert, M., Daspe, M. È., Lapierre, A., Godbout, N., Blais, M., Fernet, M., & Lavoie, F. (2019). A meta-analysis of risk and protective factors for dating violence victimization: The role of family and peer interpersonal context. *Trauma, Violence, and Abuse*, *20*, 574-590.

Heimer, K., & De Coster, S. (1999). The gendering of violent delinquency. *Criminology*, *37*, 277-318

Hindelang, M. J., Gottfredson, M. R., & Garofalo, J. (1978). *Victims of personal crime: An empirical foundation for a theory of personal victimization*. Ballinger.

Hindelang, M. J., Hirschi, T., & Weis, J. G. (1981). *Measuring delinquency.* Sage.

Hirschi, T. (1969). *Causes of delinquency*. University of California Press.

Hirschi, T. (2004). Self-control and crime. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and application* (p. 537-552). The Guildford Press.

Hoeve, M., Stams, G. J. J., Van der Put, C. E., Dubas, J. S., Van der Laan, P. H., & Gerris, J. R. (2012). A meta-analysis of attachment to parents and delinquency. *Journal of Abnormal Child Psychology*, *40*, 771-785.

Holtfreter, K., Reisig, M. D., Leeper Piquero, N., & Piquero, A. R. (2010). Low self-control and fraud: Offending, victimization, and their overlap. *Criminal Justice and Behavior*, *37*, 188-203.

Howard, D. E., Debnam, K. J., & Wang, M. Q. (2013). Ten-year trends in physical dating violence victimization among US adolescent females. *Journal of School Health*, *83*, 389-399.

Howard, D. E., Debnam, K. J., Wang, M. Q., & Gilchrist, B. (2012). 10-year trends in physical dating violence victimization among US adolescent males. *International Quarterly of Community Health Education*, *32*, 283-305.

Howard, D. E., & Wang, M. Q. (2003). Risk profiles of adolescent girls who were victims of dating violence. *Adolescence*, *38*, 1-15.

Huebner, A. J., & Betts, S. C. (2002). Exploring the utility of social control theory for youth development: Issues of attachment, involvement, and gender. *Youth and Society*, *34*, 123-145.

Jackson, S. M. (1999). Issues in the dating violence research: A review of the literature. *Aggression and Violent Behavior*, *4*, 233-247.

Jenkins, P. H. (1997). School delinquency and the school social bond. *Journal of Research in Crime and Delinquency*, *34*, 337-367.

Jennings, W. G., Higgins, G. E., Tewksbury, R., Gover, A. R., & Piquero, A. R. (2010). A longitudinal assessment of the victim-offender overlap. *Journal of Interpersonal Violence*, *25*, 2147-2174.

Jennings, W. G., Park, M., Tomsich, E. A., Gover, A. R., & Akers, R. L. (2011). Assessing the overlap in dating violence perpetration and victimization among South Korean college students: The influence of social learning and self-control. *American Journal of Criminal Justice*, *36*, 188-206.

Jennings, W. G., Piquero, A. R., & Reingle, J. M. (2012). On the overlap between victimization and offending: A review of the literature. *Aggression and Violent Behavior*, *17*, 16-26.

Jennings, W. G., Zgoba, K. M., Maschi, T., & Reingle, J. M. (2014). An empirical assessment of the overlap between sexual victimization and sex offending. *International Journal of Offender Therapy and Comparative Criminology, 58*, 1466-1480.

Jensen, G. F., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activity. *Violence and Victims, 1*, 85-99.

Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020). *Monitoring the future: National survey results on drug use, 1975-2019.* Institute for Social Research, The University of Michigan.

Karlsson, M. E., Temple, J. R., Weston, R., & Le, V. D. (2016). Witnessing inter-parental violence and acceptance of dating violence as predictors for teen dating violence victimization. *Violence Against Women*, *22*, 625-646.

Kast, N. R., Eisenberg, M. E., & Sieving, R. E. (2016). The role of parent communication and connectedness in dating violence victimization among Latino adolescents. *Journal of Interpersonal Violence*, *31*, 1932-1955.

Kerr, D. C., & Capaldi, D. M. (2011). Young men's intimate partner violence and relationship functioning: long-term outcomes associated with suicide attempt and aggression in adolescence. *Psychological Medicine, 41*, 759-769.

Kerstens, J., & Jansen, J. (2016). The victim–perpetrator overlap in financial cybercrime: Evidence and reflection on the overlap of youth's on-line victimization and perpetration. *Deviant Behavior, 37*, 585-600.

Kezdi, G. (2004). Robust standard error estimation in fixed-effects panel models. *Hungarian Statistical Review Special, 9,* 96-116.

Klevens, J., Duque, L. F., & Ramirez, C. (2002). The victim-perpetrator overlap and routine activities: Results from a cross-sectional study in Bogotá, Colombia. *Journal of Interpersonal Violence*, *17*, 206-216.

Krohn, M. D., & Massey, J. L. (1980). Social control and delinquent behavior: An examination of the elements of the social bond. *The Sociological Quarterly*, *21*, 529-544.

Lauritsen, J. L., Laub, J. H., & Sampson, R. J. (1992). Conventional and delinquent activities: Implications for the prevention of violent victimization among adolescents. *Violence and Victims, 7*, 91-108.

Lavoie, F., Hébert, M., Tremblay, R., Vitaro, F., Vézina, L., & McDuff, P. (2002). History of family dysfunction and perpetration of dating violence by adolescent boys: A longitudinal study. *Journal of Adolescent Health*, *30*, 375-383.

Leadbeater, B. J., Thompson, K., & Sukhawathanakul, P. (2014). It gets better or does it? Peer victimization and internalizing problems in the transition to young adulthood. *Development and Psychopathology*, *26*, 675-688.

Li, S. D. (2004). The impacts of self-control and social bonds on juvenile delinquency in a national sample of midadolescents. *Deviant Behavior*, *25*, 351-373.

Love is Respect (2020) *A parent's guide to teen dating violence: 10 questions to start the conversation.* https://www.breakthecycle.org/sites/default/files/hanbook_-_parents_of_teen_0.pdf

Magdol, L., Moffitt, T. E., Caspi, A., & Silva, P. A. (1998). Developmental antecedents of partner abuse: a prospective-longitudinal study. *Journal of Abnormal Psychology*, *107*, 375-389.

Maldonado-Molina, M. M., Jennings, W. G., Tobler, A. L., Piquero, A. R., & Canino, G. (2010). Assessing the victim-offender overlap among Puerto Rican youth. *Journal of Criminal Justice*, *38*, 1191-1201.

Malik, S., Sorenson, S. B., & Aneshensel, C. S. (1997). Community and dating violence among adolescents: Perpetration and victimization. *Journal of Adolescent Health*, *21*, 291-302.

Manchikanti Gómez, A. (2011). Testing the cycle of violence hypothesis: Child abuse and adolescent dating violence as predictors of intimate partner violence in young adulthood. *Youth and Society*, *43*, 171-192.

Mansfield, E. R., & Helms, B. P. (1982). Detecting multicollinearity. *The American Statistician*, *36*, 158-160.

Marcum, C. D., Higgins, G. E., Freiburger, T. L., & Ricketts, M. L. (2014). Exploration of the cyberbullying victim/offender overlap by sex. *American Journal of Criminal Justice*, *39*, 538-548.

McCloskey, L. A. (2013). The intergenerational transfer of mother–daughter risk for gender-based abuse. *Psychodynamic Psychiatry*, *41*, 303-328.

McLean, G., & Bocinski, S. G. (2019). *The economic cost of intimate partner violence, sexual assault, and stalking.* Institute for Women's Policy Research. https://iwpr.org/publications/economic-cost-intimate-partner-violence-sexual-assault-stalking/

Molidor, C., & Tolman, R. M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women*, *4*, 180-194.

Mrug, S., & McCay, R. (2013). Parental and peer disapproval of alcohol use and its relationship to adolescent drinking: Age, gender, and racial differences. *Psychology of Addictive Behaviors*, *27*, 604-614.

Mueller, V., Jouriles, E. N., McDonald, R., & Rosenfield, D. (2013). Adolescent beliefs about the acceptability of dating violence: Does violent behavior change them? *Journal of Interpersonal Violence*, *28*, 436-450.

Nash, S. G., McQueen, A., & Bray, J. H. (2005). Pathways to adolescent alcohol use: Family environment, peer influence, and parental expectations. *Journal of Adolescent Health*, *37*, 19-28.

National Institute of Justice (n.d.). *Teen dating violence.* https://nij.ojp.gov/topics/crimes/teen-dating-violence

Nelson, B. V., Patience, T. H., & MacDonald, D. C. (1999). Adolescent risk behavior and the influence of parents and education. *The Journal of the American Board of Family Practice*, *12*, 436-443.

Nichols, A., & Shaffer, M. (2007). *Clustered errors in Stata* [PowerPoint slides]. https://www.stata.com/meeting/13uk/nichols_crse.pdf

O'Keefe, M. (1997). Predictors of dating violence among high school students. *Journal of Interpersonal Violence*, *12*, 546-568.

O'Keefe, M. (1998). Factors mediating the link between witnessing inter-parental violence and dating violence. *Journal of Family Violence*, *13*, 39-57.

Osgood, D. W., Wilson, J. K., O'malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review, 61*, 635-655.

Özbay, Ö., & Özcan, Y. Z. (2008). A test of Hirschi's social bonding theory: A comparison of male and female delinquency. *International Journal of Offender Therapy and Comparative Criminology*, *52*, 134-157.

Paterson, J., Feehan, M., Butler, S., Williams, M., & Cowley-Malcolm, E. T. (2007). Intimate partner violence within a cohort of Pacific mothers living in New Zealand. *Journal of Interpersonal Violence*, *22*, 698-721.

Peguero, A. A. (2009). Victimizing the children of immigrants: Latino and Asian American student victimization. *Youth and Society*, *41*, 186-208.

Peguero, A. A., & Popp, A. M. (2012). Youth violence at school and the intersection of gender, race, and ethnicity. *Journal of Criminal Justice, 40*, 1-9.

Peskin, M. F., Markham, C. M., Shegog, R., Baumler, E. R., Addy, R. C., Temple, J. R., Hernandez, B., Curraco, P. M., Thiel, M. A., Gabay, E. K., & Tortolero Emery, S. R. (2019). Adolescent dating violence prevention program for early adolescents: The Me & You randomized controlled trial, 2014–2015. *American Journal of Public Health*, *109*, 1419-1428.

Peterson, D., Carson, D. C., & Fowler, E. (2018). What's sex (composition) got to do with it? The importance of sex composition of gangs for female and male members' offending and victimization. *Justice Quarterly*, *35*, 941-976.

Pituch, K. A., & Stevens, J. P. (2015). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBM's SPSS*. Routledge.

Popp, A. M., & Peguero, A. A. (2012). Social bonds and the role of school-based victimization. *Journal of Interpersonal Violence*, *27*, 3366-3388.

Posick, C. (2013). The overlap between offending and victimization among adolescents: Results from the second international self-report delinquency study. *Journal of Contemporary Criminal Justice*, *29*, 106-124.

Puzzanchera, C. (2019). *Arrests of juveniles in 2018 reached lowest levels in nearly four decades.* https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2018.pdf

Reingle, J. M., & Maldonado-Molina, M. M. (2012). Victimization and violent offending: An assessment of the victim-offender overlap among Native American adolescents and young adults. *International Criminal Justice Review, 2*, 123-138.

Reisig, M. D., & Holtfreter, K. (2018). The victim–offender overlap in late adulthood. *Journal of Elder Abuse and Neglect*, *30*, 144-166.

Richards, T. N., Tillyer, M. S., & Wright, E. M. (2017). Intimate partner violence and the overlap of perpetration and victimization: Considering the influence of physical, sexual, and emotional abuse in childhood. *Child Abuse and Neglect, 67*, 240-248.

Riggs, D. S., & O'Leary, K. D. (1989). A theoretical model of courtship aggression. In M. A. Pirog-Good & J. E. Stets (Eds.), *Violence in dating relationships: Emerging social issues* (p. 53–71). Praeger.

Rothman, E. F., & Xuan, Z. (2014). Trends in physical dating violence victimization among US high school students, 1999–2011. *Journal of School Violence*, *13*, 277-290.

Sampson, R. J., & Lauritsen, J. L. (1990). Deviant lifestyles, proximity to crime, and the offender-victim link in personal violence. *Journal of Research in Crime and Delinquency*, *27*, 110-139.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, *37*, 1-5.

Schnurr, M. P., & Lohman, B. J. (2008). How much does school matter? An examination of adolescent dating violence perpetration. *Journal of Youth and Adolescence*, *37*, 266-283.

Schnurr, M. P., & Lohman, B. J. (2013). The impact of collective efficacy on risks for adolescents' perpetration of dating violence. *Journal of Youth and Adolescence*, *42*, 518-535.

Schreck, C. J., & Fisher, B. S. (2004). Specifying the influence of family and peers on violent victimization: Extending routine activities and lifestyles theories. *Journal of Interpersonal Violence*, *19*, 1021-1041.

Schreck, C. J., Fisher, B. S., & Miller, J. M. (2004). The social context of violent victimization: A study of the delinquent peer effect. *Justice Quarterly*, *21*, 23-47.

Schreck, C. J., Stewart, E. A., & Osgood, D. W. (2008). A reappraisal of the overlap of violent offenders and victims. *Criminology*, *46*, 871-906.

Schulte, M. T., Ramo, D., & Brown, S. A. (2009). Gender differences in factors influencing alcohol use and drinking progression among adolescents. *Clinical Psychology Review*, *29*, 535-547.

Shaffer, C. S., Adjei, J., Viljoen, J. L., Douglas, K. S., & Saewyc, E. M. (2018). Ten-year trends in physical dating violence victimization among adolescent boys and girls in British Columbia, Canada. *Journal of Interpersonal Violence.* https://doi.org/10.1177/0886260518788367

Silver, E., Piquero, A. R., Jennings, W. G., Piquero, N. L., & Leiber, M. (2011). Assessing the violent offending and violent victimization overlap among discharged psychiatric patients. *Law and Human Behavior*, *35*, 49-59.

Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA, 286*, 572-579.

Simon, L. M. (1997). Do criminal offenders specialize in crime types? *Applied and Preventive Psychology*, *6*, 35-53.

Smith, D. A., & Paternoster, R. (1987). The gender gap in theories of deviance: Issues and evidence. *Journal of Research in Crime and Delinquency*, *24*, 140-172.

Stine, R. (1989). An introduction to bootstrap methods: Examples and ideas. *Sociological Methods and Research*, *18*, 243-291.

Swahn, M. H., Simon, T. R., Arias, I., & Bossarte, R. M. (2008). Measuring sex differences in violence victimization and perpetration within date and same-sex peer relationships. *Journal of Interpersonal Violence*, *23*, 1120-1138.

Sweeten, G. (2012). Scaling criminal offending. *Journal of Quantitative Criminology, 28*, 533-557.

Taylor, B. G., & Mumford, E. A. (2016). A national descriptive portrait of adolescent relationship abuse: Results from the National Survey on Teen Relationships and Intimate Violence. *Journal of Interpersonal Violence, 31*, 963–988.

Taylor, B. G., Mumford, E. A., Liu, W., Berg, M., & Bohri, M. (2019). Young adult reports of the victim–offender overlap in intimate and nonintimate relationships: A Nationally representative sample. *Criminal Justice and Behavior, 46*, 415-436.

Taylor, T. J., Freng, A., Esbensen, F. A., & Peterson, D. (2008). Youth gang membership and serious violent victimization: The importance of lifestyles and routine activities. *Journal of Interpersonal Violence, 23*, 1441-1464.

Taylor, T. J., Peterson, D., Esbensen, F. A., & Freng, A. (2007). Gang membership as a risk factor for adolescent violent victimization. *Journal of Research in Crime and Delinquency, 44*, 351-380.

Temple, J. R., Shorey, R. C., Fite, P., Stuart, G. L., & Le, V. D. (2013). Substance use as a longitudinal predictor of the perpetration of teen dating violence. *Journal of Youth and Adolescence*, *42*, 596-606.

Tewksbury, R., & Mustaine, E. E. (2000). Routine activities and vandalism: A theoretical and empirical study. *Journal of Crime and Justice*, *23*, 81-110.

Tillyer, M. S., & Wright, E. M. (2014). Intimate partner violence and the victim-offender overlap. *Journal of Research in Crime and Delinquency*, *51*, 29-55.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications.* American Psychological Association.

Toman, E. L. (2019). The victim–offender overlap behind bars: Linking prison misconduct and victimization. *Justice Quarterly*, *36*, 350-382.

Topitzes, J., Mersky, J. P., & Reynolds, A. J. (2011). Child maltreatment and offending behavior: Gender-specific effects and pathways. *Criminal Justice and Behavior*, *38*, 492-510.

Vagi, K. J., Rothman, E. F., Latzman, N. E., Tharp, A. T., Hall, D. M., & Breiding, M. J. (2013). Beyond correlates: A review of risk and protective factors for adolescent dating violence perpetration. *Journal of Youth and Adolescence*, *42*, 633-649.

Van Dijk, J. J., & Steinmetz, C. H. (1983). Victimization surveys: Beyond measuring the volume of crime. *Victimology*, *8*, 291-309.

Vézina, J., & Hébert, M. (2007). Risk factors for victimization in romantic relationships of young women: A review of empirical studies and implications for prevention. *Trauma, Violence, and Abuse*, *8*, 33-66.

Vézina, J., Hébert, M., Poulin, F., Lavoie, F., Vitaro, F., & Tremblay, R. E. (2011). Risky lifestyle as a mediator of the relationship between deviant peer affiliation and dating violence victimization among adolescent girls. *Journal of Youth and Adolescence*, *40*, 814-824.

Von Hentig, H. (1948). *The criminal & his victim: Studies in the sociobiology of crime*. Shoe String Press.

Walters, G. D. (2020): Perceived peer delinquency, proactive criminal thinking, neighborhood disorder, and serious offending: moderated mediation and theoretical integration. *Journal of Crime and Justice*. https://doi.org/10.1080/0735648X.2019.1701527

Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency*, *46*, 245-269.

Williams, S. E., & Martinez, E. (1999). Psychiatric assessment of victims of adolescent dating violence in a primary care clinic. *Clinical Child Psychology and Psychiatry*, *4*, 427-439.

Wincentak, K., Connolly, J., & Card, N. (2017). Teen dating violence: A meta-analytic review of prevalence rates. *Psychology of Violence*, *7*, 224-241.

Windle, M., & Mrug, S. (2009). Cross-gender violence perpetration and victimization among early adolescents and associations with attitudes toward dating conflict. *Journal of Youth and Adolescence*, *38*, 429-439.

Wittebrood, K., & Nieuwbeerta, P. (1999). Wages of sin? The link between offending, lifestyle and violent victimization. *European Journal on Criminal Policy and Research*, *7*, 63-80.

Wolfe, D. A., Crooks, C., Jaffe, P., Chiodo, D., Hughes, R., Ellis, W., Stitt, L., & Donner, A. (2009). A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Archives of Pediatrics andAdolescent Medicine*, *163*, 692-699.

Wolfgang, M. E. (1958). *Patterns in criminal homicide.* University of Pennsylvania Press.

Wu, S., Yan, S., Marsiglia, F. F., & Perron, B. (2020). Patterns and Correlates of Substance Use among Arizona Youth: A Latent Class Analysis Approach. *Children and Youth Services Review*, https://doi.org/10.1016/j.childyouth.2020.104769

Ybarra, M. L., Espelage, D. L., Langhinrichsen-Rohling, J., & Korchmaros, J. D. (2016). Lifetime prevalence rates and overlap of physical, psychological, and sexual dating abuse perpetration and victimization in a national sample of youth. *Archives of Sexual Behavior*, *45*, 1083-1099.

Zavala, E., Spohn, R. E., & Alarid, L. F. (2019). Gender and serious youth victimization: Assessing the generality of self-control, differential association, and social bonding theories. *Sociological Spectrum*, *39*, 53-69.

CHAPTER 4

NEGATIVE EMOTIONS, AVOIDANT COPING, AND DELINQUENCY: DIRECT AND INDIRECT EFFECTS

While late adolescence is an exciting period in most people's lives, it also presents many difficulties. Teenagers go through many cognitive and physical changes during this time, and are especially vulnerable to aggression, anxiety, and depression (Child Mind Institute, 2017). Additionally, this is the time period when offending peaks (Moffitt, 2017), and those who start using substances are more likely to become addicted than those who begin in adulthood (National Center on Addiction and Substance Abuse, 2011). While arrests for violent offenses among adolescents have decreased dramatically over the past decade, there were still 48,470 arrests in 2017 (Puzzanchera, 2019). Although substance use during late adolescence has decreased in the past several decades, it has not decreased to the same extent as violent crime. In 2019, 52.1% reported using alcohol, 40.6% reported using tobacco (usually by vaping), and 38% reported using illicit drugs in the past year (Johnston, 2020). Violent offending and substance use are very different in terms of gender involvement. Although the gender gap has narrowed in recent years, males were responsible for 80% of the violent crime arrests in 2017 (Puzzanchera, 2019). While a greater number of male 12th graders have historically engaged in marijuana and alcohol use, in 2019, the Monitoring the Future Study reported males and females had equal involvement (Johnston et al., 2020).

A theory that has received considerable support in explaining delinquency in late adolescence is Agnew's (1992, 2006) general strain theory (GST). This general theory of

criminal behavior argues that people respond to stressors in their lives with negative emotions. If they are unable to cope with these negative emotions in a proactive way, they may cope maladaptively, which may include delinquent acts. However, Agnew implied that maladaptive coping and delinquency were one and the same and did not specify *how* this way of coping would lead to delinquency. Avoidance coping, which involves ignoring or distracting oneself from stressors has been found to explain why negative emotions may lead to delinquency (Eftekhari et al., 2004; Kort-Butler, 2009). However, research is sparse, and has not used male and female high-risk samples with a variety of negative emotions and delinquency outcomes. Additionally, GST has been found to operate differently for males and females, and prior research is mixed with regard to whether this can be considered a general theory (Broidy & Agnew, 1997). Since the gender gap is narrowing for both violent crime and substance use, it is concerning that we do not know if GST mechanisms operate the same for males and females.

This study will attempt to fill several gaps in the research literature. Using structural equation modeling, this study will determine whether avoidant coping mediates the relationship between negative emotions and two forms of delinquency: violent behavior and substance use. Doing so will determine whether the same paths are significant for males and females. The study will use data from LONGSCAN, which is a longitudinal dataset of high-risk youth in five different study locations. Negative emotions will be measured at age 16 and avoidant coping, substance use, and violent delinquency will be measured at age 18. The results will add to the literature that focuses on the role of avoidant coping in GST, as well as gender.

Literature Review

Theoretical Framework

GST has received considerable support as an individual-level general theory of criminal behavior that has been used to explain various types of delinquency (Agnew & Brezina, 1997; Paternoster & Mazerolle, 1994). The first test of GST theory used a sample of both males and females, but used gender as a control variable, and did not provide an explanation as to why relationships between strain and delinquency might be gendered (Agnew & White, 1992). However, Agnew and White recognized that subgroup differences in strain may exist, and urged scholars to examine GST with a focus on race, class, and gender. In subsequent tests of the theory that used subgroup analyses, differences between males and females were found in several of GST's elements. One of the most extensively studied is the source of strain, as physical and sexual abuse is a strain more commonly experienced by females. Additionally, the effect of strain from abuse on negative emotions has been found to be stronger for females than males (Feiring et al., 1999; Sigfusdottir et al., 2008; Ullman & Filipas, 2005). Some elements of GST that have had less attention and less agreement on potential gender differences are negative emotions, avoidant coping, and the effect of avoidant coping on delinquency. This next section will outline prior research in these three areas.

Negative Emotions

Responding to Agnew & White's (1992, p. 494) call for GST research using subgroup analyses, Broidy and Agnew (1997) were the first to study GST using a gendered focus. They used GST to explain the gender gap in crime, as well as explain

female delinquency. Although males and females experience similar levels of strain (Broidy, 2001), Broidy and Agnew argued that males are likely to experience the *types* of strain that would lead delinquency. When examining the gender gap, Broidy and Agnew hypothesized that differences in crime rates for males and females were due to the outcomes associated with the emotional response of strains. Anger is more likely to result in outwardly directed delinquency, including violent behavior (Gudjonsson & Sigurdsson, 2007; Jennings et al., 2009). Internalizing emotions, such as depression and anxiety are more likely to be directed inwards and are more likely to result in substance abuse and self-harm (Jang, 2007; Sigfusdottir et al., 2004).

While some studies indicate that males are socialized to react to negative emotions with anger, while females are more likely to be passive and internalize their frustrations (Heimer & DeCoster, 1999), the claim that "men get angry and women get depressed" (Agnew 2006, p.136) is not always the case. Females have been found to be just as likely as males to experience strain-induced anger (Hay, 2003; Mirowsky & Ross, 1995). More importantly, De Coster and Zito (2010) found that it was not the emotion experienced (i.e. anger vs. depression) that explained gender differences in delinquency. Rather, it was the response to the emotion experienced. For example, while both males and females experienced anger, females were more likely to internalize other negative emotions, such as guilt, shame, depression and anxiety, along with anger. These additional negative emotions severed to buffer the anger of females from exhibiting emotional expressions of anger (Broidy, 2001; Hay, 2003; Mirowsky & Ross, 1995; Piquero & Sealock, 2004; Sigfusdottir & Silver, 2009). Additionally, females tend to

blame themselves for the strain while males tend to blame others, and females may internalize their anger to reduce the chances that it would affect their social ties (Agnew, 2006; Ford et al., 2014).

Along with the differences in experiencing negative emotions, studies have found that the effect of anger on violent behavior was stronger for males than females. Because females are better at diffusing their feelings of anger, they are less likely to externalize this anger in an act of physical aggression (Campbell & Muncer, 2008). While previous research found that rates of internalizing symptoms are higher for females, a positive relationship between depression and delinquency was observed for males as well (Mannasse & Ganem, 2009). However, some studies found that the effect of negative emotions on delinquency does not vary for males and females, (Jennings et al., 2009; Kaufman, 2009), in opposition to much of the previous research.

Approach and Avoidant Coping

There is no consensus on the definition of coping, how many coping styles exist, and how they should be measured. Scholars have developed several distinctions such as problem-focused coping and emotion-focused coping, primary control coping and secondary control coping, and approach and avoidant coping (Connor-Smith & Flachsbart, 2007). This study will focus on the approach and avoidant distinction, as avoidant coping is closest to Agnew's (2006) definition of maladaptive coping. While emotion-focused coping would appear to fit GST the best, emotion-focused can also be proactive. Approach coping involves controlling the affective response that results stress and proactively working towards eliminating the source of stress. This can be done by

seeking social support, therapy, and psychotropic drugs prescribed by a doctor (Roth & Cohen, 1986). The opposing method, avoidant coping, involves indirect efforts to manage stress by attempting to suppress the resulting negative emotions by withdrawing or ignoring the stressor. Approach coping styles are generally more effective at reducing stress and negative emotions, while avoidant coping styles tend to exacerbate them and lead to continued internalizing symptoms (Compas et al., 2001).

When examining gender differences in coping styles there is no consensus as to whether males and females cope differently. Females have been found to place greater value on relationships and seek social support when presented with stress and negative emotions. Seeking social support is a form of approach, rather than avoidant coping (Eschenbeck et al., 2007;Frydenberg & Lewis, 1993; Jang & Johnson, 2003; Turner, 1999). Because men are socialized to be independent rather than seek support from others, they are more likely to ignore the stressors and cope avoidantly (Day & Livingston, 2003). However, some opposing research has found that males are more likely to proactively try to change their stressors using an approach style, while females tend to withdraw and avoid their stressors (Compas et al., 1993; Frydenburg & Lewis, 1993; Griffith et al., 2000). These contradictory findings may be due to the wide variety of measurements of coping as well as methodology (Eschenbeck et al., 2007) suggesting a need for further research.

Coping and Delinquency

The link between avoidant coping and substance use is well-established. Substance use is often used as a form of escapism by blocking stressful memories or

pretending stressful events did not happen (Fuendeling, 1998). Avoidant coping has been shown to mediate the relationship between IPV and drug use in adult women (Flanagan et al., 2014), and increased substance use in both male and female adolescents (Eftekhari et al., 2004; Ohannessian et al., 2001; Turner et al., 2005). Avoidant coping also had a moderating effect on the relationship between stress and substance use. High and low levels of avoidant coping led to higher levels of drug use, but moderate levels of avoidant coping were unrelated (Weiss et al., 2014).

However, the relationship between avoidant coping and violent behavior is not as clear. While avoidant coping involves withdrawing and denying negative emotions, it seems unlikely that this coping strategy would result in an explosive emotional outcome characterized by aggression. A systematic review found that a small number of studies showed a significant positive or negative relationship between avoidant coping and externalizing behaviors, while the majority of studies reported null effects (Compas et al., 2001). However, Gardner et al. (2012) found a positive relationship between avoidant coping and proactive aggression, which is characterized by violence that is planned rather than impulsive.

While the relationship between avoidant coping and delinquency has been established for both sexes (Kort-Butler, 2009), several studies diverge from this finding. For example, while positive relationships have been found between avoidant coping and substance use for male juvenile offenders (Eftekhari et al., 2004; Turner et al., 2005), the same relationship has been found to be insignificant for female juvenile offenders (Robertson et al., 2010). Avoidant coping was found to buffer the effect of victimization

on delinquency for males, but amplified it for females (Rosario et al., 2003). All in all, the lack of research that examines the relationship between avoidant coping and delinquent outcomes suggests the need for future research.

