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Personality Disorder Trait Mediation Of Childhood Abuse Effects On Internalized And Externalized Symptoms Of Distress

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PERSONALITY DISORDER TRAIT MEDIATION OF CHILDHOOD ABUSE EFFECTS ON INTERNALIZED AND EXTERNALIZED SYMPTOMS OF DISTRESS

by

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This thesis, submitted by Amy Catherine Veith in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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PERMISSION

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Amy Catherine Veith
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ABSTRACT

The current study explored the relationships between childhood maltreatment indicators and mental health symptomatology in adulthood. Based on previous research, it was hypothesized that the indirect effects of child abuse on symptom expression as mediated by personality traits would be substantial and possibly larger than the direct effects alone. Additional abuse by trait interactions were examined. Results supported these hypotheses, specifically, the PID-5 trait factors were successful in accounting for a disproportionate amount of the variance in the criterion measures. These traits were substantially stronger than childhood physical abuse and domestic violence exposure. Childhood sexual abuse also outperformed childhood physical abuse and domestic violence exposure, but to a lesser extent than the personality traits. These results add to the literature reviewing the mechanisms through which psychopathology emerges, in an attempt to better predict and intervene following the occurrence of childhood abuse.

CHAPTER I

INTRODUCTION

Traumatic life events can have devastating effects on the physical, mental, and emotional experiences of individuals. A trauma is any event that may cause or threaten death, serious injury, or sexual violence to an individual, a close family member, or a close friend (DSM-5; American Psychiatric Association, 2013). Prior survey research has reported lifetime rates of exposure to traumatic events ranging from 40% to 90% (Breslau et al., 1991; Breslau et al., 1998). While childhood physical abuse (CPA), childhood sexual abuse (CSA), and childhood exposure to domestic violence (CDA) in particular have been shown to have serious psychological consequences (Silva et al., 2014; Kraftcheck et al., 2007; Clark et al., 2012, Jaffee et al., 2002), extensive variation may be expected in how victims adapt to those traumas. The present study will examine potential mediators of childhood abuse effects in an effort to account further for some of these individual adaptation differences.

Traumatic stress reactions to CPA, CSA, and CDA vary widely from victim to victim. Abuse-related trauma in childhood has been associated with negative effects on development, most notably behavioral and affect dysregulation (Kraftcheck et al., 2007) extending to anger management difficulties, post-traumatic stress disorder (PTSD), and mood and anxiety disturbance (Briere, 1994). Sexual assault in adolescence has been linked as well to substance abuse, risky sexual behavior, depression, anxiety, and social

avoidance (Basile & Smith, 2011; Mason & Lodrick, 2013; Clark et al., 2014). Domestic violence exposure in childhood has been associated with aggression, alcohol and substance use as well as anxiety, depression, and somatic complaints (Kitzman, Gaylord, Holt, & Kenny, 2003).

CPA, CSA, and CDA stress reactions can take the form of internalized or externalized symptoms of distress. Internalizing dysfunction is defined as an over-control of emotions that are inner-directed. Such symptoms include social withdrawal, feelings of worthlessness or inferiority, dependence, over-inhibition, and shy-anxious difficulties (Silva et al., 2013; Sabri, 2012) Externalizing dysfunction is characterized by an under-control of emotions that are outer-directed, including difficulties with interpersonal relationships and rule breaking (Silva et al., 2014; Sabri, 2012). The exact mechanisms determining an individual's responses to trauma are not fully understood. Several factors have been identified, including the nature and frequency of the trauma, the identity of the perpetrator (Paris, 2000), events prior to or concurrent with the trauma, environmental factors, and the individual's post trauma conceptualizations (Davis & Petretic-Jackson, 2000). Recent research has also suggested that personality traits may mediate the effects of life stress on internalized and externalized symptom expression (Combs et al., 2013; Settles et al, 2011). Traits such as negative urgency (Settles et. Al., 2011) and impulsivity (Battista et al., 2013; Kunst & Van Wilsem, 2013) have been proposed to mediate the relationship between violent crime victimization and externalizing disorders. Personality traits such as neuroticism (Paris, 2000) and anxiety sensitivity (Battista et al., 2013) have been proposed to mediate the stress effects on internalizing symptoms in adolescence as well. Trait anxiety and trait depression have also been examined as potential predictors of

dysfunction after trauma (Combs et al., 2013). Personality traits are thought to be mediating factors between trauma and internalizing and externalizing outcomes. One theoretical model has emerged, which holds promise for advancing current knowledge regarding the mediation of internalized and externalized symptom expression by personality traits. The present study will examine recommended DSM-5 personality disorder trait dimensions as mediators of childhood abuse effect using the following theoretical model as a guide.

The Acquired Preparedness Model

The Acquired Preparedness Model (APM) of risk development has proposed that personality traits are important in predisposing victim reactions to life experiences such as trauma (Smith & Anderson, 2001). While proximal stressors such as life trauma may have a direct impact on symptom expression, more distal and generalized reaction tendencies (i.e., traits) should influence perceptions of life events and indirectly mediate positive or negative outcome effects.

