ASSESSING THE THEORETICAL CORRELATES OF SEXUAL AND PHYSICAL VICTIMIZATION IN ADULTHOOD

Morgan Goslar

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ASSESSING THE THEORETICAL CORRELATES OF SEXUAL AND PHYSICAL VICTIMIZATION IN ADULTHOOD

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ABSTRACT

As research on victimization continues to adapt, scholars have begun to examine how certain variables in childhood affect the likelihood of being victimized in adulthood—much of which is focused on adverse childhood experiences (ACEs). Studying the impact of early experiences on later victimization outcomes is important for the field so practitioners can intervene early in an individual’s life before they experience further trauma. However, past research has neglected to use a comprehensive approach (e.g., using multiple theoretical frameworks, assessing the frequency of ACE occurrences). The current study addresses these gaps in the literature by assessing the impact of variables related to three frameworks on adulthood sexual and physical assault victimization: (1) state dependence theory, (2) population heterogeneity theory, and (3) target congruence theory. The respondents answered the ACE indicator questions using a Likert scale ranging from “never” to “very often.” Because of the varying frequencies, these answers were coded in two ways: (1) a more conservative approach in which only answers of “often” and “very often” were coded as “yes” for having experienced, and (2) a more inclusive approach in which answers of “rarely,” “sometimes,” “often,” and “very often” were coded as “yes” for having experienced. Both of these coding variations were examined in model estimations to determine whether they affected the substantive findings. Data were analyzed from an online survey administered by YouGov and
completed by a national sample of adults ($N = 1,693$). Findings indicated support for all three theories. Factors related to state dependence theory (i.e., child sexual abuse), population heterogeneity theory (i.e., substance use), and target congruence theory (i.e., physical neglect, having an incarcerated family member, being Black or Hispanic) were positively correlated with both sexual and physical assault victimization in adulthood. Some variables, namely running away before age 18, were associated with adult sexual victimization only, while others, including impulsivity, substances in the home, and relying on strangers, were associated with adult physical victimization only. Regarding coding variations, some of these variables (i.e., substances in the home, physical neglect, having an incarcerated family member) were correlated with both sexual and physical assault victimization for just one of the ACE coding variations, while others (i.e., child sexual abuse, substance use) were correlated with both sexual and physical assault victimization regardless of the ACE coding variation. These findings provide direction for future research, such as using multiple theoretical approaches and coding ACEs with different variations, as well as guide future policymaking in the area of childhood trauma and adult victimization.
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Chapter One: Understanding Revictimization

Revictimization—or victimization that occurs in two or more periods of someone’s life—is considered an ongoing challenge for researchers and practitioners to address (e.g., Gobin & Freyd, 2009). Although most people never experience victimization, a proportion of the population will experience revictimization (Pridemore & Berg, 2017). More specifically, revictimization can include criminal or interpersonal victimization experiences before and after a certain life event (e.g., pre/post military service, entering a domestic violence shelter; e.g., Bybee & Sullivan, 2005; Schry et al., 2016), but it most commonly occurs in two or more developmental periods, such as in childhood and adolescence or in childhood/adolescence and then again in adulthood (e.g., Hosser et al., 2007). The occurrence of a subsequent victimization experience is not random; rather, those that experience abuse in one developmental period are much more likely to experience victimization in another stage (e.g., Finkelhor et al., 2007; Gobin & Freyd, 2009). The initial and subsequent victimization experiences can include a range of experiences, including sexual abuse, bullying, psychological violence, and intimate partner violence (e.g., Cho et al., 2022; Pantalone et al., 2015; Scoglio et al., 2022; Zamir et al., 2018). The victimization experiences may be different, such as experiencing physical abuse as a child and sexual abuse as an adult (e.g., Tietjen et al., 2010), but again, scholars more commonly examine the occurrence of the same type of victimization across periods of life (e.g., sexual abuse in both childhood and adulthood; Mazzarello et al., 2022).
While it is important to consider the harmful effects of experiencing victimization, it is even more essential to recognize the compounded and long-term effects of experiencing revictimization. Past research has shown that victims of multiple crime or interpersonal incidents are more likely to experience premature death, mental health issues (e.g., anxiety, depression), and physical health complications (e.g., hypertension) (e.g., Caceres et al., 2021; Evans et al., 2014; Pridemore & Berg, 2017). These consequences may occur soon after the event and be short-lived, but in some cases, the harmful effects can endure for years (e.g., Brendgen et al., 2019; Pridemore & Berg, 2017). In essence, because of the consequences that can amass for revictims, both in the short-term and long-term, it is crucial for researchers to gain a better understanding of who is most vulnerable to revictimization in order to implement policies to decrease the likelihood of experiencing these harms.

As previously noted, researchers have broadly considered revictimization to encompass the same type of crime or abuse over two or more developmental periods. In addition to understanding *that* revictimization occurs, researchers have begun developing an understanding of *why* revictimization may occur. Generally, scholars have examined sexual and physical assault and find that individuals who experienced sexual or physical assault as a child are more likely to experience these same types of offenses in adulthood (e.g., Orchowsky, 1999; Parillo et al., 2003). The idea behind this relationship is that there is something about experiencing these harms early in life that makes someone more vulnerable to the same harms later in life (e.g., Pridemore & Berg, 2017). Scholars have considered a number of variables to explain why individuals may be vulnerable to revictimization experiences, including social supports, life stressors, socioeconomic
status, education level, trauma perspectives, and social influences (e.g., Aakvaag et al., 2019; Cuevas et al., 2010; Izdebska & Beisert, 2021; Scr afford et al., 2018; Yoon & Song, 2022; Zamir et al., 2018). While this research has provided important insights on what factors increase vulnerability to these harms, there are four limitations that should be considered in past research.

First, the samples are generally limited in that they include small sample sizes or only include a specific population (e.g., females only, narrow age range) (e.g., Cho et al., 2022; Pantalone et al., 2015; Schramm et al., 2023). The concern with this is that small sample sizes and specific populations run the risk of not being representative of all individuals who could experience revictimization, as studies have shown that both men and women of all ages are vulnerable to revictimization (e.g., Brousseau et al., 2012; Yoon & Song, 2022).

Second, when researchers have considered adverse childhood experiences (ACEs) as correlates of revictimization, they oftentimes examine the index (or summed score) rather than separate ACE indicators. ACEs can include physical and emotional abuse or neglect and have been linked to a number of adverse effects later in life, including mental health issues and substance abuse (e.g., van der Feltz-Cornelis et al., 2019). More recently, ACEs have been examined in light of one’s likelihood of revictimization (e.g., Petit et al., 2023). When studying the index rather than separate ACE indicators, researchers are unable to determine which experiences are most influential in predicting future victimization (e.g., experiencing sexual abuse as a child as a correlate of sexual assault as an adult).
Third, when examining ACEs, researchers tend to code them using only one variation instead of looking at the degree of ACE exposure. In other words, some researchers may code responses of “never” and “rarely” as “no” and “sometimes,” “often,” and “very often” as “yes” (e.g., Ports et al., 2016). Others may code ACEs dichotomously (e.g., Desir & Karatekin, 2021). However, literature that includes more than one coding variation is very rare (see Bond et al., 2021). This is problematic because the correlation between the predictor variables and outcome variables may differ based on how often respondents experienced ACEs and, relatedly, how the ACEs were coded.

Fourth, studies commonly examine factors associated with one theory or perspective rather than using a more comprehensive approach (e.g., Izdebska & Beisert, 2021; Mazzarello et al., 2022). For example, some of these studies are not able to assess multiple potential risk factors because they examine victimization using an index of vulnerability factors (e.g., having a history of both child sexual abuse and anti-bisexual experiences) rather than examining the variables separately (e.g., McConnell & Messman-Moore, 2019).

Taking these gaps into consideration, the current study seeks to determine whether sexual and physical victimization in adulthood is associated with (1) past victimization of the same type during childhood and/or (2) other theoretically relevant factors. In other words, is it that someone is vulnerable to the same type of victimization in adulthood because they experienced it during childhood? Or, are other theoretically relevant factors for victimization more generally contributing to this vulnerability in adulthood (e.g., other early childhood harms not related to the later victimization type, lifestyle factors)?
The current study seeks to address these questions by taking a comprehensive approach when examining theoretical components across state dependence, population heterogeneity, and target congruence frameworks. Specifically, the proposed study examines the revictimization perspective (i.e., state dependence—experiencing sexual or physical violence as a child), lifestyle factors (e.g., population heterogeneity—running away, substance abuse; Hindelang et al., 1978), individual traits (e.g., population heterogeneity—low self-control; Schreck, 1999), and target congruence theory (e.g., target vulnerability, gratifiability, and antagonism; Finkelhor & Asdigian, 1996) in one model to predict separate estimations of adult sexual and physical assault victimizations in adulthood that occurred in the past 12 months. Also, by using a secondary data set of a national survey using behaviorally specific questions, the current study examines childhood experiences individually (e.g., physical abuse, physical neglect, emotional abuse) to better understand which risk factors are most influential in predicting subsequent victimization. Taking these factors and perspectives into account, the current study will help explain which factors matter most when trying to understand revictimization experiences. This study serves as another step to understand why some individuals are victimized repeatedly in order to create helpful and practical policy implications to minimize the harmful effects associated with revictimization.

**The Nature of Revictimization**

Considering revictimization has been studied since the early 1990s, there is a wide variety in the research that has been conducted on this topic. This research includes how revictimization is defined, how it is measured, and the types of victimization that are being studied. As previously mentioned, revictimization has been studied as two or more
instances of victimization in different life stages or simply at two points in time (e.g., Hosser et al., 2007). These life stages include childhood, adolescence, adulthood, and seniors (e.g., Friedman et al., 2017; Hosser et al., 2007). As for two points in time, for example, researchers have studied intimate partner violence victimization experiences that occur within a year of each other, sexual and physical victimization experiences occurring within six months of each other, or conventional crime victimization experiences occurring within six months of each other (e.g., Dardis et al., 2018; DePrince et al., 2015; Kunst & Winkel, 2013). Not only is there much discrepancy among how revictimization is defined, but there is also variability in the types of experiences scholars consider when studying revictimization. Although some scholars have studied bullying, financial abuse, or witnessing family violence (e.g., Aakvaag et al., 2019; Cho et al., 2022; Yoon & Song, 2022), a majority of the research in this area has examined sexual and physical abuse (e.g., Christ et al., 2022; Mazzarello et al., 2022). Because of the different ways scholars have defined and measured revictimization over time, the prevalence rates associated with those studies are also subject to variability.

**Prevalence Estimates**

Prevalence ranges can vary based on victim demographics, if the offender is known or unknown to the victim, and the specific type of victimization being studied. For example, for sexual revictimization, the rates range from 10% to 77% for females and 37% to 65% for males (e.g., Aosved et al., 2011; Lau & Kristensen, 2010; Orcutt et al., 2005; Stevenson & Gajarsky, 1992). The prevalence rates for sexual revictimization in males must be considered with some caution, as there are very few studies that examine male populations (e.g., Aosved et al., 2011). In the studies that do include males, the
samples tend to be of college students and the measures of sexual assault are rather broad (Aosved et al., 2011; Stevenson & Gajarsky, 1992). For instance, Aosved et al. (2011) included both contact sexual abuse (i.e., kissing, oral-genital contact, penetration) and coercive sexual abuse (e.g., due to alcohol or drug use or misuse of authority) when measuring childhood and adulthood sexual abuse. Because the inclusion criteria were so broad, participants may have been more likely to report abusive experiences than studies with female populations that define sexual abuse more narrowly (e.g., experiencing sexual coercion, rape, or attempted rape; Simmel et al., 2012). In these studies, sexual revictimization is defined as experiencing sexual abuse in childhood and again in adulthood, though the age which researchers consider adulthood ranges from 14 to 17 years (e.g., Chu et al., 2014; Papalia et al., 2017), and other studies have used different time frames for sexual revictimization.

Various time frames for sexual revictimization include sexual violence before and during college (Anderson et al., 2020) or sexual victimization at Time 1 (i.e., any point in time) and again at Time 2 (i.e., in the past year) (Collins, 1998). Prevalence rates for these time frames tend to be higher than those of childhood and adulthood sexual revictimization. For sexual revictimization before and during college, prevalence rates are around 53%, while rates for sexual victimization at any two points (i.e., at Time 1 and again at Time 2) are around 85% (Anderson et al., 2020; Collins, 1998). Similarly, rates tend to hover between 25% and 40% for physical revictimization of females, while the rates for males are higher, around 63% (e.g., Barnes et al., 2009; Cho & Wilke, 2010; Morris & Balsam, 2003). In general, scholars define physical revictimization for females as physical victimization as a child and again as an adult (e.g., Barnes et al., 2009; Morris
& Balsam, 2003), while male physical revictimization has been defined as a second physical assault occurring more than a year after the initial physical assault (Cho & Wilke, 2010). This discrepancy in definition may be one of the reasons male and female revictimization prevalence rates are so different. Another reason for the discrepancy in prevalence rates is simply because males are at greater risk for physical victimization than females, which in turn increases their risk of physical revictimization (Tjaden & Thoennes, 2000, as cited in de Waal et al., 2017).

Not only do prevalence rates vary by broad demographic characteristics, but the relationship between the victim and the offender can also change the rate of revictimization. Sexual revictimization rates tend to be lower when the perpetrator is a stranger than when the perpetrator is known to the victim (i.e., acquaintance, partner). For example, Messman-Moore and Long (2002) found that the rate of rape revictimization by a stranger is 12.5%, while the rate for coerced intercourse by a known perpetrator ranges between 30% and 47%. Similar to other researchers, Messman-Moore and Long (2002) defined sexual revictimization as experiencing sexual abuse involving physical contact (i.e., by a relative, by an individual five or more years older, or by an individual using threat or force) in childhood and subsequent sexual abuse (i.e., unwanted intercourse due to arguments or pressure, use of authority, substances, or physical force) in adulthood. They defined childhood as under the age of 17 and adulthood as at or after the age of 17 (Messman-Moore & Long, 2002).

Lastly, while sexual and physical revictimization are most commonly studied, scholars have studied many other types of revictimization, leading to an even wider range of prevalence rates. Conventional crime revictimization, which includes robbery,
personal theft, vandalism, assault with or without a weapon, attempted assault, kidnapping, and bias attacks occurring in two subsequent years, for instance, have a prevalence rate of about 60% (e.g., Finkelhor et al., 2007). Also, some researchers have examined rates of economic abuse, particularly in dating relationships, and report a rate of about 14% (e.g., Giraldo-Rodríguez et al., 2022). Economic abuse is typically defined as abuse in two or more stages of life (e.g., Giraldo-Rodríguez et al., 2022; Yoon & Song, 2022). Clearly, prevalence rates can range greatly, from 21% to 85%, for example, for the same type of revictimization (Collins, 1998; Miner et al., 2006). This discrepancy is likely due to researchers sampling high-risk populations, such as pregnant and parenting adolescents and low-income individuals (e.g., Collins, 1998; Miner et al., 2006). These are high-risk populations because pregnant adolescents that experienced childhood abuse are more likely to suffer from psychological, behavioral, and social problems than pregnant adolescents without a history of abuse (Lanz, 1995, as cited in Collins, 1998). This may make them especially vulnerable to physical, emotional, or financial abuse (Collins, 1998). On the same note, having a low socioeconomic status can lead to unsafe situations, poor health conditions, and a jeopardized wellbeing, all of which may make individuals vulnerable to revictimization (Campbell et al., 2008).

In sum, prevalence estimates for revictimization are seldom consistent, as they vary depending on the demographics of the victim (i.e., male or female), the relationship between the victim and offender, the type of victimization being examined, and the definition of “revictimization” being applied. Because of the discrepancy in definitions and time frames, there is a challenge in studying and comparing prevalence rates across studies. Going forward, there is a need for a more uniform operationalization of
revictimization to give scholars a better understanding of the true prevalence rates of these harms in order to inform risk and protective factors that could guide policy responses.

**Studying Revictimization**

As noted above, the discrepancy across studies is due in part to the multitude of types of revictimization. Types of revictimization can range from sexual abuse to financial abuse to intimate partner violence (e.g., Yoon & Song, 2022; Zamir et al., 2018). Along with the various types of revictimization, there are also different ways scholars have studied and classified revictimization. In general, there are three ways researchers have tried to predict revictimization: (1) by using regression to predict revictimization experiences from initial victimization experiences; (2) by classifying all participants based on their experiences of victimization and then using class membership to predict revictimization; and (3) by using latent class analysis to first identify the optimal number of subgroups, then assign participants to a subgroup, and finally use the subgroups for conventional analyses.