Current Study

The research literature is clear that GST partially explains delinquency for males and females. However, prior research indicates that the relationships between strain, negative emotions, and delinquency have been found to differ according to sex (Broidy & Agnew, 1997; Piquero & Sealock, 2004). Additionally, while the concept of maladaptive coping, which often includes substance use or aggression, has been used as an outcome, prior research examining the process is scant. Costs related to substance use cost the United States $740 billion in 2019, and overdose deaths reached their highest rate in several decades, at over 70,000 (National Institute of Drug Abuse, 2020). While substance use has many known negative consequences, violent offending is also detrimental to adolescents, as a violent crime conviction may prevent young adults from attending college and obtaining employment (Pager, 2003). Therefore, it is important that research examine why adolescents cope maladaptively instead of pro-socially. Additionally, since research into the gendered effects of GST is mixed, a gendered approach is needed. This study will add to the literature by examining four research questions:

1. Are internalizing emotions at age 16 associated with substance use at age 18?
2. Is anger at age 16 associated with violent behavior at age 18?
3. Do avoidant coping strategies mediate these relationships?

4. Do these relationships differ for males and females?

Methods

Procedure

The current study uses data from the LONGSCAN study, which is a longitudinal dataset that includes children and adolescents at risk for child abuse and neglect from age four to age 18. It contains respondents from five different regions. Recruitment protocols varied across regions. While the full study sample is of a higher risk than the general population, the samples were selected to represent varying risks for abuse. Additionally, some included lower-risk controls while some did not. Those in the East study site (n = 282) were recruited from a pediatric clinic that serves low-income families. Those in the high-risk group included those who were developmentally behind at age 2 or had HIV-infected or drug-addicted mothers. The controls were from the same clinic but did not have those risk factors. The Northwest study site recruited children (n = 254) from CPS contacts. The high-risk sample had their abuse reports substantiated, while the control group did not. Those in the South (n = 243) were recruited through state public health tracking records. The high-risk group were those reported to CPS, and the control group was not reported to CPS. The high-risk recruits in the Midwest (n = 245) were also from CPS reports and low-risk controls were recruited from the neighborhood. Those in the Southwest (n = 330) were of highest risk, as they were recruited from out-of-home placements after confirmed maltreatment allegations. The high-risk recruits were still in foster care, while the low-risk controls had returned to their families. Interviews with children, their parents or guardians, and teachers took place at ages 4, 6, 8, 12, 14, 16,

and 18 between 1991 and 2012, and were completed using computer-assisted face-to-face interviews. Official data from CPS maltreatment and abuse reports as well as service utilization reports were also included (Runyan et al., 2014).

Participants

While the LONGSCAN data included 1,352 respondents at the age 4 interview, the attrition from baseline to age 18 accounted for a loss of 31.2% of the participants. Additionally, since avoidant coping was only measured at three study sites, only those in the East, Northwest, and Southwest study sites were included in the study sample. The only other gender difference found was that females were significantly more likely than males to be part of the Southwest sample (χ_2= 4.60, p <.05). Only those who completed interviews at ages 16 and 18 and had no missing data for the dependent variables were included in this study. The final study sample (n = 385) contained 182 males and 203 females.

Dependent Variables

Substance use at age 18 was modeled as a categorical latent variable and is composed of three items: cigarette use, alcohol use, and marijuana use. Respondents self-reported how many times they used each substance in the past year using a Likert-type scale. Response options included 0 (*never*), 1 (*one to three days*), 2 (*four to 20 times*) and 3 (*more than 20 times*). The component matrix ranged from .699 to .860 for each of the three items, indicating common variance with the other items. The items loaded onto one factor with an eigenvalue of 1.784 that explained 59% of the variance. This latent variable was consistent with other studies that used these data (Benedini & Fagan, 2020;

Duprey et al., 2017; Yoon et al., 2017), although these studies measured this variable at different ages.

Violent behavior was also measured at age 18. This variable captured how often the respondent engaged in six different behavioral outcomes in the past 12 months[3]. While it was originally measured using a Likert-type scale, the items were dichotomized to create a variety score that ranged from 0 to 6 (Sweeten, 2012).

Independent Variables

Two independent variables were included in the study and were modeled as observed variables. *Internalizing emotions* is composed of both anxiety and depression items from the Trauma Symptoms Checklist for Children (TSCC, Briere, 1996), and was measured at age 16. Although depression and anxiety are measured as separate concepts in the TSSC, they are highly correlated in the study sample (r = .722 for males and r = .787 for females). Because of the high correlation, they were combined to create a measure of internalizing emotions, which is composed of nine depression items (α = .81) and nine anxiety items (α = .88) [4]. The respondent self-reported how often they had experienced each of the items in the past year on a closed-ended scale ranging from 0 (*never*) to 3 (*almost all the time*). The internalizing emotions measure was created by

[3] Violent behavior items include: Attacked someone with a weapon; hit someone to hurt them badly; threw objects at people; involved in gang fights; used weapons for money; and, physically hurt someone.

[4] Depression items include: Feeling sad or unhappy; feeling lonely; feeling like nobody likes me; wanting to kill myself; feeling stupid or bad; crying; feeling like I did something wrong; washing myself because I feel dirty inside; and, wanting to hurt myself.
Anxiety items include: Feeling afraid that something bad might happen; worrying about things; feeling jumpy or nervous inside; being afraid of the dark; feeling afraid; feeling afraid somebody will kill me; getting scared all of a sudden and don't know why; remembering things that happened that I didn't like; and, feeling scared of women.

mean-scoring the 18 items. *Anger* (α = .84) was also measured at age 16 using a mean score of the nine-item subscale of the TSSC[5]. This scale has previously been used in studies examining negative emotions and delinquency (Cuevas et al., 2007; Reid & Sullivan, 2012)

Mediating Variable

Avoidant coping was measured at the age 18 interview. The respondent was asked how often they used two coping mechanisms: "Tried to stay away from home as much as possible" and "Tell yourself your problems aren't important." Response categories included 0 (*never*), 1(*hardly*), 2 (*sometimes*), 3 (*often*), and 4 (*almost always*). These items were added together and divided by two, creating a mean score (r = .119).

Covariates

This study also included several control variables. *Minority race* was a dichotomous variable, with "1" indicating that the respondent reported being a race/ethnicity other than white and "0" indicating otherwise. *Study site* was measured using three dichotomous variables that captured whether the interview took place in the East, Northwest, or Southwest. *Low SES* was a dichotomous variable. A score of "1" indicated that the caregiver reported that the household makes less than $15,000 a year.

Analytic Strategy

Primary analyses, including descriptive statistics and bivariate correlations, were performed using STATA version 14.2 (StataCorp, 2015). A confirmatory factor analysis

[5] Anger items include: Wanting to yell at people; wanting to yell and break things; feeling mad; feeling like I hate people; getting mad and can't calm down; feeling mean; arguing too much; wanting to hurt other people; getting into fights; and, wanting to say dirty words (like curses).

of the latent dependent variable and structural equation models were performed using MPLUS version 8.1 (Muthén & Muthén, 2017). To reiterate, this study examined whether anger was associated with violent behavior, internalizing emotions were associated with substance use, avoidant coping mediated the relationship between negative emotions and delinquency, and potential gender differences. The following paths were estimated: Direct paths from anger and internalizing symptoms to avoidant coping; Direct paths from avoidant coping to substance use and violent offending; Indirect paths from anger and internalizing symptoms to substance use and violent crime. All independent and mediating variables were regressed on control variables (study site, minority race and low SES).

In MPLUS, the default method of addressing missing data is by full information maximum likelihood estimation (FIML). To ensure that these data met the FIML requirement of being missing at random, Little's (1988) test was estimated. A non-significant test result (χ_2= 103.53, p = .604) indicated that data was likely missing at random, and FIML could be used (Raykov, 2005). Because one of the dependent variables was a categorial latent variable and the other was an observed count variable that was not normally distributed, weighted least squares means and variance adjusted (WLSMV) estimation was used. This is consistent with studies using similar outcomes (Benedini & Fagan, 2020; Kobulsky et al., 2018). To examine separate paths for males and females, respondents were grouped by gender. In order to increase power and reduce the chances of a Type 1 error, bias corrected bootstrapping with 1000 iterations was used

(Taylor et al., 2008), which is consistent with prior studies using these data (Benedini & Fagan, 2020; Thompson et al, 2017).

Results

Descriptive Findings

Descriptive findings are presented in Table 4.1. In order to examine gender differences within the full sample, t-tests and chi-square analyses were performed for males and females. Compared with females, males were significantly more likely than females to use alcohol more than 20 times in the past 12 months (χ_2= 4.50, p <.05), less likely to use cigarettes in the past year (χ_2= 9.52, p <.01), and more likely to use marijuana in the past year (χ_2= 11.49, p <.001). Males were also more likely to use marijuana between four and 20 times (χ_2= 5.36, p <.05) and more than 20 (χ_2= 8.15, p <.01) times than females. Females had significantly higher scores on internalizing emotions (t = 16.21). Bivariate correlations are presented in Table 2. Although some of the correlations between variables were high (r = |.50|), variance inflation factors of less than 2 indicate that harmful multicollinearity is not a concern.

Confirmatory Factor Analysis

A CFA was used to create a latent variable for substance use that was measured at age 18. It was composed of three categorical variables: cigarette use, marijuana use, and alcohol use. Fit indices indicated good model fit (RMSEA =.000, CFI = 1, TFI = 1). The factor loadings were significant (p <.001) and standardized estimates were .634 for alcohol, .685 for cigarettes, and .978 for marijuana.

Table 4.1 – Descriptive Statistics

Variable	Males (n = 182) Mean or %	S.D.	Females (n = 203) Mean or %	S.D.	Min	Max	*t*-test/ χ^2
Alcohol					0	1	
Never	54.3%	-	54.1%	-	0	1	2.73
1-2 Times	17.7%	-	29.2%	-	0	1	0.04
4-20 Times	17.2%	-	12.4%	-	0	1	1.62
20+ Times	10.8%	-	4.3%	-	0	1	4.50*
Cigarettes							
Never	54.3%	-	69.4%	-	0	1	9.52**
1-2 Times	11.3%	-	7.7%	-	0	1	1.20
4-20 Times	5.9%	-	6.2%	-	0	1	0.05
20+ Times	28.5%	-	16.7%	-	0	1	6.64*
Marijuana							
Never	65.1%	-	76.6%	-	0	1	11.49***
1-2 Times	9.1%	-	12.9%	-	0	1	1.00
4-20 Times	8.1%	-	2.9%	-	0	1	5.36*
20+ Times	17.7%	-	7.7%	-	0	1	8.15**
Violent Behavior	.560	1.18	.326	.919	0	5	1.84
Avoidant Coping	1.13	.561	.902	.782	0	4	.544
Internalizing Behaviors	.265	.11	.513	.183	0	2.39	16.21***
Anger	.500	.249	.593	.282	0	2.44	-3.43
Low SES	23.1%	-	22.2%	-	0	1	0.04
Minority	53.2%	-	52.2%	-	0	1	0.04
Study Site							
East	51.3%	-	48.7%	-	0	1	0.06
Northwest	50.4%	-	49.6%	-	0	1	0.41
Southwest	40.6%	-	59.4%	-	0	1	4.60*

Note: t-tests and chi-square test compares male and female subsamples.
* p <.05, **p <.01, **p <.001

Table 4.2 – Bivariate Correlations

Variables	Y1	Y2	Y3	Y4	M1	X1	X2	X3	X4	X5	X6	X7
Y1 Cigarettes	**1.00**	.361*	.486*	.226*	.311*	.152*	.317*	.089	.176*	-.202*	.009	.194*
Y2 Alcohol	.308*	**1.00**	.537*	.158*	.422*	.030	.192*	.009	.208*	-.183*	.070	.110
Y3 Marijuana	.526*	.416*	**1.00**	.254*	.364*	.096	.269*	.033	.149*	-.140	.130	.005
Y4 Violent Behavior	.370*	.237*	.070	**1.00**	.251*	.259*	.579*	.092	.084	-.138	.031	.105
M1 Avoidant Coping	.418*	.379*	.534*	.160*	**1.00**	.230*	.312*	-.120*	.021	-.188*	-.081	.260*
X1 Internalizing Symptoms	.317*	.161*	.226*	.186*	.284*	**1.00**	.633*	-.010	.166*	-.174*	-.074	.270*
X2 Anger	.312*	.104	.190*	.268*	.258*	.745*	**1.00**	.068	.175*	-.162*	-.009	.177*
X3 Low SES	.077	-.039	.046	.018	.093	-.102	-.018	**1.00**	-.062	-.045	.008	-.062
X4 Minority	.301*	.157*	.139*	.041	.151*	.151*	.014	-.125	**1.00**	-.635*	.452*	.166*
X5 East Study Site	-.237*	-.158*	-.128	-.047	-.235*	-.187*	-.120	.155*	-.502*	**1.00**	-1.00	-1.00
X6 Northwest Study Site	.081	.041	-.015	-.014	.041	.016	-.035	.029	.256*	-1.00	**1.00**	-1.00
X7 Southwest Study Site	.137*	.103	.130	.056	.174*	.152*	.143	-.169*	.208*	-1.00	-1.00	**1.00**

Note: Correlations for males are above the diagonal, correlations for females are below the diagonal.
*$p < .05$

Structural Equation Models

The structural equation model for males is presented in Figure 1. The model using the female subsample is presented in Figure 2. The model had a sufficient fit (RMSEA = .055, CFI = .959) (Hu & Bentler, 1999). Kenny et al. (2015) stated that the RMSEA may be artificially inflated in models with small sample sizes, and the CFI is a better metric to gauge model fit in these instances. For both males (ß = .694, $p < .001$) and females (ß = .270, $p < .05$), there was a direct path between anger and violent behavior. Additionally, there was a direct path between anger and substance use, but only for males (ß = .249, $p < .05$). However, there was no direct relationship between internalizing emotions and substance use for either males or females. Significant direct effects between avoidance coping and substance use were found for both males (ß = .470, $p < .001$) and females (ß = .519, $p < .001$). Direct effects between avoidance coping and violent behavior were not found for either gender. Additionally, a direct effect of anger on avoidant coping was found for males (ß = .296, $p < .01$), but not females. For the male subsample, a significant indirect effect was found between anger, avoidance coping, and substance use (ß = .206, $p < .05$). The indirect effect did not account for the total effect of this relationship (ß = .576, $p < .05$), indicating that avoidance coping partially mediated, rather than fully mediated, the relationship between anger and substance use. There were no indirect effects found for the female subsample, indicating that there were no mediating relationships.

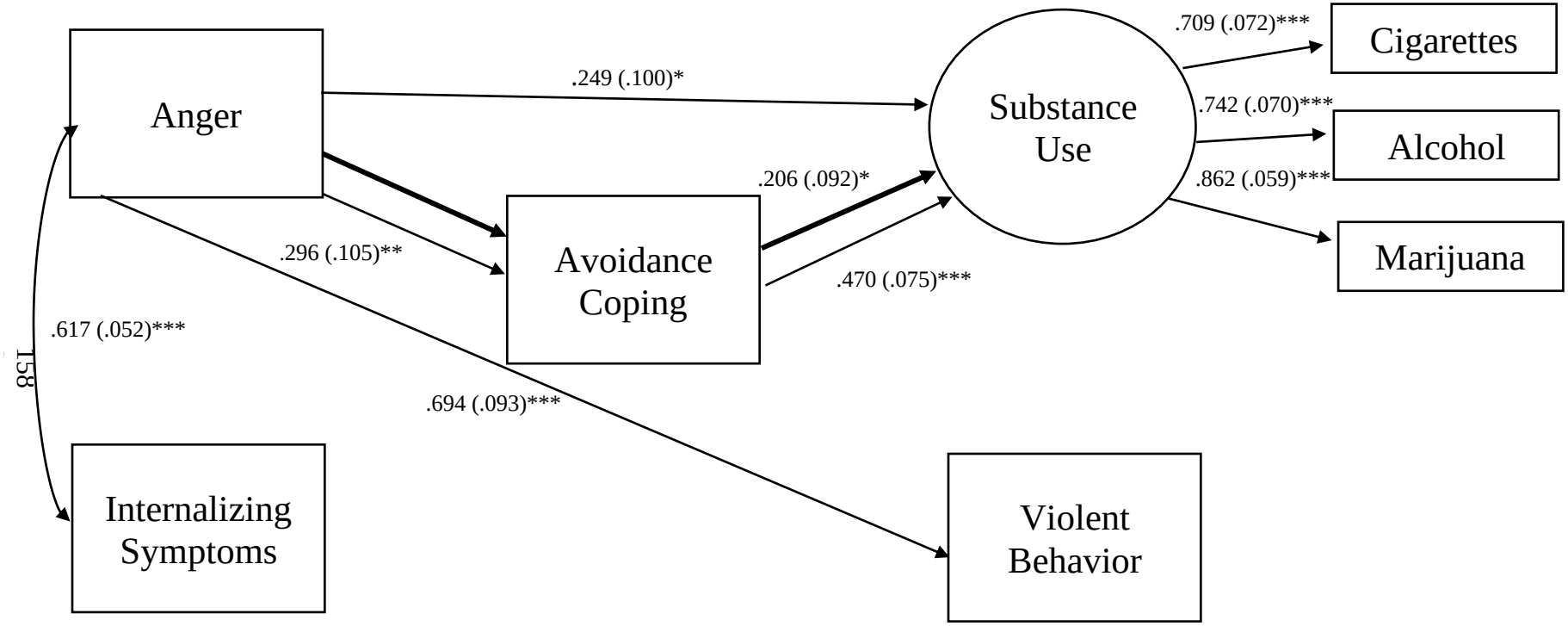


Figure 4.1. Structural equation model of the direct and indirect effects for the male sample (*n* = 182).
Note: Rectangles indicate the observed constructed and the circle indicates a latent construct. Standardized beta coefficients are presented for the significant paths only. Regular line indicates a direct relationship and bolded line indicates an indirect relationship.
*p <. 05, **p <.01, ***p <.001 (two-tailed test).

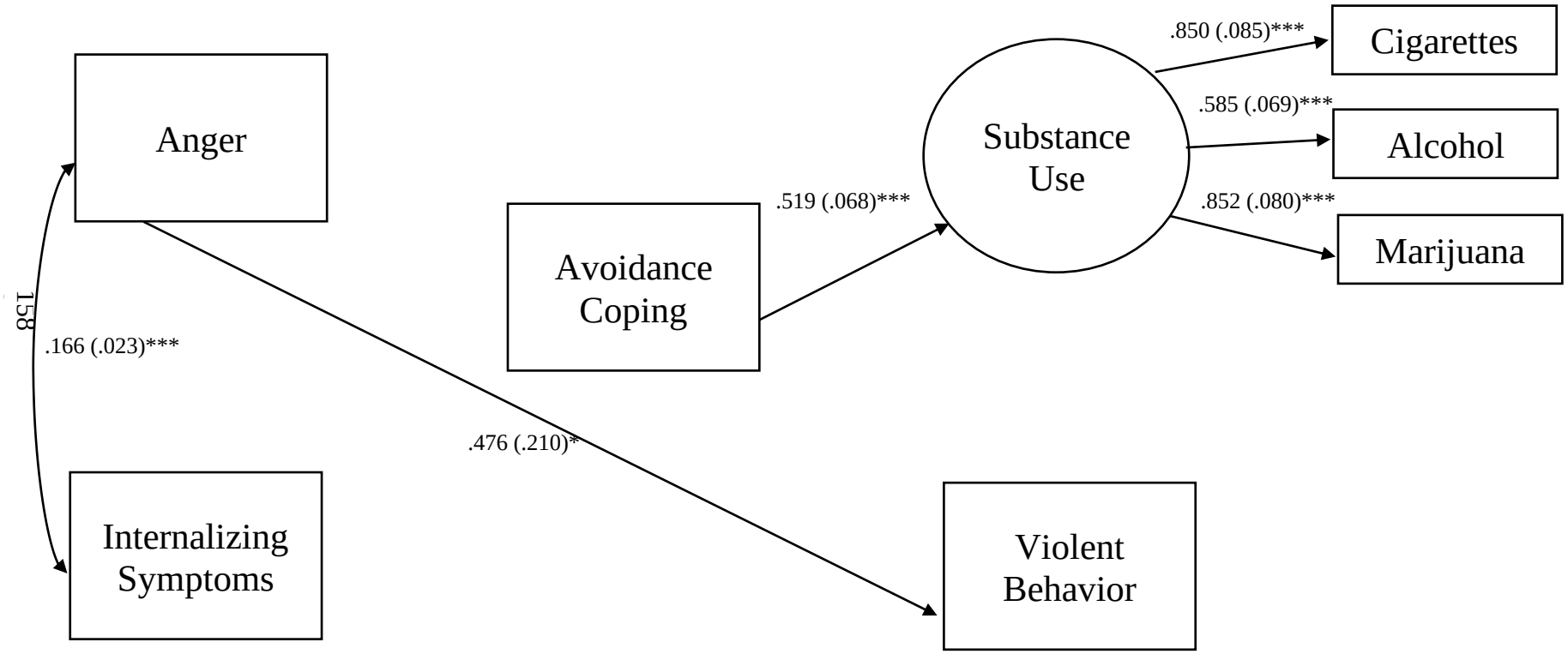


Figure 4.2. Structural equation model of the direct and indirect effects for the female sample (*n* = 203).
Note: Rectangles indicate the observed constructed and the circle indicates a latent construct. Standardized beta coefficients are presented for the significant paths only. Line indicates a direct relationship.
**p* <. 05, ***p* <.01, ****p* <.001 (two-tailed test).

Discussion

The purpose of this study was to examine whether negative emotions were associated with delinquency, whether avoidant coping mediated this relationship, and whether paths were significant for both males and females. In order to do this, structural equation models were estimated using a longitudinal, high-risk late adolescent sample. Using a GST framework (Agnew, 1992, 2006), this study found direct paths from anger to substance use and violent behavior for males, and a direct relationship between anger and violent behavior for females. Additionally, avoidant coping partially mediated the relationship between anger and substance use, but only for males. All in all, the findings from this study confirm previous research demonstrating that gender differences do exist within GST relationships (Broidy & Agnew, 1997; Piquero & Sealock, 2004). The findings also add to the literature by demonstrating that avoidant coping is useful to include in GST research.

For example, a direct path between anger and substance use was found for males only, which is inconsistent with research that finds that this relationship exists for both males and females (Asgeirsdottir et al., 2011). Along the same lines, a direct effect of anger on avoidant coping was found for males but not females. This is inconsistent with the finding that lower levels of anger were related to avoidant coping in males (Whitesell et al., 1993). However, this may be due to the measurement of coping, which is often inconsistent across studies (Skinner et al., 2003). Case in point, this study used a measurement of avoidant coping that differed from Whitesell et al.'s (1993) measure, which may explain the findings. A significant indirect effect was found between anger,

avoidance coping, and substance use, but only for males. While no known previous studies have specifically modeled a mediating relationship with these variables, Eftekhari et al. (2004) found that avoidant coping did not moderate the relationship between anger and substance use in a male adolescent offending sample, indicating that anger and avoidant coping were independent risk factors for substance use.

However, some of the results in this study were gender neutral. For example, the finding that males and females did not have significantly different rates of anger and internalizing emotions is contrary to what Broidy and Agnew (1997) theorized about gender differences in experiencing negative emotions. Additionally, a direct path between anger and violent behavior was identified for both males and females, which is consistent with prior research (Francis, 2014). This study also found direct effects of avoidant coping on substance use for both sexes, which is a robust finding in prior research (Kort-Butler, 2009; Wills et al., 2001).

Unexpectedly, no significant relationships were found between internalizing emotions and substance use for either males or females. This is contrary to prior research that has found a longitudinal relationship between internalizing emotions and substance use in adolescence (Wills & Filer, 1996; Wills et al., 1999). Scholars have long suggested that internalizing emotions would be an even stronger predictor for the substance abuse of females (Agnew, 2006). However, this current study had similar findings to Lyness and Koehler (2016), who did not find a direct relationship between internalizing emotions and substance use. Mazerolle et al. (2003) highlighted the importance of distinguishing between state-based and trait-based negative emotions when examining GST. One

explanation for this finding could be the measurement of internalizing emotions. This measure captured how often the respondent felt depressed or anxious but did not differentiate between state-based and trait-based emotions. If state-based internalizing emotions were captured, a measure of substance use two years later may not be appropriate, as substances may be used to self-medicate to alleviate negative emotions (Khantzian, 2003).

Another gender-neutral finding is that no significant effects between avoidance coping and violent behavior were found for either gender. Although research examining this relationship is scarce, a previous study found that avoidant coping did not explain reactive violence, but did explain proactive violence (Gardner et al., 2012). Again, these findings may be due to the measurement of violent behavior. In these data, it is not clear whether this measure captured reactive violence, proactive violence, or a mixture of both. Avoidant coping strategies involve suppressing and ignoring negative emotions. If this measure did indeed capture reactive violence, it is likely that this type of violence, which is the result of emotional outburst, would be less likely for avoidant coping.

The direct relationship between avoidant coping and substance use for both males and females suggests some implications for reducing substance use among adolescents. Although substance use in general has decreased among adolescents since the peak in the 1990s, some substances, such as marijuana, have held steady (Johnston et al., 2020). However, the drastic decrease in cigarette use over the past decade can be explained by the introduction and popularity of vape products, which have replaced cigarettes. Therefore, tobacco use is an ongoing concern, as vaping has been found to damage the

lungs and brain development of otherwise healthy teens, and prevention of tobacco use must continue to be addressed (U.S. Department of Health and Human Services, 2016). The findings from this study support targeting coping in adolescence as a way of reducing substance use for both males and females. While avoidant coping strategies have been found to increase substance use, problem-focused coping strategies have been found to decrease it (Eitle & Eitle, 2014), although additional research using split-gender samples is needed. Programming should focus on teaching teens to cope with stress proactively and seek therapy at school or social support from parents instead of ignoring their stress and negative emotions.

Limitations

This study has several limitations to address. While this study examined one part of the GST framework, it did not fully test the theory. One important element of the GST relationship—source of strain—was not available in the data at a suitable timepoint. While the data contained a child abuse measure, which is often used as a source of strain (Hay & Evans, 2006), it was measured from birth to age 12 and is unlikely to accurately predict negative emotions at age 16. There are no known studies that use structural equation models, incorporate avoidant coping as a mediator, and also include sources of strain, negative emotions, and delinquency. Future research should address this when examining gender and GST. Sources of strain have been found to be different for males and females, and the effects of strain on negative emotions have been found to be gendered (Jang, 2007; Piquero & Sealock, 2004; Watts & MuNulty, 2013).

Another limitation involves the time lag between the age 16 and age 18 waves. Negative emotions have also been used as the mediator in the relationships between avoidant coping and substance use (Lyness & Koehler, 2016). Therefore, it was important that negative emotions were measured in the wave before avoidant coping and delinquency in order to correctly model the hypothesized relationship. However, since negative emotions were measured at age 16 and coping and delinquency at age 18, there was a 2-year time lag between these measures. While negative emotions due to childhood strain can sometimes persist into adulthood (Chapman et al., 2004; Gibbs et al., 2007), it is more likely that there would be an alternate explanation for avoidant coping during that time lag. Future data collection endeavors should involve collecting data that measures these concepts during a smaller time period.

One more limitation that should be addressed is the small sample size and the possibility that the analyses were under-powered. There is no agreed-upon sample size required for structural equation modeling, and estimates range from a minimum sample size of 100, a minimum of 5 respondents per parameter, and a minimum of 10 respondents per variable (Wolf et al., 2013). A common estimation that a number of researchers have used is a minimum sample size of 200 (Hooglund & Boomsma, 1998), but this varies due to the complexity of the model and missing data patterns. Since this study had such a small sample, this may be the reason for insignificant pathways.

While this study did not include variables derived from other criminological theories, previous tests of GST found that self-control and social control are useful to include (Bunch et al., 2018; Holtfreter et al., 2015). Interaction effects between strain and

other theoretical frameworks can help explain why negative emotions might increase the risk of delinquency for one person, but not the other. For example, those with low self-control may be more likely to cope maladaptively because they are impulsive and want instant gratitude, which may include using substances to relieve negative emotions. While Morash and Moon (2007) found gendered effects for the interaction of strain and deviant peers, future split-sample analyses that examine gender and incorporate avoidant coping are needed. While strong social ties were found decrease the likelihood of withdrawing from social activities after experiencing depression (Holtfreter et al., 2017), future research should examine other forms of coping and the relationship between coping and delinquency.

Conclusion

The detrimental consequences of substance use and violent behavior in adolescence may continue to have negative impacts on mental health, future offending, employment, and social relationships well into adulthood. This study helped to add to the GST and avoidant coping literature, and also provided direction on how to advance future research. Since both gendered and gender-neutral explanations were found in this study, future research should continue to examine GST and avoidant coping using a gendered focus, and incorporate other potential subgroup differences, such as race and ethnicity.

References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*, 47-88.

Agnew, R. (2006). *Pressured into crime: An overview of general strain theory*. Roxbury Publishing Company.

Agnew, R., & Brezina, T. (1997). Relational problems with peers, gender, and delinquency. *Youth and Society, 29*, 84-111.

Agnew, R., & White, H. R. (1992). An empirical test of general strain theory. *Criminology, 30*, 475-500.

Asgeirsdottir, B. B., Sigfusdottir, I. D., Gudjonsson, G. H., & Sigurdsson, J. F. (2011). Associations between sexual abuse and family conflict/violence, self-injurious behavior, and substance use: The mediating role of depressed mood and anger. *Child Abuse and Neglect, 35*, 210-219.

Benedini, K. M., & Fagan, A. A. (2020). From Child Maltreatment to Adolescent Substance Use: Different Pathways for Males and Females? *Feminist Criminology*, 15, 147-173.

Briere, J. (1996). Trauma symptom checklist for children. *Psychological Assessment Resources*. https://www.researchgate.net/profile/John_Briere/publication/267726306_Trauma_Symptom_Checklist_for_Children_TSCC/links/54b199fc0cf220c63cd12837.pdf

Broidy, L. M. (2001). A test of general strain theory. *Criminology, 39*, 9-36.