The APM postulates bidirectional effects of distal personality and proximal learning factors on psychological functioning. While successful in accounting for many direct and indirect stressor and personality effects on symptom expression (Hayaki et al., 2011; Corbin, Iwamoto, & Fromme, 2011), much of the research on the APM has focused on the interaction between maladaptive traits and learned expectancies in addictive processes (Corbin, Iwamoto, & Fromme, 2011; Hayaki et al., 2011; Smith & Anderson, 2001). Target traits, stressors, and outcomes have varied, but the distinctive objective of the APM is to identify and quantify both the direct and indirect impact of traits and stressors on relevant clinical outcomes.

Of interest for purposes of this study have been extensions of the APM to account for the interaction between selected traits and externalized (Settles, Cyders, & Smith, 2011) and internalized (Pearson, Combs, Zapolski, & Smith, 2012) expressions of distress as found in substance abuse and eating disorders respectively. Smith and Anderson (2001) identified disinhibition (i.e. impulsivity, sensation seeking) as a trait that was likely to influence positive and negative expectancies about alcohol use and therefore the individual's drinking behavior. The APM has also been supported in research focusing on marijuana use (Hayaki et al., 2011; Vangsness et al., 2005), alcohol use (Anderson, Smith, & Fischer, 2003; Corbin, Iwamoto, & Fromme, 2011) and in longitudinal studies (Corbin, Iwamoto, & Fromme, 2011).

Extension of the Acquired Preparedness Model

Personality traits likely influence what is learned from the environment. Hypotheses derived from the APM tend to focus on the additional indirect (mediated) effects of personality traits on symptom expression via altered perceptions of life experiences (including trauma). Although this model has almost exclusively been used to explain the relationship between disinhibition, substance expectancies, and externalizing behavioral outcomes, recent research has attempted to expand the current model to include other personality traits and potential learning experiences. For instance, Combs, Jordan, and Smith (2013) tested the APM in the context of sexual assault as a learning experience. They demonstrated a link between negative urgency and externalizing behaviors following a sexual assault. Negative urgency did not, however, successfully predict internalizing behaviors (Combs, Jordan, & Smith, 2013). In contrast, trait anxiety

and trait depression predicted internalizing behaviors, but not externalizing behaviors post-trauma.

Perhaps the simplest form of the APM can be expressed as follows (Figure 1; Settles, Cyders, & Smith, 2010):

Figure 1. Acquired Preparedness Model.

The hypothesized directional relationships depicted in this model (ultimately extended to additional traits and formative learning experiences) make sense since the critical learning events occurred in early adulthood presumably after trait development. In this study, the direct and indirect effects of childhood abuse on internalized and externalized symptoms of distress will be examined. The mediational hypothesis under examination is that most of the adverse impact of child abuse will occur as a function of the indirect effects of those experiences on trait development. Tests will be conducted to determine the extent to which contemporary (DSM-5-recommended) personality disorder traits will be successful in predicting symptoms of psychological distress.

The indirect effects of childhood abuse (via these personality disorder traits) on symptom expression are expected to be much larger than the impact of the trauma itself (i.e., maladjustment to trauma is largely mediated by its impact on pernicious personality

trait acquisition). The mediational hypothesis in this thesis will be that the effects of childhood abuse occur largely as an indirect effect of maladaptive personality development (additional factors will be integrated later in this review). This conceptual contrast with prior APM research might be depicted best as follows:

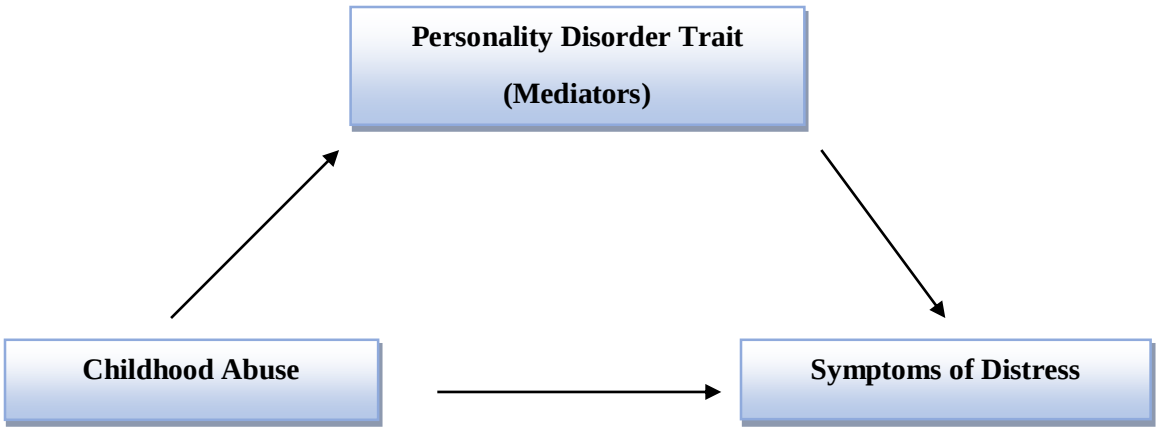


Figure 2. Extension of the Acquired Preparedness Model.