First, researchers may use initial victimization experiences as a variable in predicting later victimization. Yoon and Song (2022), for instance, used multiple logistic regression to predict adult dating violence victimization (i.e., physical, emotional, financial abuse by a dating partner after the age of 18) using childhood maltreatment (i.e., physical and emotional abuse, neglect before the age of 18) as predictor variables. That is, earlier victimization experiences were controlled for with other theoretically relevant factors to determine whether early victimization or other correlates explain adult dating violence victimization. This method of including earlier victimization experiences while
simultaneously controlling for other variables to predict the outcome is helpful because it allows researchers to consider multiple explanations for why victimization occurs (Desir & Karatekin, 2021). For example, Langer and Neuner (2021) used childhood sexual, physical, and emotional abuse before the age of 14 to predict adult sexual, physical, and emotional violence after the age of 14. In other words, scholars are able to identify if earlier victimization is a significant predictor of later victimization above and beyond other theoretically relevant correlates. Controlling for earlier victimization in a multivariate model to predict later victimization is described here as the state dependence or revictimization perspective.

Second, researchers may classify participants based on their victimization experiences and use group membership as the outcome variable of revictimization. For example, Messman-Moore and Long (2002) categorized participants into one of two groups: those that had experienced childhood sexual abuse (CSA) before the age of 17 and those that had not. They then asked participants about their experiences with sexual victimization since the age of 17. Using these categories, the researchers were able to classify participants into groups of revictimization (i.e., experienced both CSA and adulthood rape or coerced intercourse) or no revictimization (i.e., experienced CSA but not adulthood sexual victimization, experienced adulthood sexual victimization but not CSA, or did not experience either). Based on the results, researchers were able to compare the two groups to determine if their rates of adulthood sexual victimization differed, concluding that those in the childhood sexual abuse group were more likely to experience rape or coerced intercourse than their counterparts (Messman-Moore & Long, 2002). Another study, done by Balsam et al. (2011), categorized participants into groups
based on their experiences with childhood abuse before the age of 14 (i.e., no childhood sexual abuse, childhood sexual abuse). Researchers then asked participants about their experiences with adulthood sexual assault (i.e., at or after the age of 18). Using these categories, the researchers were able to classify participants into groups of revictimization (i.e., experienced both CSA and adulthood rape) or no revictimization (experienced CSA but not adulthood rape, experienced adulthood rape but not CSA, or did not experience either). Analyses were conducted to determine whether group membership (i.e., experiencing childhood sexual abuse or not) impacted one’s likelihood of adulthood sexual assault, supporting the conclusion that those who had experienced CSA were more likely to experience adulthood rape—or revictimization—than those without a history of CSA (Balsam et al., 2011).

Third, researchers have tried to predict revictimization by using latent class analysis (LCA). To use LCA, researchers derive classes from variables, assign participants to their best fitting class, and then use class membership as a variable in further analyses (Papalia et al., 2017). In relation to revictimization, scholars have categorized participants into latent classes based on their experiences with childhood victimization as a way to predict adulthood victimization. Cho et al. (2022), for example, categorized participants into bullying subgroups based on when their bullying began and how long it continued. The subgroups were early onset-stable (i.e., bullying present at Wave 1 and frequent occurrence thereafter), early onset declining (i.e., bullying present at Wave 1 and declining thereafter), low-late peak (i.e., peaked at Wave 7), and normative (i.e., no or few bullying victimization experiences), and participants were grouped into one of the four waves using group-based trajectory modeling. Researchers then asked
participants about their exposure to violence before the age of nine. Revictimization was classified as exposure to violence (i.e., family violence, sibling aggression, peer delinquency, and self-reported delinquency) before the age of nine and experiencing bullying victimization in middle school. Those respondents that experienced neither childhood exposure to violence or bullying victimization or just one of the victimization experiences were not classified as revictims. Using this information, researchers were able to compare the groups to determine if there was a relationship between participants’ experiences with early exposure to violence and their subsequent membership in the bullying subgroups (i.e., revictimization). On the same note, Papalia et al. (2017) used latent classes to classify victims of childhood abuse into groups (i.e., normative, childhood-limited, emerging-adulthood, and chronic) based on their experiences with both childhood abuse (i.e., before the age of 17) and interpersonal victimization (i.e., between the ages of 10 and 25). Revictimization was classified as exposure to childhood sexual abuse before the age of 17 and experiencing interpersonal victimization (i.e., homicide offenses, sexual assault, violence, threats, stalking, abduction/kidnapping) between the ages of 10 and 25. Participants who experienced neither or just one of these victimization experiences were not classified as revictims. The researchers were able to determine which groups were more likely to experience certain abuse characteristics (e.g., penetrative, intrafamilial) as well as revictimization experiences (Papalia et al., 2022).

In sum, scholars have tried to predict revictimization by controlling for earlier victimization experiences, by classifying participants into groups based on their victimization experiences, and by using latent class analysis to classify participants into
groups to assess their revictimization trajectories. Each method has unique advantages, including the ability to consider and control for multiple variables (i.e., Yoon & Song, 2022) and the ability of group membership analysis to group participants based on their experience with one type of abuse (i.e., experiencing childhood sexual abuse or not; Balsam et al., 2011) or multiple types of abuse (i.e., victims of sexual abuse, victims of physical abuse, and victims of both sexual and physical abuse; Rowe et al., 2023) (Anderson et al., 2020; Andersson et al., 2020; Desir & Karatekin, 2021). While methodology is important in considering the ways in which scholars have tried to predict revictimization, it is just as important to consider how various theories have guided scholars’ understanding of predictor variables.

Explaining Revictimization

As previously mentioned, there is a wide range of variables scholars have used to try to predict revictimization. These variables are not chosen at random; rather, they are selected based on their relation to certain theories and explanations for why someone might be targeted again. Some common theories researchers use when studying revictimization include those related to trauma and dissociation, coping mechanisms and social support, disclosure decisions, learning processes, and routine activities. Some of the theories are linked directly to criminology and victimology, such as routine activity theory (e.g., Cohen & Felson, 1979), while others have been applied to a variety of other disciplines, including psychology, sociology, and physical health (e.g., Fteiha & Awwad, 2020; Robinson et al., 2002). The theoretical correlates of revictimization that have emerged in this field include the traumagenic dynamics model, peritraumatic dissociation theory, coping styles, social support deterioration model, betrayal trauma theory,
disclosure theory, self-blame theory, the Minnesota Sexual Health Model, affect
dysregulation, learning theory, and routine activity theory. Each of these theories is
reviewed briefly below.

**Traumagenic Dynamics**

The traumagenic dynamics framework was developed in 1985 by Finkelhor and
Browne. They found that children who were victims of sexual abuse typically experience
(1) traumatic sexualization, (2) betrayal, (3) stigmatization, or (4) powerlessness as a
result of their abuse, which are the four traumagenic dynamics. Consequently, their self-
image, world view, and emotional capacity may be compromised (Finkelhor & Browne,
1985). This research was only interested in the effects of childhood sexual abuse, but
several years later, scholars applied these effects to one’s risk level of experiencing
revictimization specifically (Freshwater et al., 2001; Mayall & Gold, 1995). Women who
experience traumatic sexualization as a result of CSA may be more likely to experience
adulthood sexual violence because they experienced violent sexual abuse and expect
further sexual activity to be violent (Fromuth, 1986, as cited in Mayall & Gold, 1995). In
addition, experiencing traumatic sexualization may make it difficult for individuals to
identify danger or leave an abusive relationship later in life (Mazzarello et al., 2022).
Betrayal plays a role in revictimization in that CSA victims who were betrayed in
childhood are less likely to identify partners in adulthood who will not betray them
(Mayall & Gold, 1995). CSA victims may be more likely to experience revictimization
because their sense of powerlessness from the initial assault makes them feel less capable
of defending themselves in a subsequent sexual assault (Freshwater et al., 2001; Mayall
& Gold, 1995). Finally, stigmatization resulting from CSA can increase a woman’s
likelihood of engaging in criminal activity or experiencing a substance use disorder, both of which play a role in revictimization risk (Ageton, 1983, as cited in Mayall & Gold, 1995).

In sum, the four dynamics in the traumagenic dynamics model have been theorized to link childhood sexual abuse to adulthood sexual assault (Mayall & Gold, 1995). In practice, however, the impact of these dynamics on revictimization risk has mixed empirical support. Researchers have been able to study victims’ experiences with and perceptions of their own traumatic sexualization, betrayal, powerlessness, and stigmatization, but they have not been able to provide a direct link between the two abusive experiences using these traumagenic dynamics (Freshwater et al., 2001; Mayall & Gold, 1995). Some researchers, however, have been able to link one of the components, traumatic sexualization, to revictimization. Mazzarello and colleagues (2022) found that victims of child sexual abuse who had also experienced post-traumatic stress disorder (PTSD) were more likely to report psychological violence in a dating relationship. In this way, while traumatic sexualization may play a role in revictimization, the traumagenic dynamics model as a whole has not been widely supported in empirical research (Freshwater et al., 2001; Mayall & Gold, 1995; Mazzarello et al., 2022).

**Peritraumatic Dissociation**

Peritraumatic dissociation, which commonly occurs immediately following a traumatic event, can include reactions such as memory loss, emotional detachment, and lack of awareness. These reactions are helpful for minimizing distress but are harmful for processing and resolving traumatic events (Brooks et al., 2009). Related to
revictimization, the individual-level risk factor of dissociation has been associated with both childhood sexual abuse and adulthood dating violence, as explained by Dahlberg and Krug’s (2002) ecological model of victimization (Mazzarello et al., 2022). When an individual dissociates from an initial abusive experience, they are less likely to bring informed judgment to a potentially harmful experience in the future, thus increasing their risk of revictimization. Also, abuse victims that experience dissociation tend to have poor coping mechanisms and strenuous relationships, both of which can also increase their likelihood of revictimization (Irwin, 1999).

Despite the impact of peritraumatic dissociation on an individual’s cognitive functioning (e.g., post-traumatic stress disorder [PTSD], dissociative disorders), empirical findings are mixed (Irwin, 1999; Mazzarello et al., 2022). In a study of sexual and physical revictimization among women, Irwin (1999) used a 10-item scale to analyze the effects of peritraumatic dissociative experiences (e.g., amnesia following a traumatic event) on revictimization risk. While Irwin (1999) found that peritraumatic dissociation does impact the likelihood of certain dissociative disorders and PTSD, he did not find peritraumatic dissociation to have an intervening effect on revictimization experiences. Mazzarello and colleagues (2022), however, studied sexual, psychological, and physical victimization among individuals who had experienced child maltreatment. They also asked participants about their mental health (e.g., dissociative experiences) and concluded that those who had experienced dissociation were more likely to report physical violence in adulthood than those with no reported dissociation. In essence, evidence related to the theory of peritraumatic dissociation in revictimization has been
mixed and further research is needed in this area (DePrince, 2005; Irwin, 1999; Mazzarello et al., 2022).

Coping Styles

After experiencing trauma of any kind, an individual will respond using a coping mechanism, which can either be positive or negative. Positive coping can include disclosing the incident or seeking counseling, whereas negative coping can involve using drugs or alcohol or blaming oneself (Long & Ullman, 2013). For childhood trauma in particular, an index of eight coping mechanisms is typically used to evaluate children’s responses to victimization. These include the mechanisms of (1) confronting, (2) distancing, (3) self-controlling, (4) seeking social support, (5) accepting responsibility, (6) escape-avoidance, (7) planful problem solving, and (8) positive reappraisal (Irwin, 1999). These coping mechanisms are related to revictimization because how an individual responds to their initial victimization experience may influence their likelihood of experiencing a subsequent victimization event. For instance, if a person does not take adequate steps to grow personally after being victimized (positive reappraisal), they may be more likely to find themselves in the same abusive situation that they did before (Irwin, 1999).

Looking at the empirical evidence for these claims, it becomes clear that certain coping mechanisms mediate the relationship between childhood and adulthood abuse. More specifically, Irwin (1999) asked child abuse victims about which of the eight coping mechanisms they used following their abusive experience(s), concluding that the positive reappraisal style was an intervening variable between childhood and adulthood victimization. Simply put, individuals who do not seek to change their circumstances and
themselves following an abusive incident (i.e., cope using the positive reappraisal style) are more likely to be revictimized than those who do make changes. The other coping mechanisms were not significantly related to revictimization risk and warrant further research to fully understand their relationship with revictimization (Filipas & Ullman, 2006; Irwin, 1999).

**Social Support Deterioration**

According to the social support deterioration model, individuals affected by trauma or disaster may either lose social support or have the perception that they have lost social support (Barrera, 1988, as cited in McNeil Smith et al., 2019). Individuals’ social support may deteriorate after a traumatic event because the support system doesn’t know how to support the individual, they are unaware of the traumatic event, or their support is not helpful (McHale et al., 2006, as cited in McNeil Smith et al., 2019). This lack of social support in the aftermath of a traumatic event can inhibit the coping process (McNeil Smith et al., 2019). Similarly, according to Kernberg’s theory of personality, victims of child abuse tend to have superficial relationships in adulthood, which are more likely to be exploitative than relationships built on trust (Izdebska & Beisert, 2021). In the context of revictimization, when a victim of abuse loses social support, they are more likely to have increased levels of psychological distress and PTSD, which, in turn, can elevate that individual’s risk of experiencing a subsequent abusive incident (Izdebska & Beisert, 2021; Schumm et al., 2004).

Schumm et al. (2004) tested the social support deterioration model by analyzing the mediating effect of social resources and psychological distress on initial and subsequent victimization experiences. They found that child sexual and physical abuse
were significantly related to PTSD in predicting adulthood abuse and, more importantly, that social support deterioration approached significance as a predictor of PTSD severity. Likewise, Izdebska and Beisert (2021) studied individuals who had experienced child abuse and asked about their personality organization, social support, and potential revictimization experiences. They concluded that women with a history of child abuse and borderline personality organization had difficulty maintaining relationships, which in turn led to a higher rate of revictimization than women without personality disorders and with normal relationships. In other words, research shows that social support deterioration following a traumatic experience in childhood may increase PTSD severity and personality functioning, which then increases an individual’s likelihood of experiencing adulthood abuse (Bybee & Sullivan, 2005; Izdebska & Beisert, 2021; Schumm et al., 2004; Ullman & Najdowski, 2009).

**Betrayal Trauma Theory**

Betrayal trauma theory posits that, in the wake of a traumatic event, victims may dissociate from the trauma by subconsciously removing abuse-related information from their awareness as a way to remain attached to their offender (Freyd, 1994). Freyd (1994) applied this theory specifically to victims of child abuse, as children are more likely to dissociate in order to maintain a relationship with their parent(s). DePrince (2005) furthered this theory by applying it to revictimization experiences in that dissociating from the original traumatic event, especially one that is high in betrayal (e.g., child abuse by a caregiver, abuse by an intimate partner), compromises the victim’s ability to identify risk in the future. Thus, their inability to detect a risky situation as a result of betrayal trauma puts them at risk of being further victimized (Gobin & Freyd, 2009).
Empirically, this theory has mixed findings. For example, Gobin and Freyd (2009) concluded that while betrayal trauma is not directly correlated with revictimization risk, victims who experienced events high in betrayal trauma (e.g., sexually abused by someone very close to them) were more apt to stay in those abusive relationships. In theory, it seems some individuals may be more likely to face abuse at the hands of the same abuser, though there were no statistically significant differences in revictimization rates between groups with different levels of betrayal. In another study, DePrince (2005) found that victims of child abuse that experienced events high in betrayal trauma (e.g., attacked by someone very close to them, mistreated over time by someone very close to them) were more likely to dissociate from their abuse, making them more susceptible to adulthood trauma. In sum, while research has supported the theory that individuals who experience betrayal trauma may be more likely to maintain relationships with their abuser (DePrince, 2005; Gobin & Freyd, 2009), further research is needed to determine the extent of this finding, especially in regard to revictimization risk.

**Disclosure**

As mentioned above, decisions to disclose can be a positive or negative coping mechanism after experiencing abuse (Long & Ullman, 2013). Looking at disclosure theory in greater detail, it becomes clear that delaying abuse disclosure can lead to severe long-term consequences as well as further abuse (Paine & Hansen, 2002). Paine and Hansen (2002) applied disclosure theory to childhood abuse in particular, acknowledging that when children do not disclose abuse, they will not receive legal or therapeutic assistance. As a result, the abuse may continue and the child may face negative effects
such as poor mental health outcomes (Pennebaker, 1995, as cited in Kogan, 2005) and adjustment problems (Kogan, 2005). In relation to revictimization, when law enforcement is unaware of the abuse, particularly child abuse, or cases are forced to close because of insufficient evidence (e.g., lack of disclosure), parents are given the opportunity to continue abusing their child (Paine & Hansen, 2002).