Broidy, L., & Agnew, R. (1997). Gender and crime: A general strain theory perspective. *Journal of Research in Crime and Delinquency, 34*, 275-306.

Bunch, J. M., Iratzoqui, A., & Watts, S. J. (2018). Child abuse, self-control, and delinquency: A general strain perspective. *Journal of Criminal Justice, 56*, 20-28.

Campbell, A., & Muncer, S. (2008). Intent to harm or injure? Gender and the expression of anger. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression, 34*, 282-293.

Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders, 82*, 217-225.

Child Mind Institute (2017). *2017 children's mental health report*. Child Mind Institute, Inc. https://childmind.org/downloads/2017-CMHR-PDF.pdf

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127.

Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: a meta-analysis. *Journal of Personality and Social Psychology, 93*, 1080-1107.

Cuevas, C. A., Finkelhor, D., Turner, H. A., & Ormrod, R. K. (2007). Juvenile delinquency and victimization: A theoretical typology. *Journal of Interpersonal Violence, 22*, 1581-1602.

Day, A. L., & Livingstone, H. A. (2003). Gender differences in perceptions of stressors and utilization of social support among university students. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement, 35*, 73-83.

De Coster, S., & Cornell Zito, R. (2010). Gender and general strain theory: The gendering of emotional experiences and expressions. *Journal of Contemporary Criminal Justice, 26*, 224-245.

Duprey, E. B., Oshri, A., & Caughy, M. O. (2017). Childhood neglect, internalizing symptoms and adolescent substance use: does the neighborhood context matter? *Journal of Youth and Adolescence, 46*, 1582-1597.

Eftekhari, A. Turner, A. P., & Larmier, M. E. (2004). Anger expression, coping, and substance use in adolescent offenders. *Addictive Behaviors, 29*, 1001-1008.

Eitle, T. M., & Eitle, D. (2014). Race, coping strategies, and substance use behaviors: A preliminary analysis examining White and American Indian adolescents. *Substance Use & Misuse, 49*, 315-325.

Eschenbeck, H., Kohlmann, C. W., & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences, 28*, 18-26.

Feiring, C., Taska, L., & Lewis, M. (1999). Age and gender differences in children's and adolescents' adaptation to sexual abuse. *Child Abuse and Neglect, 23*, 115-128.

Flanagan, J. C., Jaquier, V., Overstreet, N., Swan, S. C., & Sullivan, T. P. (2014). The mediating role of avoidance coping between intimate partner violence (IPV) victimization, mental health, and substance abuse among women experiencing bidirectional IPV. *Psychiatry Research, 220,* 391-396.

Ford, J. A., Reckdenwald, A., & Marquardt, B. (2014). Prescription drug misuse and gender. *Substance Use and Misuse, 49,* 842-851.

Francis, K. A. (2014). General strain theory, gender, and the conditioning influence of negative internalizing emotions on youth risk behaviors. *Youth Violence and Juvenile Justice, 12,* 58-76.

Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others: Age, gender and ethnicity as determinants of coping. *Journal of Adolescence, 16,* 253-266.

Fuendeling, J. M. (1998). Affect regulation as a stylistic process within adult attachment. *Journal of Social and Personal Relationships, 15,* 291-322.

Gardner, K. J., Archer, J., & Jackson, S. (2012). Does maladaptive coping mediate the relationship between borderline personality traits and reactive and proactive aggression? *Aggressive Behavior, 38,* 403-413.

Gibb, B. E., Chelminski, I., & Zimmerman, M. (2007). Childhood emotional, physical, and sexual abuse, and diagnoses of depressive and anxiety disorders in adult psychiatric outpatients. *Depression and Anxiety, 24,* 256-263.

Griffith, M. A., Dubow, E. F., & Ippolito, M. F. (2000). Developmental and cross-situational differences in adolescents' coping strategies. *Journal of Youth and Adolescence, 29,* 183-204.

Gudjonsson, G. H., & Sigurdsson, J. F. (2007). Motivation for offending and personality. A study among young offenders on probation. *Personality and Individual Differences, 42,* 1243-1253.

Hay, C. (2003). Family strain, gender, and delinquency. *Sociological Perspectives, 46,* 107-135.

Hay, C., & Evans, M. M. (2006). Violent victimization and involvement in delinquency: Examining predictions from general strain theory. *Journal of Criminal Justice, 34,* 261-274.

Heimer, K., & Coster, S. D. (1999). The gendering of violent delinquency. *Criminology, 37,* 277-318.

Holtfreter, K., Reisig, M. D., & O'Neal, E. N. (2015). Prescription drug misuse in late adulthood: An empirical examination of competing theories. *Journal of Drug Issues, 45*, 351-367.

Holtfreter, K., Reisig, M. D., & Turanovic, J. J. (2017). Depression and infrequent participation in social activities among older adults: the moderating role of high-quality family ties. *Aging and Mental Health, 21*, 379-388.

Hoogland, J. J., & Boomsma, A. (1998). Robustness studies in covariance structure modeling: An overview and a meta-analysis. *Sociological Methods and Research, 26*, 329-367.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1-55.

Jang, S. J. (2007). Gender differences in strain, negative emotions, and coping behaviors: A general strain theory approach. *Justice Quarterly, 24*, 523-553.

Jang, S. J., & Johnson, B. R. (2003). Strain, negative emotions, and deviant coping among African Americans: A test of general strain theory. *Journal of Quantitative Criminology, 19*, 79-105.

Jennings, W. G., Piquero, N. L., Gover, A. R., & Perez, D. M. (2009). Gender and general strain theory: A replication and exploration of Broidy and Agnew's gender/strain hypothesis among a sample of southwestern Mexican American adolescents. *Journal of Criminal Justice, 37*, 404-417.

Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020). *Monitoring the Future national survey results on drug use 1975-2019: Overview, key findings on adolescent drug use*. Institute for Social Research, University of Michigan.

Kaufman, J. M. (2009). Gendered responses to serious strain: The argument for a general strain theory of deviance. *Justice Quarterly, 26*, 410-444.

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods and Research, 44*, 486-507.

Khantzian, E. J. (2003). The self-medication hypothesis revisited: The dually diagnosed patient. *Primary Psychiatry, 10*, 47-54.

Kobulsky, J. M., Yoon, S., Bright, C. L., Lee, G., & Nam, B. (2018). Gender-moderated pathways from childhood abuse and neglect to late-adolescent substance use. *Journal of Traumatic Stress*, *31*, 654-664.

Kort-Butler, L. A. (2009). Coping styles and sex differences in depressive symptoms and delinquent behavior. *Journal of Youth and Adolescence, 38*, 122-136.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, *83*, 1198-1202.

Lyness, K. P., & Koehler, A. N. (2016). Effect of coping on substance use in adolescent girls: A dyadic analysis of parent and adolescent perceptions. *International Journal of Adolescence and Youth*, *21*, 449-461.

Manasse, M. E., & Ganem, N. M. (2009). Victimization as a cause of delinquency: The role of depression and gender. *Journal of Criminal Justice*, *37*, 371-378.

Mazerolle, P., Piquero, A. R., & Capowich, G. E. (2003). Examining the links between strain, situational and dispositional anger, and crime: Further specifying and testing general strain theory. *Youth and Society*, *35*, 131-157.

Mirowsky, J., & Ross, C. E. (1995). Sex differences in distress: Real or artifact? *American Sociological Review*, *60*, 449-468.

Moffitt, T. E. (2017). A review of research on the taxonomy of life-course persistent versus adolescent-limited antisocial behavior. In F. T. Cullen, J. P. Wright, K. R. Blevins (Eds.) *Taking stock: the status of criminological theory* (p. 277-311). Routledge.

Morash, M., & Moon, B. (2007). Gender differences in the effects of strain on the delinquency of South Korean youth. *Youth and Society, 38*, 300-321.

Muthén, L.K. and Muthén, B.O. (1998-2017). *Mplus user's guide, eighth edition*. Muthén & Muthén

National Center on Addiction and Substance Use (2011). *Adolescent substance use: America's #1 health problem.* The National Center on Addiction and Substance use at Columbia University. file:///Users/natayshapusch/Downloads/Adolescent-substance-use-americas-no-1-public-health-problem.pdf

National Institute on Drug Abuse (2020). Trends and statistics. National Institute on Drug Abuse. https://www.drugabuse.gov/related-topics/trends-statistics

Ohannessian, C. M., Bradley, J., Waninger, K., Ruddy, K., Hepp, B. W., & Hesselbrock, V. (2010). An examination of adolescent coping typologies and young adult alcohol use in a high-risk sample. *Vulnerable Children and Youth Studies, 5*, 52-65.

Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology, 108*, 937-975.

Paternoster, R., & Mazerolle, P. (1994). General strain theory and delinquency: A replication and extension. *Journal of Research in Crime and Delinquency, 31*, 235-263.

Piquero, N. L., & Sealock, M. D. (2004). Gender and general strain theory: A preliminary test of Broidy and Agnew's gender/GST hypotheses. *Justice Quarterly, 21*, 125-158.

Puzzanchera, C. (2019). *Arrests of juveniles in 2018 reached lowest levels in nearly four decades.* https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2018.pdf

Raykov, T. (2005). Analysis of longitudinal studies with missing data using covariance structure modeling with full-information maximum likelihood. *Structural Equation Modeling: A Multidisciplinary Journal, 12*, 493-505.

Reid, J. A., & Sullivan, C. J. (2012). Unraveling victim-offender overlap: Exploring profiles and constellations of risk. *Victims and Offenders, 7*, 327-360.

Robertson, A. A., Xu, X., & Stripling, A. (2010). Adverse events and substance use among female adolescent offenders: Effects of coping and family support. *Substance Use and Misuse, 45*, 451-472.

Rosario, M., Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2003). Community violence exposure and delinquent behaviors among youth: The moderating role of coping. *Journal of Community Psychology, 31*, 489-512.

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist, 41*, 813-819.

Runyan, D., Dubowitz, H., English, D.J., Kotch, J.B., Litrownik, A., Thompson, R., & The LONGSCAN Investigator Group (2014). *Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) Assessments 0-18* [Dataset]. Available from National Data Archive on Child Abuse and Neglect Web site, http://www.ndacan.cornell.edu

Sigfusdottir, I. D., Asgeirsdottir, B. B., Gudjonsson, G. H., & Sigurdsson, J. F. (2008). A model of sexual abuse's effects on suicidal behavior and delinquency: The role of emotions as mediating factors. *Journal of Youth and Adolescence*, *37*, 699-712.

Sigfusdottir, I. D., Farkas, G., & Silver, E. (2004). The role of depressed mood and anger in the relationship between family conflict and delinquent behavior. *Journal of Youth and Adolescence*, *33*, 509-522.

Sigfusdottir, I. D., & Silver, E. (2009). Emotional reactions to stress among adolescent boys and girls: An examination of the mediating mechanisms proposed by general strain theory. *Youth and Society*, *40*, 571-590.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*, 216-269.

StataCorp. 2015. *Stata Statistical Software: Release 14*. StataCorp LP.

Sweeten, G. (2012). Scaling criminal offending. *Journal of Quantitative Criminology*, *28*, 533-557.

Taylor, A. B., MacKinnon, D. P., & Tein, J. Y. (2008). Tests of the three-path mediated effect. *Organizational Research Methods*, *11*, 241-269.

Thompson, R., Lewis, T., Neilson, E. C., English, D. J., Litrownik, A. J., Margolis, B., Proctor, L., & Dubowitz, H. (2017). Child maltreatment and risky sexual behavior: indirect effects through trauma symptoms and substance use. *Child Maltreatment*, *22*, 69-78.

Turner, A. P., Larimer, M. E., Sarason, I. G., & Trupin, E. W. (2005). Identifying a negative mood subtype in incarcerated adolescents: Relationship to substance use. *Addictive Behaviors*, *30*, 1442-1448.

Turner, R. J. (1999). Social support and coping. In A. V. Horwitz & T. L. Scheid (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (p. 198–210). Cambridge University Press.

Ullman, S. E., & Filipas, H. H. (2005). Gender differences in social reactions to abuse disclosures, post-abuse coping, and PTSD of child sexual abuse survivors. *Child Abuse and Neglect*, *29*, 767-782.

U.S. Department of Health and Human Services (2016). *E-Cigarette use among youth and young adults: A report of the surgeon general.* Public Health Service, Office of the Surgeon General.

Watts, S. J., & McNulty, T. L. (2013). Childhood abuse and criminal behavior: Testing a general strain theory model. *Journal of Interpersonal Violence*, *28*, 3023-3040.

Weiss, N. H., Duke, A. A., & Sullivan, T. P. (2014). Evidence for a curvilinear dose-response relationship between avoidance coping and drug use problems among women who experience intimate partner violence. *Anxiety, Stress, and Coping*, *27*, 722-732.

Whitesell, N. R., Robinson, N. S., & Harter, S. (1993). Coping with anger-provoking situations: Young adolescents' theories of strategy use and effectiveness. *Journal of Applied Developmental Psychology*, *14*, 521-545.

Wills, T. A., & Filer, M. (1996). Stress—coping model of adolescent substance use. In T. H. Ollendick & R. J. Prinz (Eds.) *Advances in clinical child psychology* (pp. 91-132). Springer.

Wills, T. A., Sandy, J. M., Shinar, O., & Yaeger, A. (1999). Contributions of positive and negative affect to adolescent substance use: Test of a bidimensional model in a longitudinal study. *Psychology of Addictive Behaviors*, *13*, 327-338.

Wills, T. A., Sandy, J. M., & Yaeger, A. M. (2001). Time perspective and early-onset substance use: A model based on stress–coping theory. *Psychology of Addictive Behaviors, 15*, 118-125.

Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement, 73*, 913-934.

Yoon, S., Kobulsky, J. M., Yoon, D., & Kim, W. (2017). Developmental pathways from child maltreatment to adolescent substance use: The roles of posttraumatic stress symptoms and mother-child relationships. *Children and Youth Services Review, 82*, 271-279.

CHAPTER 5

DISCUSSION

One of the most widely agreed upon facts in the field of criminology is that for most types of offenses, males offend and are victimized at a higher rate than females (Lauristen & Heimer, 2008; Steffensmeier & Allan, 1996). Early tests of general theories of crime causation such as low self-control theory, social learning theory, and social control theory demonstrated a healthy amount of empirical support (Akers & Lee, 1996; Gottfredson & Hirschi, 1990; Hirschi, 1969). General theories are assumed to explain criminal activity regardless of offense type or sample characteristics. However, feminist criminologists criticized general theories as "malestream" because they were not only developed by male scholars, but also largely tested using samples of boys and men. They argued that mainstream theories/theorists disregarded important gendered factors, including intimate partner violence, sexual assault, poverty, and relational concerns (Daly & Cheseney-Lind, 1988; Morash, 1999; Steffensmeier & Allan, 1996). What is more, feminist criminologists challenged the generality of these theories by applying them to female samples and/or arguing for methods that split mixed samples into male and female subsamples (Belknap & Holsinger, 2006). One of the earliest and most influential pieces of feminist scholarship is Daly's (1992) qualitative examination of females in a felony court, which identified five gendered pathways that women take to crime. Since then, scholars have used a variety of quantitative methods to examine general theories of criminal behavior using female samples. Along with offending, general theories have also

been increasingly applied to the study of victimization (Henson et al., 2010; Stewart et al., 2004; Turanovic et al., 2015).

While tests of gendered and general theories of crime have produced a large volume of research, the empirical evidence remains mixed as to whether these theories can explain female offending and victimization. Some prior research has concluded that self-control theory (Turanovic et al., 2015), social learning theory (Heimer & DeCoster, 1999), general strain theory (Smith & Paternoster, 1987), and social control theory (Smith & Paternoster, 1987) were gender-neutral, and that various causal mechanisms operate similarly for males and females. However, there is also research that challenges the generality of these particular theories. For example, strains have been found to result in different types of negative emotions for males and females, which explain the differential involvement in offending (Daniels & Holtfreter, 2019; Mazerolle, 1998; Piquero & Sealock, 2004). Different elements of social bonds are more influential in explaining delinquency and victimization for males and females (Alarid et al., 2000; Krohn & Massey, 1980; Wilcox et al., 2009). And the effects of associations with delinquent peers (Piquero et al., 2005) and low self-control (Burton et al., 1998) on crime have tend to be stronger for males. Yet, many of the gender differences have been identified in adult samples, and tests of general theories of crime using adolescent samples tend to produce results that support gender-neutral explanations. This may be because adolescent females have not yet experienced important gendered risk factors such as intimate partner violence, access to employment, and family obligations (Alarid et al., 2000; Steffensmeier & Allan, 1996).

The lack of consensus with the applicability of general theories of crime to offending and victimization for both males and females is concerning. In order to shed some light on this topic, three studies using different juvenile samples were completed. This chapter will discuss some of the implications for criminological theory, suggest some important directions for future research, and describe the potential practical contributions.

Implications for Theory

As stated above, the empirical evidence as to whether general theories of crime can explain victimization for juvenile males and females remains somewhat mixed. This dissertation applied several general theories of crime to adolescent offending and victimization. Study 1 used meta-analytic techniques to estimate mean effect sizes of predictor variables derived from general theory on juvenile victimization. With a few exceptions, the same predictor variables were significant in explaining offending and victimization for both males and females. An explanation for this could be that risk factors for victimization in adolescence are largely gender-neutral, and gendered risk factors are developed from gendered experiences in adulthood, including gender discrimination, lack of economic opportunities, and single parenthood. Future research should build on this by completing a similar meta-analysis using predictors derived from criminological theory, victimization and adult samples to see if additional gender-specific explanations emerge. However, study one did find several gender-specific explanations of victimization as well. For example, prior sexual victimization significantly predicted future victimization for females only. Although sexual victimization is experienced more

often by females in both childhood and adulthood (Morgan & Oudekerk, 2019) prior research has found that its' effect on future victimization is stronger for females (Pittenger et al., 2018). In sum, this particular risk factor is largely gender-specific, regardless of the stage of the life course when it is experienced.

The meta-analysis found that while some of the predictor domains derived from theory, including attachment, belief, monitoring, and exposure significantly explained victimization in at least one of the models, risky lifestyles, such as offending, alcohol use, drug use, deviant peers, and gang involvement had larger effect sizes overall, suggesting that risky activities are important to include when examining adolescent victimization. While low self-control is a well-established correlate of victimization, mean effect sizes in this study did not significantly predict victimization for either males or females. One possibility is that risky lifestyles may be a mediator in the relationship between low self-control and victimization (Pratt et al., 2014), and predictors derived from general theories have stronger direct relationships for offending than victimization. Future research should not ignore the influence of risky lifestyles in the study of juvenile victimization.

Study 2 tested whether social control theory explained the victim-offender overlap in the context of adolescent dating violence (ADV). This study found a significant overlap between ADV offending and victimization that was partially explained by social bonds for both males and females. However, contrary to expectations, more of the social bond variables were significant for males than females. Scholars have theorized that social bonds are more influential for females than males due to socialization. Males are taught from a young age to be independent and value status, power, and material success.

Females are socialized to put family first and value relationships with others over material success. This suggests that social ties would provide a greater control mechanism against delinquency, as females would not want to jeopardize these relationships by engaging in unacceptable behavior (Canter, 1982; Gilligan, 1993). However, this was not found in this study, suggesting that these gender expectations could be more salient in adulthood. Additionally, gender expectations have changed in recent years, and it could be that these gender expectations are outdated.

The third study examined the mediating effect of avoidant coping on the relationships between negative emotions on delinquency using a split-sample analysis and a general strain theory (GST) framework (Agnew, 1992; 2006). While touted as a general theory of crime causation, gender differences have been found in several elements of the theory, including the types of strains and negative emotions experienced, the effects of negative emotions on delinquency, and the type of delinquency outcome (Broidy & Agnew, 1997; DeCoster & Zito, 2010; Piquero & Sealock, 2004). This study found support for both gendered and gender-neutral elements of GST. For example, while the type of emotions experienced were gender-neutral, and anger was associated with violent behavior for both males and females, anger was associated with substance use for males only. Again, the gender-neutral findings in Study 3 may be an artifact of the type of sample that was used. Strains felt in childhood, such as maltreatment and bullying tend to be experienced by both genders. However, intimate partner violence, single parenthood, and lack of economic opportunities are gender-specific sources of strain that are likely to be felt in adulthood, rather than adolescence (Iratzoqui, 2020). Continuing to

examine GST over the life-course may help to identify more gender differences in different elements of the theory.

Directions for Future Research

The findings from these three studies contribute to the existing literature on general theories of criminal behavior, juvenile offending and victimization, and gender. However, the findings from this dissertation also raise new questions and point to several areas where more research is needed. Along those lines, meta-analyses not only summarize what has been done in a particular area, but help identify what still needs to be done, and even illuminates how future studies could be improved. In the current meta-analysis, some of the predictor variables were not able to be examined due to a lack of studies that included them. The analyses cannot be interpreted to constitute a comprehensive "test" of any particular theory; rather, meta-analyses reflect an assessment of the size and strength of effects of various theoretically-driven independent variables on victimization outcomes in adolescence. To increase the potential contribution of future meta analyses, empirical tests of general theories of crime need to include split-sample analyses (at least as a supplementary analysis), even if the study is not related to gender. Most juvenile delinquency research continues to rely on the "add gender and stir" approach (Koon Magnin et al., 2016; Simpson, 1989) approach, where gender represents a control variable. Since the proportion of females becoming involved in the juvenile justice system compared to males is increasing (Puzzanchera, 2019), risk factors for delinquency and victimization should be a continued focus on research that aims to better understand these outcomes.

In the second study, a limitation is the use of cross-sectional data. Social bonds and adolescent dating violence were measured at the same time, and therefore, unable to be time-ordered. Social bonds and crime have been found to have a reciprocal relationship, and offending has also been found to influence social bonds (Wright et al., 1999). The interactional perspective argues that delinquency may damage relationships with pro-social others, make one less committed to conventional activities, and influence beliefs (Thornberry et al., 1991). For example, offending conflicts with the expectations conventional parents have of their children, and therefore, engaging in delinquency will likely strain the parent-child relationship (Huijsmans et al., 2019). Additionally, one may not decide whether or not to engage in delinquency according to what their moral beliefs are, but they may use moral beliefs as a type of justification for the delinquent activities that they are already involved in. Krohn et al. (1996) found that the effect of drug use on beliefs stronger than the effect of beliefs on drug use. Reciprocal effects have also been found for social bonds and victimization. If a child is victimized at school, their perceptions of school may change, and they may withdraw from their studies and school activities they were once involved in, affecting school attachment (Leadbeater et al., 2015). However, the reciprocal relationships between parental social bonds and adolescent dating violence have not been studied. Future research should use longitudinal designs to examine reciprocal relationships of dating violence during adolescence.

The majority of research on the victim-offender overlap focuses on one stage of the life course, such as adolescence (Flexon et al., 2016) or late adulthood (Reisig & Holtfreter, 2018). However, longitudinal research that examines multiple stages of the

life course is scarce, especially when it comes to dating violence. Since dating violence is more likely than other types of violence to continue into adulthood (Leadbeater et al., 2014), future research should look at the effect of social bonds on dating violence over the life course. In life course research, social bonds may provide turning points which may influence desistance from crime. For example, a high-quality marriage and resulting social ties have been found to provide a control mechanism that prevents one from engaging in crime (Laub & Sampson, 2003). While this perspective has been examined for adult intimate partner violence perpetration (Greenman & Matsuda, 2016), future research should also include adolescents, as different social bonds are important at different ages (Sampson & Laub, 1990). Adding victimization to this perspective is important for future research, as it has predominately examined offending. One way that scholars can build on this in the future is by examining dating violence trajectories that include offender only, victim only, and offender-victim groups over the life course (Jennings et al., 2012). The effect of social bonds on each of these trajectories may differ over the life-course, and they may also differ for males and females.

Another direction for future longitudinal research is determining the time-ordering of victimization and offending. While this overlap has been well-established using cross-sectional research that measures offending and victimization at the same time (Jennings et al., 2012), longitudinal research is lacking. This is especially important when using criminological theory to examine the overlap, and theories have different time-ordering of offending and victimization. For example, examinations using a GST framework have found that victimization is generally a source of strain, and precedes

offending (Hay & Evans, 2006). The routine activities and risky lifestyles perspectives suggest that offending precedes victimization, as being involved in offending puts on in contact with other offenders, therefore making victimization more likely (Lauritsen et al., 1991). Self-control theory suggests that an underlying characteristic—low self-control—is responsible for increasing both offending and victimization risk (Holtfreter et al., 2010). Longitudinal research on social bonds and the ADV overlap will help establish the time-ordering of dating violence perpetration and victimization.

In the third study, anger was associated with violent behavior for both males and females. Additionally, avoidant coping was associated with substance use. While these relationships were significant for both genders, we cannot definitively say that they are gender-neutral. While it was unable to be done in this study, a gender moderator for structural equation models should be estimated and then compared using Wald's tests. This would determine if a predictor has a stronger effect on an outcome for one gender over the other, even though they are both significant. Therefore, instead of simply saying that an explanation is gender-neutral because it is significant for both males and females, testing the strength of effects may find additional gendered nuances.

While a small number of the studies included in the meta-analysis used offending samples, and the sample in Study 3 was at heightened risk for child abuse, the samples, for the most part, were general youth samples. The findings of these studies may not generalize to offending populations, who are also more likely to be victimized. In Study 1, sample type was a significant moderator for some of the predictor variables. This indicates that predictors for victimization may depend on whether the sample was a

general youth sample, or a sample at heightened risk for offending. Going back to evidence-based programming, intervention programs delivered to juveniles already involved in the criminal justice system need to incorporate the needs that are most important for that particular group. Programs based on criminological theory may not be effective if they are based on the findings of low-risk groups only. Future research should examine the general theories of crime used in this dissertation and see if results are consistent for samples of serious juvenile offenders.

Finally, general theories of crime causation should continue to be applied not only to victimization, but also to the consequences of victimization. The connections between victimization and future mental health problems such as depression, anxiety, conduct disorder, and PTSD (Golladay & Holtfreter, 2017; Turner et al., 2006), and the cycle of repeat victimization (Lauritsen & Quinet, 1995) are well established, and general theories of crime may help to explain why some experience these outcome and some do not. For example, social ties have been found to condition the effects of victimization on mental health, with those with stronger ties have been found to be less likely to experience depression after being victimized (Reisig et al., 2018). This research could help inform intervention programs for adolescents who have already been victimized in order to prevent future negative outcomes. Programming, namely, offending and victimization prevention programs, will be discussed in the next section.

Implications for Practice

While much of this narrowing gender gap of delinquency is due to changes in policy rather than changes in females' behavior (Feld, 2009; Stevens et al., 2011), a

larger proportion of females, compared to males, are getting involved in the criminal justice system than ever before. This underscores the need for gender-specific prevention programs that specifically target juvenile females who are at risk for offending and victimization. Historically, most prevention programs have not been guided by empirically validated criminological theory, and those that were combined elements of several theories rather than empirically tested one (Catalano et al., 1998). As feminist scholars have noted, the available theoretically-driven programs—such as those based on social learning theory—did not take the unique needs and experience of females into account (Covington & Bloom, 2003). By comparison, gender-specific programming takes these unique female needs, such as history of abuse, mental health, teenage pregnancy, and family issues into account (Bloom et al., 2003). Since there is a large overlap between risk factors that explain both offending and victimization of adolescent females, it is likely that prevention programs aimed at reducing female delinquency would potentially also help prevent victimization.

Several gender-specific delinquency prevention programs that incorporate criminological theory have been implemented for females and, for the most part, appear to be promising. These programs focus on family relationships and building social bonds, which are especially important target factors for females (Foley, 2008; Kumpfer et al., 2008). For example, Keep Safe is aimed at high-risk adolescent females in early adolescence. It focuses on improving relationships between females and their caregivers, increasing social skills, and reducing susceptibility to becoming involved with delinquent peers. An evaluation showed mixed results, with significantly lower rates of tabaco use,

marijuana use, and delinquent behavior than the control group. However, alcohol use and delinquent peer associations were unaffected (Kim & Leve, 2011). Similar gender-specific prevention programs that focus on improving familial bonds have found to decrease substance use in adolescent females (Fang & Schinke, 2013; Schinke et al., 2009).

However, it is not to say that universal prevention programs are ineffective for girls. In each of the studies in this dissertation, gender-neutral explanations of offending and victimization were supported in addition to gendered ones. While the effectiveness of universal substance use and delinquency prevention programs for adolescent females is mixed, some have found that these programs work equally well for males and females (Zahn et al., 2008). Many popular prevention programs, such as the Nurse-Family Partnership, the Perry Preschool Project, SafeDates, and Raising Healthy Children, are equally effective at preventing delinquency for both genders (Fagan & Lindsay, 2014). However, not every gender-neutral program has the same effects for males and females. Communities that Care is a universal delinquency prevention program that is delivered in the community and focuses on general risk and protective factors. While significantly effective for both males and females, the effects of the program on substance use were stronger for males. However, they were equally effective at preventing delinquency for both sexes (Oesterle et al., 2010). In a nine-year follow-up, the program had positive effects into adulthood for males, but not females (Oesterle et al., 2015). There is no clear pattern for which types of prevention programs are more effective for males and females (Fagan & Lindsay, 2014), and it is difficult for service providers to decide if a gender-

neutral program will be sufficient, or if they should use a gender-specific one to target female needs instead. These should be decided on a case-by-case basis.

Another area of practice that has benefitted from both gender-neutral and gender-specific programming is risk assessment. Commonly used risk-assessment tools are based on social learning theory and used to gauge recidivism risk for both male and female populations. However, for adult females, they seem to be more effective at predicting recidivism for economically motivated crimes that are more like those of males, rather than crimes that take unique female experiences into account (Reisig et al., 2006), suggesting that gendered experiences in adulthood are important. However, a meta-analysis of a juvenile risk assessment tool based on social learning theory found that it was effective at predicting recidivism regardless of sex (Pusch & Holtfreter, 2018).