Childhood Physical Abuse (CPA)

In 2011, state and local child protection agencies received 3.7 million referrals of child maltreatment. Eighteen percent, or approximately 666,000, of those referrals were for child physical abuse (U.S. Department of Health and Human Services). Although the exact definition of child physical abuse (CPA) varies by state, the Center for Disease Control defines physical abuse to include everything from being pushed, grabbed, slapped, and the like, to items being thrown at the child, or the child being hit hard enough to leave marks or cause injury.

Childhood physical abuse negatively impacts multiple aspect of development including, producing deviant behavior, difficulties with affect regulation, poor attachment

behavior, poor interpersonal relating, negative self-appraisal, and difficulties with personality integration (Kraftcheck & Muller, 2007). Prior research studies have indicated that children who are maltreated are at a greater risk for internalizing and externalizing symptomatology as well as a variety of psychological disorders into adulthood (Silva et al. 2014). For example, Flisher et al. (1997) reported a link between CPA and major depression, conduct disorder, oppositional defiant disorder, agoraphobia, overanxious disorder, and generalized anxiety disorder, as well as global impairment and poor social competence.

Internalizing and Externalizing Dysfunction

Increased levels of internalizing and externalizing symptomatology were found in children who were exposed to violence in the home, at school, and in the community, however, violence at home was the only variable to predict internalizing and externalizing symptomatology independently (Mrug & Windle, 2010). Children exposed to domestic violence tend to report higher levels of anxiety than their non-abused counterparts (Mrug & Windle, 2010). The internalizing behavioral consequences of CPA are numerous, but the most frequently reported include anxiety, difficulty with affect regulation, poor self-appraisal, depression, fear, distress, somatic complaints, and a lack of personality integration (Kraftcheck et al., 2007, Gore-Felton et al., 2002). In general, research indicates that girls who are physically abused are more likely to evidence internalizing dysfunction than their male counterparts, who evidence more externalizing dysfunction (Silva et al., 2014).

Although internalizing dysfunction has been shown to be a consequence of CPA, externalizing dysfunction, specifically delinquency in adolescence has been a long

associated consequence of CPA. Externalizing symptomatology related to CPA is also varied and has included illicit drug use, aggression, hostility, violent and criminal behavior, conduct disorder, poor attachment, and poor interpersonal relating (Silva et al., 2014; Mrug & Windle; 2010, Gore-Felton et al., 2002; Clark et al., 2014). Children who reported a history of CPA also reported significantly greater externalizing pathology than children who did not report a history of CPA (Gore-Felton et al., 2002). As with internalizing dysfunction, witnessing and experiencing domestic violence was associated with higher rates of externalizing dysfunction in children and adolescents (Mrug & Windle, 2010). Prior research has also found that a history of CPA is more prevalent among individuals who abuse substances than those who do not (Clark et al., 2014). Children who experience multiple forms of maltreatment, specifically co-occurring childhood physical abuse and childhood sexual abuse have higher rates of externalizing symptomatology (Kim et al., 2009).

CPA and Delinquency

Although the externalizing consequences are vast for individuals with a history of CPA, the most frequently associated consequence of CPA is delinquency in adolescence. The impact of CPA on adolescent behavior has been consistently reported as a strong link to delinquency (Gore-Felton et al., 2002). Studies have repeatedly shown that childhood abuse and neglect, along with family dysfunction in childhood and psychiatric problems are prevalent among offenders who commit violent and homicidal offenses (Gore-Felton et al., 2002). Furthermore, individuals who report a history of CPA are also more likely to report having high levels of aggression in general (Clark et al., 2014). Individuals with

a history of CPA are also at an increased risk of committing violence against their own children and intimate partners (Clark et al., 2014).

A high percentage of incarcerated youth report being victims of CPA (Silva et al., 2014). In 2010, Coleman and Stewart reported that 42.5% of incarcerated youth had a history of CPA. Compared to adolescents in the general population, youth in correctional facilities had much higher rates of both CPA and childhood sexual abuse (CSA) (Gore-Felton et al., 2002). The association between CPA, CSA, trauma, and childhood neglect have all been shown to increase the likelihood of incarceration in adolescence in the literature (Clark et al., 2014). The large amounts of research that have shown consistent links between externalizing symptomatology and CPA and CSA suggest that childhood abuse may be at least partially responsible for incarceration in adolescence and adulthood (Gore-Felton et al., 2002). The link between trauma and aggression appears to be well established in the criminal justice literature (Clark et al. 2014).

A further consequence of CPA related both to the abuse and to future incarceration is substance abuse. Individuals who report a history of CPA also tend to report using and abusing substances more frequently than those who do not report a history of CPA (Clark et al., 2014). The relationship between aggression and substance abuse has also been well documented in the literature (Clark et al., 2014). Approximately half of incarcerated offenders reported using an illicit substance the month prior to their offense, while another fourth reported using an illicit substance during the commission of their offense (Clark et al., 2014). It is reasonable to expect that offenders who report regular use of illicit substances as well as a history of childhood trauma will demonstrate the highest levels of violence as well as the more severe forms of other externalizing

behaviors due to the connection of both drug use and trauma to aggressive tendencies in the literature (Clark et al., 2014).