Researchers found that disclosing abuse promptly (i.e., within 30 days) does reduce one’s risk for future victimization, while delaying abuse disclosure increases one’s risk for future victimization as well as symptoms of abuse (e.g., PTSD, substance abuse, major depressive disorder) (Kogan, 2005). While these findings seem to support the theory of disclosure, Kogan (2005) also found that choosing not to disclose also decreased one’s likelihood of revictimization. Non-disclosure may be related to lower revictimization rates because the victim is not being stigmatized or losing social support as a result of disclosing their abuse to others. Delayed disclosure may be related to increased revictimization rates because the victims being studied were older and simply had more time to be revictimized (Kogan, 2005). In any case, the impact of disclosure decisions on revictimization rates warrants further research and discussion.

**Self-Blame**

Two types of self-blame may arise after an individual experiences a traumatic event: (1) behavioral and (2) characterological (Janoff-Bulman, 1979). Behavioral self-blame is when a person blames something changeable about themselves or their situation, such as blaming a rape victimization on their walking alone at night. Characterological self-blame, on the other hand, is when a person blames the nonmodifiable attributes of themselves, such as pointing to their naturally trusting disposition as a reason for letting a
dangerous person into their apartment (Janoff-Bulman, 1979). For several years, the concept of self-blame was applied to the likelihood of experiencing the psychological effects of trauma (e.g., depression, loneliness, anxiety) before being applied to one’s likelihood of further victimization (e.g., Graham & Juvonen, 1998; Peterson et al., 1981). As researchers began to apply the concept of self-blame to revictimization, they found that both behavioral and characterological self-blame may increase a victim’s likelihood of experiencing PTSD, which may lead to an increased risk of revictimization (Arata, 2000, as cited in Filipas & Ullman, 2006). On top of that, victims who blame themselves may be perceived by potential offenders as more vulnerable, thus increasing their risk of revictimization (Filipas & Ullman, 2006).

After testing their hypothesis that victims of child sexual abuse (CSA) who experience self-blame are at an increased risk of adulthood sexual assault (ASA), Filipas and Ullman (2006) found that revictims (i.e., experienced both CSA and ASA) were more likely to blame themselves for both the initial and subsequent victimizations. Moreover, the more severe cases of CSA (e.g., completed penetration as opposed to genital exposure) had higher frequencies of self-blame than cases of less severity (Filipas & Ullman, 2006). However, despite the revictimization group’s high likelihood of experiencing self-blame in comparison with the CSA-only group, when nonsignificant predictors were removed, experiencing self-blame was not significantly correlated with revictimization (Filipas & Ullman, 2006). Because there were no differences in revictimization prevalence rates between those who experienced self-blame after CSA and those who did not, the theory of self-blame is not yet well supported in the literature.
Minnesota Sexual Health Model

As put forth by Robinson et al. (2002), there are ten components to sexual health, which can be used to inform individuals of their health as well as provide them with treatment information if one or more of the components are lacking. These components make up the Minnesota Sexual Health Model and include the following: (1) talking about sex, (2) culture and sexual identity, (3) sexual anatomy functioning, (4) sexual health care and safer sex, (5) challenges, (6) body image, (7) masturbation and fantasy, (8) positive sexuality, (9) intimacy and relationships, and (10) spirituality (Robinson et al., 2002).

Miner et al. (2006) used this model to show the harmful effect of sexual victimization on the other components (e.g., body image, intimacy and relationships) and, as a result, on overall sexual health. They went on to say that when an individual experiences sexual victimization, their ability to communicate with sexual partners may be impaired and they may experience other unhealthy sexual behaviors (e.g., not using birth control, engaging in intercourse at a young age).

Although Miner and colleagues (2006) did identify a correlation between childhood and adulthood sexual abuse, there was no support for the mediating effect of the Minnesota Sexual Health Model as hypothesized. There were no differences in unhealthy sexual behaviors or partner communication abilities between women who had been sexually abused in childhood and women who had not (Miner et al., 2006). While this model could be used in studies with other populations, as it stands, there is no empirical support for the effect of the Minnesota Sexual Health Model on revictimization risk specifically.
Affect Dysregulation

Normally, children without a history of abuse have a strongly developed affect regulation, meaning that, in response to stress, they can manage their internal state and their external response (Cloitre & Rosenberg, 2006). Affect regulation is developed and improved upon when caregivers encourage appropriate regulation skills and model healthy behavioral responses. However, when faced with sexual abuse, children’s affect becomes dysregulated. Affect dysregulation can result in dissociation, emotional flooding or numbing, and substance abuse (Cloitre & Rosenberg, 2006). Unfortunately, affect dysregulation is not only a result of abuse, but it can also be used to predict further abuse. Because individuals may be unable to cope with past trauma or have weakened fight or flight responses, their response to immediate danger could be inhibited (Dietrich, 2007).

One study by Dietrich (2007) tested three components of affect dysregulation (i.e., [1] substance abuse, [2] dissociation, and [3] PTSD) on revictimization risk. Results showed that PTSD was a main predictor of sexual revictimization for females, while dissociation and substance abuse had no effect on revictimization risk. Because only one of the components of affect dysregulation significantly predicted revictimization, there is weak support for the affect dysregulation model in the context of revictimization.

Learning Theory

In the field of psychology, Ivan Pavlov studied learning processes and how dogs can be conditioned to certain stimuli in their environment. He concluded that dogs developed a physiological response (i.e., salivating) to a stimulus that was previously neutral (i.e., a bell) when that neutral stimulus was associated with a more meaningful
stimulus (i.e., food) (Windholz, 1992). This process, also known as classical conditioning, is an essential component of learning theory and can be applied to a wide variety of situations. For example, a woman who has been assaulted may avoid the scene so as not to elicit an emotional response similar to what she felt during the assault (Fortier et al., 2009). Regarding revictimization, a victim of child abuse may use avoidance as a strategy to cope with their victimization. These strategies, which can include physical isolation and self-blame, are developed after an initial victimization experience and are maintained over time due to conditioning. As a result of poor coping strategies, victims of CSA may be at an increased risk of further victimization (Fortier et al., 2009). While learning theory incorporates an important aspect of coping theory—coping mechanisms—this theory is unique in that it does not simply describe coping strategies; it explains the process by which these strategies are maintained over time.

Upon testing this theory, Fortier et al. (2009) found that child sexual abuse predicts avoidance, which in turn predicts revictimization. Essentially, they found support for learning theory in that avoidant coping strategies (e.g., spending more time alone, criticizing oneself, emotional numbing), conditioned and maintained over time, led to an increased risk of adulthood victimization. The association between learned coping strategies after childhood victimization and risk of adulthood victimization offers some empirical support for learning theory in the field of revictimization.

**Routine Activity Theory**

Routine activity theory, which was coined by Cohen and Felson in 1979, is a criminological theory arguing that a crime will occur when three components converge in time and space: a motivated offender, a suitable target, and the absence of capable
guardianship (Cohen & Felson, 2003). This theory has been applied to many types of crime since its conception, including property crimes, personal crimes, and even terrorism (e.g., Massey et al., 1989; Mustaine & Tewksbury, 1999; Parkin & Freilich, 2015). Examining sexual victimization, researchers have found that people are more likely to be sexually victimized when they use drugs (suitable target), go to crowded bars (proximity to motivated offenders), or are alone at night (absence of capable guardianship) (Clodfelter et al., 2010; Tewksbury & Mustaine, 2001). If individuals remain in close proximity to motivated offenders without capable guardianship, it is likely they will be victimized again (Stockdale et al., 2014).

In relation to sexual revictimization, Stockdale et al. (2014) applied routine activity theory to sexual harassment victimization. They defined a motivated offender as someone with a history of sexual harassment, a vulnerable victim as someone with past victimization experiences, and a lack of capable guardianship as a workplace or other environment without necessary safeguards and policies against sexual harassment. Other places that lack capable guardianship in this context may be areas dominated by males or sex-work environments (Fitzgerald et al., 1997b, as cited in Stockdale et al., 2014; Grauerholz, 2000, as cited in Stockdale et al., 2014). Stockdale et al. (2014) tested their theory by examining workplace environments (e.g., gender composition), previous victimization experiences, and gender and sexual harassment habits and their effect on revictimization. In relation to the workplace environment, jobs dominated by males or with male supervisors had more revictimized women (i.e., experienced child abuse and subsequent sexual harassment) than workplaces without male dominance. There was no relationship between victim vulnerability and revictimization or male sexual harassment
habits and revictimization (Stockdale et al., 2014). Simply put, while there was support for increased revictimization risk based on gender composition in the workplace, the other components of routine activity theory were not upheld, thus pointing to limited support for this theory’s connection to revictimization.

**Current Study**

Although prior research has been informative and provided key insights into revictimization experiences, the proposed study builds on extant research in four ways. First, the current study uses a national sample of adults, while past research tends to include small sample sizes or a specific population. This shortcoming is addressed by the current study in that it uses data from a national sample of adults, including males and females across age groups (aged 19-95). Data are also weighted to increase the representativeness of the sample to the U.S. population of adults. A large, diverse sample size is important because it allows the findings to be applied to the general population as opposed to just a small subset of the population. Past research has generally used restricted samples that focus on a narrow population, such as females only, or a very specific age range, such as 17 to 20 years (e.g., Cho et al., 2022; Krahé et al., 1999). Other studies limit their sample to individuals with a specific housing situation (Edalati et al., 2016; Wright et al., 2022) or people with a certain medical diagnosis (Cunningham et al., 2019; Eid et al., 2022; Izdebska & Beisert, 2021; Tirone et al., 2021). Wright and colleagues (2022), for example, sampled youth residing at a homeless shelter, and, similarly, Edalati et al. (2016) included 500 young adults from a homeless shelter in their study. As for medical diagnoses, numerous prior studies have limited their sample to individuals with a diagnosed depressive disorder (Cunningham et al., 2019), multiple
sclerosis (Eid et al., 2022), borderline or neurotic personality disorder (Izdebska & Beisert, 2021), or PTSD (Tirone et al., 2021). It is important that past research is able to help explain why revictimization experiences differ across various populations, but a downfall of this is that it isn’t generalizable to the adult population more broadly. Again, the current study addresses this limitation by drawing on responses from a large sample size of adults in the general population ($N = 1,693$).

Second, separate adverse childhood experience (ACE) indicators were analyzed as opposed to analyzing a sum score of variables as found in prior work. For instance, McConnell and Messman-Moore (2019) asked participants about their experiences with five types of childhood sexual abuse (CSA) and then summed the items to create one dichotomous variable (no CSA and CSA). Researchers then used the dichotomous CSA history variable to predict experiences of adult rape to assess sexual revictimization. Another study examined the correlation between criminal offense victimization experiences (i.e., burglary, theft, vandalism, sexual harassment, threat, physical assault) and summed victimization scores to create a dichotomous dependent variable. To identify revictimization experiences, researchers then examined the sums of victimization experiences across types of abuse or crime to identify which participants had experienced more than one incident of victimization of different types of abuse/crime (Kunst & Winkel, 2013). When scores are summed such as this, the researchers are unable to determine which of the individual variables is most important in predicting revictimization. In other words, a revictimization “effect” may be present (i.e., experiencing the same type of victimization as a child and again as an adult), but it is unclear to the researchers which variable “matters” when the score is summed. Another
issue that arises when coding certain variables (e.g., CSA history) as either present or not present is that researchers are unable to examine the potential nuances of each variable. For example, McConnell and Messman-Moore (2019) did not distinguish between more severe and less severe instances of child sexual abuse; rather, they coded all instances of CSA as present. Additionally, when the unique adverse experiences are not examined separately, then the potential relationship between other early harms and later victimization cannot be assessed (e.g., do other early victimization experiences matter more than a harm of a similar type for later victimization?).

The proposed study addresses this limitation by analyzing ACE indicators separately instead of summing the scores. Participants answered questions regarding their experiences with multiple ACEs (e.g., emotional abuse, physical abuse, sexual abuse) so that each individual ACE indicator was able to be analyzed separately (Felitti et al., 1998). Given that the current study is assessing correlates of adult sexual and physical victimization, the separation of these items allows for the unique contribution of individual ACE indicators. Specifically, the relationship between childhood sexual abuse (i.e., fondling, touching, engaging in sex) and adult sexual assault (i.e., harassment, assault, rape) is analyzed, while other forms of childhood harms (i.e., physical abuse, emotional abuse, neglect) are controlled for. Similarly, physical revictimization was analyzed by examining the relationship between childhood physical abuse (i.e., being pushed, grabbed, slapped, hit) and adult physical assault (e.g., using a weapon or being punched, kicked, or slapped). In this way, the relationship between all early ACEs can be examined separately to determine which experiences (if any) matter for understanding victimization risk in adulthood.
Third, the current study examines the classifications of ACE indicators to account for more conservative and inclusive response coding. Analyzing the degree of the ACE indicator is essential when studying ACEs because individuals who rarely experienced adverse experiences in childhood (e.g., Bond et al., 2021) may have vastly different experiences with adulthood victimization than individuals who experienced adversity in childhood very often (e.g., Ports et al., 2016). As a result, it is important to distinguish between those that have experienced ACEs with varying frequencies to better understand their relationship with adulthood victimization. Not only was each variable analyzed separately, but the ACE indicators were coded in two different ways accounting for the 5-point Likert scale options: (1) conservative coding in which only the responses of “often” and “very often” were coded as “1” for having experienced an ACE and (2) inclusive coding in which responses of “rarely,” “sometimes,” “often,” and “very often” were coded as “1” for having experienced an ACE. In doing so, the relationship between the frequency of each ACE indicator and adulthood victimization is analyzed. The current study includes both conservative and inclusive coding variations in order to better understand the relationship between the degree of ACEs and adulthood victimization.

Fourth, multiple theories and frameworks rooted in victimology were considered simultaneously rather than using one theory to guide analyses, as seen in prior literature. For example, Izdebska and Beisert (2021) sought to investigate the connection between childhood trauma, personality structure, and adult victimization using Kernberg’s theory of personality. To elaborate, researchers asked participants (i.e., victims of child sexual abuse) about their experience with borderline personality organization (BPO) and neurotic personality organization, concluding that those with BPO were at greater risk for
victimization in adulthood. While this finding is important, it is limited because researchers only considered one theory to guide their research on the effect of personality disorders on revictimization. The current study addresses this limitation by examining revictimization using three theories: (1) state dependence theory, (2) population heterogeneity theory, and (3) target congruence theory. Each of these perspectives is reviewed in more detail below.

**State Dependence**

State dependence theory, also referred to here as the revictimization perspective, suggests that individuals who are victimized once are more likely to be victimized again. Farrell and Pease (1993) refer to this theory as “once bitten, twice bitten” (as cited in Wittebrood & Nieuwbeerta, 2000). The rationale behind this perspective is that people are not revictimized at random; rather, different factors may make an individual more likely to experience victimization after being victimized once (Farrell & Pease, 1993). In other words, after a victimization event, the victim may be seen as more vulnerable, which can lead to an increased risk of the same victim being targeted again later. In line with this perspective, past research has supported the idea that those who experience victimization once are at an increased risk of experiencing victimization again, even after controlling for individual factors (e.g., Desai et al., 2002). O et al. (2017), for example, found that 10% of personal crime victims accounted for over 50% of all personal crime victimizations. In essence, something occurs after an initial victimization event that makes the victim vulnerable to a later victimization event. However, there are other factors, such as the victim’s demographics and characteristics, that may also account for differences in revictimization risk.
**Population Heterogeneity**

The theory of population heterogeneity posits that there is something about an individual that makes them vulnerable to victimization experiences (Tillyer et al., 2016). It was first applied to the field of victimology by Farrell and colleagues (1995) in their study of repeat victimization. The authors concluded that some victims have enduring characteristics that make rational offenders more apt to commit a crime against them. More specifically, they found that racial attacks, domestic violence, and child abuse are three of the more common types of repeated crime because those victims are unable to change the factors that make them vulnerable to crime (i.e., race/ethnicity, age) or are not willing to change their behaviors (i.e., leave a domestic violence relationship). After a person is victimized once, repeat offenses “involve little effort, less risk, and at least as much reward as offenses against new victims” (Farrell et al., 1995, p. 389). As researchers continued to study revictimization using the theory of population heterogeneity, they added other factors, such as behaviors and associations (Cohen et al., 1981; Turanovic & Pratt, 2014; Turanovic et al., 2018). Characteristics specific to a person, as studied by Farrell et al. (1995) make up the theory of individual traits, while behaviors and associations constitute lifestyle theory, both of which are components of the overarching theory of population heterogeneity. Both lifestyle theory and individual traits theory will be discussed in further detail.

**The Role of Risky Lifestyles**

The role of risky lifestyles refers to both lifestyles and routine activities, which together form lifestyle-routine activities theory (L-RAT; Cohen et al., 1981). Before this was one theory, however, there were the theories of routine activity and lifestyle-
exposure. Routine activity theory, created by Cohen and Felson (1979) suggests that a crime will occur when three components converge in time and space: motivated offenders, suitable targets, and the lack of capable guardianship. Lifestyle theory, coined by Hindelang et al. (1978), details the daily activities (i.e., leisure activities, where a person resides, works, or goes to school), social roles, and behavioral constraints (i.e., due to financial or education limitations, familial obligations) that can increase or decrease a person’s chances of being victimized (Hindelang et al., 1978). Because of the similarities between these two theories, they were combined to create one theory, known as L-RAT (Cohen et al., 1981).