Currently, victimization prevention programs are generally not based on criminological theory, and instead focus on building social skills, conflict resolution, and bystander reporting (Hoglund et al., 2012). However, the findings of the first study suggest that victimization prevention programs based on criminological theory may be beneficial. Some variables derived from general theories of crime were associated with victimization, and while most of these were gender-neutral, some predictors were gender-specific. School bonds, including attachment and achievement, had significant negative relationships with victimization for males. This suggests that one way of preventing victimization for adolescent males is by strengthening school bonds and encouraging educational success (Popp & Peguero, 2012). Prevention programs delivered in schools tend to be effective, with reductions of school victimization by 17% to 20% (Gaffney et

al., 2019; Farrington & Tofti, 2009). However, these programs focused on disciplinary methods, playground supervision, and parent-teacher relationships, rather than increasing school attachment and achievement. Notably, Positive Action, a victimization prevention program used in Hawaiian elementary schools was found to be effective at reducing bullying and violent behaviors. While the program itself is not inherently based on criminological theory, one goal is to encourage academic achievement, which is often used in the social bond literature (Beets et al., 2009; Li et al., 2011).

Unlike other forms of violence, adolescent dating violence equally affects males and females (Foshee, 1996). Results from the second study indicate that there is an overlap between ADV offending and victimization, and familial social ties explain some of this overlap. Several gender differences existed, so it is surprising that the vast majority of ADV prevention programs are universal, and delivered to both males and females, usually in a classroom setting (Hebert et al., 2019; Hickman et al., 2004; Whitaker et al., 2006). However, ADV is one area where prevention programs tend to incorporate criminological theory—usually in the form of social bond theory. Consistent with findings from the second study that suggest social bonds may help to prevent dating violence, several widely implemented programs, such as SafeDates, the Youth Relationship Project, and 4th R aim to change behavior by changing perceptions of relationships and patriarchal beliefs.

While these programs are somewhat successful in general youth samples (Ball et al., 2012), scholars suggest that those at high risk for ADV may benefit from additional preventative efforts (Whitaker et al., 2006). One of these high-risk groups are those that

have witnessed violence in the home. The present study found that witnessing violence increased risk for ADV for both males and females, suggesting that this risk factor is gender-neutral and important to address. The Expect Respect program targets youth who have previously witnessed violence. Interventions focus on gender roles, acceptance of violence, role models, and trauma. Although shared risk factors are addressed, this program is delivered in classrooms separated by sex. However, evaluations of this program are mixed, with some finding no reductions in either ADV offending or victimization (Ball et al., 2012), and some finding that it was only effective at preventing ADV for males (Reidy et al., 2017).

The mixed evidence for gender-neutral ADV prevention programs suggests that gender-specific programming might be more effective. In the second study, paternal attachment significantly decreased ADV offending and victimization, but only for females. The results from this study suggest that gender-specific programs that aim to strengthen the relationships that adolescent females have with their fathers could be beneficial. However, the lack of these types of programs is concerning. While online programs for fathers and their daughters that focus on talking about dating violence can be effective if fathers initiate this conversation (Love is Respect, 2020), scholars recommend integrating fathers into programs that are initiated elsewhere, such as school (Alleyne-Green et al., 2016; Kast et al., 2016). While not specifically targeting dating violence, gender-specific programs that focused on building familial bonds have been successful in preventing other negative outcomes, such as underage drinking (Schinke et al., 2009). While the gender-specific prevention program Young Women's Lives has

found to be associated with a reduction in ADV, this program does not focus on building familial bonds (Kerig et al., 2010). A gender-specific program that aims to strengthen bonds between fathers and daughters to prevent ADV may be even more effective. Gender-specific ADV prevention programs also target adolescent males. These programs generally focus on changing patriarchal beliefs and attitudes towards violence and have been found to be effective at preventing ADV perpetration (Miller et al., 2012; Salazar & Cook, 2006).

The findings from the third study suggest that delinquency prevention programs that incorporate general strain theory may be beneficial for both males and females. As the findings suggest, one way of doing this could be to target the relationship between anger and violent behavior. One program that incorporates this finding is Aggression Replacement Training (ART). ART is a gender-neutral program that is targeted at aggressive adolescents using three concepts: building social skills, controlling anger, and enhancing morality (Glick & Goldstein, 1987). While the program was found to be effective at reducing problem behaviors for males and female adolescents (Gundersen & Svartdal, 2006), a meta-analysis reported that the majority of these studies suffered from methodological flaws and were conducted by investigators with a vested interest in the intervention program (Brännström et al., 2016). Therefore, the evaluations of this program should be interpreted with caution, and scholars should focus on finding additional ways of incorporating the findings of tests from general strain theory.

The third study also identified a significant positive relationship between avoidant coping and substance use, which suggests that reducing avoidant coping may prevent

substance use. This could be accomplished by teaching adolescents to use proactive coping strategies instead, namely social support from families and seeking therapy. Although helpful guides that teach parents how to talk to their children about stress and substance use are available online (Gerrity & Folcarelli, 2008), the adolescents that do not have good relationships with their parents, and thus less likely to use this resource, are the ones most at risk for substance use (Ryan et al., 2010). A potentially more effective way to encourage teens to cope proactively is to increase access to therapy in schools and in the community. Only about 25% of teens receive therapy to manage mental health symptoms such as depression and anxiety due to lack of access and stigma surrounding mental health (Melnyk et al., 2014). Cognitive behavioral therapy (CBT) programs have been found to be effective at changing adolescents' thought patterns to change behavior (Tobler et al., 2000). CBT programs delivered in the classroom have the potential to reach a large number of teens at once and reduces some of the stigma of receiving therapy (Whisman, 2008). These low-cost and widely implemented programs have been found to increase coping efficacy and reduce negative emotions in teens (Cunningham et al., 2002; Melnyk et al., 2014). Since those who have dropped out of school are among the highest risk for substance use (Townsend et al., 2007), similar programming should be made available at community centers and juvenile justice centers as well.

Conclusion

While official statistics report that delinquency and victimization has decreased dramatically among adolescents over the past decade (Puzzanchera, 2019), there is a

percentage of this population that experiences offending and victimization. Evidence-based programs and policies based on general theories of crime causation have no doubt been influential in this decrease, and scholars should continue to examine risk factors for adolescent offending and victimization. The studies included in this dissertation suggest that although general theories of crime can help explain the experiences of females, there are also important gender differences that must be considered when examining offending and victimization. Additional theoretically-informed research on adolescent offending and victimization that takes care to consider sex-specific differences will continue to shed light these outcomes and other potential negative consequences, including mental health issues and future victimization.

References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, *30*, 47-88.

Agnew, R. (2006). *Pressured into crime: An overview of general strain theory*. Roxbury Publishing Company.

Akers, R. L., & Lee, G. (1996). A longitudinal test of social learning theory: Adolescent smoking. *Journal of Drug Issues*, *26*, 317-343.

Alarid, L. F., Burton Jr, V. S., & Cullen, F. T. (2000). Gender and crime among felony offenders: Assessing the generality of social control and differential association theories. *Journal of Research in Crime and Delinquency*, *37*, 171-199.

Alleyne-Green, B., Grinnell-Davis, C., Clark, T. T., Quinn, C. R., & Cryer-Coupet, Q. R. (2016). Father involvement, dating violence, and sexual risk behaviors among a national sample of adolescent females. *Journal of Interpersonal Violence*, *31*, 810-830.

Ball, B., Tharp, A. T., Noonan, R. K., Valle, L. A., Hamburger, M. E., & Rosenbluth, B. (2012). Expect respect support groups: preliminary evaluation of a dating violence prevention program for at-risk youth. *Violence Against Women*, *18*, 746-762.

Beets, M. W., Flay, B. R., Vuchinich, S., Snyder, F. J., Acock, A., Li, K. K., ... & Durlak, J. (2009). Use of a social and character development program to prevent substance use, violent behaviors, and sexual activity among elementary-school students in Hawaii. *American Journal of Public Health*, *99*, 1438-1445.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology*, *1*, 48-71.

Bloom, B., Owen, B. A., & Covington, S. (2003). *Gender-responsive strategies: Research, practice, and guiding principles for women offenders*. US Department of Justice, National Institute of Corrections.

Brännström, L., Kaunitz, C., Andershed, A. K., South, S., & Smedslund, G. (2016). Aggression replacement training (ART) for reducing antisocial behavior in adolescents and adults: A systematic review. *Aggression and Violent Behavior*, *27*, 30-41.

Broidy, L., & Agnew, R. (1997). Gender and crime: A general strain theory perspective. *Journal of Research in Crime and Delinquency*, *34*, 275-306.

Burton Jr, V. S., Cullen, F. T., Evans, T. D., Alarid, L. F., & Dunaway, R. G. (1998). Gender, self-control, and crime. *Journal of Research in Crime and Delinquency, 35*, 123-147.

Canter, R. J. (1982). Family correlates of male and female delinquency. *Criminology*, *20*, 149-168.

Catalano, R. F., Arthur, M. W., Hawkins, D. J., Berglund, L., & Olson, J. J. (1998). Comprehensive community- and school-based interventions to prevent antisocial behavior. In R. Loeber & D. P. Farrington (Eds.), *Serious & violent juvenile offenders: Risk factors and successful interventions* (p. 248–283). Sage Publications, Inc.

Covington, S. S. & Bloom, B. E. (2003). Gendered justice: Women in the criminal justice system. In B. E. Bloom (Ed.) *Gendered justice: addressing female offenders*. Carolina Academic Press.

Cunningham, E. G., Brandon, C. M., & Frydenberg, E. (2002). Enhancing coping resources in early adolescence through a school-based program teaching optimistic thinking skills. *Anxiety, Stress and Coping, 15*, 369-381.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law and Women's Studies, 2*, 11-52.

Daly, K., & Chesney-Lind, M. (1988). Feminism and criminology. *Justice Quarterly, 5*, 497-538.

Daniels, A. Z., & Holtfreter, K. (2019). Moving beyond anger and depression: The effects of anxiety and envy on maladaptive coping. *Deviant Behavior, 40*, 334-352.

De Coster, S., & Zito, R. C. (2010). Gender and general strain theory: The gendering of emotional experiences and expressions. *Journal of Contemporary Criminal Justice*, *26*, 224-245.

Fagan, A. A., & Lindsey, A. M. (2014). Gender differences in the effectiveness of delinquency prevention programs: What can be learned from experimental research? *Criminal Justice and Behavior, 41*, 1057-1078.

Fang, L., & Schinke, S. P. (2013). Two-year outcomes of a randomized, family-based substance use prevention trial for Asian American adolescent girls. *Psychology of Addictive Behaviors, 27*, 788-789.

Farrington, D. P., & Ttofi, M. M. (2009). School-based programs to reduce bullying and victimization. *Campbell Systematic Reviews, 5*, 1-148.

Feld, B. C. (2009). Violent girls or relabeled status offenders? An alternative interpretation of the data. *Crime & Delinquency*, *55*, 241-265.

Flexon, J. L., Meldrum, R. C., & Piquero, A. R. (2016). Low self-control and the victim–offender overlap: A gendered analysis. *Journal of Interpersonal Violence*, *31*, 2052-2076.

Foley, A. (2008). The current state of gender-specific delinquency programming. *Journal of Criminal Justice, 36,* 262-269.

Foshee, V. A. (1996). Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Education Research*, *11,* 275-286.

Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2019). Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. *Aggression and Violent Behavior, 45,* 111-133.

Gerrity, E., & Folcarelli, C. (2008). Child traumatic stress: What every policymaker should know. *National Child Traumatic Stress Network.* http://www. nctsn. org/nctsn_assets/pdfs/PolicyGuide_CTS2008.

Gilligan, C. (1993). *In a different voice: Psychological theory and women's development*. Harvard University Press.

Glick, B., & Goldstein, A. P. (1987). Aggression replacement training. *Journal of Counseling and Development, 65,* 356-362.

Golladay, K.A., & Holtfreter, K. (2017). The consequences of identity theft victimization: An examination of emotional and physical health outcomes. *Victims and Offenders,12,* 741-760.

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.

Greenman, S. J., & Matsuda, M. (2016). From early dating violence to adult intimate partner violence: continuity and sources of resilience in adulthood. *Criminal Behavior and Mental Health, 26,* 293-303.

Gundersen, K., & Svartdal, F. (2006). Aggression replacement training in Norway: Outcome evaluation of 11 Norwegian student projects. *Scandinavian Journal of Educational Research, 50,* 63-81.

Hay, C., & Evans, M. M. (2006). Violent victimization and involvement in delinquency: Examining predictions from general strain theory. *Journal of Criminal Justice, 34,* 261-274.

Hébert, M., Daspe, M. È., Lapierre, A., Godbout, N., Blais, M., Fernet, M., & Lavoie, F. (2019). A meta-analysis of risk and protective factors for dating violence victimization: The role of family and peer interpersonal context. *Trauma, Violence, and Abuse, 20,* 574-590.

Heimer, K., & DeCoster, S. (1999). The gendering of violent delinquency. *Criminology, 37,* 277-318.

Henson, B., Wilcox, P., Reyns, B. W., & Cullen, F. T. (2010). Gender, adolescent lifestyles, and violent victimization: Implications for routine activity theory. *Victims and Offenders, 5,* 303-328.

Hickman, L. J., Jaycox, L. H., & Aronoff, J. (2004). Dating violence among adolescents: Prevalence, gender distribution, and prevention program effectiveness. *Trauma, Violence, and Abuse, 5,* 123-142.

Hirschi, T. (1969) *Causes of delinquency*. University of California Press.

Hoglund, W. L., Hosan, N. E., & Leadbeater, B. J. (2012). Using your WITS: A 6-year follow-up of a peer victimization prevention program. *School Psychology Review, 41,* 193-214.

Holtfreter, K., Reisig, M. D., Leeper Piquero, N., & Piquero, A. R. (2010). Low self-control and fraud: Offending, victimization, and their overlap. *Criminal Justice and Behavior, 37,* 188-203.

Huijsmans, T., Nivette, A. E., Eisner, M., & Ribeaud, D. (2019). Social influences, peer delinquency, and low self-control: An examination of time-varying and reciprocal effects on delinquency over adolescence. *European Journal of Criminology,* https://doi.org/10.1177/1477370819838720

Iratzoqui, A. (2020). A gendered model of lifetime experiences of strain. *Youth and Society, 52,* 166-186.

Jennings, W. G., Piquero, A. R., & Reingle, J. M. (2012). On the overlap between victimization and offending: A review of the literature. *Aggression and Violent Behavior*, *17*, 16-26.

Kast, N. R., Eisenberg, M. E., & Sieving, R. E. (2016). The role of parent communication and connectedness in dating violence victimization among Latino adolescents. *Journal of Interpersonal Violence*, *31*, 1932-1955.

Kerig, P. K., Volz, A. R., Moeddel, M. A., & Cuellar, R. E. (2010). Implementing dating violence prevention programs with flexibility, fidelity, and sensitivity to diversity: Lessons learned from Expect Respect. *Journal of Aggression, Maltreatment and Trauma*, *19*, 661-680.

Kim, H. K., & Leve, L. D. (2011). Substance use and delinquency among middle school girls in foster care: A three-year follow-up of a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *79*, 740-750.

Koon-Magnin, S., Bowers, D., Langhinrichsen-Rohling, J., & Arata, C. (2016). Social learning, self-control, gender, and variety of violent delinquency. *Deviant Behavior*, *37*, 824-836.

Krohn, M. D., Lizotte, A. J., Thornberry, T. P., Smith, C., & McDowall, D. (1996). Reciprocal causal relationships among drug use, peers, and beliefs: A five-wave panel model. *Journal of Drug Issues*, *26*, 405-428.

Krohn, M. D., & Massey, J. L. (1980). Social control and delinquent behavior: An examination of the elements of the social bond. *The Sociological Quarterly*, *21*, 529-544.

Kumpfer, K. L., Smith, P., & Summerhays, J. F. (2008). A wakeup call to the prevention field: Are prevention programs for substance use effective for girls? *Substance use and Misuse*, *43*, 978-1001.

Laub, J. H., & Sampson, R. J. (2003) *Shared beginnings, divergent lives: Delinquent boys to age 70*. Harvard University Press.

Lauritsen, J. L., & Heimer, K. (2008). The gender gap in violent victimization, 1973–2004. *Journal of Quantitative Criminology*, *24*, 125-147.

Lauritsen, J. L., & Quinet, K. F. D. (1995). Repeat victimization among adolescents and young adults. *Journal of Quantitative Criminology*, *11*, 143-166.

Lauritsen, J. L., Sampson, R. J., & Laub, J. H. (1991). The link between offending and victimization among adolescents. *Criminology*, *29*, 265-292.

Leadbeater, B., Sukhawathanakul, P., Smith, D., & Bowen, F. (2015). Reciprocal associations between interpersonal and values dimensions of school climate and peer victimization in elementary school children. *Journal of Clinical Child and Adolescent Psychology, 44*, 480-493.

Leadbeater, B. J., Thompson, K., & Sukhawathanakul, P. (2014). It gets better or does it? Peer victimization and internalizing problems in the transition to young adulthood. *Development and Psychopathology*, *26*, 675-688.

Li, K. K., Washburn, I., DuBois, D. L., Vuchinich, S., Ji, P., Brechling, V., Berbaum, M., Snyder, F., & Faly, B. R. (2011). Effects of the Positive Action programme on problem behaviours in elementary school students: a matched-pair randomised control trial in Chicago. *Psychology and Health*, *26*, 187-204.

Love is Respect (2020) *A parent's guide to teen dating violence: 10 questions to start the conversation.* https://www.breakthecycle.org/sites/default/files/hanbook_-_parents_of_teen_0.pdf

Mazerolle, P. (1998). Gender, general strain, and delinquency: An empirical examination. *Justice Quarterly, 15*, 65-91.

Melnyk, B., Kelly, S., & Lusk, P. (2014). Outcomes and feasibility of a manualized cognitive-behavioral skills building intervention: Group COPE for depressed and anxious adolescents in school settings. *Journal of Child and Adolescent Psychiatric Nursing*, *27*, 3-13.

Miller, E., Tancredi, D. J., McCauley, H. L., Decker, M. R., Virata, M. C. D., Anderson, H. A., Stetkevich, N., Brown, E. W., Feroz Moideen J. D., & Silverman, J. G. (2012). "Coaching boys into men": A cluster-randomized controlled trial of a dating violence prevention program. *Journal of Adolescent Health*, *51*, 431-438.

Morash, M. (1999). A consideration of gender in relation to social learning and social structure: A general theory of crime and deviance. *Theoretical Criminology*, *3*, 451-462.

Morgan, R. E., & Oudekerk, B. A. (2019). *Criminal victimization, 2018*. https://www.bjs.gov/content/pub/pdf/cv18.pdf

Oesterle, S., Hawkins, J. D., Fagan, A. A., Abbott, R. D., & Catalano, R. F. (2010). Testing the universality of the effects of the Communities That Care prevention system for preventing adolescent drug use and delinquency. *Prevention Science*, *11*, 411-423.

Oesterle, S., Hawkins, J. D., Kuklinski, M. R., Fagan, A. A., Fleming, C., Rhew, I. C., Brown, E. C., Abbott, R. D., & Catalano, R. F. (2015). Effects of Communities That Care on males' and females' drug use and delinquency 9 years after baseline in a community-randomized trial. *American Journal of Community Psychology, 56,* 217-228.

Piquero, N. L., Gover, A. R., MacDonald, J. M., & Piquero, A. R. (2005). The Influence of Delinquent Peers on Delinquency: Does Gender Matter? *Youth and Society, 36,* 251-275.

Piquero, N. L., & Sealock, M. D. (2004). Gender and general strain theory: A preliminary test of Broidy and Agnew's gender/GST hypotheses. *Justice Quarterly, 21,* 125-158.

Pittenger, S. L., Pogue, J. K., & Hansen, D. J. (2018). Predicting sexual revictimization in childhood and adolescence: A longitudinal examination using ecological systems theory. *Child Maltreatment, 23,* 137-146.

Popp, A. M., & Peguero, A. A. (2012). Social bonds and the role of school-based victimization. *Journal of Interpersonal Violence, 27,* 3366-3388.

Pratt, T. C., Turanovic, J. J., Fox, K. A., & Wright, K. A. (2014). Self-control and victimization: A meta-analysis. *Criminology, 52,* 87-116.

Pusch, N., & Holtfreter, K. (2018). Gender and risk assessment in juvenile offenders: A meta-analysis. *Criminal Justice and Behavior, 45,* 56-81.

Puzzanchera, C. (2019). *Arrests of juveniles in 2018 reached lowest levels in nearly four decades* https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2018.pdf

Reidy, D. E., Holland, K. M., Cortina, K., Ball, B., & Rosenbluth, B. (2017). Evaluation of the expect respect support group program: A violence prevention strategy for youth exposed to violence. *Preventive Medicine, 100,* 235-242.

Reisig, M. D., & Holtfreter, K. (2018). The victim–offender overlap in late adulthood. *Journal of Elder Abuse and Neglect, 30,* 144-166.

Reisig, M. D., Holtfreter, K., & Morash, M. (2006). Assessing recidivism risk across female pathways to crime. *Justice Quarterly, 23,* 384-405.

Reisig, M. D., Holtfreter, K., & Turanovic, J. J. (2018). Criminal victimization, depressive symptoms, and behavioral avoidance coping in late adulthood: The conditioning role of strong familial ties. *Journal of Adult Development, 25,* 13-24.

Ryan, S. M., Jorm, A. F., & Lubman, D. I. (2010). Parenting factors associated with reduced adolescent alcohol use: a systematic review of longitudinal studies. *Australian and New Zealand Journal of Psychiatry*, *44*, 774-783.

Salazar, L. F., & Cook, S. L. (2006). Preliminary findings from an outcome evaluation of an intimate partner violence prevention program for adjudicated, African American, adolescent males. *Youth Violence and Juvenile Justice*, *4*, 368-385.

Sampson, R. J., & Laub, J. H. (1990). Crime and deviance over the life course: The salience of adult social bonds. *American Sociological Review*, *55*, 609-627.

Schinke, S. P., Fang, L., & Cole, K. C. (2009). Preventing substance use among adolescent girls: 1-year outcomes of a computerized, mother–daughter program. *Addictive Behaviors*, *34*, 1060-1064.

Simpson, S. S. (1989). Feminist theory, crime, and justice. *Criminology*, *27*, 605-632.

Smith, D. A., & Paternoster, R. (1987). The gender gap in theories of deviance: Issues and evidence. *Journal of Research in Crime and Delinquency*, *24*, 140-172.

Steffensmeier, D., & Allan, E. (1996). Gender and crime: Toward a gendered theory of female offending. *Annual Review of Sociology*, *22*, 459-487.

Stevens, T., Morash, M., & Chesney-Lind, M. (2011). Are girls getting tougher, or are we tougher on girls? Probability of arrest and juvenile court oversight in 1980 and 2000. *Justice Quarterly*, *28*, 719-744.

Stewart, E. A., Elifson, K. W., & Sterk, C. E. (2004). Integrating the general theory of crime into an explanation of violent victimization among female offenders. *Justice Quarterly*, *21*, 159-181.

Thornberry T. P., Lizotte A. J., Krohn M. D., Farnworth M. & Jang S. J. (1991) Testing interactional theory: An examination of reciprocal causal relationships among family, school, and delinquency. *Journal of Criminal Law and Criminology 82*, 3–35.

Tobler, N. S., Roona, M. R., Ochshorn, P., Marshall, D. G., Streke, A. V., & Stackpole, K. M. (2000). School-based adolescent drug prevention programs: 1998 meta-analysis. *Journal of Primary Prevention*, *20*, 275-336.

Townsend, L., Flisher, A. J., & King, G. (2007). A systematic review of the relationship between high school dropout and substance use. *Clinical Child and Family Psychology Review*, *10*, 295-317.

Turanovic, J. J., Reisig, M. D., & Pratt, T. C. (2015). Risky lifestyles, low self-control, and violent victimization across gendered pathways to crime. *Journal of Quantitative Criminology, 31*, 183-206.

Turner, H. A., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science and Medicine, 62*, 13-27.

Whisman, M. P. (Ed.). (2008). *Adapting cognitive therapy for depression: Managing complexity and comorbidity.* Guilford Press.

Whitaker, D. J., Morrison, S., Lindquist, C., Hawkins, S. R., O'Neil, J. A., Nesius, A. M., Mathew, A., & Reese, L. R. (2006). A critical review of interventions for the primary prevention of perpetration of partner violence. *Aggression and Violent Behavior, 11*, 151-166.

Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency, 46*, 245-269.

Wright, B. R. E., Caspi, A., Moffitt, T. E., & Silva, P. A. (1999). Low self-control, social bonds, and crime: Social causation, social selection, or both? *Criminology, 37*, 479-514.

Zahn, M. A., Day, J. C., Mihalic, S. F., & Tichavsky, L. (2009). Determining what works for girls in the juvenile justice system: A summary of evaluation evidence. *Crime & Delinquency, 55*, 266-293.

REFERENCES

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*, 47-88.

Agnew, R. (2006). General strain theory: Current status and directions for further research. In Cullen, F. T., Wright, J. P., & Blevins, K. R. (eds.) *Taking stock: The status of criminological theory, vol.15*, (p.101-123). Transaction Publishers

Agnew, R. (2006). *Pressured into crime: An overview of general strain theory*. Roxbury Publishing Company.

Agnew, R., & Brezina, T. (1997). Relational problems with peers, gender, and delinquency. *Youth and Society*, *29*, 84-111.

Agnew, R., & White, H. R. (1992). An empirical test of general strain theory. *Criminology*, *30*, 475-500.

Agnich, L. E., Kahle, L. L., Peguero, A. A., Murphy, J. L., Foroughi, O., & Nester, J. N. (2017). Does breaking gender stereotypes contribute to victimization at school? *Criminal Justice Studies*, *30*, 257-275.

Akers, R. L., & Lee, G. (1996). A longitudinal test of social learning theory: Adolescent smoking. *Journal of Drug Issues*, *26*, 317-343.

Alarid, L. F., Burton Jr, V. S., & Cullen, F. T. (2000). Gender and crime among felony offenders: Assessing the generality of social control and differential association theories. *Journal of Research in Crime and Delinquency*, *37*, 171-199.

Alleyne-Green, B., Grinnell-Davis, C., Clark, T. T., Quinn, C. R., & Cryer-Coupet, Q. R. (2016). Father involvement, dating violence, and sexual risk behaviors among a national sample of adolescent females. *Journal of Interpersonal Violence*, *31*, 810-830.

Ames, M. & Leadbeater, B. (2017). Overweight and isolated: The interpersonal problems of youth who are overweight from adolescence into young adulthood. *International Journal of Behavioral Development, 41*, 390-404.

Andrews, L. M. (2004). *The utility of routine activities theory in relation to child sexual abuse* [Unpublished doctoral dissertation]. Sam Houston State University.

Antunes, M. J. L., Ahlin, E. M., Emmert, A. D., & Manasse, M. (2019). Gender Differences in Youth Exposure to Community Violence: A Partial Test of Power-Control Theory. *Feminist Criminology*, *15*, 123-146.

Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin, 126*, 651-680.

Arizona Criminal Justice Commission (2018). *Arizona youth survey state report*. https://azcjc.gov/sites/default/files/pubs/AYSReports/2018/2018_Arizona_Youth_Survey_State_Report.pdf

Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni Jr, A. J. (2002). Measuring risk and protective factors for use, delinquency, and other adolescent problem behaviors: The Communities That Care Youth Survey. *Evaluation Review, 26*, 575-601.

Asgeirsdottir, B. B., Sigfusdottir, I. D., Gudjonsson, G. H., & Sigurdsson, J. F. (2011). Associations between sexual abuse and family conflict/violence, self-injurious behavior, and substance use: The mediating role of depressed mood and anger. *Child Abuse and Neglect, 35*, 210-219.

Ashford, J. R., & Sowden, R. R. (1970). Multi-variate probit analysis. *Biometrics, 26*, 535-546.

Assink, M., van der Put, C. E., Meeuwsen, M. W. C. M., de Jong, N. M., Oort, F. J., Stams, G. J. J. M., & Hoeve, M. (2019). Risk factors for child sexual abuse victimization: A meta-analytic review. *Psychological Bulletin, 145*, 459-489.

Assink, M., & Wibbelink, C. J. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology, 12*, 154-174.

Augustyn, M. B., & McGloin, J. M. (2013). The risk of informal socializing with peers: Considering gender differences across predatory delinquency and substance use. *Justice Quarterly, 30*, 117-143.

Averdijk, M. (2011). Reciprocal effects of victimization and routine activities. *Journal of Quantitative Criminology, 27*, 125-149.

Averdijk, M., Van Gelder, J. L., Eisner, M., & Ribeaud, D. (2016). Violence begets violence… but how? A decision-making perspective on the victim–offender overlap. *Criminology, 54*, 282-306

Avgoustis, E. (2001). *The importance of childhood emotional neglect to adolescent dating violence: Is insecure attachment style a risk factor?* [Unpublished doctoral dissertation]. York University.

Ayers, S., Jager, J., & Kulis, S. S. (2019). Variations in risk and protective factors on substance use among urban American Indian youth. *Journal of Ethnicity in Substance Abuse, 1*, 1-24.

Ball, B., Tharp, A. T., Noonan, R. K., Valle, L. A., Hamburger, M. E., & Rosenbluth, B. (2012). Expect respect support groups: preliminary evaluation of a dating violence prevention program for at-risk youth. *Violence Against Women, 18*, 746-762.

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, *4*, 359-373.