Childhood physical abuse often co-occurs with other forms of childhood maltreatment, specifically childhood sexual abuse. The culmination of these two forms of abuse can lead to more internalizing and externalizing dysfunction than either form of abuse alone (Kim et al., 2009).

Childhood Sexual Abuse (CSA)

In 2010 over 63,000 cases of childhood sexual abuse were reported (US Department of Health and Human Services). Briere and Elliot (2003) found that 1 in 3 girls and 1 in 7 boys will be sexually abused during their childhood. However, only 30% of all CSA occurrences are reported to authorities according to a 1998 study conducted by Kilpatrick et al. Although the rate of CSA has declined since 1993, a vast number of children are still affected each year (National Child Trauma Stress Network). The consequences of CSA are numerous and are evident throughout childhood, adolescence, and adulthood. Previous research has connected CSA to childhood and adolescent maladjustment as well as maladaptive response patterns in later life (Paolucci et al., 2001). Individuals with a history of sexual abuse had a 20% greater occurrence of PTSD, 21% greater occurrence of depression, 21% greater occurrence of suicide, 14% greater occurrence of sexual promiscuity, 8% became a perpetrator of sexual abuse, and 10% had academic difficulties when compared with children who did not have a history of sexual abuse (Paolucci et. Al., 2001).

Internalizing and Externalizing Dysfunction

The most frequently reported outcomes of CSA include depression, anxiety, and other internalizing dysfunction, as well as dissociation, conduct disorders, aggressiveness, and inappropriate or early sexual behavior, and other externalizing dysfunctions (Paolucci et. Al., 2001). The variety of maladaptive consequences of CSA for children and adolescents can also be generalized into internalizing and externalizing dysfunction. Internalizing consequences can include anxiety, sleep disturbance, low self-esteem, distorted self-concept, depression, anxiety, self-blame, guilt, helplessness, self-mutilation, obsessions and compulsions, somatization, sexual dysfunctions, educational difficulties, self-destructive acts, fears, and a history of suicide attempts (Davis & Petretic-Jackson, 2000; Clark et. Al., 2012; Paolucci et. Al, 2001). Research has also shown a relationship between CSA and externalizing dysfunction including substance abuse problems, antisocial behaviors, anger and hostility, prostitution, sexualized behaviors, and delinquent criminal behavior (Clark et. Al., 2012; Davis & Petretic-Jackson, 2000; Paolucci et. Al., 2001). A heightened sense of sexual awareness is one of the most commonly reported consequences of CSA (Davis & Petretic-Jackson, 2000). Children who have such an awareness at an early age may engage other children in sexual play (Yates, 1982). Abused children may also become sexually aggressive to other children as a way to understand the abuse they themselves suffered (Masson, 1995).

A history of CSA has a continued effect on the survivor, with consequences seen in both adolescence and adulthood. Adult survivors of CSA report difficulty in sustaining healthy relationships, sexual dysfunction, oversexualization of relationships, infidelity, divorce, and substance abuse (Clark et. Al., 2012). Adult's with a history of CSA were

also more likely to be unemployed or on disability, have lived in a shelter, and traded sex for drugs (Clark et. Al., 2012). Sexual relationships tend to be difficult for adults with a history of CSA. Many survivors report a fear of sexual intimacy, possibly because early sexual experiences were associated with revulsion, anger, powerlessness, and anxiety. Many female survivors of CSA report mistrust, flashbacks, lack of control, and fear of closeness with their sexual partners (Davis & Petretic-Jackson, 2000). Sexual phobias are also common among women with a history of CSA. Phobic reactions to sexual intimacy lead many women to become sexually inhibited and/or avoid sex. Women who are sexually avoidant tend to have been abused by offenders that were emotionally close to them (Davis & Petretic-Jackson, 2000).

Oversexualization also occurs in adult survivors of CSA. Survivors may view sex as a tool to get what they want or as a validation of worthiness (Davis & Petretic-Jackson, 2000). Some survivors of CSA are not able to separate intimacy and affection from sexuality, which can result in a sex-intimacy dichotomy, where the individual wants only sex or only non-sexual intimacy from their partner and they are unable to connect the two aspects into one relationship (Davis & Petretic-Jackson, 2000). Oversexualization can also lead to the sexualization of all interpersonal relationships as well as the possibility of the survivor sexually or physically abusing their own children (Davis & Petretic-Jackson, 2000; Clark et al., 2014). The sexualization of relationships may also increase the survivor's vulnerability to re-victimization.