Lifestyle-routine activities theory (L-RAT) suggests that daily risky lifestyles influence one’s risk of victimization. Cohen and colleagues (1981) noted that individuals who live with or spend time in close proximity to offenders, are visible and accessible to offenders, are seen as attractive by offenders, and have limited guardianship are likely to be victimized. Put otherwise, people who associate with offenders, have poor security measures, and engage in other risky behaviors or lifestyles that repeatedly put them in contact with potential offenders are at a higher risk for becoming victims (Pratt & Turanovic, 2016). Over time, scholars have expanded risky lifestyles to include substance abuse, engaging in violent behaviors, and committing non-violent crimes (Turanovic & Pratt, 2014; Turanovic et al., 2018). In essence, lifestyles that are deemed “risky” can alter the likelihood of victimization by putting individuals in close proximity and exposure to offenders without capable guardianship.

Like individual traits theory, L-RAT is related to revictimization in that if individuals do not alter their lifestyles and behaviors after being victimized, they are
again at risk of being victimized later (Tseloni & Pease, 2003). For example, if a person continues to engage in “risky” lifestyles (e.g., substance use, delinquency) even after being victimized, their risk of being revictimized stays the same (Tillyer et al., 2016). In support of the connection between lifestyle theory and revictimization, researchers have found that risky lifestyles, such as engaging in delinquency, using drugs, and associating with delinquent peers, are all linked to personal victimization and revictimization (Pratt & Turanovic, 2016; Tillyer et al., 2016). Based on these findings, the risky lifestyles people routinely engage in put them at risk not only for being victimized, but for being revictimized if they continue in the same lifestyles and routines. Despite the importance of lifestyle factors, it is just as important to consider a person’s individual traits that may influence their likelihood of victimization.

**Individual Traits**

Individual traits theory suggests that a person’s characteristics and behaviors may predispose them to both initial and subsequent victimization risks (Tillyer et al., 2016). In other words, if a person has low self-control, they may be at an increased risk of victimization because they engage in risky behaviors. Having low self-control, which includes a lack of empathy, poor risk avoidance, and lack of frustration tolerance, is likely to put a person in a dangerous situation. For example, someone with poor risk avoidance may provoke a physical attack by engaging in, rather than retreating from, a hostile situation (Schreck, 1999). Because these individual traits are unlikely to change over time, neither is one’s risk of being victimized. In their study on self-control and revictimization, Pratt et al. (2014) found that people with low self-control tend to engage in risky lifestyles, which then puts them at risk for victimization. Another study that
lends support to this theory is that of Tillyer et al. (2016), who found that young (i.e., 25 or younger) females were more likely to experience sexual assault than their older, male counterparts. They also reported that participants who had low levels of self-control were more likely to experience repeat sexual harassment victimization. In sum, the application of individual traits theory to revictimization is supported because certain characteristics and behaviors of individuals can influence their likelihood of engaging in risky behaviors and becoming a victim. If these traits do not change, the likelihood of becoming a victim again remains the same (e.g., Pratt et al., 2014; Tillyer et al., 2016).

**Target Congruence Theory**

Another perspective to understand revictimization comes from target congruence theory. Target congruence theory posits that certain characteristics of an individual make them more “congruent” with potential offenders’ motives (Finkelhor & Asdigian, 1996). Put another way, how vulnerable, gratifiable, and antagonistic a person is can increase or decrease their likelihood of becoming a victim. This theory is unique in that it shifts away from environmental factors found in lifestyle theories and focuses more on individual characteristics that are oftentimes outside of the individual’s control. The characteristics in this theory differ from those in individual traits theory because they are hypothesized to be directly correlated with the needs and motives of offenders (Finkelhor & Asdigian, 1996). The first component, target vulnerability, refers to the limited capacity of the victim to deter his/her offender, such as having a small physical stature or a psychological disorder (Finkelhor & Asdigian, 1996). The second component, target gratifiability, refers to the certain characteristics, skills, or possessions a victim has that an offender wants to "obtain, use, have access to, or manipulate” (Finkelhor & Asdigian,
For example, Finkelhor and Asdigian (1996) consider gender—and being female in particular—as being a characteristic in cases of sexual assault. The third component, target antagonism, refers to the anger a victim arouses in the offender, as is often the case where race or ethnicity is considered in many hate crimes (Finkelhor & Asdigian, 1996).

In relation to revictimization, a victim that is perceived as vulnerable, gratifiable, and antagonistic may be revictimized because these perceptions are not likely to change over time since they are characteristics of the victim themselves. While there is not much research on the relationship between target congruence theory and revictimization, preliminary findings do support the connection. For instance, Cho and Harper (2023) studied target antagonism by measuring individuals’ self-control and target vulnerability by measuring levels of self-esteem and depression. They found that participants with high levels of depression and low levels of self-esteem (i.e., vulnerable targets) were more likely to experience early-onset and decreasing bullying revictimization (i.e., teased, collectively bullied, beaten, threatened, robbed). In other words, individuals deemed vulnerable were more likely than their counterparts to be revictimized, though only for a short time after the initial victimization. There was no association between target antagonism (i.e., low self-control) and revictimization. Other scholars have studied individual components of target congruence theory and have found support for a connection with revictimization. Some have studied target antagonism by including participants who identify as lesbian, gay, or bisexual (Daigle & Hawk, 2021), and others have studied target vulnerability by including participants who are immigrants or are of a racial minority (e.g., Liendo et al., 2011). While these researchers were not specifically
studying target congruence theory, Daigle and Hawk (2021) did find support for an increased risk of psychological, physical, and sexual revictimization, and Liendo et al. (2011) found support for an increased risk of intimate partner assault revictimization when the victim was considered vulnerable or antagonistic. In sum, while the research on target congruence theory and its relationship to revictimization is limited, there is support for the theory in that a person who is victimized because of their perceived vulnerability, gratifiability, or antagonism is at an increased risk of being victimized again because of these same factors.

**Research Questions**

The proposed study seeks to determine whether revictimization can be explained by an initial victimization experience (i.e., state dependence) or other victimological theoretical explanations (i.e., population heterogeneity, risky lifestyles, individual traits, target congruence) (e.g., Daigle & Hawk, 2021; Farrell & Pease, 1993; Tillyer et al., 2016; Turanovic et al., 2018). Taking these theories into consideration, the following two exploratory questions will be assessed:

1. Is sexual victimization in adulthood associated with (i) childhood sexual abuse (i.e., state dependence) and/or (ii) other theoretically relevant factors (i.e., population heterogeneity [risky lifestyles, individual traits], target congruence theory)?
   a. Do the findings differ when the ACE indicators are coded (1) *conservatively* or (2) *inclusively*?

2. Is physical victimization in adulthood associated with (i) childhood physical abuse (i.e., state dependence) and/or (ii) other theoretically relevant factors (i.e., population heterogeneity [risky lifestyles, individual traits], target congruence theory)?
   a. Do the findings differ when the ACE indicators are coded (1) *conservatively* or (2) *inclusively*?
Conclusion

Despite the extant literature in the field of revictimization, past research has been unable to account for several factors. Specifically, the proposed study examines revictimization and its correlates using a large national sample of adults (N = 1,693) to assess correlates of adulthood sexual and physical assault victimization. Multiple theories were used to guide the research and which factors are assessed, including state dependence (i.e., childhood sexual and physical abuse), population heterogeneity (i.e., risky lifestyles, individual traits), and target congruence theory (i.e., indicators of target vulnerability, gratifiability, and antagonism). In doing so, the goal of the current study is to determine whether the theories of population heterogeneity and target congruence predict adulthood victimization or if there is a stronger correlation between childhood victimization and the same type of victimization in adulthood (i.e., state dependence) when controlling for other theoretically relevant factors.
Chapter Two: Method

The proposed study, which will be outlined in further detail in this chapter, analyzed data from 1,700 adult participants across the United States who agreed to participate in a self-report survey. The sampling and inclusion criteria for the survey platform—YouGov—is detailed, as are the dependent, theoretically relevant independent, and control variables. This section will also include a detailed rationale of why the adverse childhood experience (ACE) variables were coded in two variations. Lastly, this chapter will describe the analytic strategy used for the current study.

Data

YouGov America, Inc.

The data for the current study was gathered from YouGov America, Inc. (YouGov), which is a public opinion research network with over 24 million panel members. Members opt-in to take surveys on diverse topics, and as an incentive for completing these surveys, they are rewarded with points which can be redeemed for cash or gift cards (e.g., Amazon gift card; YouGov, 2023a). YouGov collects data for a wide range of agencies, such as news outlets, marketing businesses, political campaigns, public affairs groups, and research surveys on diverse topics (e.g., victimization, Dolliver et al., 2022; YouGov, 2023b).

To recruit approximately nationally representative respondents, YouGov uses online advertising for recruitment as well as a two-stage sampling process (Newman et al., 2021). The first stage, target sampling, involves creating a sampling frame from the American Community Survey (ACS). The ACS is an annual survey conducted by the Census Bureau that is sent to 3.5 million households to gather data on U.S. citizens (U.S.
Census Bureau, 2023). After the sampling frame is created, the second stage involves matched sampling. In this stage, the target sample members are matched to the sampling frame on specific characteristics (e.g., age, education, gender, race) and weighted to increase the representativeness of the national sample (YouGov, 2023c). Online panels rival other survey collection methods because they do not require much time to administer, their anonymity increases accuracy, and they have fewer non-responses to questions than other methods (e.g., phone surveys, mail surveys) (e.g., Ansolabehere & Schaffner, 2011, 2014; Baker et al., 2010; Chang & Krosnick, 2009, 2010; Fricker et al., 2005; Kreuter et al., 2008). On top of that, the two-stage sample-matching design employed by YouGov rivals other survey sampling methods, such as the General Social Survey (Ansolabehere & Schaffner, 2014; Graham et al., 2021).

Current Sample

Data for the current study was collected from a YouGov survey asking about various life experiences. The survey was administered between April and May 2022 to 2,117 individuals. Of the interviewed respondents, 1,700 adults (ages 19-95) were matched and selected for inclusion. Specific to this context, the victimization items in the survey used behaviorally specific language, meaning that they described the experience rather than asking about being a “victim” to (1) avoid priming language relating to victimization experiences and (2) ensure the researchers and participants have the same understanding of the questions being asked (Fisher, 2009). For example, instead of asking participants if they had been sexually assaulted in the past year, the survey question asked: “In the past 12 months, how many times has anyone touched you in a sexual manner that was unwanted or uninvited?” The question went on to describe
specific instances of touching (e.g., forced kissing, fondling) in order to eliminate any possible confusion on the wording of the question. In addition to using behaviorally specific questions, the survey collected data on diverse characteristics, perceptions, and experiences assessing various domains of the respondent’s life. With the inclusion of these variables, the current dataset allows for the examination of multiple theoretically relevant factors when assessing adulthood sexual and physical victimization.

**Measures**

Because the proposed study is seeking to examine the effect of adverse childhood experiences or other theoretically relevant factors on adulthood victimization, the dependent variables are adulthood sexual and physical victimization. The independent variables were created through the lens of state dependence, population heterogeneity, and target congruence theories. Each of these measures will be described in detail below, and the specific survey items are provided in the Appendix.

**Dependent Variables**

As mentioned above, (1) sexual and (2) physical assault victimization experiences are examined as the dependent variables. This is of note because the study is examining personal victimization experiences, rather than property offenses, to determine the enduring characteristics that may make certain individuals more likely to be revictimized (Ousey et al., 2008). *Sexual assault victimization* in adulthood is defined as experiencing unwanted or uninvited sexual touching in the past 12 months. *Physical assault victimization* in adulthood is defined as being seriously harmed with physical violence (e.g., punch, kick, slap, choke, burn) or being harmed with a gun, knife, or other weapon in the past 12 months. For both items, the response options consisted of 0, 1, 2, 3, 4, 5+
times, or “this has happened, but not in the past 12 months.” The variables were created by capturing individuals who experienced any sexual or physical victimization in the past 12 months (coded as “1”). Any respondents who did not experience victimization in the past 12 months or have experienced victimization but not in the past 12 months were coded as “0.” These variables were created to distinguish between victims and non-victims to assess adulthood experiences only. Relatively few cases were missing from the total dataset, resulting in a sample size of 1,693 from the total of 1,700 survey respondents.

**Independent Variables**

**State Dependence Theory**

Farrell and Pease (1993) explain state dependence theory as the increased likelihood of certain individuals to be victimized after experiencing an initial victimization experience of the same type of abuse. A victim may be more vulnerable after experiencing an initial victimization event, thus increasing the risk of another victimization (e.g., Desai et al., 2002). Related to the current study, experiencing childhood abuse may increase the risk of experiencing adulthood victimization of the same type of abuse (Farrell & Pease, 1993). However, the rate at which one experiences childhood abuse may impact the risk of experiencing adulthood victimization. Previous research has used two variations of coding (e.g., Bond et al., 2021; Ports et al., 2016)—conservative and inclusive—to uncover the nuances of the rates of adversity in childhood and, as a result, have come to different conclusions regarding the likelihood of adulthood victimization (Reidy et al., 2021). The more conservative coding variation tends to only code “often” and “very often” responses as having occurred (e.g., Ports et al., 2016),
while the more inclusive coding variation tends to include any instances of abuse (e.g., “rarely” and “sometimes”) as having occurred (e.g., Bond et al., 2021). Because of the varying outcomes based on coding differences, the current study uses both conservative and inclusive variations.

Sexual abuse in childhood was defined as experiencing any of the following three items before the age of 18 by an adult or someone at least five years older than the respondent: (1) being touched or fondled in a sexual way, (2) being forced to touch someone else in a sexual way, or (3) being forced or attempted to have oral, anal, or vaginal sex with someone. Response options consisted of “never,” “rarely,” “sometimes,” “often,” and “very often.” For sexual abuse in childhood, coding was completed in two variations to capture conservative (i.e., only captured as present if occurred “often” or “very often”) and inclusive (i.e., captured if experienced any abuse as a child) responses to determine if adulthood victimization differs based on experiences of ACEs that occurred more often (i.e., conservative) or less often (i.e., inclusive). If respondents were coded as “1” for any of the three sexual abuse items, then they were classified as experiencing childhood sexual abuse.

Physical abuse in childhood was defined as experiencing either of the following two items before the age of 18 by a parent or other adult in the household: (1) being pushed, grabbed, slapped, having something thrown at or (2) being hit so hard as to leave marks or result in injury. Again, response options consisted of “never,” “rarely,” “sometimes,” “often,” and “very often.” To analyze conservative responses, responses indicated as “never,” “rarely,” and “sometimes” were coded as “0” and responses indicated as “often” and “very often” were coded as “1.” To analyze inclusive responses,
responses of “never” were coded as “0” and responses indicated as “rarely,” “sometimes,” “often,” and “very often” were coded as “1.” If respondents were coded as “1” for either of the physical abuse items, then they were classified as experiencing childhood physical abuse (e.g., Bethell et al., 2019).

**Population Heterogeneity Theory**

Population heterogeneity theory refers to the individual characteristics and behaviors that may make an individual more vulnerable to both an initial and subsequent victimization experience (Farrell et al., 1995). The enduring characteristics and lifestyles a person has may make their risk of victimization stable over time. In this context, both risky lifestyles and individual traits may be indicators of these enduring characteristics that increase the likelihood of ongoing victimization experiences.

**Risky Lifestyles.** The role of “risky” lifestyles is impacted by both the theories of routine activity and lifestyle-exposure (Cohen & Felson, 1979; Hindelang et al., 1978). Routine activity theory states that when a motivated offender, suitable target, and the lack of capable guardianship converge, a crime will occur (Cohen & Felson, 1979). Lifestyle theory states that the daily activities, social roles, and behavioral constraints specific to a person impact their victimization risk (Hindelang et al., 1978). Together, these theories form lifestyle-routine activities theory, which assumes that daily risky lifestyles increase exposure and proximity to offenders with limited guardianship and can increase target attractiveness, thus affecting victimization risk (Cohen et al., 1981). Similar to individual traits theory, risky lifestyles that remain unchanged will result in a constant risk of victimization (Tseloni & Pease, 2003).
In the current study, “risky” lifestyles are measured as (1) using substances in the past 12 months and (2) having deviant peers. Substance use measured whether the respondents used (i) alcohol, (ii) marijuana, (iii) prescription medications used recreationally, or (iv) illicit substances in the past 12 months ($\alpha = 0.43$). The response options ranged from “never” to “every day.” The responses (ranging from 0-5) from each of the four substance-related responses were averaged, with higher values indicating greater substance use. Deviant peers was measured as a dichotomous yes/no response for each of the three items assessing whether the respondents associated with deviant peers who (i) sell drugs, (ii) have committed a serious crime, and (iii) have engaged in sexual activity in exchange for anything of value. Responses were coded as “1” (having deviant peers) for a “yes” response to any one or more of the three deviant peer-related questions. The respondents who indicated “no” to all three items were coded as “0” (no deviant peers).