Banyard, V. L., & Cross, C. (2008). Consequences of teen dating violence: Understanding intervening variables in ecological context. *Violence Against Women*, *14*, 998-1013.

Baron, S. W. (2009). Street youths' violent responses to violent personal, vicarious, and anticipated strain. *Journal of Criminal Justice*, *37*, 442-451.

Baron, S. W., Forde, D. R., & Kennedy, L. W. (2007). Disputatiousness, aggressiveness, and victimization among street youths. *Youth Violence and Juvenile Justice*, *5*, 411-425.

Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: a systematic review and meta-analysis. *International Journal of Public Health*, *58*, 469-483.

Beauvais, F., Chavez, E. L., Oetting, E. R., Deffenbacher, J. L., & Cornell, G. R. (1996). Drug use, violence, and victimization among White American, Mexican American, and American Indian dropouts, students with academic problems, and students in good academic standing. *Journal of Counseling Psychology*, *43*, 292-299.

Beaver, K. M., Wright, J. P., DeLisi, M., Daigle, L. E., Swatt, M. L., & Gibson, C. L. (2007). Evidence of a gene X environment interaction in the creation of victimization: Results from a longitudinal sample of adolescents. *International Journal of Offender Therapy and Comparative Criminology*, *51*, 620-645.

Beets, M. W., Flay, B. R., Vuchinich, S., Snyder, F. J., Acock, A., Li, K. K., ... & Durlak, J. (2009). Use of a social and character development program to prevent substance use, violent behaviors, and sexual activity among elementary-school students in Hawaii. *American Journal of Public Health*, *99*, 1438-1445.

Begg, C. B., & Mazumdar, M. (1994). Operating characteristics of a rank correlation test for publication bias. *Biometrics 50*, 1088-1101.

Begle, A. M., Hanson, R. F., Danielson, C. K., McCart, M. R., Ruggiero, K. J., Amstadter, A. B., Resnick, H. S., Saunders, B. E., & Kilpatrick, D. G. (2011). Longitudinal pathways of victimization, substance use, and delinquency: Findings from the National Survey of Adolescents. *Addictive Behaviors*, *36*, 682-689.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology, 1*, 48-71.

Benda, B. B., & Corwyn, R. F. (2002). The effect of abuse in childhood and in adolescence on violence among adolescents. *Youth and Society*, *33*, 339-365.

Benedini, K. M., & Fagan, A. A. (2020). From Child Maltreatment to Adolescent Substance Use: Different Pathways for Males and Females? *Feminist Criminology*, 15, 147-173.

Benedini, K. M., Fagan, A. A., & Gibson, C. L. (2016). The cycle of victimization: The relationship between childhood maltreatment and adolescent peer victimization. *Child Abuse and Neglect, 59*, 111-121.

Berg, M. T., & Felson, R. B. (2016). Why are offenders victimized so often? In C. A. Cuevas & C. M. Rennison (Eds.), *The Wiley handbook on the psychology of violence* (p. 49-65). John Wiley & Sons.

Berg, M. T., & Felson, R. (2019). A social interactionist approach to the victim-offender overlap. *Journal of Quantitative Criminology, 36*, 153-181.

Beutel, A. M., & Johnson, M. K. (2004). Gender and prosocial values during adolescence: A research note. *Sociological Quarterly, 45*, 379-393.

Bjarnason, T., Sigurdardottir, T. J., & Thorlindsson, T. (1999). Human agency, capable guardians, and structural constraints: A lifestyle approach to the study of violent victimization. *Journal of Youth and Adolescence, 28*, 105-119.

Blom, H., Högberg, U., Olofsson, N., & Danielsson, I. (2014). Strong association between earlier abuse and revictimization in youth. *BMC Public Health, 14*, 715-725.

Bloom, B., Owen, B. A., & Covington, S. (2003). *Gender-responsive strategies: Research, practice, and guiding principles for women offenders*. US Department of Justice, National Institute of Corrections.

Bonett, D. G. (2007). Transforming odds ratios to correlations for meta-analytic research. *American Psychologist, 62*, 254-255.

Bonta, J., & Andrews, D. A. (2016). *The psychology of criminal conduct*. Routledge.

Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2011). *Introduction to meta-analysis*. John Wiley & Sons.

Bramsen, R. H., Lasgaard, M., Koss, M. P., Elklit, A., & Banner, J. (2012). Adolescent sexual victimization: A prospective study on risk factors for first time sexual assault. *European Child and Adolescent Psychiatry*, *21*, 521-526.

Brännström, L., Kaunitz, C., Andershed, A. K., South, S., & Smedslund, G. (2016). Aggression replacement training (ART) for reducing antisocial behavior in adolescents and adults: A systematic review. *Aggression and Violent Behavior*, *27*, 30-41.

Briere, J. (1996). Trauma symptom checklist for children. *Psychological Assessment Resources*. https://www.researchgate.net/profile/John_Briere/publication/267726306_Trauma_Symptom_Checklist_for_Children_TSCC/links/54b199fc0cf220c63cd12837.pdf

Broidy, L. M. (2001). A test of general strain theory. *Criminology, 39*, 9-36.

Broidy, L., & Agnew, R. (1997). Gender and crime: A general strain theory perspective. *Journal of Research in Crime and Delinquency*, *34*, 275-306.

Broidy, L. M., Daday, J. K., Crandall, C. S., Sklar, D. P., & Jost, P. F. (2006). Exploring demographic, structural, and behavioral overlap among homicide offenders and victims. *Homicide Studies*, *10*, 155-180.

Brooks-Russell, A., Foshee, V. A., & Ennett, S. T. (2013). Predictors of latent trajectory classes of physical dating violence victimization. *Journal of Youth and Adolescence, 42*, 566-580.

Brown, B. B. (1999). "You're going out with who?": Peer group influences on adolescent romantic relationships. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *Cambridge studies in social and emotional development. The development of romantic relationships in adolescence* (p. 291–329). Cambridge University Press.

Brownstone, D., & Valletta, R. (2001). The bootstrap and multiple imputations: harnessing increased computing power for improved statistical tests. *Journal of Economic Perspectives*, *15*, 129-141.

Bunch, J., Clay-Warner, J., & Lei, M. K. (2015). Demographic characteristics and victimization risk: Testing the mediating effects of routine activities. *Crime & Delinquency, 61*, 1181-1205.

Bunch, J. Clay-Warner, J., & McMahon-Howard, J. (2013). The effects of victimization on routine activities. *Criminal Justice and Behavior, 4*, 574-592.

Bunch, J. M., Iratzoqui, A., & Watts, S. J. (2018). Child abuse, self-control, and delinquency: A general strain perspective. *Journal of Criminal Justice*, *56*, 20-28.

Burton Jr, V. S., Cullen, F. T., Evans, T. D., Alarid, L. F., & Dunaway, R. G. (1998). Gender, self-control, and crime. *Journal of Research in Crime and Delinquency*, *35*, 123-147.

Buzy, W. M., McDonald, R., Jouriles, E. N., Swank, P. R., Rosenfield, D., Shimek, J. S., & Corbitt-Shindler, D. (2004). Adolescent girls' alcohol use as a risk factor for relationship violence. *Journal of Research on Adolescence*, *14*, 449-470.

Cameron, A. C., & Trivedi, P. K. (2010). *Microeconometrics using Stata* (revised ed.). StataCorp LP.

Campbell, A., & Muncer, S. (2008). Intent to harm or injure? Gender and the expression of anger. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *34*, 282-293.

Canter, R. J. (1982). Family correlates of male and female delinquency. *Criminology*, *20*, 149-168.

Carbone-Lopez, K., Esbensen, F. A., & Brick, B. T. (2010). Correlates and consequences of peer victimization: Gender differences in direct and indirect forms of bullying. *Youth Violence and Juvenile Justice*, *8*, 332-350.

Carson, D. C., Esbensen, F. A., & Taylor, T. J. (2013). A longitudinal analysis of the relationship between school victimization and student mobility. *Youth Violence and Juvenile Justice*, *11*, 275-295.

Catalano, R. F., Arthur, M. W., Hawkins, D. J., Berglund, L., & Olson, J. J. (1998). Comprehensive community- and school-based interventions to prevent antisocial behavior. In R. Loeber & D. P. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (p. 248–283). Sage.

Center for Disease Control (2014). *Understanding teen dating violence*. https://www.cdc.gov/violenceprevention/pdf/teen-dating-violence-2014-a.pdf

Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood *Journal of Affective Disorders*, *82*, 217-225.

Chapple, C. L., McQuillan, J. A., & Berdahl, T. A. (2005). Gender, social bonds, and delinquency: A comparison of boys' and girls' models. *Social Science Research*, *34*, 357-383.

Chen, X. (2009). The link between juvenile offending and victimization: The influence of risky lifestyles, social bonding, and individual characteristics. *Youth Violence and Juvenile Justice*, *7*, 119-135.

Chen, F. R., Rothman, E. F., & Jaffee, S. R. (2017). Early puberty, friendship group characteristics, and dating abuse in US girls. *Pediatrics*, https://doi.org/10.1542/peds.2016-2847

Cheung, M. W. L. (2014). Modeling dependent effect sizes with three-level meta-analyses: a structural equation modeling approach. *Psychological Methods*, *19*, 211-229.

Chiodo, D., Crooks, C. V., Wolfe, D. A., McIsaac, C., Hughes, R., & Jaffe, P. G. (2012). Longitudinal prediction and concurrent functioning of adolescent girls demonstrating various profiles of dating violence and victimization. *Prevention Science*, *13*, 350-359.

Child Mind Institute (2017). *2017 children's mental health report*. Child Mind Institute, Inc. https://childmind.org/downloads/2017-CMHR-PDF.pdf

Christiansen, E. J., & Evans, W. P. (2005). Adolescent victimization: Testing models of resiliency by gender. *The Journal of Early Adolescence*, *25*, 298-316.

Clark, V. A. (2010). *Correlates and consequences of offending and victimization: An analysis of intimate partner violence among adolescents* [Unpublished doctoral dissertation]. The Pennsylvania State University.

Cleveland, H. H., Herrera, V. M., & Stuewig, J. (2003). Abusive males and abused females in adolescent relationships: Risk factor similarity and dissimilarity and the role of relationship seriousness. *Journal of Family Violence*, *18*, 325-339.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44, 588-608.

Coker, A. L., McKeown, R. E., Sanderson, M., Davis, K. E., Valois, R. F., & Huebner, E. S. (2000). Severe dating violence and quality of life among South Carolina high school students. *American Journal of Preventive Medicine, 19*, 220-227.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127.

Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: a meta-analysis. *Journal of Personality and Social Psychology, 93*, 1080-1107.

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: a meta-analytic investigation. *School Psychology Quarterly*, *25*, 65-83.

Covington, S. S. & Bloom, B. E. (2003). Gendered justice: Women in the criminal justice system. In B. E. Bloom (Ed.) *Gendered justice: addressing female offenders*. Carolina Academic Press.

Cuevas, C. A., Finkelhor, D., Turner, H. A., & Ormrod, R. K. (2007). Juvenile delinquency and victimization: A theoretical typology. *Journal of Interpersonal Violence*, *22*, 1581-1602.

Cunningham, E. G., Brandon, C. M., & Frydenberg, E. (2002). Enhancing coping resources in early adolescence through a school-based program teaching optimistic thinking skills. *Anxiety, Stress and Coping, 15*, 369-381.

Cyr, M., McDuff, P., & Wright, J. (2006). Prevalence and predictors of dating violence among adolescent female victims of child sexual abuse. *Journal of Interpersonal Violence*, *21*, 1000-1017.

Daigle, L. E., Cullen, F. T., & Wright, J. P. (2007). Gender differences in the predictors of juvenile delinquency: Assessing the generality-specificity debate. *Youth Violence and Juvenile Justice, 5,* 254-286.

Daly, K. (1992). Women's pathways to felony court: Feminist theories of lawbreaking and problems of representation. *Southern California Review of Law and Women's Studies, 2*, 11-52.

Daly, K., & Chesney-Lind, M. (1988). Feminism and criminology. *Justice Quarterly, 5,* 497-538.

Daniels, A. Z., & Holtfreter, K. (2019). Moving beyond anger and depression: The effects of anxiety and envy on maladaptive coping. *Deviant Behavior*, *40*, 334-352.

Day, A. L., & Livingstone, H. A. (2003). Gender differences in perceptions of stressors and utilization of social support among university students. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, *35*, 73-83.

Decker, S. H., & Van Winkle, B. (1996). *Life in the gang: Family, friends, and violence*. Cambridge University Press.

De Coster, S., & Cornell Zito, R. (2010). Gender and general strain theory: The gendering of emotional experiences and expressions. *Journal of Contemporary Criminal Justice*, *26*, 224-245.

De La Rue, L., Polanin, J. R., Espelage, D. L., & Pigott, T. D. (2017). A meta-analysis of school-based interventions aimed to prevent or reduce violence in teen dating relationships. *Review of Educational Research*, *87*, 7-34.

De Puy, J., Hamby, S. L., & Lindemuth, C. (2014). Teen dating violence in French-speaking Switzerland: Attitudes and experiences. *International Journal of Conflict and Violence*, *8*, 305-315.

Dhami, M. K., Hoglund, W. L., Leadbeater, B. J., & Boone, E. M. (2005). Gender-linked risks for peer physical and relational victimization in the context of school-level poverty in first grade. *Social Development, 14*, 532-549.

Digby, P. G. (1983). Approximating the tetrachoric correlation coefficient. *Biometrics*, *39*, 753-757.

DuPont-Reyes, M. J., Fry, D., Rickert, V. I., Bell, D. L., Palmetto, N., & Davidson, L. L. (2014). Relationship violence, fear, and exposure to youth violence among adolescents in New York City. *Journal of Interpersonal Violence*, *29*, 2325-2350.

Duprey, E. B., Oshri, A., & Caughy, M. O. (2017). Childhood neglect, internalizing symptoms and adolescent substance use: does the neighborhood context matter? *Journal of Youth and Adolescence*, *46*, 1582-1597.

Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*, 455-463.

Eaton, D. K., Davis, K. S., Barrios, L., Brener, N. D., & Noonan, R. K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence, and early initiation of risk behaviors among US high school students. *Journal of Interpersonal Violence*, *22*, 585-602.

Eftekhari, A., Turner, A. P., & Larimer, M. E. (2004). Anger expression, coping, and substance use in adolescent offenders. *Addictive Behaviors*, *29*, 1001-1008.

Egger, M., & Smith, G. D. (1998). Bias in location and selection of studies. *British Medical Journal*, *316*, 61-67.

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal*, *315*, 629-634.

Eitle, T. M., & Eitle, D. (2014). Race, coping strategies, and substance use behaviors: A preliminary analysis examining White and American Indian adolescents. *Substance Use and Misuse*, *49*, 315-325.

Ellonen, N., & Aaltonen, M. (2012). Association between drinking and victimization among Finnish adolescents: estimating the extent of the spurious effect. *Nordic Studies on Alcohol and Drugs*, *29*, 125-138.

Engström, A. (2018). Associations between risky lifestyles and involvement in violent crime during adolescence. *Victims and Offenders*, *13*, 898-920.

Epstein-Ngo, Q. M., Cunningham, R. M., Whiteside, L. K., Chermack, S. T., Booth, B. M., Zimmerman, M. A., & Walton, M. A. (2013). A daily calendar analysis of substance use and dating violence among high risk urban youth. *Drug and Alcohol Dependence*, *130*, 194-200.

Esbensen, F. A., Deschenes, E. P., & Winfree Jr, L. T. (1999). Differences between gang girls and gang boys: Results from a multisite survey. *Youth and Society*, *31*, 27-53.

Esbensen, F. A., & Winfree, L. T. (1998). Race and gender differences between gang and non-gang youths: Results from a multisite survey. *Justice Quarterly*, *15*, 505-526.

Eschenbeck, H., Kohlmann, C. W., & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences*, *28*, 18-26.

Exner-Cortens, D., Wright, A., Hurlock, D., Carter, R., Krause, P., & Crooks, C. (2019). Preventing adolescent dating violence: An outcomes protocol for evaluating a gender-transformative healthy relationships promotion program. *Contemporary Clinical Trials Communications*. https://doi.org/10.1016/j.conctc.2019.100484

Fagan, A. A., & Lindsey, A. M. (2014). Gender differences in the effectiveness of delinquency prevention programs: What can be learned from experimental research? *Criminal Justice and Behavior, 41*, 1057-1078.

Fagan, A. A., & Mazerolle, P. (2011). Repeat offending and repeat victimization: Assessing similarities and differences in psychosocial risk factors. *Crime and Delinquency, 57*, 732-755.

Fang, X., & Corso, P. S. (2007). Child maltreatment, youth violence, and intimate partner violence: Developmental relationships. *American Journal of Preventive Medicine, 33*, 281-290.

Fang, L., & Schinke, S. P. (2013). Two-year outcomes of a randomized, family-based substance use prevention trial for Asian American adolescent girls. *Psychology of Addictive Behaviors*, *27*, 788-789.

Farrington, D. P., & Ttofi, M. M. (2009). School-based programs to reduce bullying and victimization. *Campbell Systematic Reviews*, *5*, 1-148.

Feiring, C., Taska, L., & Lewis, M. (1999). Age and gender differences in children's and adolescents' adaptation to sexual abuse. *Child Abuse and Neglect, 23*, 115-128.

Feld, B. C. (2009). Violent girls or relabeled status offenders? An alternative interpretation of the data. *Crime and Delinquency*, *55*, 241-265.

Felson, M. (1986). Linking criminal choices, routine activities, informal control, and criminal outcomes. In D. B. Cornish, & R. V. Clarke (Eds.). In *The reasoning criminal: Rational choices perspectives and offending* (p. 119-128). Transaction.

Felson, R. B., Berg, M. T., Rogers, E. M., & Krajewski, A. (2018). Disputatiousness and the offender–victim overlap. *Journal of Research in Crime and Delinquency*, *55*, 351-389.

Felson, R. B., Savolainen, J., Berg, M. T., & Ellonen, N. (2013). Does spending time in public settings contribute to the adolescent risk of violent victimization? *Journal of Quantitative Criminology*, *29*, 273-293.

Fernández-Suárez, A., Herrero, J., Pérez, B., Juarros-Basterretxea, J., & Rodríguez-Díaz, F. J. (2016). Risk factors for school dropout in a sample of juvenile offenders. *Frontiers in Psychology*, *7*, 1-7.

Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2015) Prevalence of childhood exposure to violence, crime, and abuse: Results from the National Survey of Children's Exposure to Violence. *JAMA Pediatrics, 169,* 746-754.

Flanagan, J. C., Jaquier, V., Overstreet, N., Swan, S. C., & Sullivan, T. P. (2014). The mediating role of avoidance coping between intimate partner violence (IPV) victimization, mental health, and substance abuse among women experiencing bidirectional IPV. *Psychiatry Research*, *220*, 391-396.

Flexon, J. L., Meldrum, R. C., & Piquero, A. R. (2016). Low self-control and the victim–offender overlap: A gendered analysis. *Journal of Interpersonal Violence*, *31*, 2052-2076.

Foley, A. (2008). The current state of gender-specific delinquency programming. *Journal of Criminal Justice, 36,* 262-269.

Ford, J. A., Reckdenwald, A., & Marquardt, B. (2014). Prescription drug misuse and gender. *Substance Use and Misuse*, *49*, 842-851.

Forde, D. R., & Kennedy, L. W. (1997). Risky lifestyles, routine activities, and the general theory of crime. *Justice Quarterly*, *14*, 265-294.

Foshee, V. A. (1996). Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Education Research*, *11,* 275-286.

Foshee, V. A., Bauman, K. E., & Linder, G. F. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and the Family*, *61,* 331-342.

Foshee, V. A., Benefield, T. S., Ennett, S. T., Bauman, K. E., & Suchindran, C. (2004). Longitudinal predictors of serious physical and sexual dating violence victimization during adolescence. *Preventive Medicine*, *39*, 1007-1016.

Foshee, V. A., Benefield, T. S., Reyes, H. L. M., Ennett, S. T., Faris, R., Chang, L. Y., Husson, A. & Suchindran, C. M. (2013). The peer context and the development of the perpetration of adolescent dating violence. *Journal of Youth and Adolescence*, *42*, 471-486.

Foshee, V. A., Linder, F., MacDougall, J. E., & Bangdiwala, S. (2001). Gender differences in the longitudinal predictors of adolescent dating violence. *Preventive Medicine*, *32*, 128-141.

Francis, K. A. (2014). General strain theory, gender, and the conditioning influence of negative internalizing emotions on youth risk behaviors. *Youth Violence and Juvenile Justice, 12*, 58-76.

Fredricks, J. A., & Eccles, J. S. (2005). Family socialization, gender, and sport motivation and involvement. *Journal of Sport and Exercise Psychology*, *27*, 3-31.

Frydenberg, E., & Lewis, R. (1993). Boys play sport and girls turn to others: Age, gender and ethnicity as determinants of coping. *Journal of Adolescence, 16*, 253-266.

Fuendeling, J. M. (1998). Affect regulation as a stylistic process within adult attachment. *Journal of Social and Personal Relationships*, *15*, 291-322.

Furman, W., & Rose, A. J. (2015). Friendships, romantic relationships, and peer relationships. In R. M. Lerner, M. H. Borenstein, & T. Leventhal (Eds.), *Handbook of child psychology and developmental science* (p. 1-43). John Wiley & Sons.

Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2019). Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. *Aggression and Violent Behavior, 45*, 111-133.

Gagné, M. H., Lavoie, F., & Hébert, M. (2005). Victimization during childhood and re-victimization in dating relationships in adolescent girls. *Child Abuse and Neglect, 29*, 1155-1172.

Gardner, K. J., Archer, J., & Jackson, S. (2012). Does maladaptive coping mediate the relationship between borderline personality traits and reactive and proactive aggression? *Aggressive Behavior*, *38*, 403-413.

Garthe, R. C., Sullivan, T. N., & McDaniel, M. A. (2017). A meta-analytic review of peer risk factors and adolescent dating violence. *Psychology of Violence*, *7*, 45-57.

Gerrity, E., & Folcarelli, C. (2008). *Child traumatic stress: What every policymaker should know.* The National Child Traumatic Stress Network.

Gertseva, A. (2009). *The power and utility of latent growth modeling applied to longitudinal data for assessing the developmental synchrony of offending and victimization* [Unpublished doctoral dissertation]. Washington State University.

Gibb, B. E., Chelminski, I., & Zimmerman, M. (2007). Childhood emotional, physical, and sexual abuse, and diagnoses of depressive and anxiety disorders in adult psychiatric outpatients. *Depression and Anxiety, 24*, 256-263.

Gibson, C. L. (2012). An investigation of neighborhood disadvantage, low self-control, and violent victimization among youth. *Youth Violence and Juvenile Justice, 10*, 41-63.

Gilligan, C. (1993). *In a different voice: Psychological theory and women's development*. Harvard University Press.

Glick, B., & Goldstein, A. P. (1987). Aggression replacement training. *Journal of Counseling and Development, 65*, 356-362.

Golladay, K.A., & Holtfreter, K. (2017). The consequences of identity theft victimization: An examination of emotional and physical health outcomes. *Victims and Offenders,12*, 741-760.

Gottfredson, M. R. (1981). On the etiology of criminal victimization. *Journal of Criminal Law and Criminology*, *72*, 714-726.

Gottfredson G. D. & Gottfredson, D. C. (1985). *Schools and delinquency*. New York: Plenum.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.

Gover, A. R., Jennings, W. G., & Tewksbury, R. (2009). Adolescent male and female gang members' experiences with violent victimization, dating violence, and sexual assault. *American Journal of Criminal Justice, 34*, 103-115.

Gover, A. R., Jennings, W. G., Tomsich, E. A., Park, M., & Rennison, C. M. (2011). The influence of childhood maltreatment and self-control on dating violence: A comparison of college students in the United States and South Korea. *Violence and Victims*, *23*, 296-318.

Grasmick, H. G., Tittle, C. R., Bursik Jr, R. J., & Arneklev, B. J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency*, *30*, 5-29.

Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violent profiles. *Journal of Interpersonal Violence*, *12*, 126-141.

Greenman, S. J., & Matsuda, M. (2016). From early dating violence to adult intimate partner violence: continuity and sources of resilience in adulthood. *Criminal Behavior and Mental Health, 26,* 293-303.

Griffin, K. W., & Botvin, G. J. (2010). Evidence-based interventions for preventing substance use disorders in adolescents. *Child and Adolescent Psychiatric Clinics, 19,* 505-526.

Griffith, M. A., Dubow, E. F., & Ippolito, M. F. (2000). Developmental and cross-situational differences in adolescents' coping strategies. *Journal of Youth and Adolescence, 29,* 183-204.

Grych, J. H. & Kinsfogel, K. M. (2010). Exploring the role of attachment style in the relation between family aggression and abuse in adolescent dating relationships. *Journal of Aggression, Maltreatment, and Trauma, 19,* 624-640.

Gudjonsson, G. H., & Sigurdsson, J. F. (2007). Motivation for offending and personality. A study among young offenders on probation. *Personality and Individual Differences, 42,* 1243-1253.

Gundersen, K., & Svartdal, F. (2006). Aggression replacement training in Norway: Outcome evaluation of 11 Norwegian student projects. *Scandinavian Journal of Educational Research, 50,* 63-81.

Gutman, L. M., & Eccles, J. S. (2007). Stage-environment fit during adolescence: Trajectories of family relations and adolescent outcomes. *Developmental Psychology, 43,* 522-537.

Hagan, J., Simpson, J., & Gillis, A. R. (1987). Class in the household: A power-control theory of gender and delinquency. *American Journal of Sociology, 92,* 788-816.

Haller, D. L., & Miles, D. R. (2003). Victimization and perpetration among perinatal substance abusers. *Journal of Interpersonal Violence, 18,* 760-780.

Halpern, C. T., Oslak, S. G., Young, M. L., Martin, S. L., & Kupper, L. L. (2001). Partner violence among adolescents in opposite-sex romantic relationships: Findings from the National Longitudinal Study of Adolescent Health. *American Journal of Public Health, 91,* 1679-1685.

Hamby, S., Finkelhor, D., & Turner, H. (2012). Teen dating violence: Co-occurrence with other victimizations in the National Survey of Children's Exposure to Violence (NatSCEV). *Psychology of Violence, 2,* 111-124.

Hamby, S., & Turner, H. (2013). Measuring teen dating violence in males and females: insights from the National Survey of Children's Exposure to Violence. *Psychology of Violence*, *3*, 323-339.

Han, S. C. (2015). *Family aggression, prosocial friends, and the risk of dating and friend victimization in late adolescence* [Unpublished Master's Thesis]. University of Southern California.

Hart, C. O., & Mueller, C. E. (2013). School delinquency and social bond factors: Exploring gendered differences among a national sample of 10th graders. *Psychology in the Schools*, *50*, 116-133.

Hartinger-Saunders, R. M., Rine, C. M., Wieczorek, W., & Nochajski, T. (2012). Family level predictors of victimization and offending among young men: Rethinking the role of parents in prevention and interventions models. *Children and Youth Services Review*, *34*, 2423-2432.

Hawkins, D. L., (2000). *The contribution of child maltreatment and gender-role attitudes to aggressive teen relationships* [Unpublished Doctoral Dissertation]. York University.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*, 64–105.

Hay, C. (2003). Family strain, gender, and delinquency. *Sociological Perspectives*, *46*, 107-135.

Hay, C., & Evans, M. M. (2006). Violent victimization and involvement in delinquency: Examining predictions from general strain theory. *Journal of Criminal Justice*, *34*, 261-274.

Haynie, D. L., & Piquero, A. R. (2006). Pubertal development and physical victimization in adolescence. *Journal of Research in Crime and Delinquency*, *43*, 3-35.

Hébert, M., Daspe, M. È., Lapierre, A., Godbout, N., Blais, M., Fernet, M., & Lavoie, F. (2019). A meta-analysis of risk and protective factors for dating violence victimization: The role of family and peer interpersonal context. *Trauma, Violence, and Abuse*, *20*, 574-590.

Hébert, M., Moreau, C., Blais, M., Lavoie, F., & Guerrier, M. (2017). Child sexual abuse as a risk factor for teen dating violence: Findings from a representative sample of Quebec youth. *Journal of Child and Adolescent Trauma, 10*, 51-61.

Heimer, K., & De Coster, S. (1999). The gendering of violent delinquency. *Criminology, 37,* 471-487.

Henson, B., Wilcox, P., Reyns, B. W., & Cullen, F. T. (2010). Gender, adolescent lifestyles, and violent victimization: Implications for routine activity theory. *Victims and Offenders, 5,* 303-328.

Herbel, K. F. (2002). *Personality predictors of confluence of risk in adolescent females living in group homes* [Unpublished Doctoral Dissertation]. University of California Riverside.

Hickman, L. J., Jaycox, L. H., & Aronoff, J. (2004). Dating violence among adolescents: Prevalence, gender distribution, and prevention program effectiveness. *Trauma, Violence, & Abuse, 5,* 123-142.

Hindelang, M. J. (1976). *Criminal victimization in eight American cities: A descriptive analysis of common theft and assault*. Ballinger.

Hindelang, M. J., Gottfredson, M. R., & Garofalo, J. (1978). *Victims of personal crime: An empirical foundation for a theory of personal victimization*. Ballinger.

Hindelang, M. J., Hirschi, T., & Weis, J. G. (1981). *Measuring delinquency.* Sage.

Hirschi, T. (1969) *Causes of delinquency*. University of California Press.

Hirschi, T. (2004). Self-control and crime. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and application* (p. 537-552). The Guildford Press.

Hoeve, M., Stams, G. J. J., Van der Put, C. E., Dubas, J. S., Van der Laan, P. H., & Gerris, J. R. (2012). A meta-analysis of attachment to parents and delinquency. *Journal of Abnormal Child Psychology*, *40*, 771-785.