Revictimization

Re-victimization is a serious concern for individuals with a history of CSA, particularly female survivors of CSA. Humphrey and White (2000) found that children

who were sexually abused or assaulted before the age of 14 were two times more likely to be sexually assaulted as an adolescent. Victimization during adolescence may be even more detrimental and lead to greater long-term effects due to the importance of sexual development during this time period (Turner et. Al., 2010). Previous research has shown that adolescent and adult women with a history of CSA are at a higher risk for being revictimized later in life including rape, assault, or spousal abuse (Follette et. Al., 1996). Several possible reasons for revictimization include a sense of powerlessness in relationships, a lack of assertiveness, and a sense of lacking control over one's body and what happens to it (Davis & Petretic-Jackson, 2000). Prior traumatic experiences such as CSA can lead to substance use and casual sexual relationships, both of which have been shown to increase the risk of revictimization (Clark et. Al., 2012; Davis & Petretic-Jackson, 2000). Humphrey and White (2000) found that CSA increased the risk for sexual assault in adolescence, which then increased the risk for sexual assault in college-aged women. CSA survivors were more likely to experience moderate to severe sexual assault in adolescence than children who had never been sexually abused. Victimization in adolescence increased the risk for college sexual assault by four-fold (Humphrey & White, 2000). Individuals who are re-victimized repeatedly show higher levels of post-trauma internalizing and externalizing symptomatology, suggesting that victims do not habituate their experiences, but rather they become more sensitive to them. Therefore, new trauma symptoms may serve to exacerbate pre-existing trauma symptoms (Follette et. Al., 1996).

Combined Effect of CPA and CSA

Children who experience both a history of CPA and CSA are more likely to have a greater level of externalizing dysfunction (Kim et al., 2009). CPA has been linked with revictimization similar to the link between CSA and revictimization. CPA has been associated with revictimization in a variety of forms including domestic violence, adult physical assaults, and sexual assaults (Messman-Moore et al., 2010). Several studies have reported a specific link between sexual revictimization and CPA. CPA has been linked to sexual victimization in community, clinical, and college samples (Desai et al., 2002; Cloitre et al., 1996; Schaaf & McCanne, 1998). CPA and CSA have both been associated with adolescent and adult rape. In a sample of 752 women, Messman-Moore, Walsh, and DiLillo (2010) found that 29.8% of CSA victims and 24.3% of CPA victims were revictimized. Earlier research has indicated that CSA may only be associated with sexual revictimization when it is combined with CPA or that the risk of sexual revictimization is greater if the individual experiences physical as well as sexual abuse in childhood (Messman-Moore et al., 2010). However, prior research relating a history of CSA and subsequent sexual assaults shows a strong link between CSA only and later sexual revictimization (Humphrey & White, 2000; Follette et al., 1996; Davis & Petretic-Jackson, 2000). Incarcerated individuals often report prior traumatic life events, in some studies nearly 90% of inmates reported prior trauma. Approximately 50% of incarcerated individuals reported a history of CSA (Clark et al., 2014).

Childhood Exposure to Domestic Violence (CDA)

Between 1998 and 2002 domestic or family violence accounted for 11% of all reported and unreported violent crimes in the United States (Bureau of Justice Statistics).

Of these crimes 49% were committed against a spouse and 6% were committed against a child by their parent. The Bureau of Justice Statistics defines family violence as "all types of violent crime committed by an offender who is related to the victim either biologically or legally through marriage or adoption". Although the rate of family violence fell between 1993 and 2002, it is still a widely occurring societal problem with vast consequences (Bureau of Justice Statistics). An estimated 10 million children in the U.S. witness violence between their parents each year (Jaffee et al., 2002). In 2000 alone, police reports indicated that 33% of all violent crimes were classified as family violence in eighteen states and the District of Columbia. Of that 33%, approximately half (53%) were crimes against a spouse (Bureau of Justice Statistics).

Families that experience domestic violence tend to have higher levels of stress due to lower incomes and frequent relocations. Couples are more likely to be young and less educated (Kitzmannn, Gaylord, Holt, and Kenny, 2003; Jaffee, Hurley, & Wolfe, 1990), and are more likely to be divorced and single parents along with having higher levels of alcohol-related problems compared to the general population (Kitzmannn, Gaylord, Holt, & Kenney, 2003).

The children in families characterized by domestic violence often have adjustment difficulties (Jaffee, Wolfe, Wilson, & Zak, 1986; Fergusson & Horwood, 1998). The greatest potential risk for children in violent families occurs when conflict between parents becomes physically violent (Margolin & Gordis, 2000). Many parents report shielding their children from marital discord and violence, for example fighting only after the children have gone to bed. However, research negates this claim; findings indicate that children in homes where domestic violence occurs often see, hear, and attempt to

intervene during instances of violence between parents (Rosenberg, 1987; Kitzmann, Gaylord, Holt, & Kenny, 2003). A meta-analysis of 118 studies related to domestic violence, by Kitzmann, Gaylord, Holt, & Kenny (2003), found that 63% of child witnesses of parental violence were doing poorly when compared to children who had not been exposed to parental violence. When compared with children who experience non-violent forms of parental conflict, children who witness physical violence between their parents show significantly worse outcomes (Kitzmann, Gaylord, Holt, & Kenny, 2003).