**Individual Traits.** According to individual traits theory, certain characteristics, such as impulsivity, can increase one’s involvement in risky behaviors or remove capable guardianship, which, in turn, may make them more likely to experience victimization (Tillyer et al., 2016). Again, if these traits remain stable over time, a person’s risk of victimization will not change.

The current study uses impulsivity and antisocial attitudes as variables measuring individual traits. Impulsivity was measured by asking respondents about their level of agreement with four items assessing this trait (e.g., “I don’t devote much thought and effort to preparing for the future”). Responses ranged from “strongly disagree” to “strongly agree” on a 5-point Likert scale ($\alpha = 0.71$). The responses for each of the four
statements were averaged, with greater values signifying greater impulsive tendencies. 

*Antisocial attitudes* was measured by asking respondents five items about their thoughts toward criminal behavior (e.g., “It’s okay to break the law if nobody is hurt or you can get away with it”). Responses ranged from “strongly disagree” to “strongly agree” on a 5-point Likert scale ($\alpha = 0.83$). The responses for each of the five statements were averaged, with higher values signifying higher levels of antisocial attitudes.

**Target Congruence Theory**

Target congruence theory asserts that an individual’s perceived vulnerability, gratifiability, and antagonism that are congruent with the needs, motives, or reactivities of offenders place them at risk for victimization (Finkelhor & Asdigian, 1996). Unlike the other perspectives, the target congruence approach moves beyond lifestyle factors to assess what may make someone vulnerable to victimization. If those characteristics remain unchanged, then revictimization is likely to occur (Finkelhor & Asdigian, 1996; Sween & Reyns, 2017). The three components of this perspective—target vulnerability, target gratifiability, and target antagonism—were measured with nine survey categories, which are discussed below.

**Target Vulnerability.** The component of target vulnerability hypothesizes that a person’s characteristics or experiences may make them appear more vulnerable to a potential offender (e.g., Daigle & Hawk, 2021). The current study measures vulnerability using respondents’ experiences with running away before the age of 18 as well as eight categories from the adverse childhood experiences (ACE) questionnaire (Felitti et al., 1998). *Running away before the age of 18* was measured as a yes or no item and was coded dichotomously ($0 = \text{no}, 1 = \text{yes}$). The eight ACE questionnaire categories include:
(1) emotional abuse, (2) emotional neglect, (3) physical neglect, (4) family violence, (5) parents separated, (6) substances in the home, (7) mental illness in the family, and (8) incarcerated family member. Each of these eight items were measured on a scale ranging from 0 to 4. Response options included “never,” “rarely,” “sometimes,” “often,” and “very often” (α = 0.72). Again, coding was completed in two variations: (1) conservatively: responses indicated as “never,” “rarely,” and “sometimes” were coded as “0” (ACE indicator not present), and responses indicated as “often” and “very often” were coded as “1” (ACE indicator is present); (2) inclusively: responses indicated as “never” were coded as “0,” and responses indicated as “rarely,” “sometimes,” “often,” and “very often” were coded as “1.” In some cases, there were multiple items used to measure one category (e.g., two questions regarding emotional neglect). If respondents were coded as “1” for any of the items within an ACE category, then they were classified as experiencing that category. The coding of these variables is consistent with prior research to code ACE indicators as occurring on a regular or frequent basis (e.g., Fedina et al., 2019).

Disability status (e.g., learning disability, medical condition, physical disability) was measured by asking participants eight questions about their identification with a disability. The respondents indicated whether the disability was present or not for each of the eight questions. The questions were categorized into three groups to align with prior research (e.g., Turner et al., 2010): (1) chronic mental disability (e.g., depression, anxiety), (2) chronic medical disability (e.g., cystic fibrosis, diabetes), or (3) “other” disability status (i.e., learning disability, attention-deficit/hyperactivity disorder, autism spectrum disorder, mobility-related disability, sensory disability). For each of the three
categories, responses were coded as “0” for no disability present and “1” for the disability being present.

Additional target vulnerability questions assessed life hardships. Foster care before age 18 was measured dichotomously (yes/no) and was coded as 0 = no and 1 = yes. Being kicked out before age 18 was measured dichotomously (yes/no) and was coded as 0 = no and 1 = yes. Ever being homeless was measured dichotomously (yes/no) and was coded as 0 = no and 1 = yes. Ever relied on strangers was also measured dichotomously (yes/no) and was coded as 0 = no and 1 = yes.

**Target Gratifiability.** For target gratifiability, a person’s skills or characteristics may provoke an offender to commit a crime against them because they want to obtain, use, or manipulate those skills or characteristics in some way (Finkelhor & Asdigian, 1996). Gender is oftentimes perceived as an indicator of gratifiability for sexual assault offenses (i.e., being female) and physical assault offenses (i.e., being male) (e.g., de Waal et al., 2017). In the current study, gender was measured dichotomously (male/female) and was coded as 0 = male and 1 = female.

**Target Antagonism.** Target antagonism represents characteristics of a person that may provoke a potential offender to anger because of misconceptions or stereotypes about a certain group of people. Some people hold negative beliefs about immigrants, for instance, which may motivate them to commit a crime against someone in this population (e.g., Chandler & Tsai, 2001). For the current study, target antagonism was measured by asking participants about their immigration status (i.e., born in the United States or not) and was coded as 0 = no and 1 = yes. Also, because of stereotypes, anger, or jealousy toward certain races or ethnicities, some may be motivated by the perception of an
antagonistic target to commit a crime (Dixon & Ray, 2007). The second measure of target antagonism in the current study is race/ethnicity, which was measured categorically to represent White (reference group), Black, Hispanic, or Other (i.e., Asian, Native American, Middle Eastern, “two or more races,” or “other”).

Control Variables

To control for other factors that could influence victimization experiences, the current study used age, education, marital status, employment status, and region of residence as covariates. Age was calculated by subtracting participant birth year from 2022, which was the year of data collection. Education was recoded into three categories that assessed highest level of education achieved (no high school degree, high school degree, and some college or more [reference group]). Marital status was measured by asking participants if they were married, separated, divorced, widowed, never married, or in a domestic/civil partnership. It was coded as 0 = other (i.e., separated, divorced, widowed, never married, or in a domestic/civil partnership) and 1 = married. Employment was measured by asking participants about their employment status and was coded as 0 = other (temporarily laid off, unemployed, retired, permanently disabled, homemaker, student, or other) and 1 = employed full-time or part-time. Lastly, region of residence included the South (reference group), Midwest, Northeast, and West.

Analytic Strategy

The analyses were carried out in three stages. First, descriptive statistics were examined for all variables. As noted previously, the indicators of childhood abuse, neglect, and family dysfunction were coded in two ways to examine whether classification of these events affected the overall conclusions of analyses: (1)
conservative and (2) inclusive. The data draw on a sample of a total of 1,700 respondents, but missingness was examined to ensure that additional statistical corrections are not needed beyond listwise deletion (e.g., multiple imputation) (Scoglio et al., 2022). Second, multicollinearity checks were completed for all independent and control variables to make sure that the condition index and variance inflation factors did not exceed recommended cutoffs prior to examining the variables in a multivariate context (Franke, 2010). The checks were done twice to assess all independent and control variables with the conservative and inclusive responses of childhood abuse, neglect, and family dysfunction. The recommended cutoff for variance inflation factors (VIF) is 10 and the recommended cutoff for the condition index is 15, though this does not become a serious concern until it exceeds 30 (Senaviratna & Cooray, 2019). For the current study, the VIF was approximately 1.90 (1.93 with conservative responses; 1.91 with inclusive responses). The condition index was higher than the recommended cutoff of 15 (25.37 with conservative responses; 27.09 with inclusive responses) but was lower than 30 and thus not a serious issue. Third, logistic regression models were estimated to examine the correlates of (1) sexual assault victimization and (2) physical assault victimization in adulthood in the past 12 months while controlling for all theoretically relevant factors (i.e., state dependence, population heterogeneity, target congruence theories) and control variables. Two logistic regression models were estimated for each dependent variable to assess the influence of conservative and inclusive classifications of the childhood abuse, neglect, and family dysfunction variables while controlling for the other theoretically relevant factors. Given the dichotomous creation of the two dependent
variables, logistic regression is an appropriate estimation for these analyses (Madger & Hughes, 1997).
Chapter Three: Results

Three theories were used to organize the independent variables for the current study, namely state dependence, population heterogeneity, and target congruence theories. This chapter will detail an overview of the descriptive statistics for all variables. Then, the multivariate logistic regression estimations for both dependent variables will be reviewed.

Descriptives

The descriptive statistics for all variables are provided in Table 1 and Table 2. In the past 12 months, approximately 7.1% and 6.0% of the respondents reported experiencing sexual assault and physical assault victimization in the past 12 months, respectively (see Table 1). The key covariates are discussed in more detail below, and are organized by theoretical perspective.

State Dependence Theory

State dependence theory was measured through two adverse childhood experience (ACE) indicators: (1) childhood sexual abuse and (2) childhood physical abuse. As noted previously, the coding of these variables was done in two ways to classify responses as conservative and inclusive (see Table 2). Between 4.8% and 9.5% of the respondents experienced sexual abuse or physical abuse as a child, respectively, when the responses were coded as conservative. However, approximately one-fourth (24.5%) of respondents could be classified as a sexual abuse victim and almost half of the respondents (49.5%) were coded as experiencing physical abuse as a child when coded inclusively. These discrepancies illustrate the importance of considering how respondents experience abuse and the importance of coding decisions in creating classifications. The conservative
estimates are more restricted, yet many respondents have experienced these forms of child abuse at all when these constraints are removed.

**Population Heterogeneity Theory**

Population heterogeneity was assessed primarily with the inclusion of “risky” lifestyle measures (see Table 1). The average substance abuse score was 0.53 (standard deviation [SD] = 0.69), suggesting that, on average, respondents tended to answer either “never” or “less than once per week” for their substance use. The average score for impulsivity was 2.39 (SD = 0.84), indicating that, on average, respondents “somewhat disagreed” or “neither disagreed nor agreed” when asked about their impulsivity. In this way, the respondents tended to have relatively low levels of impulsivity. Lastly, the respondents had an average antisocial attitude score of 1.93 (SD = 0.83), suggesting that respondents were likely to answer “somewhat disagree” for these items, on average. Approximately 33% of respondents answered “yes” to having any deviant peers. In sum, the respondents tended not to indicate high involvement with “risky” lifestyles across the variables assessed here.

**Target Congruence Theory**

Target congruence theory assessed components of (1) target vulnerability, (2) target gratifiability, and (3) target antagonism. Multiple measures were used to assess target vulnerability. Specifically, running away before age 18, having a chronic mental, medical, or other disability, being in foster care before age 18, being kicked out before age 18, ever being homeless, ever relying on strangers, and experiencing adverse childhood experiences (ACEs; emotional abuse and neglect, physical neglect, family violence, parents separated, substances in the home, mental illness in the family, and
having an incarcerated family member) were included as components of target vulnerability. Around one-fifth (18.9%) of respondents reported running away before age 18 and approximately one-fourth of respondents reported having a chronic mental (23.7%), medical (18.0%), or “other” disability (27.8%) (see Table 1). Around the same prevalence range were the factors of homelessness and relying on strangers. Eighteen percent of respondents reported ever being homeless while 15.2% of respondents reported ever relying on strangers (see Table 1). Lastly, the rates of being in the foster care system before age 18 and being kicked out before age 18 were much lower, ranging from 4.4% to 10.0%, respectively (see Table 1). Overall, respondents were most likely to experience a disability or homelessness, but even those rates were below 25%, revealing that target vulnerability experiences were relatively uncommon among respondents.
Table 1. Descriptive Statistics ($N = 1,693$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Weighted Percent/Mean (SD)</th>
<th>Unweighted Percent/Mean (SD)</th>
<th>Min/Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Assault Victimization</td>
<td>7.1%</td>
<td>7.0%</td>
<td>0-1</td>
</tr>
<tr>
<td>Physical Assault Victimization</td>
<td>6.0%</td>
<td>5.6%</td>
<td>0-1</td>
</tr>
<tr>
<td><strong>Population Heterogeneity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Use</td>
<td>0.53 (0.69)</td>
<td>0.53 (0.67)</td>
<td>0-5</td>
</tr>
<tr>
<td>Deviant Peers</td>
<td>33.1%</td>
<td>34.4%</td>
<td>0-1</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>2.39 (0.84)</td>
<td>2.37 (0.84)</td>
<td>1-5</td>
</tr>
<tr>
<td>Antisocial Attitudes</td>
<td>1.93 (0.83)</td>
<td>1.92 (0.82)</td>
<td>1-5</td>
</tr>
<tr>
<td><strong>Target Vulnerability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running Away before Age 18</td>
<td>18.9%</td>
<td>18.0%</td>
<td>0-1</td>
</tr>
<tr>
<td>Chronic Mental Disability</td>
<td>23.7%</td>
<td>24.3%</td>
<td>0-1</td>
</tr>
<tr>
<td>Chronic Medical Disability</td>
<td>18.0%</td>
<td>18.6%</td>
<td>0-1</td>
</tr>
<tr>
<td>Other Disability$^a$</td>
<td>27.8%</td>
<td>27.1%</td>
<td>0-1</td>
</tr>
<tr>
<td>Foster Care before Age 18</td>
<td>4.4%</td>
<td>4.0%</td>
<td>0-1</td>
</tr>
<tr>
<td>Being Kicked Out before Age 18</td>
<td>10.0%</td>
<td>9.3%</td>
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<tr>
<td>Ever Homeless</td>
<td>18.0%</td>
<td>18.0%</td>
<td>0-1</td>
</tr>
<tr>
<td>Ever Relied on Strangers</td>
<td>15.2%</td>
<td>15.9%</td>
<td>0-1</td>
</tr>
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<td><strong>Target Gratifiability</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51.3%</td>
<td>55.0%</td>
<td>0-1</td>
</tr>
<tr>
<td><strong>Target Antagonism</strong></td>
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<td></td>
</tr>
<tr>
<td>Immigration Status</td>
<td>7.8%</td>
<td>7.4%</td>
<td>0-1</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td>0-3</td>
</tr>
<tr>
<td>White</td>
<td>64.3%</td>
<td>65.4%</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>12.3%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>14.6%</td>
<td>13.2%</td>
<td></td>
</tr>
<tr>
<td>Other$^b$</td>
<td>8.8%</td>
<td>8.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>48.92 (17.86)</td>
<td>49.20 (17.60)</td>
<td>19-95</td>
</tr>
<tr>
<td>Education</td>
<td></td>
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</table>
### Table 1. Descriptive Statistics (N = 1,693)

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<tr>
<th>Category</th>
<th>Any College</th>
<th>High School Degree</th>
<th>No High School Degree</th>
<th>Married</th>
<th>Employed (full/part)</th>
<th>Region of Residence</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>61.8%</td>
<td>27.3%</td>
<td>10.9%</td>
<td>40.6%</td>
<td>45.3%</td>
<td>37.8%</td>
</tr>
<tr>
<td></td>
<td>63.9%</td>
<td>30.2%</td>
<td>5.8%</td>
<td>40.8%</td>
<td>45.9%</td>
<td>36.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-3</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0-1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-3</td>
</tr>
</tbody>
</table>

**Notes:** SD = standard deviation.

a “Other” disability includes responses for learning disability, attention-deficit/hyperactivity disorder, autism spectrum disorder, mobility-related disability, and/or sensory disability.

b “Other” race includes responses for Asian, Native American, Middle Eastern, “two or more races,” or “other.”

c Any College includes some college, 2-year, 4-year, or post-graduate.
For emotional abuse, emotional neglect, physical neglect, and family violence, coding was completed in two variations to differentiate between conservative and inclusive responses (see Table 2). Approximately one-fifth of respondents were classified as having experienced emotional abuse (18.4%) and emotional neglect (19.9%) when coded conservatively. However, these rates increased to 61.9% for emotional abuse and 53.0% for emotional neglect when coded inclusively. The rates for physical neglect and family violence were lower, with 7.0% of respondents experiencing physical neglect and 7.1% experiencing family violence when coded conservatively. When coded inclusively, the rates increased to 26.4% for physical neglect and 30.2% for family violence. These discrepancies are notable in that the prevalence rates of ACEs when any experiences of ACEs were coded as “yes” (i.e., inclusive coding) were much higher than when only “often” and “very often” experiences of ACEs were coded as “yes” (i.e., conservative coding). The fact remains, however, that respondents did experience these vulnerabilities, regardless of coding differences. The final four ACE indicators in Table 2—parents separated, substances in the home, mental illness in the family, and having an incarcerated family member—were assessed dichotomously and therefore only coded in one variation. Few respondents reported having an incarcerated family member (9.1%), but reporting parental separation (38.3%), substances in the home (32.0%), and a mental illness in the family (32.4%) was much more common.