Hoglund, W. L. (2007). School functioning in early adolescence: Gender-linked responses to peer victimization. *Journal of Educational Psychology*, *99*, 683-699.

Hoglund, W. L., Hosan, N. E., & Leadbeater, B. J. (2012). Using your WITS: A 6-year follow-up of a peer victimization prevention program. *School Psychology Review, 41*, 193-214.

Holtfreter, K., Reisig, M. D., Leeper Piquero, N., & Piquero, A. R. (2010). Low self-control and fraud: Offending, victimization, and their overlap. *Criminal Justice and Behavior, 37*, 188-203.

Holtfreter, K., Reisig, M. D., & O'Neal, E. N. (2015). Prescription drug misuse in late adulthood: An empirical examination of competing theories. *Journal of Drug Issues, 45*, 351-367.

Holtfreter, K., Reisig, M. D., & Pratt, T. C. (2008). Low self-control, routine activities, and fraud victimization. *Criminology, 46*, 189-220.

Holtfreter, K., Reisig, M. D., & Turanovic, J. J. (2017). Depression and infrequent participation in social activities among older adults: the moderating role of high-quality family ties. *Aging and Mental Health, 21*, 379-388.

Hoogland, J. J., & Boomsma, A. (1998). Robustness studies in covariance structure modeling: An overview and a meta-analysis. *Sociological Methods and Research, 26*, 329-367.

Howard, D. E., Beck, K., Kerr, M. H., & Shattuck, T. (2005). Psychosocial correlates of dating violence victimization among Latino youth. *Adolescence, 40*, 319-331.

Howard, D. E., Debnam, K. J., & Wang, M. Q. (2013). Ten-year trends in physical dating violence victimization among US adolescent females. *Journal of School Health, 83*, 389-399.

Howard, D. E., Debnam, K. J., Wang, M. Q., & Gilchrist, B. (2012). 10-year trends in physical dating violence victimization among US adolescent males. *International Quarterly of Community Health Education, 32*, 283-305.

Howard, A. L., Kimonis, E. R., Muñoz, L. C., & Frick, P. J. (2012). Violence exposure mediates the relation between callous-unemotional traits and offending patterns in adolescence. *Journal of Abnormal Child Psychology, 40*, 1237-1247.

Howard, D. E., & Wang, M. Q. (2003). Risk profiles of adolescent girls who were victims of dating violence. *Adolescence, 38*, 1-14.

Howard, D. E., Wang, M. Q., & Fang, Y. (2007). Psychosocial factors associated with reports of physical dating violence among US adolescent females. *Adolescence, 42*, 449-460.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1-55.

Huebner, A. J., & Betts, S. C. (2002). Exploring the utility of social control theory for youth development: Issues of attachment, involvement, and gender. *Youth and Society, 34*, 123-145.

Huijsmans, T., Nivette, A. E., Eisner, M., & Ribeaud, D. (2019). Social influences, peer delinquency, and low self-control: An examination of time-varying and reciprocal effects on delinquency over adolescence. *European Journal of Criminology*, https://doi.org/10.1177/1477370819838720

Hukriede, C. (2016). *Gender differences in factors contributing to frequency of victimization among youth in residential placement* [Unpublished doctoral dissertation]. University of North Dakota.

Ihongbe, T. O., Cha, S., & Masho, S. W. (2017). Age of sexual debut and physical dating violence victimization: sex differences among US high school students. *Journal of School Health, 87*, 200-208.

Iratzoqui, A. (2018). Strain and opportunity: A theory of repeat victimization. *Journal of Interpersonal Violence*, *33*, 1366-1387.

Iratzoqui, A. (2020). A gendered model of lifetime experiences of strain. *Youth and Society, 52*, 166-186.

Jackson, S. M. (1999). Issues in the dating violence research: A review of the literature. *Aggression and Violent Behavior*, *4*, 233-247.

Jang, S. J. (2007). Gender differences in strain, negative emotions, and coping behaviors: A general strain theory approach. *Justice Quarterly*, *24*, 523-553.

Jang, S. J., & Johnson, B. R. (2003). Strain, negative emotions, and deviant coping among African Americans: A test of general strain theory. *Journal of Quantitative Criminology*, *19*, 79-105.

Jenkins, P. H. (1997). School delinquency and the school social bond. *Journal of Research in Crime and Delinquency*, *34*, 337-367.

Jennings, W. G., Higgins, G. E., Tewksbury, R., Gover, A. R., & Piquero, A. R. (2010). A longitudinal assessment of the victim-offender overlap. *Journal of Interpersonal Violence*, *25*, 2147-2174.

Jennings, W. G., Park, M., Tomsich, E. A., Gover, A. R., & Akers, R. L. (2011). Assessing the overlap in dating violence perpetration and victimization among South Korean college students: The influence of social learning and self-control. *American Journal of Criminal Justice*, *36*, 188-206.

Jennings, W. G., Piquero, N. L., Gover, A. R., & Perez, D. M. (2009). Gender and general strain theory: A replication and exploration of Broidy and Agnew's gender/strain hypothesis among a sample of southwestern Mexican American adolescents. *Journal of Criminal Justice, 37,* 404-417.

Jennings, W. G., Piquero, A. R., & Reingle, J. M. (2012). On the overlap between victimization and offending: A review of the literature. *Aggression and Violent Behavior, 17,* 16-26.

Jennings, W. G., Zgoba, K. M., Maschi, T., & Reingle, J. M. (2014). An empirical assessment of the overlap between sexual victimization and sex offending. *International Journal of Offender Therapy and Comparative Criminology, 58,* 1466-1480.

Jensen, G., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activities. *Violence and Victims, 1,* 85-99.

Jo, Y., & Lee, B. (2018). Self-control, risky lifestyles, and violent victimization: A longitudinal study of the youth in South Korea. *International Journal of Law, Crime and Justice, 55,* 27-39.

Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2020). *Monitoring the future: National survey results on drug use, 1975-2019.* Institute for Social Research, The University of Michigan.

Karlsson, M. E., Temple, J. R., Weston, R., & Le, V. D. (2016). Witnessing interparental violence and acceptance of dating violence as predictors for teen dating violence victimization. *Violence Against Women, 22,* 625-646.

Kast, N. R., Eisenberg, M. E., & Sieving, R. E. (2016). The role of parent communication and connectedness in dating violence victimization among Latino adolescents. *Journal of Interpersonal Violence, 31,* 1932-1955.

Kaufman, J. M. (2009). Gendered responses to serious strain: The argument for a general strain theory of deviance. *Justice Quarterly, 26,* 410-444.

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods and Research, 44,* 486-507.

Kerig, P. K., Volz, A. R., Moeddel, M. A., & Cuellar, R. E. (2010). Implementing dating violence prevention programs with flexibility, fidelity, and sensitivity to diversity: Lessons learned from Expect Respect. *Journal of Aggression, Maltreatment & Trauma, 19,* 661-680.

Kerr, D. C., & Capaldi, D. M. (2011). Young men's intimate partner violence and relationship functioning: long-term outcomes associated with suicide attempt and aggression in adolescence. *Psychological Medicine*, *41*, 759-769.

Kerstens, J., & Jansen, J. (2016). The victim–perpetrator overlap in financial cybercrime: Evidence and reflection on the overlap of youth's on-line victimization and perpetration. *Deviant Behavior*, *37*, 585-600.

Kezdi, G. (2004). Robust standard error estimation in fixed-effects panel models. *Hungarian Statistical Review Special*, *9*, 96-116.

Khantzian, E. J. (2003). The self-medication hypothesis revisited: The dually diagnosed patient. *Primary Psychiatry*, *10*, 47-54.

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology*, *68*, 19-30.

Kim, H. K., & Leve, L. D. (2011). Substance use and delinquency among middle school girls in foster care: A three-year follow-up of a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *79*, 740-750.

King, G., Flisher, A. J., Noubary, F., Reece, R., Marais, A., & Lombard, C. (2004). Substance abuse and behavioral correlates of sexual assault among South African adolescents. *Child Abuse and Neglect*, *28*, 683-696.

Klevens, J., Duque, L. F., & Ramirez, C. (2002). The victim-perpetrator overlap and routine activities: Results from a cross-sectional study in Bogotá, Colombia. *Journal of Interpersonal Violence*, *17*, 206-216.

Kobulsky, J. M., Yoon, S., Bright, C. L., Lee, G., & Nam, B. (2018). Gender-moderated pathways from childhood abuse and neglect to late-adolescent substance use. *Journal of Traumatic Stress*, *31*, 654-664.

Koo, D. J., Peguero, A. A., & Shekarkhar, Z. (2012). Gender, immigration, and school victimization. *Victims and Offenders*, *7*, 77-96.

Koon-Magnin, S., Bowers, D., Langhinrichsen-Rohling, J., & Arata, C. (2016). Social learning, self-control, gender, and variety of violent delinquency. *Deviant Behavior*, *37*, 824-836.

Koposov, R., & Ruchkin, V. (2011). Exposure to community violence, psychopathology, and personality traits in Russian youth. *Depression Research and Treatment, 2011,* 1-15.

Kort-Butler, L. A. (2009). Coping styles and sex differences in depressive symptoms and delinquent behavior. *Journal of Youth and Adolescence, 38,* 122-136.

Krohn, M. D., Lizotte, A. J., Thornberry, T. P., Smith, C., & McDowall, D. (1996). Reciprocal causal relationships among drug use, peers, and beliefs: A five-wave panel model. *Journal of Drug Issues, 26,* 405-428.

Krohn, M. D., & Massey, J. L. (1980). Social control and delinquent behavior: An examination of the elements of the social bond. *The Sociological Quarterly, 21,* 529-544.

Kumpfer, K. L., Smith, P., & Summerhays, J. F. (2008). A wakeup call to the prevention field: Are prevention programs for substance use effective for girls? *Substance use and Misuse, 43,* 978-1001.

Laub, J. H., & Sampson, R. J. (2003) *Shared beginnings, divergent lives: Delinquent boys to age 70*. Harvard University Press.

Lauritsen, J. L., & Carbone-Lopez, K. (2011). Gender differences in risk factors for violent victimization: An examination of individual-, family-, and community-level predictors. *Journal of Research in Crime and Delinquency, 48,* 538-565.

Lauritsen, J. L., Laub, J. H., & Sampson, R. J. (1992). Conventional and delinquent activities: Implications for the prevention of violent victimization among adolescents. *Violence and Victims, 7,* 91-108.

Lauritsen, J. L., & Quinet, K. F. D. (1995). Repeat victimization among adolescents and young adults. *Journal of Quantitative Criminology, 11,* 143-166.

Lauritsen, J. L., Sampson, R. J., & Laub, J. H. (1991). The link between offending and victimization among adolescents. *Criminology, 29,* 265-292.

Lavoie, F., Hébert, M., Tremblay, R., Vitaro, F., Vézina, L., & McDuff, P. (2002). History of family dysfunction and perpetration of dating violence by adolescent boys: A longitudinal study. *Journal of Adolescent Health, 30,* 375-383.

Leadbeater, B. J., Connolly, J., & Temple, J. R. (2018). Changing your status in a changing world: It is complicated! A developmental systems framework for understanding dating violence in adolescents and young adults. In Wolfe, D. A., & Temple, J. R. (eds.) *Adolescent dating violence: Theory, research, and prevention*, 2-23. Academic Press.

Leadbeater, B., Sukhawathanakul, P., Smith, D., & Bowen, F. (2015). Reciprocal associations between interpersonal and values dimensions of school climate and peer victimization in elementary school children. *Journal of Clinical Child & Adolescent Psychology, 44*, 480-493.

Leadbeater, B. J., Thompson, K., & Sukhawathanakul, P. (2014). It gets better or does it? Peer victimization and internalizing problems in the transition to young adulthood. *Development and Psychopathology, 26*, 675-688.

Lee, B., & Jo, B. (2017). Correlates of repeat victimization and sex differences in South Korean youth. *Journal of Interpersonal Violence*, https://doi.org/10.1177/0886260517708760

Lee, W. (2015). A longitudinal study of victimization among South Korean youth: The integrative approach between lifestyle and control theory. *Children and Youth Services Review, 58*, 200-207.

Li, K. K., Washburn, I., DuBois, D. L., Vuchinich, S., Ji, P., Brechling, V., Berbaum, M., Snyder, F., & Faly, B. R. (2011). Effects of the Positive Action programme on problem behaviours in elementary school students: a matched-pair randomised control trial in Chicago. *Psychology and Health, 26*, 187-204.

Li, S. D. (2004). The impacts of self-control and social bonds on juvenile delinquency in a national sample of midadolescents. *Deviant Behavior, 25*, 351-373.

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Annals of Internal Medicine, 151*, 65-94.

Like-Haislip, T. Z., & Miofsky, K. T. (2011). Race, ethnicity, gender, and violent victimization. *Race and Justice, 1*, 254-276.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*, 1198-1202.

Liu, C. (2014). *Relations between childhood violence exposure and dating violence victimization in the treatment seeking low-income, urban African-American girls* [Unpublished doctoral dissertation]. Palo Alto University.

Loeber, R., Kalb, L., & Huizinga, D. (2001). *Juvenile delinquency and serious injury victimization*. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Lösel, F., & Farrington, D. P. (2012). Direct protective and buffering protective factors in the development of youth violence. *American Journal of Preventive Medicine*, *43*, 8-23.

Love is Respect (2020) *A parent's guide to teen dating violence: 10 questions to start the conversation.* https://www.breakthecycle.org/sites/default/files/hanbook_-_parents_of_teen_0.pdf

Lyness, K. P., & Koehler, A. N. (2016). Effect of coping on substance use in adolescent girls: A dyadic analysis of parent and adolescent perceptions. *International Journal of Adolescence and Youth*, *21*, 449-461.

Ma, T. L., & Bellmore, A. (2012). Peer victimization and parental psychological control in adolescence. *Journal of Abnormal Child Psychology*, *40*, 413-424.

Maas, C. D., Fleming, C. B., Herrenkohl, T. I., & Catalano, R. F. (2010). Childhood predictors of teen dating violence victimization. *Violence and Victims*, *25*, 131-149.

Magdol, L., Moffitt, T. E., Caspi, A., & Silva, P. A. (1998). Developmental antecedents of partner abuse: a prospective-longitudinal study. *Journal of Abnormal Psychology*, *107*, 375-389.

Maldonado-Molina, M. M., Jennings, W. G., Tobler, A. L., Piquero, A. R., & Canino, G. (2010). Assessing the victim-offender overlap among Puerto Rican youth. *Journal of Criminal Justice, 38*, 1191-1201.

Malik, S., Sorenson, S. B., & Aneshensel, C. S. (1997). Community and dating violence among adolescents: Perpetration and victimization. *Journal of Adolescent Health*, *21*, 291-302.

Manchikanti Gómez, A. (2011). Testing the cycle of violence hypothesis: Child abuse and adolescent dating violence as predictors of intimate partner violence in young adulthood. *Youth and Society*, *43*, 171-192.

Manasse, M. E., & Ganem, N. M. (2009). Victimization as a cause of delinquency: The role of depression and gender. *Journal of Criminal Justice, 37*, 371-378.

Manseau, H., Fernet, M., Hébert, M., Collin-Vézina, D., & Blais, M. (2008). Risk factors for dating violence among teenage girls under child protective services. *International Journal of Social Welfare, 17*, 236-242.

Mansfield, E. R., & Helms, B. P. (1982). Detecting multicollinearity. *The American Statistician*, *36*, 158-160.

Marcum, C. D., Higgins, G. E., Freiburger, T. L., & Ricketts, M. L. (2014). Exploration of the cyberbullying victim/offender overlap by sex. *American Journal of Criminal Justice, 39*, 538-548.

Mawby, R. I. (1979). The victimization of juveniles: A comparative study of three areas of publicly owned housing in Sheffield. *Journal of Research in Crime and Delinquency, 16*, 93-116.

Maxwell, C. D., Robinson, A. L., & Post, L. A. (2003). The nature and predictors of sexual victimization and offending among adolescents. *Journal of Youth and Adolescence, 32*, 465-477.

Mazerolle, P. (1998). Gender, general strain, and delinquency: An empirical examination. *Justice Quarterly, 15*, 65-91.

Mazerolle, P., Piquero, A. R., & Capowich, G. E. (2003). Examining the links between strain, situational and dispositional anger, and crime: Further specifying and testing general strain theory. *Youth and Society*, *35*, 131-157.

McCloskey, L. A. (2013). The intergenerational transfer of mother–daughter risk for gender-based abuse. *Psychodynamic Psychiatry*, *41*, 303-328.

McDonell, J., Ott, J., & Mitchell, M. (2010). Predicting dating violence victimization and perpetration among middle and high school students in a rural southern community. *Children and Youth Services Review*, *32*, 1458-1463.

McGeough, B. L., & Sterzing, P. R. (2018). A systematic review of family victimization experiences among sexual minority youth. *The Journal of Primary Prevention*, *39*, 491-528.

McLean, G., & Bocinski, S. G. (2019). *The economic cost of intimate partner violence, sexual assault, and stalking.* Institute for Women's Policy Research. https://iwpr.org/publications/economic-cost-intimate-partner-violence-sexual-assault-stalking/

Meinck, F., Cluver, L. D., & Boyes, M. E. (2017). Longitudinal predictors of child sexual abuse in a large community-based sample of South African youth. *Journal of Interpersonal Violence*, *32*, 2804-2836.

Melnyk, B., Kelly, S., & Lusk, P. (2014). Outcomes and feasibility of a manualized cognitive-behavioral skills building intervention: Group COPE for depressed and anxious adolescents in school settings. *Journal of Child and Adolescent Psychiatric Nursing*, *27*, 3-13.

Menard, S. W. (2000). The "normality" of repeat victimization from adolescence through early adulthood. *Justice Quarterly, 17*, 543-574.

Menard, S. W. (2002). *Short and long-term consequences of adolescent victimization*. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Menard, S. W. (2012). Age, criminal victimization, and offending: Changing relationships from adolescence to middle adulthood. *Victims and Offenders*, *7*, 227-254.

Miller, E., Tancredi, D. J., McCauley, H. L., Decker, M. R., Virata, M. C. D., Anderson, H. A., Stetkevich, N., Brown, E. W., Feroz Moideen J. D., & Silverman, J. G. (2012). "Coaching boys into men": A cluster-randomized controlled trial of a dating violence prevention program. *Journal of Adolescent Health, 51*, 431-438.

Miller, T. R., Cohen, M. A., and Wiersema, B. (1996). *Victim costs and consequences: A new look*. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Mirowsky, J., & Ross, C. E. (1995). Sex differences in distress: Real or artifact? *American Sociological Review, 60*, 449-468.

Mitchell, K. J., & Finkelhor, D. (2001). Risk of crime victimization among youth exposed to domestic violence. *Journal of Interpersonal Violence, 16*, 944-964.

Mitra, M., Mouradian, V. E., & McKenna, M. (2013). Dating violence and associated health risks among high school students with disabilities. *Maternal and Child Health Journal*, *17*, 1088-1094.

Mmari, K., Lantos, H., Blum, R. W., Brahmbhatt, H., Sangowawa, A., Yu, C., & Delany-Moretlwe, S. (2014). A global study on the influence of neighborhood contextual factors on adolescent health. *Journal of Adolescent Health, 55*, S13-S20.

Moffitt, T. E. (2017). A review of research on the taxonomy of life-course persistent versus adolescent-limited antisocial behavior. In F. T. Cullen, J. P. Wright, K. R. Blevins (Eds.) *Taking stock: the status of criminological theory* (p. 277-311). Routledge.

Molidor, C., & Tolman, R. M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women*, *4*, 180-194.

Moon, B., Morash, M., Jeong, S., & Yoon, H. S. (2016). Gender differences in the routine activities associated with risks for larceny in South Korea. *International Journal of Offender Therapy and Comparative Criminology*, *60*, 1327-1343.

Morash, M. (1999). A consideration of gender in relation to social learning and social structure: A general theory of crime and deviance. *Theoretical Criminology*, *3*, 451-462.

Morash, M., & Moon, B. (2007). Gender differences in the effects of strain on the delinquency of South Korean youth. *Youth and Society*, *38*, 300-321.

Morgan, R. E., & Truman, J. L. (2018). *Criminal victimization, 2017*. U.S. Department of Justice, Office of Justice Programs. Bureau of Justice Statistics.

Morris, A. M., Mrug, S., & Windle, M. (2015). From family violence to dating violence: Testing a dual pathway model. *Journal of Youth and Adolescence*, *44*, 1819-1835.

Mrug, S., & McCay, R. (2013). Parental and peer disapproval of alcohol use and its relationship to adolescent drinking: Age, gender, and racial differences. *Psychology of Addictive Behaviors*, *27*, 604-614.

Mueller, V., Jouriles, E. N., McDonald, R., & Rosenfield, D. (2013). Adolescent beliefs about the acceptability of dating violence: Does violent behavior change them? *Journal of Interpersonal Violence*, *28*, 436-450.

Mueller-Johnson, K., Eisner, M. P., & Obsuth, I. (2014). Sexual victimization of youth with a physical disability: An examination of prevalence rates, and risk and protective factors. *Journal of Interpersonal Violence*, *29*, 3180-3206.

Muftic, L. R., & Moreno, R. D. (2010). Juvenile homicide victimization differences and similarities by gender. *Youth Violence and Juvenile Justice*, *8*, 386-398.

Musu-Gillette, L., Zhang, A., Wang, K., Zhang, J., and Oudekerk, B.A. (2019). *Indicators of school crime and safety: 2018*. U.S. Department of Justice, Office of Justice Programs. National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics

Muthén, L.K. and Muthén, B.O. (1998-2017). *Mplus user's guide, eighth edition*. Muthén & Muthén

Nash, S. G., McQueen, A., & Bray, J. H. (2005). Pathways to adolescent alcohol use: Family environment, peer influence, and parental expectations. *Journal of Adolescent Health*, *37*, 19-28.

National Center on Addiction and Substance Use (2011). *Adolescent substance use: America's #1 health problem.* The National Center on Addiction and Substance use at Columbia University. file:///Users/natayshapusch/Downloads/Adolescent-substance-use-americas-no-1-public-health-problem.pdf

National Institute on Drug Abuse (2020). *Trends and statistics. National Institute on Drug Abuse*. https://www.drugabuse.gov/related-topics/trends-statistics

National Institute of Justice (n.d.). *Teen dating violence.* https://nij.ojp.gov/topics/crimes/teen-dating-violence

Nelson, B. V., Patience, T. H., & MacDonald, D. C. (1999). Adolescent risk behavior and the influence of parents and education. *The Journal of the American Board of Family Practice*, *12*, 436-443.

Nichols, A., & Shaffer, M. (2007). *Clustered errors in Stata* [PowerPoint slides]. https://www.stata.com/meeting/13uk/nichols_crse.pdf

Nofziger, S. (2009). Deviant lifestyles and violent victimization at school. *Journal of Interpersonal Violence, 9*, 1494-1517.

O'Brien, J. E., Li, W., Givens, A., & Leibowitz, G. S. (2017). Domestic minor sex trafficking among adjudicated male youth: Prevalence and links to treatment. *Children and Youth Services Review, 82*, 392-399.

Oesterle, S., Hawkins, J. D., Fagan, A. A., Abbott, R. D., & Catalano, R. F. (2010). Testing the universality of the effects of the Communities That Care prevention system for preventing adolescent drug use and delinquency. *Prevention Science, 11*, 411-423.

Oesterle, S., Hawkins, J. D., Kuklinski, M. R., Fagan, A. A., Fleming, C., Rhew, I. C., Brown, E. C., Abbott, R. D., & Catalano, R. F. (2015). Effects of Communities That Care on males' and females' drug use and delinquency 9 years after baseline in a community-randomized trial. *American Journal of Community Psychology, 56*, 217-228.

Ohannessian, C. M., Bradley, J., Waninger, K., Ruddy, K., Hepp, B. W., & Hesselbrock, V. (2010). An examination of adolescent coping typologies and young adult alcohol use in a high-risk sample. *Vulnerable Children and Youth Studies, 5,* 52-65.

O'Keefe, M. (1997). Predictors of dating violence among high school students. *Journal of Interpersonal Violence*, *12,* 546-568.

O'Keefe, M. (1998). Factors mediating the link between witnessing inter-parental violence and dating violence. *Journal of Family Violence, 13,* 39-57.

Osgood, D. W., & Chambers, J. M. (2000). Social disorganization outside the metropolis: An analysis of rural youth violence. *Criminology, 38,* 81-116.

Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review,* 61, 635-655.

Özbay, Ö., & Özcan, Y. Z. (2008). A test of Hirschi's social bonding theory: A comparison of male and female delinquency. *International Journal of Offender Therapy and Comparative Criminology*, *52,* 134-157.

Pabayo, R., Molnar, B. E., & Kawachi, I. (2014). The role of neighborhood income inequality in adolescent aggression and violence. *Journal of Adolescent Health, 55,* 571-579.

Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology, 108,* 937-975.

Parker, E. M., Johnson, S. L., Debnam, K. J., Milam, A. J., & Bradshaw, C. P. (2017). Teen dating violence victimization among high school students: A multilevel analysis of school-level risk factors. *Journal of School Health, 87,* 696-704.

Paternoster, R., & Mazerolle, P. (1994). General strain theory and delinquency: A replication and extension. *Journal of Research in Crime and Delinquency, 31,* 235-263.

Paterson, J., Feehan, M., Butler, S., Williams, M., & Cowley-Malcolm, E. T. (2007). Intimate partner violence within a cohort of Pacific mothers living in New Zealand. *Journal of Interpersonal Violence, 22,* 698-721.

Pauwels, L. J. R., & Svensson, R. (2011). Exploring the relationship between offending and victimization: What is the role of risky lifestyles and low self-control? A test in two urban samples. *European Journal of Criminal Policy Research 17*, 163-177.

Pedersen, W. (2001). Adolescent victims of violence in a welfare state: Sociodemography, ethnicity and risk behaviors. *British Journal of Criminology, 41*, 1-21.

Pedersen, W., Wichstrøm, L., & Blekesaune, M. (2001). Violent behaviors, violent victimization, and doping agents: A normal population study of adolescents. *Journal of Interpersonal Violence, 16*, 808-832.

Peguero, A. A. (2009). Victimizing the children of immigrants: Latino and Asian American student victimization. *Youth and Society*, *41*, 186-208.

Peguero, A. A., & Popp, A. M. (2012). Youth violence at school and the intersection of gender, race, and ethnicity. *Journal of Criminal Justice, 40*, 1-9.

Peguero, A. A., Popp, A. M., & Koo, D. J. (2015). Race, ethnicity, and school-based adolescent victimization. *Crime and Delinquency, 61*, 323-349.

Peskin, M. F., Markham, C. M., Shegog, R., Baumler, E. R., Addy, R. C., Temple, J. R., Hernandez, B., Curraco, P. M., Thiel, M. A., Gabay, E. K., & Tortolero Emery, S. R. (2019). Adolescent dating violence prevention program for early adolescents: The Me & You randomized controlled trial, 2014–2015. *American Journal of Public Health*, *109*, 1419-1428.

Peterson, R. A., & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology, 90*, 175-181.

Peterson, D., Carson, D. C., & Fowler, E. (2018). What's sex (composition) got to do with it? The importance of sex composition of gangs for female and male members' offending and victimization. *Justice Quarterly*, *35*, 941-976.

Peterson, S., Lasky, N. V., Fisher, B. S., & Wilcox, P. (2018). Gendered opportunity and school-based victimization: an integrated approach. *Youth Violence and Juvenile Justice, 16*, 137-155

Piquero, N. L., Gover, A. R., MacDonald, J. M., & Piquero, A. R. (2005). The Influence of Delinquent Peers on Delinquency: Does Gender Matter? *Youth and Society, 36*, 251-275.

Piquero, N. L., & Sealock, M. D. (2004). Gender and general strain theory: A preliminary test of Broidy and Agnew's gender/GST hypotheses. *Justice Quarterly, 21*, 125-158.

Pittenger, S. L., Pogue, J. K., & Hansen, D. J. (2018). Predicting sexual revictimization in childhood and adolescence: A longitudinal examination using ecological systems theory. *Child Maltreatment, 23*, 137-146.

Pituch, K. A., & Stevens, J. P. (2015). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBM's SPSS*. Routledge.

Popp, A. M., & Peguero, A. A. (2011). Routine activities and victimization at school: The significance of gender. *Journal of Interpersonal Violence, 26*, 2413-2436.

Popp, A. M., & Peguero, A. A. (2012). Social bonds and the role of school-based victimization. *Journal of Interpersonal Violence*, *27*, 3366-3388.

Posick, C. (2013). The overlap between offending and victimization among adolescents: Results from the second international self-report delinquency study. *Journal of Contemporary Criminal Justice*, *29*, 106-124.

Pratt, T. C., & Cullen, F. T. (2000). The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology, 38*, 931-964.

Pratt, T. C., Cullen, F. T., Sellers, C. S., Winfree, L. T. Jr., Madensen, T. D., Daigle, L. E., Fearn, N. E., & Gau, J. M. (2010). The empirical status of social learning theory: A meta-analysis. *Justice Quarterly, 27*, 65-793.

Pratt, T. C., & Turanovic, J. J. (2016). Lifestyle and routine activity theories revisited: The importance of "risk" to the study of victimization. *Victims and Offenders*, *11*, 335-354.

Pratt, T. C., Turanovic, J. J., Fox, K. A., & Wright, K. A. (2014). Self-control and victimization: A meta-analysis. *Criminology, 52*, 87-116.

Pusch, N. (2019). Protective factors for violent victimization in schools: a gendered analysis. *Journal of School Violence*, *18*, 597-612.

Pusch, N., & Holtfreter, K. (2018). Gender and risk assessment in juvenile offenders: A meta-analysis. *Criminal Justice and Behavior*, *45*, 56-81.