Research over the past few decades has attempted to identify the adjustment difficulties and long-term consequences for child witnesses of domestic violence. A large number of studies have found a variety of problems experienced by child witnesses including psychological, behavioral, emotional, social, and academic difficulties (Margolin & Gordis, 2000, Litrownik et. Al., 2003, Moffitt & Caspi, 2003, Herrera & McCloskey, 2001, Moylan et al., 2010). A variety of qualitative reviews on exposure to domestic violence support these findings (Kitzmann, Gaylord, Holt, & Kenny, 2003). When children witness their parents engaging in frequent, intense, and poorly resolved conflicts they are likely to begin to evince increased levels of both internalizing and externalizing symptomatology (Jaffee et al., 2002).

Several models have attempted to explain the potential outcomes for child witnesses of domestic violence. The social learning model has emphasized children's risk for externalizing symptomatology, specifically aggression, after witnessing domestic violence, while models of traumatic experiences have focused primarily on the child's risk of internalizing symptomatology including anxiety and post-traumatic stress responses (Kitzman, Gaylord, Holt, & Kenny, 2003). Models emphasizing a holistic

approach have used measures of both internalizing and externalizing symptoms to document the wide variety of problematic outcomes for these children.

Internalizing and Externalizing Dysfunction

Research has consistently shown that children who witness interparental violence are at a greater risk of future internalizing and externalizing adjustment difficulties (Fergusson & Horwood, 1998). Exposure to domestic violence has been linked to internalizing symptomatology including: low self-esteem, social and emotional withdrawal, depression, anxiety, trauma symptoms, hyperarousal, and exaggerated startle response (Moylan et al., 2010; Evans, Davies, & DiLillio, 2008). Externalizing difficulties have also been identified in children exposed to domestic violence including: physical aggression, higher levels of general behavioral problems, violence, delinquency, conduct disorder, and alcohol use and abuse (Fergusson & Horwood, 1998; Moylan et al., 2010; Evans, Davies, & DiLillio, 2008). A study by Fergusson and Horwood (1998) found that after controlling for confounding factors, child exposure to father initiated domestic violence was associated with an increased risk of anxiety, conduct disorder, and property crime, whereas mother initiated domestic violence was associated with future alcohol use and abuse.

Gender has been proposed as a potentially moderating factor of effects after domestic violence exposure (Moylan et al., 2010). Prior research has indicated that females exposed to domestic violence tended to score higher on internalizing symptomatology than males exposed to domestic violence. Males in contrast scored higher on externalizing symptomatology than females (Moylan et al., 2010; Evans et al., 2008). However, several other studies have found no evidence of gender as a moderating

factor (Kitzmann, Gaylord, Holt, & Kenny, 2003, Fergusson & Horwood, 1998, Sternberg et al., 2006). Although males tend to express more externalizing symptoms, while females tend to express internalizing symptoms, there is no consistent evidence to suggest a significant difference in response to domestic violence based on gender (Fergusson & Horwood, 1998, Cummings et al., 2000).

Exposure to parental violence has been associated with adjustment difficulties not only in childhood and adolescence, but also into adulthood (Fergusson & Horwood, 1998, Kalmuss, 1984). Children who witnessed interparental violence are particularly at risk of future psychosocial adjustment difficulties including mental health problems, alcohol abuse and dependence, and criminal offending. Internalizing and externalizing problems including higher rates of anxiety, conduct disorder, criminal behavior, and substance abuse are also carried into adulthood, particularly if the violence was initiated by the individual's father (Fergusson & Horwood, 1998). Childhood exposure to domestic violence has also been associated with future abuse of partners, spouses, and children (Jaffee et al., 2002, Reitzel-Jaffee & Wolfe, 2001).

Cycle of Violence Hypothesis

A general belief associated with domestic violence, is that the children exposed will grow up to continue the abuse in their own families. Several research studies have examined this "cycle of violence" hypothesis, also known as the intergenerational transmission of violence, which speculates that children who were victims of violence grow up to victimize others (Heyman & Smith, 2002). This hypothesis has been repeatedly applied to domestic violence in particular. The exposure to domestic violence is thought to predispose children to model their parent's aggression or to increase the

child's emotional insecurity (Grych et al., 2000; Jaffee et al., 2002). Similarities and differences have been found among men and women who were exposed to domestic violence as children. Women who were exposed to both parental violence and parent to child violence had an increased risk of abusing their own children and partners, as well as being abused by their partners. Men who were exposed to both parental and parent to child violence were at twice the risk of abusing a future partner. A study by Heyman and Smith (2002) found that men who were exposed to father initiated parental violence as children were at an increased risk to abuse their own children by 13% and partners by 8%. The study also found that women who were exposed to mother to child abuse as children were 35% more likely to be abused by a future partner. The results of Heyman and Smith's (2002) study support prior research on the cycle of violence hypothesis. Although the results would suggest a bleak outlook for families of children exposed to domestic violence, the majority of children who are exposed to domestic violence grow up to be nonviolent in their own families (Heyman & Smith, 2002).