The second component of target congruence theory, target gratifiability, was measured using a single factor: gender. Approximately half (51.3%) of the sample was female (see Table 1). The third component, target antagonism, included the factors of immigration status and race/ethnicity. Approximately 7.8% of respondents reported
Table 2. Adverse Childhood Experience Coding (N = 1,693)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Weighted Conservative ACE Responses(^a)</th>
<th>Weighted Inclusive ACE Responses(^b)</th>
<th>Unweighted Conservative ACE Responses(^a)</th>
<th>Unweighted Inclusive ACE Responses(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n %)</td>
<td>(n %)</td>
<td>(n %)</td>
<td>(n %)</td>
</tr>
<tr>
<td><strong>State Dependence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>82 (4.8%)</td>
<td>414 (24.5%)</td>
<td>83 (4.9%)</td>
<td>411 (24.3%)</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>161 (9.5%)</td>
<td>838 (49.5%)</td>
<td>175 (10.3%)</td>
<td>842 (49.7%)</td>
</tr>
<tr>
<td><strong>Target Vulnerability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>312 (18.4%)</td>
<td>1048 (61.9%)</td>
<td>322 (19.0%)</td>
<td>1059 (62.6%)</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>337 (19.9%)</td>
<td>897 (53.0%)</td>
<td>340 (20.1%)</td>
<td>886 (52.3%)</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>119 (7.0%)</td>
<td>448 (26.4%)</td>
<td>108 (6.4%)</td>
<td>413 (24.4%)</td>
</tr>
<tr>
<td>Family Violence</td>
<td>121 (7.1%)</td>
<td>511 (30.2%)</td>
<td>111 (6.6%)</td>
<td>498 (29.4%)</td>
</tr>
<tr>
<td>Parents Separated(^c)</td>
<td>649 (38.3%)</td>
<td>641 (37.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substances in the Home(^c)</td>
<td>542 (32.0%)</td>
<td>519 (30.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Illness in the Family(^c)</td>
<td>549 (32.4%)</td>
<td>558 (33.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incarcerated Family Member(^c)</td>
<td>154 (9.1%)</td>
<td>160 (9.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: ACE = Adverse childhood experiences. Frequencies and percentages indicate proportion of responses coded as “1.”

\(^a\) Coding of “never,” “rarely,” and “sometimes” = “0”; Coding of “often” and “very often” = “1.”

\(^b\) Coding of “never” = “0”; Coding of “rarely,” “sometimes,” “often,” and “very often” = “1.”

\(^c\) The values of these variables remain constant due to the “yes/no” format in which they were originally asked.
immigrating to the United States, while 64.3% of respondents were White, 12.3% were Black, 14.6% were Hispanic, and 8.8% reported being an “other” race or ethnicity (see Table 1).

Controls

All control variables are presented in Table 1. The sample had a mean age of approximately 49 (SD = 17.86). Most of the respondents had at least some college experience (61.8%), 27.3% had a high school degree, and 10.9% did not have a high school degree. Regarding marital and employment status, 40.6% of respondents were married and 45.3% were employed, either part-time or full-time. As for region of residence, 37.8% of respondents reported living in the South, 18.0% reported living in the Northeast, 20.0% reported living in the Midwest, and 24.2% reported living in the West.

Logistic Regressions

The final analyses that were estimated were the logistic regression models predicting sexual and physical victimization in adulthood. Because data on childhood abuse, neglect, and family dysfunction were analyzed using two approaches (i.e., a conservative approach and an inclusive approach), there are a total of four logistic regression models. Table 3 below includes Model 1 and Model 2, which consist of the variables coded conservatively and predict sexual and physical assault victimization, respectively. Table 4 below includes Model 3 and Model 4, which consist of the variables coded inclusively and predict sexual and physical assault victimization, respectively. Each of the models will be detailed in the following sections and findings are organized by dependent variable (i.e., sexual victimization, physical assault
victimization) and the use of conservative/inclusive coding classifications for childhood abuse, neglect, and family dysfunction variables.

**Predicting Sexual Assault Victimization using Conservative Coding Classifications**

As seen in Model 1 of Table 3, under *state dependence theory*, only experiencing childhood sexual abuse (*conservative* coding) was significantly and positively correlated with experiencing sexual assault victimization in adulthood (Odds Ratio [OR] = 7.08; 95% Confidence Interval [CI] [3.45, 14.53]). For *population heterogeneity theory*, using substances (OR = 1.67; 95% CI [1.28, 2.20]) was significantly and positively correlated with sexual assault victimization in adulthood. Related to *target vulnerability*, running away before the age of 18 (OR = 1.30; 95% CI [0.72, 2.36]) was significantly and positively correlated with sexual assault victimization. Finally, age (OR = 0.96; 95% CI [0.94, 0.98]) was significantly and negatively correlated with sexual assault victimization.

**Predicting Physical Assault Victimization using Conservative Coding Classifications**

Findings for physical assault victimization in adulthood are presented in Model 2 of Table 3. Notably, *state dependence theory*, *population heterogeneity theory*, and *target congruence theory* all included factors significantly related to physical assault in adulthood. First, experiencing sexual abuse as a child (*conservative* coding), related to *state dependence theory*, significantly increased the likelihood of experiencing adult physical assault (OR = 6.46; 95% CI [2.76, 15.10]). However, childhood physical assault was not associated with adult physical assault victimization. Second, substance use (OR = 2.25; 95% CI [1.66, 3.04]) and impulsivity (OR = 1.55; 95% CI [1.06, 2.27]), related to *population heterogeneity theory*, also significantly increased the likelihood of experiencing adult physical assault. Third, substances in the home (OR = 1.96, 95% CI
relying on strangers (OR = 2.14; 95% CI [1.06, 4.32]), being Black (OR = 4.88; 95% CI [2.30, 10.37]) and being Hispanic (OR = 5.50; 95% CI [2.76, 10.97]), related to target congruence theory, were significantly and positively associated with one’s likelihood of experiencing adult physical assault. Lastly, compared to respondents who lived in the West, residing in the Midwest (OR = 0.35; 95% CI [0.15, 0.85]) or South (OR = 0.50; 95% CI [0.26, 0.95]) as well as being female (OR = 0.48; 95% CI [0.27, 0.85]) significantly decreased the likelihood of being physically assaulted in adulthood.
<table>
<thead>
<tr>
<th></th>
<th><strong>Model 1</strong></th>
<th><strong>Model 2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexual Victimization</td>
<td>Physical Victimization</td>
</tr>
<tr>
<td><strong>State Dependence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>1.96 (.37)***</td>
<td>1.87 (.43)***</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>-.53 (.39)</td>
<td>.47 (.45)</td>
</tr>
<tr>
<td><strong>Population Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Use</td>
<td>.52 (.14)***</td>
<td>.81 (.15)***</td>
</tr>
<tr>
<td>Deviant Peers</td>
<td>.44 (.26)</td>
<td>-.43 (.31)</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>.22 (.16)</td>
<td>.44 (.19)*</td>
</tr>
<tr>
<td>Antisocial Attitudes</td>
<td>.19 (.15)</td>
<td>-.12 (.17)</td>
</tr>
<tr>
<td><strong>Target Vulnerability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>.15 (.32)</td>
<td>-.50 (.42)</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>.52 (.28)</td>
<td>.26 (.34)</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>.18 (.39)</td>
<td>.01 (.44)</td>
</tr>
<tr>
<td>Family Violence</td>
<td>.56 (.38)</td>
<td>.37 (.45)</td>
</tr>
<tr>
<td>Parents Separated</td>
<td>-.31 (.26)</td>
<td>-.40 (.30)</td>
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<td>Substances in the Home</td>
<td>.12 (.28)</td>
<td>.67 (.32)*</td>
</tr>
<tr>
<td>Mental Illness in the Family</td>
<td>-.42 (.28)</td>
<td>-.33 (.33)</td>
</tr>
<tr>
<td>Incarcerated Family Membe</td>
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<td>.66 (.35)</td>
</tr>
<tr>
<td>Chronic Mental Disability</td>
<td>-.03 (.28)</td>
<td>.22 (.32)</td>
</tr>
<tr>
<td>Chronic Medical Disability</td>
<td>.23 (.32)</td>
<td>.42 (.37)</td>
</tr>
<tr>
<td>Other Disability</td>
<td>.13 (.26)</td>
<td>.33 (.31)</td>
</tr>
<tr>
<td>Ran Away before Age 18</td>
<td>.27 (.30)***</td>
<td>-.72 (.37)</td>
</tr>
<tr>
<td>Foster Care before Age 18</td>
<td>.71 (.43)</td>
<td>.78 (.46)</td>
</tr>
<tr>
<td>Kicked Out before Age 18</td>
<td>-.11 (.36)</td>
<td>-.24 (.41)</td>
</tr>
<tr>
<td>Ever Homeless</td>
<td>.00 (.33)</td>
<td>.13 (.37)</td>
</tr>
<tr>
<td>Ever Relied on Strangers</td>
<td>-.34 (.34)</td>
<td>.76 (.36)*</td>
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<td><strong>Target Gratifiability</strong></td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>.16 (.24)</td>
<td>-.73 (.29)*</td>
</tr>
</tbody>
</table>

Table 3. Logistic Regression Models Predicting Victimization with Conservative Coding (%N = 1,693)
## Table 3. Logistic Regression Models Predicting Victimization with Conservative Coding (N = 1,693)

<table>
<thead>
<tr>
<th>Target Antagonism</th>
<th>Model 1 Sexual Victimization</th>
<th>Model 2 Physical Victimization</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td><strong>Immigration Status</strong></td>
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</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (ref)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.40 (.49)</td>
<td>1.50 [0.57, 3.92]</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.39 (.30)</td>
<td>1.47 [0.81, 2.68]</td>
</tr>
<tr>
<td>Other (^b)</td>
<td>.17 (.39)</td>
<td>1.18 [0.55, 2.54]</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.05 (.01)***</td>
<td>0.96 [0.94, 0.98]</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any College(^c) (ref)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Degree</td>
<td>.06 (.27)</td>
<td>1.06 [0.63, 1.78]</td>
</tr>
<tr>
<td>No High School Degree</td>
<td>-.38 (.38)</td>
<td>0.69 [0.33, 1.44]</td>
</tr>
<tr>
<td>Married</td>
<td>.18 (.27)</td>
<td>1.19 [0.71, 2.01]</td>
</tr>
<tr>
<td>Employed</td>
<td>.28 (.24)</td>
<td>1.32 [0.83, 2.11]</td>
</tr>
<tr>
<td>Region of Residence</td>
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<td></td>
</tr>
<tr>
<td>West (ref)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>-.29 (.34)</td>
<td>0.75 [0.38, 1.47]</td>
</tr>
<tr>
<td>Northeast</td>
<td>-.30 (.35)</td>
<td>0.74 [0.38, 1.46]</td>
</tr>
<tr>
<td>South</td>
<td>-.37 (.29)</td>
<td>0.69 [0.39, 1.23]</td>
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<tr>
<td>Constant</td>
<td>-2.98 (.78)***</td>
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<tr>
<td>LR (\chi^2)</td>
<td>234.42***</td>
<td></td>
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<tr>
<td>Cox &amp; Snell (R^2)</td>
<td>0.13</td>
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</tr>
<tr>
<td>Nagelkerke (R^2)</td>
<td>0.32</td>
<td></td>
</tr>
</tbody>
</table>

*Notes: \(b\) = unstandardized coefficient; \(SE\) = standard error; \(OR\) = odds ratio; \(CI\) = confidence interval for odds ratio; ref = reference category.*

*“Other disability” includes having a learning disability, attention-deficit hyperactivity disorder, autism spectrum disorder, mobility-related, and/or sensory disability.

*“Other” race includes responses for Asian, Native American, Middle Eastern, “two or more races,” or “other.”

*Any college includes some college, 2-year, 4-year, or post-graduate.

*p < .05; **p < .01; ***p < .001.
Summary of Findings using Conservative Coding Classifications

In sum, when adverse childhood experiences were coded more conservatively, sexual abuse in childhood and using substances in the past 12 months were both significantly and positively correlated with experiencing sexual and physical victimization in adulthood. However, the predictors of sexual and physical victimization differed in that running away before the age of 18 was associated with sexual assault victimization in adulthood, while impulsivity, substances in the home, relying on strangers, being female, being Black and Hispanic (compared to White respondents), and residing in the Midwest or South (compared to the West) were correlated with physical assault victimization in adulthood.

Predicting Sexual Assault Victimization using Inclusive Coding Classifications

Model 3 of Table 4 shows the logistic regression model predicting sexual assault victimization in adulthood. Of the independent variables under state dependence theory, experiencing sexual abuse in childhood (inclusive coding) was significantly and positively correlated with adult sexual assault victimization (OR = 3.48; 95% CI [2.10, 5.76]). For population heterogeneity theory, substance use was a significant, positive predictor of adult sexual assault victimization (OR = 1.64; 95% CI [1.27, 2.13]). Physical neglect (OR = 1.93; 95% CI [1.08, 3.46]) and having an incarcerated family member (OR = 1.89; 95% CI [1.03, 3.46]) under target vulnerability were significantly and positively correlated with reporting sexual assault victimization in adulthood. Lastly, older respondents were less likely to be physically assaulted in adulthood than younger respondents (OR = 0.96; 95% CI [0.94, 0.97]).
Predicting Physical Assault Victimization using Inclusive Coding Classifications