Puzzanchera, C. (2019). *Arrests of juveniles in 2018 reached lowest levels in nearly four decades.* https://www.ojjdp.gov/ojstatbb/snapshots/DataSnapshot_UCR2018.pdf

Raykov, T. (2005). Analysis of longitudinal studies with missing data using covariance structure modeling with full-information maximum likelihood. *Structural Equation Modeling: A Multidisciplinary Journal, 12*, 493-505.

Reid, J. A., & Sullivan, C. J. (2012). Unraveling victim-offender overlap: Exploring profiles and constellations of risk. *Victims and Offenders, 7*, 327-360.

Reidy, D. E., Holland, K. M., Cortina, K., Ball, B., & Rosenbluth, B. (2017). Evaluation of the expect respect support group program: A violence prevention strategy for youth exposed to violence. *Preventive Medicine, 100*, 235-242.

Reingle, J. M., Jennings, W. G., Maume, M. O., & Komro, K. A. (2013). The substance-related etiology of teen dating violence victimization: does gender matter? *Women and Criminal Justice, 23*, 185-208.

Reingle, J. M., & Maldonado-Molina, M. M. (2012). Victimization and violent offending: An assessment of the victim-offender overlap among Native American adolescents and young adults." *International Criminal Justice Review, 2*, 123-138.

Reisig, M. D., & Golladay, K. A. (2019). Violent victimization and low self-control: The mediating effect of risky lifestyles. *Violence and Victims*, *34*, 157-174.

Reisig, M. D., & Holtfreter, K. (2018). The victim–offender overlap in late adulthood. *Journal of Elder Abuse and Neglect, 30*, 144-166.

Reisig, M. D., Holtfreter, K., & Morash, M. (2006). Assessing recidivism risk across female pathways to crime. *Justice Quarterly, 23*, 384-405.

Reisig, M. D., Holtfreter, K., & Turanovic, J. J. (2018). Criminal victimization, depressive symptoms, and behavioral avoidance coping in late adulthood: The conditioning role of strong familial ties. *Journal of Adult Development, 25*, 13-24.

Reuter, T. R., Sharp, C., Temple, J. R., & Babcock, J. C. (2015). The relation between borderline personality disorder features and teen dating violence. *Psychology of Violence, 5*, 163-173.

Rich, C. L., Gidycz, C. A., Warkentin, J. B., Loh, C., & Weiland, P. (2005). Child and adolescent abuse and subsequent victimization: A prospective study. *Child Abuse and Neglect, 29*, 1373-1394.

Richards, T. N., & Branch, K. A. (2012). The relationship between social support and adolescent dating violence: A comparison across genders. *Journal of Interpersonal Violence, 27*, 1540-1561.

Richards, T. N., Branch, K. A., & Ray, K. (2014). The impact of parental and peer social support on dating violence perpetration and victimization among female adolescents: A longitudinal study. *Violence and Victims, 29,* 317-331.

Richards, T. N., Tillyer, M. S., & Wright, E. M. (2017). Intimate partner violence and the overlap of perpetration and victimization: Considering the influence of physical, sexual, and emotional abuse in childhood. *Child Abuse and Neglect, 67,* 240-248.

Riggs, D. S., & O'Leary, K. D. (1989). A theoretical model of courtship aggression. In M. A. Pirog-Good & J. E. Stets (Eds.), *Violence in dating relationships: Emerging social issues* (p. 53–71). Praeger.

Rivera, B., & Widom, C. S. (1990). Childhood victimization and violent offending. *Violence and Victims, 5,* 19-35.

Rivera-Rivera, L., Allen-Leigh, B., Rodríguez-Ortega, G., Chávez-Ayala, R., & Lazcano-Ponce, E. (2007). Prevalence and correlates of adolescent dating violence: Baseline study of a cohort of 7960 male and female Mexican public school students. *Preventive Medicine, 44*, 477-484.

Robertson, A. A., Xu, X., & Stripling, A. (2010). Adverse events and substance use among female adolescent offenders: Effects of coping and family support. *Substance Use and Misuse, 45*, 451-472.

Rosario, M., Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2003). Community violence exposure and delinquent behaviors among youth: The moderating role of coping. *Journal of Community Psychology*, *31*, 489-512.

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist*, *41*, 813-819.

Rothman, E. F., Stuart, G. L., Greenbaum, P. E., Heeren, T., Bowen, D. J., Vinci, R., ... & Bernstein, J. (2011). Drinking style and dating violence in a sample of urban, alcohol-using youth. *Journal of Studies on Alcohol and Drugs*, *72*, 555-566.

Rothman, E. F., & Xuan, Z. (2014). Trends in physical dating violence victimization among US high school students, 1999–2011. *Journal of School Violence*, *13*, 277-290.

Rowe, L. S., Jouriles, E. N., & McDonald, R. (2015). Reducing sexual victimization among adolescent girls: A randomized controlled pilot trial of My Voice, My Choice. *Behavior Therapy, 46*, 315-327.

Runyan, D., Dubowitz, H., English, D.J., Kotch, J.B., Litrownik, A., Thompson, R., & The LONGSCAN Investigator Group (2014). *Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) Assessments 0-18* [Dataset]. Available from National Data Archive on Child Abuse and Neglect Web site, http://www.ndacan.cornell.edu

Russell, M., Cupp, P. K., Jewkes, R. K., Gevers, A., Mathews, C., LeFleur-Bellerose, C., & Small, J. (2014). Intimate partner violence among adolescents in Cape Town, South Africa. *Prevention Science*, *15*, 283-295.

Ryan, S. M., Jorm, A. F., & Lubman, D. I. (2010). Parenting factors associated with reduced adolescent alcohol use: a systematic review of longitudinal studies. *Australian and New Zealand Journal of Psychiatry*, *44*, 774-783.

Salazar, L. F., & Cook, S. L. (2006). Preliminary findings from an outcome evaluation of an intimate partner violence prevention program for adjudicated, African American, adolescent males. *Youth Violence and Juvenile Justice*, *4*, 368-385.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology*, *94*, 774-802.

Sampson, R. J., & Laub, J. H. (1990). Crime and deviance over the life course: The salience of adult social bonds. *American Sociological Review*, *55*, 609-627.

Sampson, R. J., & Lauritsen, J. L. (1990). Deviant lifestyles, proximity to crime, and the offender-victim link in personal violence. *Journal of Research in Crime and Delinquency*, *27*, 110-139.

Sampson, R. J., & Lauritsen, J. L. (1994). Violent victimization and offending: Individual-, situational-, and community-level risk factors. In Reiss, A. J. & Roth, J. A. (eds.) *Understanding and preventing violence, vol. 3.* National Academy Press.

Sanderson, M., Coker, A. L., Roberts, R. E., Tortolero, S. R., Reininger, P. H. (2004). Acculturation, ethnic identity, and dating violence among Latino ninth-grade students. *Preventative Medicine, 39*, 373-383.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension*, *37*, 1-5.

Schnurr, M. P., & Lohman, B. J. (2008). How much does school matter? An examination of adolescent dating violence perpetration. *Journal of Youth and Adolescence*, *37*, 266-283.

Schnurr, M. P., & Lohman, B. J. (2013). The impact of collective efficacy on risks for adolescents' perpetration of dating violence. *Journal of Youth and Adolescence, 42,* 518-535.

Schreck, C. J. (1999). Criminal victimization and low self-control: An extension and test of a general theory of crime. *Justice Quarterly, 16,* 633-654.

Schreck, C. J., Burek, M. W., Stewart, E. A., & Miller, J. M. (2007). Distress and violent victimization among young adolescents: Early puberty and the social interactionist explanation. *Journal of Research in Crime and Delinquency, 44,* 381-405.

Schreck, C. J., & Fisher, B. S. (2004). Specifying the influence of family and peers on violent victimization: Extending routine activities and lifestyles theories. *Journal of Interpersonal Violence, 19,* 1021-1041.

Schreck, C. J., Fisher, B. S., & Miller, J. M. (2004). The social context of violent victimization: A study of the delinquent peer effect. *Justice Quarterly, 21,* 23-47.

Schreck, C. J., Miller, J. M., & Gibson, C. L. (2003). Trouble in the school yard: A study of the risk factors of victimization at school. *Crime and Delinquency, 49,* 460-484.

Schreck, C. J., Stewart, E. A., & Osgood, D. W. (2008). A reappraisal of the overlap of violent offenders and victims. *Criminology, 46,* 871-906.

Schreck, C. J., Wright, R. A., & Miller, J. M. (2002). A study of individual and situational antecedents of violent victimization. *Justice Quarterly, 19,* 159-180.

Schinke, S. P., Fang, L., & Cole, K. C. (2009). Preventing substance use among adolescent girls: 1-year outcomes of a computerized, mother–daughter program. *Addictive Behaviors, 34,* 1060-1064.

Schulte, M. T., Ramo, D., & Brown, S. A. (2009). Gender differences in factors influencing alcohol use and drinking progression among adolescents. *Clinical Psychology Review, 29,* 535-547.

Sears, H. A., Byers, E. S., & Price, L. (2007). The co-occurrence of adolescent boys' and girls' use of psychologically, physically, and sexually abusive behaviors in their dating relationships. *Journal of Adolescence, 30,* 487-504.

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

Shaffer, C. S., Adjei, J., Viljoen, J. L., Douglas, K. S., & Saewyc, E. M. (2018). Ten-year trends in physical dating violence victimization among adolescent boys and girls in British Columbia, Canada. *Journal of Interpersonal Violence.* https://doi.org/10.1177/0886260518788367

Shen, A. C. T., Chiu, M. Y. L., & Gao, J. (2012). Predictors of dating violence among Chinese adolescents: The role of gender-role beliefs and justification of violence. *Journal of Interpersonal Violence, 27,* 1066-1089.

Shlafer, R. J., McMorris, B. J., Sieving, R. E., & Gower, A. L. (2013). The impact of family and peer protective factors on girls' violence perpetration and victimization. *Journal of Adolescent Health*, *52,* 365-371.

Sigfusdottir, I. D., Asgeirsdottir, B. B., Gudjonsson, G. H., & Sigurdsson, J. F. (2008). A model of sexual abuse's effects on suicidal behavior and delinquency: The role of emotions as mediating factors. *Journal of Youth and Adolescence*, *37,* 699-712.

Sigfusdottir, I. D., Farkas, G., & Silver, E. (2004). The role of depressed mood and anger in the relationship between family conflict and delinquent behavior. *Journal of Youth and Adolescence, 33,* 509-522.

Sigfusdottir, I. D., & Silver, E. (2009). Emotional reactions to stress among adolescent boys and girls: An examination of the mediating mechanisms proposed by general strain theory. *Youth and Society, 40,* 571-590.

Silver, E., Piquero, A. R., Jennings, W. G., Piquero, N. L., & Leiber, M. (2011). Assessing the violent offending and violent victimization overlap among discharged psychiatric patients. *Law and Human Behavior*, *35*, 49-59.

Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA, 286,* 572-579.

Simon, L. M. (1997). Do criminal offenders specialize in crime types? *Applied and Preventive Psychology*, *6,* 35-53.

Simon, R. L., Miller, M. G., & Aigner, S. M. (1980). Contemporary theories of deviance and female delinquency: An empirical test. *Journal of Research in Crime and Delinquency, 17,* 42-57.

Simpson, S. S. (1989). Feminist theory, crime, and justice. *Criminology*, *27*, 605-632.

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129,* 216-269.

Smith, D. A., & Paternoster, R. (1987). The gender gap in theories of deviance: Issues and evidence. *Journal of Research in Crime and Delinquency*, *24*, 140-172.

Spano, R., Freilich, J. D., & Bolland, J. (2008). Gang membership, gun carrying, and employment: Applying routine activities theory to violent victimization among inner city, minority youth living in extreme poverty. *Justice Quarterly, 25*, 381-410.

Spriggs, A. L., Halpern, C. T., Herring, A. H., & Schoenbach, V. J. (2009). Family and school socioeconomic disadvantage: Interactive influences on adolescent dating violence victimization. *Social Science and Medicine, 68,* 1956-1965.

StataCorp. 2015. *Stata Statistical Software: Release 14*. StataCorp LP.

Steffensmeier, D., & Allan, E. (1996). Gender and crime: Toward a gendered theory of female offending. *Annual Review of Sociology, 22*, 459-487.

Stevens, T., Morash, M., & Chesney-Lind, M. (2011). Are girls getting tougher, or are we tougher on girls? Probability of arrest and juvenile court oversight in 1980 and 2000. *Justice Quarterly, 28,* 719-744.

Stewart, E. A., Elifson, K. W., & Sterk, C. E. (2004). Integrating the general theory of crime into an explanation of violent victimization among female offenders. *Justice Quarterly, 21,* 159-181.

Stine, R. (1989). An introduction to bootstrap methods: Examples and ideas. *Sociological Methods and Research*, *18,* 243-291.

Stogner, J., Miller, J. M., Fisher, B. S., Stewart, E. A., & Schreck, C. J. (2014). Peer group delinquency and sexual victimization: Does popularity matter? *Women & Criminal Justice, 24,* 62-81.

Swahn, M. H., Simon, T. R., Arias, I., & Bossarte, R. M. (2008). Measuring sex differences in violence victimization and perpetration within date and same-sex peer relationships. *Journal of Interpersonal Violence*, *23,* 1120-1138.

Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly, 23*, 462-480.

Sweeten, G. (2012). Scaling criminal offending. *Journal of Quantitative Criminology*, *28*, 533-557.

Taylor, A. B., MacKinnon, D. P., & Tein, J. Y. (2008). Tests of the three-path mediated effect. *Organizational Research Methods*, *11*, 241-269.

Taylor, B. G., & Mumford, E. A. (2016). A national descriptive portrait of adolescent relationship abuse: Results from the National Survey on Teen Relationships and Intimate Violence. *Journal of Interpersonal Violence*, *31*, 963-988.

Taylor, B. G., Mumford, E. A., Liu, W., Berg, M., & Bohri, M. (2019). Young adult reports of the victim–offender overlap in intimate and nonintimate relationships: A Nationally representative sample. *Criminal Justice and Behavior*, *46*, 415-436.

Taylor, T. J., Freng, A., Esbensen, F. A., & Peterson, D. (2008). Youth gang membership and serious violent victimization: The importance of lifestyles and routine activities. *Journal of Interpersonal Violence*, *23*, 1441-1464.

Taylor, T. J., Peterson, D., Esbensen, F. A., & Freng, A. (2007). Gang membership as a risk factor for adolescent violent victimization. *Journal of Research in Crime and Delinquency*, *44*, 351-380.

Temple, J. R., Shorey, R. C., Fite, P., Stuart, G. L., & Le, V. D. (2013). Substance use as a longitudinal predictor of the perpetration of teen dating violence. *Journal of Youth and Adolescence*, *42*, 596-606.

Tewksbury, R., & Mustaine, E. E. (2000). Routine activities and vandalism: A theoretical and empirical study. *Journal of Crime and Justice*, *23*, 81-110.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications.* American Psychological Association.

Thompson, M. P., Sims, L., Kingree, J. B., & Windle, M. (2008). Longitudinal associations between problem alcohol use and violent victimization in a national sample of adolescents. *Journal of Adolescent Health*, *42*, 21-27.

Thompson, R., Lewis, T., Neilson, E. C., English, D. J., Litrownik, A. J., Margolis, B., Proctor, L., & Dubowitz, H. (2017). Child maltreatment and risky sexual behavior: indirect effects through trauma symptoms and substance use. *Child Maltreatment*, *22*, 69-78.

Thornberry T. P., Lizotte A. J., Krohn M. D., Farnworth M. & Jang S. J. (1991) Testing interactional theory: An examination of reciprocal causal relationships among family, school, and delinquency. *Journal of Criminal Law and Criminology 82*, 3–35.

Tillyer, M. S, Tillyer, R., Ventura Miller, H., & Pangrac, R. (2011). Reexamining the correlates of adolescent violent victimization: The importance of exposure, guardianship, and target characteristics. *Journal of Interpersonal Violence*, *26*, 2908-2928.

Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice, 38,* 1071-1081.

Tobler, N. S., Roona, M. R., Ochshorn, P., Marshall, D. G., Streke, A. V., & Stackpole, K. M. (2000). School-based adolescent drug prevention programs: 1998 meta-analysis. *Journal of Primary Prevention*, *20*, 275-336.

Toman, E. L. (2019). The victim–offender overlap behind bars: Linking prison misconduct and victimization. *Justice Quarterly*, *36*, 350-382.

Topitzes, J., Mersky, J. P., & Reynolds, A. J. (2011). Child maltreatment and offending behavior: Gender-specific effects and pathways. *Criminal Justice and Behavior*, *38*, 492-510.

Townsend, L., Flisher, A. J., & King, G. (2007). A systematic review of the relationship between high school dropout and substance use. *Clinical Child and Family Psychology Review*, *10*, 295-317.

Troop-Gordon, W., & Kopp, J. (2011). Teacher–child relationship quality and children's peer victimization and aggressive behavior in late childhood. *Social Development, 20,* 536-561.

Turanovic, J. J., & Pratt, T. C. (2014). "Can't stop, won't stop": Self-control, risky lifestyles, and repeat victimization. *Journal of Quantitative Criminology, 30,* 29-56.

Turanovic, J. J., Reisig, M. D., & Pratt, T. C. (2015). Risky lifestyles, low self-control, and violent victimization across gendered pathways to crime. *Journal of Quantitative Criminology, 31,* 183-206.

Turner, A. P., Larimer, M. E., Sarason, I. G., & Trupin, E. W. (2005). Identifying a negative mood subtype in incarcerated adolescents: Relationship to substance use. *Addictive Behaviors, 30,* 1442-1448.

Turner, H. A., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science and Medicine, 62*, 13-27.

Turner, R. J. (1999). Social support and coping. In A. V. Horwitz & T. L. Scheid (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (p. 198–210). Cambridge University Press.

Tyler, K. A., Hoyt, D. R., & Whitbeck, L. B. (2000). The effects of early sexual abuse on later sexual victimization among female homeless and runaway adolescents. *Journal of Interpersonal Violence, 15*, 235-250.

Tyler, K. A., Whitbeck, L. B., Hoyt, D. R., & Cauce, A. M. (2004). Risk factors for sexual victimization among male and female homeless and runaway youth. *Journal of Interpersonal Violence, 19*, 503-520.

Ullman, S. E., & Filipas, H. H. (2005). Gender differences in social reactions to abuse disclosures, post-abuse coping, and PTSD of child sexual abuse survivors. *Child Abuse and Neglect, 29*, 767-782.

U.S. Department of Health and Human Services (2016). *E-Cigarette use among youth and young adults: A report of the surgeon general.* Public Health Service, Office of the Surgeon General.

Vagi, K. J., Rothman, E. F., Latzman, N. E., Tharp, A. T., Hall, D. M., & Breiding, M. J. (2013). Beyond correlates: A review of risk and protective factors for adolescent dating violence perpetration. *Journal of Youth and Adolescence*, *42*, 633-649.

Van Dijk, J. J., & Steinmetz, C. H. (1983). Victimization surveys: Beyond measuring the volume of crime. *Victimology, 8*, 291-309.

Vaughan-Jensen, J. (2015). *Could teacher support help break the cycle of violence?* [Unpublished doctoral dissertation]. Texas A&M University.

Vézina, J., & Hebert, M. (2007). Risk factors for victimization in romantic relationships of young women: A review of empirical studies and implications for prevention. *Trauma, Violence, and Abuse*, *8*, 33-66.

Vézina, J., Hébert, M., Poulin, F., Lavoie, F., Vitaro, F., & Tremblay, R. E. (2011). Risky lifestyle as a mediator of the relationship between deviant peer affiliation and dating violence victimization among adolescent girls. *Journal of Youth and Adolescence, 40*, 814-824.

Vézina, J., Hébert, M., Poulin, F., Lavoie, F., Vitaro, F., & Tremblay, R. E. (2015). History of family violence, childhood behavior problems, and adolescent high-risk behaviors as predictors of girls' repeated patterns of dating victimization in two developmental periods. *Violence Against Women*, *21*, 435-459.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*, 1-48.

Von Hentig, H. (1948). *The criminal & his victim: Studies in the sociobiology of crime*. Shoe String Press.

Watts, S. J., & McNulty, T. L. (2013). Childhood abuse and criminal behavior: Testing a general strain theory model. *Journal of Interpersonal Violence*, *28*, 3023-3040.

Watts, S. J., Tetzlaff-Bemiller, M. J., & McCutcheon, J. C. (2017). MAOA, drug selling, and violent victimization: Evidence of a gene×environment interaction. *Criminal Justice Review*, *42*, 368-383.

Weiss, N. H., Duke, A. A., & Sullivan, T. P. (2014). Evidence for a curvilinear dose-response relationship between avoidance coping and drug use problems among women who experience intimate partner violence. *Anxiety, Stress, and Coping*, *27*, 722-732.

Werner, K. B., McCutcheon, V. V., Challa, M., Agrawal, A., Lynskey, M. T., Statham, D. J., Conroy, E., Madden, P. A. F., Henders, A. K., Todarov, A. A., & Heath, A. C. (2016). The association between childhood maltreatment, psychopathology, and adult sexual victimization in men and women: Results from three independent samples. *Psychological Medicine*, *46*, 563-573.

Whisman, M. P. (Ed.). (2008). *Adapting cognitive therapy for depression: Managing complexity and comorbidity.* Guilford Press.

Whitaker, D. J., Morrison, S., Lindquist, C., Hawkins, S. R., O'Neil, J. A., Nesius, A. M., Mathew, A., & Reese, L. R. (2006). A critical review of interventions for the primary prevention of perpetration of partner violence. *Aggression and Violent Behavior*, *11*, 151-166.

Whitbeck, L. B., Hoyt, D. R., & Yoder, K. A. (1999). A risk-amplification model of victimization and depressive symptoms among runaway and homeless adolescents. *American Journal of Community Psychology*, *27*, 273-296.

Whitesell, N. R., Robinson, N. S., & Harter, S. (1993). Coping with anger-provoking situations: Young adolescents' theories of strategy use and effectiveness. *Journal of Applied Developmental Psychology*, *14*, 521-545.

Widom, C. S. (1989). The cycle of violence. *Science*, *244*, 160-166.

Widom, C. S., Czaja, S. J., & Dutton, M. A. (2008). Childhood victimization and lifetime revictimization. *Child Abuse and Neglect*, *32*, 785-796.

Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency*, *46*, 245-269.

Williams, S. E., & Martinez, E. (1999). Psychiatric assessment of victims of adolescent dating violence in a primary care clinic. *Clinical Child Psychology and Psychiatry*, *4*, 427-439.

Wills, T. A., & Filer, M. (1996). Stress—coping model of adolescent substance use. In T. H. Ollendick & R. J. Prinz (Eds.) *Advances in clinical child psychology* (pp. 91-132). Springer.

Wills, T. A., Sandy, J. M., Shinar, O., & Yaeger, A. (1999). Contributions of positive and negative affect to adolescent substance use: Test of a bidimensional model in a longitudinal study. *Psychology of Addictive Behaviors*, *13*, 327-338.

Wills, T. A., Sandy, J. M., & Yaeger, A. M. (2001). Time perspective and early-onset substance use: A model based on stress–coping theory. *Psychology of Addictive Behaviors*, *15*, 118-125.

Wilson, J. Q., & Kelling, G. L. (1982). Broken windows. *Atlantic Monthly*, *249*, 29-38.

Wincentak, K., Connolly, J., & Card, N. (2017). Teen dating violence: A meta-analytic review of prevalence rates. *Psychology of Violence*, *7*, 224-241.

Windle, M. (1994). Substance use, risky behaviors, and victimization among a US national adolescent sample. *Addiction*, *89*, 175-182.

Windle, M., & Mrug, S. (2009). Cross-gender violence perpetration and victimization among early adolescents and associations with attitudes toward dating conflict. *Journal of Youth and Adolescence*, *38*, 429-439.

Wittebrood, K., & Nieuwbeerta, P. (1999). Wages of sin? The link between offending, lifestyle and violent victimization. *European Journal on Criminal Policy and Research*, *7*, 63-80.

Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement, 73,* 913-934.

Wolfe, D. A., Crooks, C., Jaffe, P., Chiodo, D., Hughes, R., Ellis, W., Stitt, L., & Donner, A. (2009). A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Archives of Pediatrics and Adolescent Medicine*, *163,* 692-699.

Wolfe, D. A., Scott, K., Wekerle, C., & Pittman, A. L. (2001). Child maltreatment: Risk of adjustment problems and dating violence in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40,* 282-289.

Wolfgang, M. E. (1958). *Patterns in criminal homicide.* University of Pennsylvania Press.

Wright, B. R. E., Caspi, A., Moffitt, T. E., & Silva, P. A. (1999). Low self-control, social bonds, and crime: Social causation, social selection, or both? *Criminology*, *37,* 479-514.

Wu, S., Yan, S., Marsiglia, F. F., & Perron, B. (2020). Patterns and Correlates of Substance Use among Arizona Youth: A Latent Class Analysis Approach. *Children and Youth Services Review,* https://doi.org/10.1016/j.childyouth.2020.104769

Xing, X., Wang, M., Zhang, Q., He, X., & Zhang, W. (2011). Gender differences in the reciprocal relationships between parental physical aggression and children's externalizing problem behavior in China. *Journal of Family Psychology*, *25,* 699-708.

Yan, F. A., Howard, D. E., Beck, K. H., Shattuck, T., & Hallmark-Kerr, M. (2010). Psychosocial correlates of physical dating violence victimization among Latino early adolescents. *Journal of Interpersonal Violence*, *25*, 808-831.

Ybarra, M. L., Espelage, D. L., Langhinrichsen-Rohling, J., & Korchmaros, J. D. (2016). Lifetime prevalence rates and overlap of physical, psychological, and sexual dating abuse perpetration and victimization in a national sample of youth. *Archives of Sexual Behavior*, *45*, 1083-1099.

Yoon, S., Kobulsky, J. M., Yoon, D., & Kim, W. (2017). Developmental pathways from child maltreatment to adolescent substance use: The roles of posttraumatic stress symptoms and mother-child relationships. *Children and Youth Services Review*, *82*, 271-279.

Young, A., Grey, M., Abbey, A., Boyd, C. J., & McCabe, S. E. (2008). Alcohol-related sexual assault victimization among adolescents: Prevalence, characteristics, and correlates. *Journal of Studies of Alcohol and Drugs, 69*, 39-48.

Young, D. A. (1991). *Conventional bonds to family and school, association with delinquent peers, gender, and victimization: An exploratory study of delinquency background variables with student victimization* [Unpublished doctoral dissertation]. University of Southern California.

Zahn, M. A., Day, J. C., Mihalic, S. F., & Tichavsky, L. (2009). Determining what works for girls in the juvenile justice system: A summary of evaluation evidence. *Crime and Delinquency, 55*, 266-293.

Zavala, E. (2018). Target congruence theory and the victim-offender overlap among male youths. *Victims and Offenders, 13*, 1013-1032.

Zavala, E., & Spohn, R. E. (2013). The role of vicarious and anticipated strain on the overlap of violent perpetration and victimization: A test of general strain theory. *American Journal of Criminal Justice, 38*, 119-140.

Zavala, E., Spohn, R. E., & Alarid, L. F. (2019). Gender and serious youth victimization: Assessing the generality of self-control, differential association, and social bonding theories. *Sociological Spectrum, 39*, 53-69.