Combined Effects of CPA and Domestic Violence Exposure

Prior research has indicated that children who witness domestic violence are more likely to experience other forms of abuse, specifically physical abuse (Kitzmann, Gaylord, Holt, & Kenny, 2003). The experience of combined childhood exposure to domestic violence and CPA has been termed the "double whammy" effect (Kitzmann, Gaylord, Holt, & Kenny, 2003). A variety of studies have found that children who are exposed to both forms of abuse experience a wider range of internalizing and externalizing symptomatology as well as have worse adjustment outcomes in later life (Moylan et al., 2010; Wolfe et al., 2003; Sternberg et al., 2006). Prior studies have found

that children who experienced both CPA and domestic violence were more likely to have internalizing symptoms than child abuse victims alone, domestic violence witnesses alone, and children with no history of abuse (Sternberg, 2006). Moylan and colleagues (2010) found that exposure to both domestic violence and CPA significantly predicted externalizing outcomes and some internalizing outcomes including anxiety, depression, and to a lesser extent somatic complaints. Although evidence supporting the "double whammy" effect, like the evidence for the cycle of violence, suggest a bleak outcome, the results are not conclusive. A study by Kitzmann and colleagues (2003) found no significant differences in effect sizes when comparing child witnesses of domestic violence and children who experienced both domestic violence exposure and CPA, indicating that these groups showed similar levels of adjustment difficulties. Similar research has also shown no significant differences between children who were only exposed to domestic violence and children who were exposed to both domestic violence and CPA (Moylan et al., 2010).

Personality Variables Mediating the Outcome of Trauma

Childhood sexual abuse, childhood physical abuse, and childhood exposure to domestic violence can have serious mental health consequences that manifest in a variety of symptom outcomes, but the mechanisms that makes victims at risk of mental health problems or delayed recovery from trauma are largely unknown (Kunst & Van Wilsem, 2013). Previous research on the varying outcomes of individuals with a history of CSA, CPA, or CDA has focused on a variety of potentially mediating variables including: age at the time of abuse, relationship between the victim and the abuser, severity and frequency of the abuse, number of perpetrators, etc. (Paris, 2000; Davis & Petretic-

Jackson, 2000). However, many of the previous variables have only been able to account for a small proportion of the variance in outcomes for abused or assaulted individuals (Gallardo-Pujol & Pereda, 2013).

Personality traits have been reviewed as a potential mediating factor between abuse, assault, and mental health outcomes in prior research. For instance, Gallardo-Pujol and Pereda (2013) identified an interaction between main personality effects, specifically conscientiousness and sexual victimization that accounted for approximately 60% of the variance in the development of psychopathology in a sample of 119 undergraduate students. Paris (2000) also found that chronicity of symptoms after rape tended to be associated with personality differences. Personality traits have been shown to mediate both the sensitivity and exposure to stressful life events (Paris, 2000).

A variety of personality traits have been reviewed in the literature and associated with internalizing and externalizing symptomatology including, trait urgency, impulsivity, emotional dysregulation, negative emotionality, trait anxiety, and trait depression.

Trait urgency, impulsivity and negative emotionality have been associated primarily with externalizing dysfunction. Trait urgency has been linked to substance use and abuse, bulimia nervosa, and risky behaviors (Battista et al., 2013; Fischer, Anderson, & Smith, 2004; Kunst & Van Wilsem, 2013; Settles et al., 2011). Impulsivity has been related to perpetration and victimization of violent crime and reactive aggression (Kunst & Van Wilsem, 2013; Paris, 2000; Bettencourt et al., 2006). Negative emotionality has been associated with risky sexual behaviors, substance abuse, and a lack of self-

regulation (Messman-Moore, Walsh, DiLillio, 2010; Marx et al., 2005; Martin & Sher, 1994; Fischer, Anderson, & Smith, 2004).

Emotional dysregulation, trait anxiety, and trait depression have been associated with internalizing dysfunction. Emotional dysregulation has been linked to revictimization, self-harm, and binge eating (Messman-Moore, Walsh, & DiLillio, 2010). Trait anxiety and trait depression have been related to anxiety sensitivity, hopelessness, and major depression (Settles et al., 2011; Battista et al., 2013).

A large portion of the research that has been done using personality factors to explain internalizing and externalizing symptomatology has focused on the five domains of the five factor model of personality. The five personality domains include openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The current literature has focused on four of the five personality domains and their relationship to internalizing and externalizing symptomatology, specifically neuroticism, conscientiousness, agreeableness and extraversion.

Personality Inventory for the DSM-5 (PID-5)

The proposed research includes a dimensional measure of personality. The Personality Inventory for the *DSM-5* (PID-5; Krueger, Derringer, Markon, Watson, & Skodol, 2012) is an instrument developed by the Personality Disorders workgroup of the *DSM-5* (American Psychological Association, 2013). The PID-5 is comprised of 25 specific personality trait facets that are grouped into five overarching domains (DSM-5; American Psychological Association, 2013). The five domains of the PID-5 are maladaptive variants of the extensively validated and replicated five factor model of personality (FFM) (DSM-5; American Psychological Association, 2013).