Finally, the logistic regression model predicting adult physical assault victimization is found in Model 4 of Table 4. Analyses showed that childhood sexual abuse (OR = 2.59; 95% CI [1.43, 4.69]) under state dependence theory significantly increased the likelihood of experiencing physical assault victimization in adulthood. As for population heterogeneity theory, the respondents who reported using substances (OR = 2.08; 95% CI [1.55, 2.79]) and being impulsive (OR = 1.54; 95% CI [1.04, 2.29]) also had an increased likelihood of being physically assaulted in adulthood. Third, regarding target congruence theory, physical neglect (OR = 2.34; 95% CI [1.19, 4.58]), having an incarcerated family member (OR = 2.18; 95% CI [1.11, 4.28]), running away before the age of 18 (OR = 0.44; 95% CI [0.22, 0.88]), relying on strangers (OR = 2.04; 95% CI [1.03, 4.03]), being Black (OR = 5.75; 95% CI [2.76, 11.99]), and being Hispanic (OR = 4.95; 95% CI [2.48, 9.85]) were all significantly and positively correlated with experiencing adult physical assault victimization. Being female (OR = 0.55; 95% CI [0.31, 0.98]), also under target congruence theory, as well as being older (OR = 0.96; 95% CI [0.94, 0.98]) and residing in the Midwest (OR = 0.26; 95% CI [0.11, 0.66]) decreased the likelihood of being physically assaulted. Lastly, being married (OR = 1.89; 95% CI [1.05, 3.41]) increased the likelihood of experiencing physical assault victimization in adulthood.
<table>
<thead>
<tr>
<th></th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexual Victimization</td>
<td>Physical Victimization</td>
</tr>
<tr>
<td><strong>State Dependence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>1.25 (.26)*** 3.48 [2.10, 5.76]</td>
<td>.95 (.30)*** 2.59 [1.43, 4.69]</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>.17 (.32) 1.19 [0.63, 2.24]</td>
<td>.73 (.41) 2.07 [0.93, 4.61]</td>
</tr>
<tr>
<td><strong>Population Heterogeneity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Use</td>
<td>.50 (.13)*** 1.64 [1.27, 2.13]</td>
<td>.73 (.15)*** 2.08 [1.55, 2.79]</td>
</tr>
<tr>
<td>Deviant Peers</td>
<td>.34 (.25) 1.40 [0.85, 2.30]</td>
<td>-.51 (.31) 0.61 [0.33, 1.10]</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>.19 (.16) 1.21 [0.88, 1.67]</td>
<td>.43 (.20)* 1.54 [1.04, 2.29]</td>
</tr>
<tr>
<td>Antisocial Attitudes</td>
<td>.17 (.15) 1.18 [0.88, 1.59]</td>
<td>-.12 (.17) 0.89 [0.63, 1.25]</td>
</tr>
<tr>
<td><strong>Target Vulnerability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>.11 (.36) 1.11 [0.55, 2.26]</td>
<td>-.29 (.45) 0.75 [0.31, 1.80]</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>-.18 (.30) 0.83 [0.46, 1.50]</td>
<td>-.54 (.36) 0.59 [0.29, 1.19]</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>.66 (.30)* 1.93 [1.08, 3.46]</td>
<td>.85 (.34)* 2.34 [1.19, 4.58]</td>
</tr>
<tr>
<td>Family Violence</td>
<td>.28 (.28) 1.32 [0.76, 2.30]</td>
<td>.55 (.33) 1.26 [0.91, 3.30]</td>
</tr>
<tr>
<td>Parents Separated</td>
<td>-.13 (.25) 0.88 [0.54, 1.43]</td>
<td>-.19 (.29) 0.83 [0.47, 1.46]</td>
</tr>
<tr>
<td>Substances in the Home</td>
<td>-.22 (.28) 0.80 [0.46, 1.39]</td>
<td>.23 (.32) 1.26 [0.67, 2.38]</td>
</tr>
<tr>
<td>Mental Illness in the Family</td>
<td>-.46 (.28) 0.63 [0.36, 1.09]</td>
<td>-.40 (.33) 0.67 [0.35, 1.28]</td>
</tr>
<tr>
<td>Incarcerated Family Member</td>
<td>.64 (.31)* 1.89 [1.03, 3.46]</td>
<td>.78 (.34)* 2.18 [1.11, 4.28]</td>
</tr>
<tr>
<td>Chronic Mental Disability</td>
<td>.04 (.28) 0.88 [0.60, 1.80]</td>
<td>.38 (.32) 1.46 [0.78, 2.73]</td>
</tr>
<tr>
<td>Chronic Medical Disability</td>
<td>.18 (.32) 1.19 [0.64, 2.22]</td>
<td>.21 (.37) 1.24 [0.60, 2.55]</td>
</tr>
<tr>
<td>Other Disability*</td>
<td>.13 (.26) 1.14 [0.69, 1.90]</td>
<td>.39 (.31) 1.47 [0.81, 2.70]</td>
</tr>
<tr>
<td>Ran Away before Age 18</td>
<td>.14 (.29) 1.14 [0.65, 2.03]</td>
<td>-.82 (.35)* 0.44 [0.22, 0.88]</td>
</tr>
<tr>
<td>Foster Care before Age 18</td>
<td>.60 (.40) 1.82 [0.83, 3.96]</td>
<td>.64 (.42) 1.90 [0.83, 4.32]</td>
</tr>
<tr>
<td>Kicked Out before Age 18</td>
<td>-.07 (.34) 0.93 [0.48, 1.80]</td>
<td>-.21 (.38) 0.81 [0.38, 1.71]</td>
</tr>
<tr>
<td>Ever Homeless</td>
<td>-.22 (.32) 0.80 [0.43, 1.51]</td>
<td>.18 (.36) 1.19 [0.59, 2.42]</td>
</tr>
<tr>
<td>Ever Relied on Strangers</td>
<td>-.06 (.31) 0.94 [0.51, 1.73]</td>
<td>.71 (.35)* 2.04 [1.03, 4.03]</td>
</tr>
<tr>
<td><strong>Target Gratifiability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>.25 (.24) 1.29 [0.80, 2.08]</td>
<td>-.59 (.29)* 0.55 [0.31, 0.98]</td>
</tr>
</tbody>
</table>
Table 4. Logistic Regression Models Predicting Victimization with Inclusive Coding (N = 1,693)

<table>
<thead>
<tr>
<th></th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexual Victimization</td>
<td>Physical Victimization</td>
</tr>
<tr>
<td>Target Antagonism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigration Status</td>
<td>(b = .43 \pm .49)</td>
<td>(b = .03 \pm .52)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (ref)</td>
<td>1.54 [0.59, 4.00]</td>
<td>1.03 [0.37, 2.84]</td>
</tr>
<tr>
<td>Black</td>
<td>(1.33 \pm .33)</td>
<td>(1.75 \pm .38)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>(1.44 \pm .30)</td>
<td>(1.60 \pm .35)***</td>
</tr>
<tr>
<td>Other(^b)</td>
<td>(1.46 \pm .40)</td>
<td>(-0.26 \pm .66)</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>(-0.05 \pm .01)***</td>
<td>(-0.04 \pm .01)***</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any College(^c) (ref)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Degree</td>
<td>(-0.09 \pm .27)</td>
<td>(-0.22 \pm .32)</td>
</tr>
<tr>
<td>No High School Degree</td>
<td>(-0.45 \pm .37)</td>
<td>(-0.14 \pm .38)</td>
</tr>
<tr>
<td>Married</td>
<td>(0.24 \pm .26)</td>
<td>(0.64 \pm .30)*</td>
</tr>
<tr>
<td>Employed</td>
<td>(0.15 \pm .24)</td>
<td>(-0.02 \pm .28)</td>
</tr>
<tr>
<td>Region of Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West (ref)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>(-0.26 \pm .35)</td>
<td>(-1.34 \pm .47)**</td>
</tr>
<tr>
<td>Northeast</td>
<td>(-0.11 \pm .35)</td>
<td>(-0.51 \pm .41)</td>
</tr>
<tr>
<td>South</td>
<td>(-0.20 \pm .29)</td>
<td>(-0.63 \pm .33)</td>
</tr>
<tr>
<td>Constant</td>
<td>(-3.28 \pm .79)***</td>
<td>(-3.32 \pm .92)***</td>
</tr>
<tr>
<td>LR (\chi^2)</td>
<td>240.57***</td>
<td>308.96***</td>
</tr>
<tr>
<td>Cox &amp; Snell R(^2)</td>
<td>0.13</td>
<td>0.17</td>
</tr>
<tr>
<td>Nagelkerke R(^2)</td>
<td>0.33</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Notes: \(b\) = unstandardized coefficient; \(SE\) = standard error; \(OR\) = odds ratio; \(CI\) = confidence interval for odds ratio; ref = reference category.

\(^a\)“Other disability” includes having a learning disability, attention-deficit hyperactivity disorder, autism spectrum disorder, mobility-related, and/or sensory disability.

\(^b\)“Other” race includes responses for Asian, Native American, Middle Eastern, “two or more races,” or “other.”

\(^c\)Any college includes some college, 2-year, 4-year, or post-graduate.

\(*p < .05; **p < .01; ***p < .001.\)
Summary of Findings using Inclusive Coding Classifications

Examining the rates of both sexual and physical assault victimization in adulthood, when coded inclusively, sexual abuse in childhood, substance use, physical neglect, and having an incarcerated family member were all significantly and positively correlated with experiencing sexual and physical assault victimization in adulthood. In addition, running away, impulsivity, relying on strangers, being female, being Black and being Hispanic (in comparison to White respondents), being married, and living in the Midwest (in comparison to the West) were all correlated with adult physical assault victimization but not sexual assault victimization.

Comparing Findings for Conservative and Inclusive Coding

As mentioned before, the childhood abuse, neglect, and family dysfunction variables were coded using two variations: (1) a conservative approach and (2) an inclusive approach. When considering the effect of these variations on the likelihood of experiencing sexual and physical victimization in adulthood, three key findings emerged. First, having substances in the home was significantly and positively correlated with physical assault victimization in adulthood when coded conservatively but not when coded inclusively. Second, physical neglect and having an incarcerated family member were significantly and positively correlated with both sexual assault and physical assault victimization in adulthood when coded inclusively but not when coded conservatively. Third, experiencing sexual abuse in childhood was significantly and positively correlated with both sexual and physical assault victimization in adulthood, regardless of the coding variation. However, experiencing childhood physical abuse was not associated with adulthood victimization when coded conservatively or inclusively.
Chapter Four: Discussion

Researchers have long understood how and why certain individuals are criminally victimized, as well as the consequences associated with victimization (e.g., Janssen et al., 2021; Turanovic, 2019). However, revictimization—or experiencing victimization in two or more periods of life—is a phenomenon that has recently been gaining more interest in the field (e.g., Blackburn et al., 2023; Walker & Wamser-Nanney, 2023). Most people are never victimized, but a proportion of the population experiences victimization in both childhood and adulthood (Pridemore & Burg, 2017). Typically, adult victimization experiences are predicted by victimization in childhood, but other adverse childhood experiences (ACEs) can be predictors of adulthood victimization (e.g., substances in the home, having an incarcerated family member; e.g., Taillieu et al., 2020). Because of the extent of both short- and long-term consequences of victimization (e.g., Brendgen et al., 2019; Caceres et al., 2021) as well as the many predictor variables associated with adulthood victimization (e.g., Felitti et al., 1998), it is important for researchers to understand who is most at risk for revictimization and why.

Certain theories that explain victimization broadly, such as routine activity theory and the social support deterioration model (e.g., Cohen & Felson, 1979; McNeil Smith et al., 2019), have been used to try to explain revictimization, but theoretical perspectives explaining revictimization are generally limited. The most prominent limitations of previous research are (1) small and limited sample sizes, (2) using a summed score of ACEs instead of individual ACE indicators, (3) using one approach to code the presence/absence of ACEs, and (4) using only one theory to explain adult victimization instead of multiple theories simultaneously to control for potential covariates. The current
study sought to overcome these limitations by (1) using a national sample of adults ($N = 1,693$), (2) analyzing adverse childhood experiences individually (i.e., not as a summed index), (3) considering the coding of ACE indicators with both a conservative and an inclusive approach, and (4) examining three victimological theories and frameworks simultaneously to assess whether adult victimization can be explained by a childhood victimization experience (i.e., state dependence) or other victimological theoretical explanations (i.e., population heterogeneity, risky lifestyles, individual traits, target congruence).

**Overview of Key Takeaways**

After addressing these gaps in previous research and conducting analyses, four key takeaways emerged. First, the coding of adverse childhood experiences (ACEs) matters. When ACEs are coded conservatively, fewer respondents are classified as having experienced that ACE than when the responses are coded inclusively. For instance, in the current study, only 9.5% of respondents experienced physical abuse in childhood when conservatively coded, while nearly half (49.5%) of the respondents experienced the same ACE when it was coded inclusively. This is an important distinction because individuals who are coded as having experienced ACEs less frequently (e.g., Bond et al., 2021) may have different outcomes with adulthood victimization than individuals who are coded as having experienced ACEs more often (e.g., Ports et al., 2016). Thus, the likelihood of experiencing adulthood victimization and other outcomes vary depending on the frequency in which ACEs are experienced.

Second, experiencing sexual abuse in childhood significantly increased the likelihood of experiencing both sexual and physical assault victimization in adulthood,
regardless of the coding variation. This finding aligns with prior work that has identified childhood sexual abuse as a strong correlate of adult sexual victimization (e.g., Arata, 1999; Messman-Moore & Garrigus, 2007; Tillyer et al., 2016; Urquiza & Goodlin-Jones, 1994). Similar work has also found support for the correlation between childhood sexual abuse and adult physical victimization (e.g., Dunkle et al., 2004; Frugaard Stroem et al., 2019; Morris & Balsam, 2003).

Third, unlike experiencing child sexual abuse, experiencing childhood physical abuse was not associated with adult sexual assault or physical assault victimization. Prior research has shown that the age at which the child experienced physical abuse may impact their likelihood of being victimized in adulthood (Till-Tentschert, 2017). Because the current study only considered child abuse before the age of 18, it is not known whether the age at which the abuse occurred affected later victimization outcomes. Also, past studies have found that while experiencing physical abuse in childhood may have negative adult outcomes, those negative outcomes may not include victimization (e.g., Edalati et al., 2016). In other words, individuals that experienced childhood physical abuse in the current study may be more likely to experience outcomes unrelated to victimization (e.g., being aggressive) later in life than to experience victimization (e.g., Edalati et al., 2016).

Fourth, other theoretically relevant factors were associated with victimization in adulthood, which sometimes varied for ACE factors depending on how they were coded (i.e., conservatively or inclusively). Related to population heterogeneity theory, using substances was positively correlated with experiencing both sexual assault and physical assault victimization in adulthood. This finding aligns with past literature that finds
support for the correlation between substance use and an increased risk of victimization (e.g., Tillyer et al., 2016; Turanovic et al., 2018). Also under population heterogeneity theory, being impulsive was significantly and positively associated with being physically victimized in adulthood for both coding variations. Past research validates this finding, concluding that high rates of impulsivity are correlated with violent revictimization, violent victimization in young adulthood, and cyber-victimization, to name a few (Álvarez-García et al., 2019; Connolly et al., 2020; Turanovic & Pratt, 2014).

Related to target vulnerability, the coding of the ACE variables resulted in substantively different conclusions across models. When coded conservatively, only having substances in the home was positively and significantly associated with physical assault victimization in adulthood—no other ACE variables were associated with adulthood victimization. However, when coded inclusively, experiencing physical neglect and having an incarcerated family member were both associated with sexual and physical assault victimization in adulthood. These discrepancies point to the variability among factors related to target vulnerability. In other words, while ACEs, disability status, running away, being in foster care, being kicked out, being homeless, and relying on strangers may all be related to target vulnerability, they are not necessarily related to each other or to sexual or physical victimization specifically. Certain variables, including household substance use, physical neglect, and having an incarcerated family member, were related to victimization and have been in previous studies (e.g., Nikulina et al., 2021; Taillieu et al., 2020; Widom et al., 2008), but other variables may have more complex relationships with victimization that are not uncovered in the current study (e.g., disability status, experiencing homelessness). Other target vulnerability indicators also
“mattered.” Specifically, individuals who ever had to rely on strangers were more likely to experience physical assault victimization in adulthood. Running away before the age of 18 was also significantly related to adulthood victimization, but in different ways. When the ACE indicators were coded conservatively, running away was a risk factor for sexual assault victimization in adulthood. However, when ACE indicators were coded inclusively, individuals who ran away before age 18 were less likely to experience physical assault victimization in adulthood. These findings suggest that individuals who frequently run away are more likely to be sexually victimized in adulthood than those that ran away less frequently. Thus, certain vulnerability factors, like ever relying on strangers and frequently running away before the age of 18, are correlated with adulthood victimization, while other, related factors may not have a correlation with adult victimization. Past literature has also shown that certain target vulnerability variables (e.g., depression, anxiety, alcohol use, staying out late) are related to various victimization outcomes (e.g., emotional abuse, violent victimization) while other variables (e.g., being on welfare, parental violence) are not (Zavala, 2018; Zavala & Guadalupe-Diaz, 2019; Zavala & Whitney, 2019).

Under target gratifiability, being female was significantly and negatively correlated with experiencing physical assault victimization in adulthood. This is consistent with past literature that finds women are less likely than males to be physically victimized (e.g., Finkelhor & Asdigian, 1996).

Related to target antagonism, respondents who were Black or Hispanic were more likely to report being sexually and physically victimized in adulthood. More specifically, Black and Hispanic respondents were significantly more likely to experience adult
physical assault victimization in comparison to their White counterparts, while their correlation with adult sexual assault victimization was positive but not significant. Past literature has also found that respondents who are Black or Hispanic are more likely to experience victimization than their White counterparts (e.g., Lauritsen & Heimer, 2010).

Other control variables were also significantly related to adulthood victimization. The respondents who were older were less likely to experience sexual or physical assault victimization in adulthood, which aligns with prior work that being older can decrease risk for victimization (e.g., Daigle & Fisher, 2013). Other findings varied depending on whether the ACE variables were coded conservatively or inclusively. When ACE indicators were coded conservatively, residing in the Midwest and South (compared to the West) was associated with a decreased risk of physical assault victimization in adulthood, which aligns with past literature that finds that region of residence can impact victimization rates (e.g., Marquart et al., 2007; Weisel, 2016). However, contrary to the current study, prior work tends to find that residing in the Midwest and South increases the risk of victimization (e.g., Lebrun-Harris et al., 2020; Marquart et al., 2007). This discrepancy could be because other studies have measured an outcome variable different than the current study’s (e.g., dating violence, bullying), resulting in different outcomes based on the respondents’ region of residence. When ACE variables were coded inclusively, being married was positively associated with physical assault victimization in adulthood, whereas residing in the Midwest (compared to the West) was associated with a decreased risk. Prior work tends to find that being married is correlated with a decreased likelihood of experiencing victimization (e.g., Merkin, 2008), which is at odds with the current study. This could be due to prior work considering various types of relationships
(e.g., cohabitating, divorced, widowed; Bernards & Graham, 2013) and their nuanced effects on victimization, whereas the current study considered only married or “other” as response options for marital status.

**Implications for Future Research and Policy**

While previous work in the field and the current study advances the field’s understanding of adulthood victimization, more research can be done as a way to inform practical and useful policies that are aimed at decreasing victimization. There are five recommendations related to the key findings of the current study. First, researchers in the future should continue to use multiple approaches when coding adverse childhood experiences (ACEs). Assessing the rate at which ACEs occur is helpful in understanding the nuanced prevalence rates of ACEs, how the coding variation may impact those prevalence rates and, as a result, impact victimization outcomes (e.g., Bond et al., 2021; Ports et al., 2016).