Zimmerman, G. M., & Messner, S. F. (2010). Neighborhood context and the gender gap in adolescent crime. *American Sociological Review, 75*, 958-980

APPENDIX A

STUDY 1 MODERATING ANALYSES

Female Bivariate

Moderator	*F* (*df*1, *df*2)	*p*
Belief		
Victimization Type	*F* (1, 4) = .828	.414
Follow-up Time	*F* (1, 4) = 9.767	.035*
Involvement		
Victimization Type	*F* (1, 3) = 1.071	.377
Follow-up Time	*F* (1, 3) = 1.071	.377
Parental Attachment		
Victimization Type	*F* (2, 1) = .203	.843
Research Design	*F* (1, 2) = .877	.448
Geographical Location	*F* (1, 2) = .410	.588
Monitoring		
Victimization Type	*F* (2, 7) = 3.388	.094
Follow-up Time	*F* (1, 8) = .894	.372
Research Design	*F* (1, 8) = .916	.367
Sample Type	*F* (1, 8) = .300	.599
Geographical Location	*F* (1, 8) = .181	.681
Alcohol		
Victimization Type	*F* (2, 14) = 1.521	.252
Follow-up Time	*F* (1, 15) = .444	.515
Research Design	*F* (1, 15) = .008	.931
Geographical Location	*F* (1, 15) = .019	.891
Deviant Peers		
Victimization Type	*F* (2, 11) = .400	.679
Follow-up Time	*F* (1, 12) = .015	.904
Research Design	*F* (1, 12) = .015	.904
Sample Type	*F* (1, 12) = .373	.553
Geographical Location	*F* (1, 12) = .837	.378
Publication Status	*F* (1, 12) = 1.316	.274
Drugs		
Victimization Type	*F* (2, 15) = 2.102	.157
Follow-up Time	*F* (1, 16) = 1.349	.263
Research Design	*F* (1, 16) = .073	.790
Geographical Location	*F* (1, 16) = .091	.767
Gang		
Victimization Type	*F* (1, 1) = 1.178	.474
Offending		
Victimization Type	*F* (4, 30) = .316	.865
Follow-up Time	*F* (1, 33) = .075	.786
Research Design	*F* (1, 33) = .102	.752
Sample Type	*F* (1, 33) = .171	.682
Geographical Location	*F* (1, 33) = 1.521	.226
Publication Status	*F* (1, 33) = .096	.758
Prior Physical Victimization		
Victimization Type	*F* (1, 5) = .010	.926
Follow-up Time	*F* (1, 5) = .025	.880
Research Design	*F* (1, 5) = 1.107	.341
Geographical Location	*F* (1, 5) = 1.107	.341
Publication Status	*F* (1, 5) = .655	.455

Prior Sexual Abuse		
Victimization Type	F (2, 3) = 1.377	.376
Research Design	F (1, 4) = .117	.750
Sample Type	F (1, 4) = .068	.807
Geographical Location	F (1, 4) = .117	.750

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

Male Bivariate

Moderator	***F* (*df*1, *df*2)**	***p***
Parental Attachment		
Victimization Type	F (2, 1) = .362	.762
Research Design	F (1, 2) = 1.558	.338
Geographical Location	F (1, 2) = .077	.807
Publication Status	F (1, 2) = .827	.459
Offending		
Victimization Type	F (3, 21) = .288	.834
Follow-up Time	F (1, 23) = .019	.890
Research Design	F (1, 23) = .928	.345
Sample Type	F (1, 23) = .868	.361
Geographical Location	F (1, 23) = 3.386	.079
Publication Status	F (1, 23) = .011	.916

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

Female Multivariate

Moderator	***F* (*df*1, *df*2)**	***P***
Involvement		
Parameters	F (1, 21) = .022	.884
Victimization Type	F (3, 19) = .787	.516
Research Design	F (1, 21) = 1.832	.190
Publication Status	F (1, 21) = .602	.447
Maternal Attachment		
Parameters	F (1, 15) = .305	.589
Victimization Type	F (2, 14) = .135	.875
Follow-up Time	F (1, 15) = 8.054	.012*
Research Time	F (1, 15) = .194	.666
Competing Theories	F (1, 15) = 7.434	.016*
Statistical Model	F (1, 15) = .130	.723
Parental Attachment		
Parameters	F (1, 14) = 5.069	.041*
Victimization Type	F (3, 12) = .131	.940
Research Design	F (1, 14) = 3.330	.089
Sample Type	F (1, 14) = .012	.916
Geographical Location	F (1, 14) = .327	.576
Statistical Model	F (3, 12) = 1.389	.294
Paternal Attachment		
Parameters	F (1, 15) = 1.013	.330
Victimization Type	F (2, 14) = 5.424	.018*
Follow-up Time	F (1, 15) = 11.774	.004**
Research Design	F (1, 15) = .009	.925
Competing Theories	F (1, 15) = 11.848	.004**

Statistical Model	F (1, 15) = .253	.629
Peer Attachment		
Parameters	F (1, 7) = .065	.806
Victimization Type	F (3, 5) = 1.201	.399
Follow-up Time	F (1, 7) = .085	.780
Research Design	F (1, 7) = 5.407	.053
Geographical Location	F (1, 7) = .085	.780
Statistical Model	F (2, 6) = 3.078	.120
School Achievement		
Parameters	F (1, 29) = .227	.637
Victimization Type	F (3, 27) = .342	.795
Follow-up Time	F (1, 29) = 29.819	<.001***
Research Design	F (1, 29) = 2.198	.149
Sample Type	F (1, 29) = .156	.696
Statistical Model	F (2, 28) = 68.396	<.001***
Publication Status	F (1, 29) = 68.396	<.001***
Parental Monitoring		
Parameters	F (1, 26) = .281	.600
Victimization Type	F (4, 23) = 1.375	.273
Follow-up Time	F (1, 26) = .838	.368
Research Design	F (1, 26) = .160	.692
Sample Type	F (1, 26) = 8.026	.009**
Geographical Location	F (1, 26) = .004	.951
Competing Theories	F (1, 26) = .278	.603
Statistical Model	F (2, 25) = 1.553	.231
Publication Status	F (1, 26) = 11.599	.002**
Alcohol		
Parameters	F (1, 79) = .639	.428
Victimization Type	F (3, 77) = 1.064	.370
Follow-up Time	F (1, 79) = 3.363	.070
Research Design	F (1, 79) = .162	.689
Sample Type	F (1, 79) = .009	.924
Geographical Location	F (1, 79) = 2.047	.156
Competing Theories	F (1, 79) = .318	.575
Statistical Model	F (2, 78) = .580	.562
Deviant Peers		
Parameters	F (1, 43) = .053	.819
Victimization Type	F (3, 41) = 1.865	.151
Follow-up Time	F (1, 43) = 1.306	.259
Research Design	F (1, 43) = .231	.634
Sample Type	F (1, 43) = .513	.478
Geographical Location	F (1, 43) = 1.507	.226
Statistical Model	F (2, 42) = 90.398	<.001***
Publication Status	F (1, 43) = 138.031	<.001***
Drugs		
Parameters	F (1, 68) = .139	.710
Victimization Type	F (3, 66) = .323	.808
Follow-up Time	F (1, 68) = .778	.381
Research Design	F (1, 68) = 1.619	.208
Sample Type	F (1, 68) = .551	.461
Geographical Location	F (1, 68) = .689	.409
Competing Theories	F (1, 68) = .003	.957

Statistical Model	F (2, 67) = .599	.552
Publication Status	F (1, 68) = .002	.963
Gang		
Parameters	F (1, 19) = 10.071	.005**
Victimization Type	F (2, 18) = .239	.790
Follow-up Time	F (1, 19) = .009	.924
Sample Type	F (1, 19) = 7.026	.016*
Geographical Location	F (1, 19) = .527	.477
Competing Theories	F (1, 19) = 5.977	.024*
Statistical Model	F (2, 18) = .509	.609
Publication Status	F (1, 19) = 3.023	.098
Offending		
Parameters	F (1, 79) = .026	.872
Victimization Type	F (4, 76) = .623	.648
Follow-up Time	F (1, 79) = .688	.409
Research Design	F (1, 79) = 2.405	.125
Sample Type	F (1, 79) = .097	.756
Geographical Location	F (1, 79) = .514	.476
Competing Theories	F (1, 79) = .158	.692
Statistical Model	F (2, 78) = 3.126	.049*
Publication Status	F (1, 79) = .538	.465
Prior Combined Victimization		
Parameters	F (1, 5) = 1.150	.333
Victimization Type	F (3, 3) = .800	.571
Follow-up Time	F (1, 5) = 1.455	.282
Research Design	F (1, 5) = .774	.419
Sample Type	F (1, 5) = .002	.964
Competing Theories	F (1, 5) = .774	.419
Statistical Model	F (2, 4) = .886	.480
Prior Physical Victimization		
Parameters	F (1, 28) = 1.171	.288
Victimization Type	F (2, 27) = .177	.839
Follow-up Time	F (1, 28) = 2.512	.124
Research Design	F (1, 28) = 9.002	.006**
Sample Type	F (1, 28) = .058	.811
Geographical Location	F (1, 28) = 3.705	.064
Competing Theories	F (1, 28) = .033	.857
Statistical Model	F (4, 25) = 1.759	.169
Publication Status	F (1, 28) = .434	.516
Prior Sexual Victimization		
Parameters	F (1, 18) = .674	.423
Victimization Type	F (1, 18) = 1.957	.179
Follow-up Time	F (1, 18) = .147	.706
Research Design	F (1, 18) = 2.141	.161
Sample Type	F (1, 18) = .384	.543
Geographical Location	F (1, 18) = .225	.641
Competing Theories	F (1, 18) = 2.204	.172
Statistical Model	F (1, 18) = 1.235	.281
Publication Status	F (1, 18) = .384	.543

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

Male Multivariate

Moderator	*F* (*df*1, *df*2)	*p*
Belief		
Parameters	*F* (1, 4) = 1.368	.307
Victimization Type	*F* (1, 4) = .654	.464
Follow-up Time	*F* (1, 4) = .278	.626
Research Design	*F* (1, 4) = 1.607	.274
Competing Theories	*F* (1, 4) = 1.607	.274
Statistical Model	*F* (1, 4) = 1.607	.274
Involvement		
Parameters	*F* (1, 25) = .583	.452
Victimization Type	*F* (1, 25) = .621	.438
Research Design	*F* (1, 25) = .122	.730
Statistical Model	*F* (1, 25) = 2.261	.145
School Achievement		
Parameters	*F* (1, 32) = 1.122	.297
Victimization Type	*F* (2, 31) = .946	.399
Follow-up Time	*F* (1, 32) = 5.549	.025*
Research Design	*F* (1, 32) = 7.209	.011*
Sample Type	*F* (1, 32) = 2.259	.143
Geographical Location	*F* (1, 32) = 2.259	.143
Statistical Model	*F* (2, 31) = .615	.547
Publication Status	*F* (1, 32) = 6.789	.014*
Poverty		
Parameters	*F* (1, 9) = 1.116	.318
Victimization Type	*F* (1, 9) = .103	.755
Research Design	*F* (1, 9) = 50.270	<.001***
Geographical Location	*F* (1, 9) = .002	.964
Competing Theories	*F* (1, 9) = .715	.420
Statistical Model	*F* (2, 8) = .181	.860
Publication Status	*F* (1, 9) = .033	.860
Exposure		
Parameters	*F* (1, 25) = .047	.830
Victimization Type	*F* (1, 25) = 2.761	.109
Follow-up Time	*F* (1, 25) = 2.761	.109
Sample Type	*F* (1, 25) = 2.339	.139
Geographical Location	*F* (1, 25) = 1.218	.280
Competing Theories	*F* (1, 25) = .046	.832
Statistical Model	*F* (1, 25) = 2.339	.139
Monitoring		
Parameters	*F* (1, 18) = 1.238	.280
Victimization Type	*F* (4, 15) = 5.437	.007**
Follow-up Time	*F* (1, 18) = .227	.640
Research Design	*F* (1, 18) = .212	.651
Geographical Location	*F* (1, 18) = .571	.459
Statistical Model	*F* (2, 17) = 4.552	.026*
Alcohol		
Parameters	*F* (1, 40) = 2.029	.162
Victimization Type	*F* (3, 38) = .173	.914
Follow-up Time	*F* (1, 40) = .015	.904
Research Design	*F* (1, 40) = .110	.742
Sample Type	*F* (1, 40) = 6.219	.017*

Geographical Location	F (1, 40) = 4.057	.051
Competing Theories	F (1, 40) = .625	.434
Statistical Model	F (2, 39) = 2.197	.125
Deviant Peers		
Parameters	F (1, 33) = 3.035	.091
Victimization Type	F (2, 32) = .427	.656
Research Design	F (1, 33) = .350	.708
Sample Type	F (1, 33) = .671	.418
Geographical Location	F (1, 33) = .358	.553
Statistical Model	F (2, 32) = .350	.708
Drugs		
Parameters	F (1, 28) = .284	.599
Victimization Type	F (3, 26) = .770	.521
Follow-up Time	F (1, 28) = 2.148	.154
Research Design	F (1, 28) = .950	.338
Sample Type	F (1, 28) = .651	.426
Geographical Location	F (1, 28) = 2.269	.143
Competing Theories	F (1, 28) = .016	.901
Statistical Model	F (2, 27) = .100	.905
Publication Status	F (1, 28) = .006	.941
Gang		
Parameters	F (1, 21) = 15.201	<.001***
Victimization Type	F (2, 20) = 3.328	.057
Follow-up Time	F (1, 21) = .098	.758
Sample Type	F (1, 21) = 3.902	.062
Geographical Location	F (1, 21) = .444	.513
Competing Theories	F (1, 21) = 4.373	.049*
Statistical Model	F (1, 21) = 3.902	.062
Publication Status	F (1, 21) = 3.902	.062
Offending		
Parameters	F (1, 51) = 2.804	.100
Victimization Type	F (4, 48) = 1.531	.208
Follow-up Time	F (1, 51) = .021	.886
Research Design	F (1, 51) = .273	.604
Sample Type	F (1, 51) = 7.142	.010**
Geographical Location	F (1, 51) = .851	.361
Competing Theories	F (1, 51) = .003	.957
Statistical Model	F (2, 50) = 5.615	.006**
Publication Status	F (1, 51) = .005	.944
Prior Physical Victimization		
Parameters	F (1, 16) = 3.569	.077
Victimization Type	F (1, 16) = .211	.887
Follow-up Time	F (1, 16) = 4.896	.042*
Research Design	F (1, 16) = 3.161	.094
Sample Type	F (1, 16) = 1.798	.199
Competing Theories	F (1, 16) = 3.323	.087
Statistical Model	F (1, 16) = 1.496	.259
Publication Status	F (1, 16) = 1.699	.211
Unstructured Activities		
Parameters	F (1, 5) = .008	.933
Victimization Type	F (2, 4) = .113	.896
Follow-up Time	F (1, 5) = .007	.936
Research Design	F (1, 5) = .308	.603

Geographical Location	F (1, 5) = .231	.651

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

APPENDIX B

STUDIES USED IN META-ANALYSIS

Authors	Year	Female *n*	Male *n*	Type	Location	Published
Alleyne-Green et al.[1]	2016	4,834	-	BV, MV	USA	Yes
Ames & Leadbeater	2017	344	318	BV	Canada	Yes
Andrews	2004	1,198	-	MV	USA	No
Avgoustis	1999	193	179	BV, MV	Canada	No
Baron et al.	2007	-	125	MV	Canada	Yes
Beaver et al.[1]	2007	-	578	MV	USA	Yes
Begle et al.	2011	1,806	1,808	MV	USA	Yes
Bjarnason et al.	1999	1,879	1,931	BV, MV	Iceland	Yes
Blom et al.	2014	406/312	251	MV	Sweden	Yes
Bramsen et al. (1)[12]	2012	238	-	MV	Denmark	Yes
Bramsen et al. (2) [12]	2013	327	-	MV	Denmark	Yes
Brooks-Russel et al.	2013	1,332	1,234	MV	USA	Yes
Buzy et al.	2004	106	-	BV, MV	USA	Yes
Carbone-Lopez et al.	2010	648	574	MV	USA	Yes
Chen et al.[1]	2017	3,870	-	BV, MV	USA	Yes
Chiodo et al.	2011	519	-	MV	Canada	Yes
Christiansen & Evans	2005	537	455	BV	USA	Yes
Clark [1]	2010	5,434	5,186	MV	USA	No
Cleveland et al.[1]	2003	603	-	MV	USA	Yes
Cyr et al.	2006	126	-	MV	Canada	Yes
Dhami et al.	2005	212	220	BV	Canada	Yes
DuPont-Reyes et al.	2014	507	403	MV	USA	Yes
Eaton et al.[6]	2007	7,347	7,749	BV	USA	Yes
Ellonen & Aaltonen	2011	2,856	2,906	MV	Finland	Yes
Engstrom	2018	224	227	MV	Sweden	Yes
Epstein-Ngo et al.	2013	243	-	MV	USA	Yes
Fang & Corso[1]	2007	5,179	4,189	MV	USA	Yes
Fehon et al.	2001	71	59	BV	USA	Yes
Felson et al.	2010	6,725	6,690	MV	Finland	Yes
Gagne et al.	2005	622	-	MV	Quebec	Yes
Gover et al.	2008	2,406	2,088	MV	USA	Yes
Gertseva	2009	915	1030	BV	USA	No
Grych & Kinsfogel	2010	203	188	BV	USA	Yes
Halpern et al.[1]	2001	4,088	3,405	MV	USA	Yes
Han	2015	58	67	BV	USA	No
Hartinger –Saunders et al.	2012	-	625	BV, MV	USA	Yes
Hawkins	2000	218	151	BV, MV	USA	No
Haynie & Piquero[1]	2006	3,728	3,219	MV	USA	Yes
Hebert et al.	2017	1,509	1,532	MV	Canada	Yes
Henson & Wilcox	2010	281	260	MV	USA	Yes
Herbel	2002	37	-	BV	USA	No
Hoglund	2007	193	144	BV, MV	Canada	Yes
Holt & Espelage	2008	273	228	BV	USA	Yes
Howard et al.[3]	2005	216	230	BV, MV	USA	Yes
Howard et al.[5]	2008	-	6,528	MV	USA	Yes
Howard et al.	2012	-	88	BV	USA	Yes
Howard et al.[4,5,6,7,8]	2013	44,274	-	BV, MV	USA	Yes
Howard & Wang[7]	2003	7,824	-	BV, MV	USA	Yes
Hukriede	2016	1,529	4,842	MV	USA	Yes
Ihongbe et al.[4]	2017	4,117	4,507	BV, MV	USA	Yes
Jo & Lee	2018	1,174	1,317	MV	Korea	Yes

Karlsson et al.	2016	513	404	BV, MV	USA	Yes
Kast et al.	2016	2,454	2,360	MV	USA	Yes
King et al.	2004	531	408	MV	South Africa	Yes
Koo et al.	2012	5,040	4,830	MV	USA	Yes
Koposov et al.	2011	357	189	BV	Russia	Yes
Liu	2014	177	-	BV, MV	USA	No
Loeber et al.	2001	-	478	MV	USA	Yes
Ma & Bellmore	2012	407	426	BV, MV	USA	Yes
Maas et al.	2010	438	503	BV, MV	USA	Yes
Manseau et al.	2008	196	-	MV	Canada	Yes
Mawby	1979	95	133	BV	England	Yes
Maxwell et al.	2003	246	-	MV	USA	Yes
McDonnell et al.	2010	181	170	MV	USA	Yes
Meinck et al.	2017	1,989	-	BV, MV	Africa	Yes
Mitchell & Finklehor	2001	3,601	3,485	MV	USA	Yes
Mitra et al.	2012	1,108	-	MV	USA	Yes
Mmari et al.	2014	1,112	1,227	MV	Global	Yes
Moon et al.	2016	8,715	7,988	MV	Korea	Yes
Morris et al.[9]	2015	235	226	BV, MV	USA	Yes
Mueller-Johnson et al.	2014	3,223	3,509	MV	Switzerland	Yes
Muftic & Moreno	2010	71	289	BV	USA	Yes
O'Brien et al.	2017	-	800	MV	USA	Yes
O'Keefe	1998	138	94	MV	USA	Yes
Pabayo et al.	2014	791	652	BV, MV	USA	Yes
Parker et al.	2017	9,307	9,367	MV	USA	Yes
Pedersen[13]	2001	5,492	5,320	MV	Norway	Yes
Pedersen et al.[13]	2001	5,500	5,328	MV	Norway	Yes
Peguero & Popp[11]	2012	5,320	5,120	MV	USA	Yes
Pusch	2019	13,878	12,604	BV, MV	USA	Yes
Reidy et al.	2016	633	632	BV	USA	Yes
Reingle et al.	2013	1,651	1,340	MV	USA	Yes
Reuter et al.	2014	549	420	BV	USA	Yes
Rich et al.	2005	551	-	BV, MV	USA	Yes
Richards & Branch[12]	2012	475	495	BV, MV	USA	Yes
Richards et al.[12]	2014	319	-	MV	USA	Yes
Rivera-Rivera et al.	2007	4,587	3,373	MV	Mexico	Yes
Rothman et al.	2011	254	202	BV, MV	USA	Yes
Rowe et al.	2015	83	-	MV	USA	Yes
Russell et al.	2013	311	-	MV	South Africa	Yes
Sanderson et al.	2004	2,287	2,190	BV	USA	Yes
Schreck et al.[1]	2007	1,300	1,200	BV, MV	USA	Yes
Sears et al.	2007	309	324	BV	Canada	Yes
Shen et al.	2012	498	478	BV	China	Yes
Shlafer et al.	2013	253	-	MV	USA	Yes
Silverman et al.	2001	4,163	-	MV	USA	Yes
Spriggs et al.[1]	2009	5,447	5,203	BV, MV	USA	Yes
Stogner et al. [1]	2014	3,354	-	BV, MV	USA	Yes
Thompson et al.[1]	2008	4,792	4,212	MV	USA	Yee
Tillyer et al.	2010	5,435	4,656	MV	USA	Yes
Troop-Gordon et al.	2011	217	193	MV	USA	Yes
Tyler et al.[14]	2000	333	-	BV, MV	USA	Yes
Tyler et al.	2004	169	203	MV	USA	Yes

Vaughn-Jensen[1]	2015	4,500	4,500	BV, MV	USA	No
Vezina et al.[2]	2011	541	-	BV, MV	Canada	Yes
Vezina et al. [2]	2015	443	-	MV	Canada	Yes
Vicary et al.	1995	112	-	BV	USA	Yes
Watts et al.[1]	2017	4,861	3,999	MV	USA	Yes
Whitbeck et al.[14]	1999	153	102	BV, MV	USA	Yes
Wilcox et al.[10]	2009	5,682	4,840	MV	USA	Yes
Windle et al.	1994	1,784	1,707	MV	USA	Yes
Windle & Mrug[9]	2008	289	312	BV, MV	USA	Yes
Woodward & Fergusson	2000	630	635	BV	New Zealand	Yes
Wolfe et al	2001	812	607	MV	Canada	Yes
Xing et al.	2011	245	241	BV, MV	China	Yes
Yan et al.[3]	2010	167	149	BV, MV	USA	Yes
Young	1991	617	592	MV	USA	No
Young et al.	2008	554	463	BV	USA	Yes
Zavala	2018	-	689	MV	USA	Yes
Zavala et al.	2019	2,117	1,813	MV	USA	Yes

Datasets with more than one study:
[1]= Add Health, [2]=Research Group on Social Maladaptation in Children [3]=Latino Adolescents in Washington DC [4]=YRBS 2009 [5]=YRBS 2005 [6]=YRBS 2003 [7]=YRBS 1999 [8]=YRBS 2001 [9]=BYVS [10]=RSVP [11]=ELS [12]=Toldedo Adolescent Relationship Study [13]= Young in Oslo [14]=Midwest Homeless and Runaway Adolescents Project

APPENDIX C

STUDY 2 POPULATION AND SAMPLE CHARACTERISTICS

	State Total 2015-2016		Sample Total 2018	
Gender	***n***	**%**	***n***	**%**
Male	128,388	51.0	2,738	48.3
Female	123,307	49.0	2,932	51.7
Race/Ethnicity				
White (Non-Hispanic)	102,114	40.6	2,574	45.4
Hispanic	110,858	44.0	2,636	46.5
Black (Non-Hispanic)	14,063	5.6	460	8.1
Native American (Non-Hispanic)	11,538	4.6	0	0
Asian/Pacific Islander (Non-Hispanic)	7,772	3.1	0	0
Multi-racial	5,350	2.1	0	0

Note: Sample total is the stratified random sample that is used in the study.
Source: National Center for Education Statistics Common Core of Data 2015-2016
Retrieved from: Arizona Criminal Justice Commission Arizona Youth Survey State Report 2018

APPENDIX D

STUDY 2 FULL SAMPLE DESCRIPTIVE STATISTICS

	Males (n = 13,805)		Females (n = 14,566)				
Variable	**Mean or %**	**S.D.**	**Mean or %**	**S.D.**	**Min**	**Max**	***t*-test/ χ^2**
ADV Offending	4.1%	-	6.3%	-	0	1	69.35***
ADV Victimization	8.9%	-	8.0%	-	0	1	7.51*
Maternal Attachment	2.04	.807	2.11	.841	0	3	7.15***
Paternal Attachment	1.77	.906	1.63	.941	0	3	12.75***
Involvement	1.74	1.34	1.96	1.32	0	7	13.92***
Commitment	2.08	.618	2.19	.556	0	3	102.97***
Parental Belief	2.69	.475	2.76	.386	0	3	13.65***
Adolescent Belief	2.40	.611	2.54	.502	0	3	21.13***
Self-reported Offending	.732	2.09	.423	1.53	0	16	14.26***
Deviant Peers	.304	.691	.167	.464	0	4	19.70***
Witnessing Violence	.438	.710	.263	.479	0	4	24.45***
Alcohol Use	1.39	1.80	1.53	1.76	0	5	6.62***
Low SES	43%	-	45%	-	0	1	11.46*
Age	16.47	1.10	16.41	1.10	15	18	4.59***
Hispanic	45.0%	-	47.1%	-	0	1	12.64*
Black	8.7%	-	7.9%	-	0	1	6.82***

APPENDIX E

STUDY 2 FULL SAMPLE BIVARIATE PROBIT MODELS - MALES

	Model 1			Model 2			Model 3			Model 4		
Variables	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***
DV 1: ADV Offending												
Maternal Attachment										-.031	(.028)	-1.14
Paternal Attachment										.020	(.031)	.65
Involvement										.026	(.018)	1.44
Commitment										-.172	(.038)	-4.55***
Parental Belief										-.201	(.039)	-5.12***
Adolescent Belief										.061	(.039)	1.57
Self-reported Offending							.155	(.010)	15.15***	.145	(.010)	14.40***
Deviant Peers							.144	(.027)	5.37***	.125	(.030)	4.18***
Witnessing Violence							.153	(.030)	5.06***	.129	(.035)	3.72***
Alcohol							-.027	(.011)	-2.55*	-.040	(.017)	-3.50***
Low SES				.123	(.047)	2.65**	.113	(.052)	2.15*	. 093	(.056)	1.69*
Age				-.017	(.019)	-.88	-.017	(.021)	-.81	-.052	(.022)	-2.34
Hispanic				.070	(.043)	1.63	.020	(.049)	.41	.031	(.050)	.62
Black				.235	(.081	2.89**	.048	(.095)	.50	.047	(.095)	.49
Constant	-1.74	(.028)	-63.01***	-1.57	(.317)	-3.62***	-1.94	(.357)	-5.46***	-.607	(.407)	-1.49
DV 2: ADV Victimization												
Maternal Attachment										-.043	(.026)	-1.70
Paternal Attachment										-.024	(.029)	-1.11
Involvement										.032	(.013)	1.29*
Commitment										-.112	(.035)	-3.23**
Parental Belief										-.226	(.040)	-5.73***
Adolescent Belief										-.007	(.036)	-.20
Self-reported Offending							.043	(.009)	4.82***	.028	(.010)	2.78**
Deviant Peers							.152	(.029)	5.35***	.122	(.032)	3.83***
Witnessing Violence							.530	(.024)	21.97***	.502	(.026)	18.98***
Alcohol							.020	(.009)	2.26*	-.001	(.009)	-.11
Low SES				.096	(.048)	2.00*	.071	(.050)	1.42	.045	(.050)	.90
Age				.006	(.015)	.42	.017	(.017)	1.04	.000	(.018)	-.02
Hispanic				.099	(.036)	2.74**	.067	(.036)	1.82	.082	(.038)	2.16*
Black				.195	(.058)	3.39**	.021	(.071)	.31	.039	(.073)	.53
Constant	-1.34	(.028)	-48.33***	-1.55	(.246)	-6.33***	-2.20	(.275)	-7.99***	-.927	(.326)	-2.84**
LLP	-6023.0			-5893.2			-4655.2			-4330.3		
Rho (p)	.711			.710			.603			.586		
Wald test of rho (x2)	714.58***			706.90***			85.42***			255.8***		

Note: Entries are unstandardized partial regression coefficients (*b*), robust standard errors clustered on classrooms (RSE), and *z*-tests.
**p* < .05, ***p* < .01, ****p* <.001 (two-tailed test)

APPENDIX F

STUDY 2 FULL SAMPLE BIVARIATE PROBIT MODELS - FEMALES

	Model 1			Model 2			Model 3			Model 4		
Variables	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***	***b***	**(RSE)**	***z***
DV 1: ADV Offending												
Maternal Attachment										-.019	(.024)	-.82
Paternal Attachment										-.055	(.019)	-2.89**
Involvement										-.004	(.015)	-.24
Commitment										-.086	(.035)	-2.43*
Parental Belief										-.031	(.043)	-.72
Adolescent Belief										-.090	(.040)	-2.22*
Self-reported Offending							.117	(.012)	9.57***	.100	(.014)	7.25***
Deviant Peers							.242	(.036)	6.82***	.215	(.038)	5.64***
Witnessing Violence							.221	(.030)	7.28***	.198	(.034)	5.87***
Alcohol							.080	(.011)	7.37***	.065	(.012)	5.29***
Low SES				.098	(.040)	2.45*	.098	(.043)	2.29*	.102	(.042)	2.44*
Age				-.023	(.016)	-1.44	-.034	(.019)	-1.79	-.031	(.020)	-1.52
Hispanic				.08	(.036)	2.38*	.068	(.035)	1.91	.078	(.036)	2.02*
Black				.322	(.057)	5.66**	.254	(.055)	4.61***	.262	(.060)	4.41
Constant	-1.53	(.025)	-61.72***	-1.26	(.279)	-4.53**	-1.46	(.322)	-4.53***	-.844	(.372)	-2.27
DV 2: ADV Victimization												
Maternal Attachment										-.032	(.020)	-1.56
Paternal Attachment										-.078	(.020)	-3.95***
Involvement										.017	(.012)	1.44
Commitment										-.080	(.031)	-2.55*
Parental Belief										-.097	(.045)	-2.14*
Adolescent Belief										-.057	(.035)	-1.61
Self-reported Offending							.056	(.014)	4.04***	.041	(.013)	3.03**
Deviant Peers							.213	(.037)	5.82***	.192	(.036)	5.32***
Witnessing Violence							.593	(.034)	17.67***	.546	(.032)	16.83***
Alcohol							.069	(.009)	7.62***	.052	(.010)	5.10***
Low SES				.095	(.036)	2.67**	.093	(.016)	2.46*	.099	(.039)	2.50*
Age				-.011	(.014)	-.83	.005	(.016)	.29	.000	(.017)	-.06
Hispanic				.036	(.032)	1.11	-.010	(.034)	-.28	.000	(.034)	.00
Black				.118	(.049)	2.40*	-.004	(.056)	-.07	-.032	(.058)	-.56
Constant	-1.40	(.020)	-70.02***	-1.29	(.232)	-5.54	-1.97	(.264)	-7.64***	-1.10	(.323)	-3.41**
LLP	-6965.1			-6811.4			-5943.6			-5638.2		
Rho (p)	.671			.671			.590			.589		
Wald test of rho (x2)	748.42***			725.05***			377.64***			377.79***		

Note: Entries are unstandardized partial regression coefficients (*b*), robust standard errors clustered on classrooms (RSE), and *z*-tests.
*$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed test)