Second, given the strong correlation between child sexual abuse and adult sexual and physical assault, this trend should continue to not only be studied, but be used to inform practitioners on policies and preventions. Researchers should continue to use multiple theories simultaneously to try to explain the correlation between childhood and adulthood sexual victimization in order to intervene before an individual is sexually revictimized. Certain theories, such as coping styles (Irwin, 1999) and peritraumatic dissociation (Mazzarello et al., 2022), seek to explain this correlation, but additional research should include multiple theories simultaneously to understand this correlation and provide practical implementations to decrease adulthood sexual assault victimization. Also, scholars might seek to consider how different perpetrators, (e.g., parents, strangers)
and different types (e.g., fondled, shown pornographic material) of childhood sexual abuse affect rates of adulthood victimization (e.g., Koçtürk & Yüksel, 2019; Rueda et al., 2021). Practitioners will want to focus resources on children and adolescents who have experienced sexual victimization in childhood because of the strong correlation between childhood sexual abuse and adulthood sexual and physical assault (e.g., Walker & Wamser-Nanney, 2023; Widom et al., 2008). Various studies have found support for trauma-related interventions, family and parenting programs, and other treatments focused on the child’s traumatic experiences and mental wellbeing (e.g., Mazzarello et al., 2022; Wekerle et al., 2018).

Third, although the current study did not find child physical abuse (CPA) to be a predictor of adulthood victimization, it may predict other factors (e.g., violent offending; Edalati et al., 2016). Future research should examine the effect of CPA on adulthood outcomes besides victimization as well as how the age at which the abuse occurred could impact adult victimization. Till-Tentschert (2017), for instance, found that the correlation between CPA and adult violence victimization was strongest when the CPA incident occurred before the age of 15. Because of the minimal research assessing the impact of age, scholars will want to assess whether this finding holds up in similar studies evaluating the effect of CPA as well as how other age categories affect the likelihood of experiencing adult victimization.

Fourth, the current study found that ACEs impacted the likelihood of adult victimization depending on how the ACEs were coded. Thus, researchers in the future should continue to use multiple approaches when coding ACEs in order to understand how the frequency of one’s ACEs impacts their likelihood of adulthood victimization.
Because substances in the home coded conservatively can have a significant effect on physical assault victimization in adulthood, it is important to intervene early when a child or adolescent is exposed to substances in their home (e.g., Amstadter et al., 2011). It is especially important to intervene at the earliest sign of substance use so that the exposure is limited and doesn’t become a frequent issue (e.g., Taillieu et al., 2020). Researchers may want to consider if different substances (e.g., certain alcohols or drugs) play a role in adulthood victimization, as well as when the child or adolescent was exposed to those substances. For example, Kraanen and colleagues (2014) found that respondents with both an alcohol use disorder and a cocaine use disorder were significantly more likely to experience intimate partner violence victimization than those that only had an alcohol use disorder. While this finding is important for the field of victimization, future studies should consider the effect of different substances in childhood specifically on adulthood sexual and physical victimization. Moreover, when the individual is exposed to substances may impact their risk of victimization in adulthood. Generally, children exposed to substances at an earlier age (i.e., before age 15) are more likely to be sexually victimized in adulthood than those exposed later (i.e., 15 years or older) (Muchimba, 2020). Future research should take this into consideration when studying the effect of substance use initiation age on adulthood victimization outcomes. Also related to the impact of ACEs, substance use was found to be positively correlated with adulthood sexual and physical victimization. Because of this correlation, implementations should be put in place that limit adolescents’ access to drugs and alcohol. Specifically, schools should provide counseling and/or other substance use programming to students that have disclosed exposure to substances (see Pinchevsky et al., 2014).
Also, because of the impact of physical neglect and having an incarcerated family member when coded *inclusively* (e.g., Ports et al., 2016; Taillieu et al., 2020; Widom et al., 2008) on adult sexual and physical victimization, providing interventions when a report of physical neglect is made or when a family member is sentenced to jail/prison is equally important. Specific interventions for reports of neglect include parental education, screening for at-risk children, and considering the comprehensive needs of children (Committee on Psychosocial Aspects of Child and Family Health et al., 2012). Regarding household member incarceration, funding and programming should focus more heavily on families and households with an incarcerated member. Examples of these programs include the Angel Tree Program and Saving Kids of Incarcerated Parents, which have been used to minimize the harmful effects of incarceration on adolescents (Hoover, 2022).

Finally, researchers may want to study Black and Hispanic individuals’ risk of physical revictimization in order to intervene in childhood. Target gratifiability and target antagonism have been studied as factors predicting adulthood victimization (e.g., Finkelhor & Asdigian, 1996), but they should continue to be studied; especially how, in the lens of target congruence theory, being Black or Hispanic change the likelihood of being victimized in adulthood. Research should continue to examine why certain interpersonal experiences or crimes (e.g., physical assault) are less likely to have female victims than others (e.g., sexual assault) (e.g., Finkelhor & Asdigian, 1996) and how race and/or immigration status impacts victimization outcomes, especially among Black and Hispanic individuals (e.g., Lauritsen & Heimer, 2010).
Limitations

Although the current study had many significant findings, there are a number of limitations that must be addressed. First, the survey gathered data on risk factors, such as ACEs, but not protective factors (e.g., social networks, parental supervision), which may decrease a person’s likelihood of being revictimized (e.g., Finkelhor et al., 2007; Pusch, 2019). As demonstrated in previous literature, assessing the impact of ACEs and other childhood factors are essential when studying adulthood victimization outcomes (e.g., Desir & Karatekin, 2021; Thompson & Kingree, 2022). Yet it may be more beneficial to understand how protective and risk factors interact to predict adulthood victimization outcomes (e.g., Pusch, 2019).

Second, and related to the survey methods, the opt-in survey conducted by YouGov only captures individuals who voluntarily participate in online surveys (Baker et al., 2010) and may not include those with limited internet access, those not involved in survey panels, and those not readily willing to disclose their victimization experiences (Nicolaas et al., 2014). Individuals who willingly participate in online surveys may have very different experiences with childhood and adulthood victimization experiences than those who are less willing to disclose such personal information (Nicolaas et al., 2014).

Third, the temporal ordering of some of the predictor variables and the outcome variables is open to doubt because of the cross-sectional nature of the study. For example, a person who has been revictimized may turn to impulsive or antisocial behaviors after they have been victimized instead of impulsivity or antisocial attitudes predicting revictimization (e.g., Tillyer et al., 2016). The current study was not able to
determine whether certain factors, such as antisocial behaviors and impulsivity, occurred in a person’s life before or after they were victimized in adulthood.

**Conclusion**

The purpose of the current study was to determine whether childhood sexual and physical abuse victimization more strongly predicted adulthood sexual and physical assault victimization (i.e., state dependence theory) or if other theoretically relevant factors were associated with later victimization in adulthood (i.e., population heterogeneity theory and target congruence theory). After analyzing the data, several main findings emerged. Variables from all three theories (i.e., child sexual abuse, substance use, being Black or Hispanic) were relevant in explaining the association between ACEs and adulthood victimization; some of the ACEs (i.e., substances in the home, physical neglect, incarcerated family member, substance use, being Black or Hispanic) were predictive of sexual and/or physical victimization only with certain coding variations. Overall, multiple theories are important in considering the impact of ACEs on adulthood victimization outcomes, as shown by the predictive value of the factors associated with the three theories used in the current study. On top of that, the frequency at which certain ACEs are experienced (i.e., ranging from “never” to “very often”) “matters” when assessing the likelihood of sexual and physical assault victimization in adulthood.
References


YouGov (2023b). *Frequently asked Questions (FAQs)*.

https://today.yougov.com/about/faq


Appendix: Survey Instructions and Items

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey Instructions and Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victimization Instructions</strong></td>
<td>People may experience a wide range of unwanted experiences. They do not always report unwanted experiences to the police or discuss them with family and friends. The person engaging in these unwanted behaviors is not always a stranger, but can be a friend, boyfriend, girlfriend, partner, spouse, supervisor, coworker, somebody you meet throughout your daily routines, or even a family member. The experience could occur anywhere: in your residence, in your place of employment, at school, or in a public place. You could be awake, or you could be asleep, unconscious, drunk, or otherwise incapacitated. Please keep this in mind as you answer the questions. Now, you are going to be asked about different types of experiences that may have happened to you. Because of the nature of different experiences, the language may seem graphic to you. However, this is the only way to assess accurately whether or not the people in this study have had such experiences.</td>
</tr>
<tr>
<td><strong>Dependent Variables</strong></td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sexual Assault Victimization</td>
<td><strong>In the past 12 months</strong>, how many different times has anyone touched you in a sexual manner that was unwanted or uninvited? Touching could include forced kissing, touching of genitals, grabbing, fondling, and rubbing up against you in a sexual way, even if it is over your clothes. [Response: 0, 1, 2, 3, 4, 5+; This has happened, but not in the past 12 months]</td>
</tr>
<tr>
<td>Physical Assault Victimization</td>
<td><strong>In the past 12 months</strong>, how many different times has anyone actually seriously harmed you with physical violence (e.g., punch, kick, slap, choke, burn) or harmed you with a gun, knife, or some other weapon? [Response: 0, 1, 2, 3, 4, 5+; This has happened, but not in the past 12 months]</td>
</tr>
<tr>
<td><strong>State Dependence</strong></td>
<td>In this section, we are interested in your experiences before you turned 18 years old.</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Sexual Abuse in Childhood | While you were growing up, *during your first 18 years of life:* How often did an adult or person at least 5 years older than you… [Response: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often]  
1. Touch or fondle you in a sexual way?  
2. Have you touch their body in a sexual way?  
3. Try to or actually have oral, anal, or vaginal sex with you? |
| Physical Abuse in Childhood | In this section, we are interested in your experiences before you turned 18 years old. |
|                        | While you were growing up, *during your first 18 years of life:* How often did a parent or other adult in the household… [Response: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often]  
1. Push, grab, slap, or throw something at you?  
2. Hit you so hard that you had marks or were injured? |
<p>| <strong>Population Heterogeneity</strong> | Now, you are going to be asked a variety of questions about yourself and your perceptions. |
| “Risky” Lifestyles | <em>In the past 12 months,</em> approximately how often have you used the following (Response: 0 = never, 1 = less than once per week, 2 = 1 or 2 days per week, 3 = 3 or 4 days per week, 4 = 5 or 6 days per week, 5 = every day): |
| Substance Use | |</p>
<table>
<thead>
<tr>
<th>Deviant Peers</th>
<th>Individual Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you personally know anyone who is currently involved in selling drugs? [Response: yes/no]</td>
<td></td>
</tr>
<tr>
<td>2. Do you personally know anyone who has committed a serious crime (e.g., rape, murder, armed robbery)? [Response: yes/no]</td>
<td></td>
</tr>
<tr>
<td>3. Do you personally know anyone who has ever engaged in a sexual act in exchange for anything of value? [Response: yes/no]</td>
<td></td>
</tr>
<tr>
<td>- Just so there is no confusion, a <em>sexual act</em> could include oral, vaginal, or anal intercourse, masturbation, or something else sexual. The sexual behavior may have been performed on the individual or they may have performed the sexual behaviors on another person.</td>
<td></td>
</tr>
<tr>
<td>- <em>Anything of value</em> could include money, favors, drugs, a place to stay, food, gifts, or something else.</td>
<td></td>
</tr>
<tr>
<td>To what extent do you agree or disagree with the following statements:</td>
<td></td>
</tr>
<tr>
<td>(Response: 1 = strongly disagree, 2 = somewhat disagree, 3 = neither disagree nor agree, 4 = somewhat agree, 5 = strongly agree)</td>
<td></td>
</tr>
<tr>
<td>1. I often act on the spur of the moment without stopping to think</td>
<td></td>
</tr>
<tr>
<td>2. I don’t devote much thought and effort to preparing for the future</td>
<td></td>
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</tbody>
</table>

$\alpha = 0.43$; factor loadings: 0.49-0.75

- a. Alcohol
- b. Marijuana
- c. Prescription medications used recreationally (e.g., stimulants, opiates, benzodiazepines)
- d. Illicit substances (e.g., cocaine, heroin, crack cocaine, methamphetamines, psychedelics)
| Antisocial Attitudes (α = 0.83; factor loadings: 0.68-0.86) | 1. It’s alright to beat up another person if they insulted you  
2. It’s okay to break the law if you can get away with it  
3. To get ahead, sometimes you have to do things that seem wrong  
4. It’s okay to break the law if nobody is hurt by it  
5. Most things that people call “crime” don’t really hurt anyone |
| --- | --- |
| (α = 0.71; factor loadings: 0.70-0.75) | 3. I often do whatever brings me pleasure here and now, even at the cost of some distant goal  
4. I’m more concerned with what happens to me in the short run than in the long run |
| Target Congruence Theory  |
| Target Vulnerability  |
| Ran Away before Age 18 | In this section, we are interested in your experiences before you turned 18 years old.  
When you were under the age of 18, did you ever run away from home?  
[Response: yes/no] |
| Adverse Childhood Experiences (α = 0.72; factor loadings: 0.06-0.73) | While you were growing up, during your first 18 years of life:  
How often did a parent or other adult in the household… [Response: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often]  
1. [Emotional Abuse] Swear at you, insult you, put you down, or humiliate you? |
2. **Emotional Abuse** Act in a way that made you afraid that you might be physically hurt?

How often did you feel that… [Response: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often]

3. **Emotional Neglect** No one in your family loved you or thought you were important or special?

4. **Emotional Neglect** Your family didn’t look out for each other, feel close to each other, or support each other?

5. **Physical Neglect** You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you?

6. **Physical Neglect** Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

How often did either of your parents experience the following from their romantic partner (e.g., your other parent, stepfather, stepmother, boyfriend, girlfriend)… [Response: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often]

7. **Family Violence** Pushed, grabbed, slapped, or had something thrown at them?

8. **Family Violence** Kicked, bitten, hit with a fist, or hit with something hard?

9. **Family Violence** Repeatedly hit for at least a few minutes

10. **Family Violence** Threatened with a gun or knife?

11. **Parents Separated** Were your parents ever separated or divorced?

12. **Substances in Home** Did you live with anyone who was a problem drinker or alcoholic? [yes/no]

13. **Substances in Home** Did you live with anyone who used street drugs? [yes/no]

14. **Mental Illness in Family** Was a household member depressed or mentally ill? [yes/no]
| Disability Status | 15. [Mental Illness in Family] Did a household member attempt suicide? [yes/no]  
|                  | 16. [Incarcerated Family Member] Did a household member go to prison? [yes/no] |
| Foster Care before Age 18 | Do you identify as an individual with any of the following? (check all that apply)  
|                          | 1. Learning disability (e.g., dyslexia)  
|                          | 2. Attention-deficit/hyperactivity disorder (ADHD)  
|                          | 3. Autism spectrum disorder  
|                          | 4. Mobility-related disability (e.g., spinal cord injury, muscular dystrophy)  
|                          | 5. Sensory disability (e.g., hard of hearing, low vision)  
|                          | 6. Chronic mental health condition (e.g., depression, PTSD, anxiety, bipolar disorder, obsessive compulsive disorder, phobia, schizophrenia)  
|                          | 7. Chronic medical condition (e.g., cystic fibrosis, diabetes, chronic pain)  
|                          | 8. None of the above  
| Being Kicked Out before Age 18 | When you were under the age of 18, were you ever part of the foster care or child welfare system? [Response: yes/no]  
| Ever Homeless | At any point in your life, have you been homeless? [Response: yes/no]  
| Ever Relyed on Strangers | At any point in your life, have you had to rely on strangers to survive when you did not have family or friends to help you? [Response: yes/no]  

<table>
<thead>
<tr>
<th><strong>Target Gratifiability</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>What is your gender? (Response: <em>male, female</em>)</td>
</tr>
<tr>
<td><strong>Target Antagonism</strong></td>
<td></td>
</tr>
<tr>
<td>Immigration Status</td>
<td>Were you born in the United States? [Response: <em>yes/no</em>]</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>What racial or ethnic group best describes you? (<em>recoded as: White [reference group], Black, Hispanic, “Other”</em>)</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Birthyear (<em>Coded in years</em>)</td>
</tr>
<tr>
<td>Education</td>
<td>What is the highest level of education you have completed? (<em>recoded as: some college or more [reference group], high school degree, less than a high school degree</em>)</td>
</tr>
<tr>
<td>Marital Status</td>
<td>What is your marital status? (<em>recoded as: married [reference group], other</em>)</td>
</tr>
<tr>
<td>Employment</td>
<td>Which of the following best describes your current employment status? (<em>recoded as: employed [full/part; reference group], other</em>)</td>
</tr>
<tr>
<td>Region of Residence</td>
<td>Response recoded based on state of residence: South [reference group], Northeast, Midwest, West</td>
</tr>
</tbody>
</table>