The PID-5 emphasizes the assessment of the pathological range of personality as opposed to the largely adaptive range that was characteristic of the FFM (Watson et al., 2013; DSM-5; American Psychological Association, 2013). Recent research investigating the connection between the FFM and the PID-5 supports the contention that the structure of the new DSM-5 domains of the PID-5 correspond to the structure of the FFM (Bagby, 2013; Thomas et al., 2013).

PID-5 Personality Domains

Previous research has consistently supported the connections between the FFM traits of neuroticism, extraversion, conscientiousness, agreeableness, and openness and subsequent psychopathology. Recent research on the similarities between the personality domains of the FFM and the personality traits of the PID-5 suggest that neuroticism, low conscientiousness, low agreeableness, extraversion, and high openness measure similar constructs to the PID-5 traits of negative affectivity, disinhibition, antagonism, detachment, and psychoticism respectively (Watson et al., 2013; Thomas et al., 2013). Therefore, the current study will use the PID-5 personality domains of negative affectivity, detachment, disinhibition, antagonism, and psychoticism as distal predictors of internalizing and externalizing dysfunction following CPA, CSA, or CDA.

Negative Affectivity. Negative Affectivity is the "frequent and intense experiences of high levels of a wide range of negative emotions including anxiety, depression, guilt, shame, worry and anger, along with behavioral and interpersonal consequences such as self-harm and dependency" (DSM-5; American Psychological Association, 2013). The domain of negative affectivity is comprised of nine personality trait facets including emotional lability, anxiousness, separation insecurity,

submissiveness, hostility, perserveration, depressivity, suspiciousness, and a lack of restricted affectivity (DSM-5; American Psychological Association, 2013).

Neuroticism and Negative Affectivity. The FFM trait of neuroticism and the PID-5 trait of negative affectivity appear to be measuring similar constructs of personality. Neuroticism is the personality trait that evidences the greatest relationship with the development of psychopathology, specifically anxiety and depression (Ozer & Benet-Martinez, 2006; Kotov et al., 2010). A study by Watson and colleagues (2013) investigated the relationship between the personality domains of the FFM and the personality domains of the PID-5. The results of this study revealed a strong correlation (r=.76) between the FFM domain of neuroticism and the personality domain of negative affectivity (Watson et al., 2013). A related study by Thomas and colleagues (2013) investigated the relationship between the personality domains of the FFM and the personality traits of the PID-5 using exploratory factor analysis to determine the higher-order factor convergence of the PID-5 and the FFM in a community sample. The results of this study also supported the strong correlation between neuroticism and negative affectivity. Therefore, neuroticism and by association negative affectivity are thought to be more closely related to internalizing symptomatology.

Detachment. Detachment is the "avoidance of socioemotional experience, including both withdrawal from interpersonal interactions and restricted affective experience and expression, particularly limited hedonic capacity" (DSM-5; American Psychological Association, 2013). The personality domain of disinhibition is comprised of six personality trait facets including withdrawal, intimacy avoidance, anhedonia,

depressivity, restricted affectivity, and suspiciousness (DSM-5; American Psychological Association, 2013).

Low Extraversion, Neuroticism, and Detachment. The PID-5 personality domain of detachment is less strictly associated with one domain of the FFM. Results from the study by Watson and colleagues (2013) indicated that detachment was correlated with both neuroticism and extraversion but was not specific to either domain. Detachment was negatively correlated with extraversion (r=-.47) and positively correlated with neuroticism (r=.47) (Watson et al., 2013). Results from the study by Thomas and colleagues (2013) also found a correlation between detachment and low extraversion from the FFM. Low extraversion and neuroticism are associated with internalizing dysfunction, specifically anxiety and depressive disorders (Kotov et al., 2010; Malouff, Thorsteinsson, & Schutte, 2005). Detachment is moderately correlated with both extraversion and neuroticism, indicating a potential link between detachment and internalizing dysfunction.

Disinhibition. Disinhibition is the "orientation towards immediate gratification, leading to impulsive behavior driven by current thoughts, feelings, and external stimuli, without regard for past learning or consideration of future consequences" (DSM-5; American Psychological Association, 2013). The domain of disinhibition is comprised of five personality trait facets including irresponsibility, impulsivity, distractibility, risk taking, and a lack of rigid perfectionism (DSM-5; American Psychological Association, 2013).

Low Conscientiousness and Disinhibition. Research has indicated that the FFM domain of conscientiousness and the PID-5 domain of disinhibition are negatively

correlated with one another. Watson and colleagues (2013) found that conscientiousness had a strong negative correlation (r=-.74) with disinhibition. Results from a study by Thomas and colleagues (2013) found a similar negative correlation between the FFM domain of conscientiousness and the PID-5 personality domain of disinhibition. Low levels of conscientiousness have been associated with antisocial behaviors and substance use disorders both of which fall on the externalizing spectrum (Kotov et al., 2010). Disinhibition is highly and negatively correlated with conscientiousness, indicating a potential relationship between disinhibition and externalizing dysfunction.

Antagonism. Antagonism includes "behaviors that put the individual at odds with other people, including an exaggerated sense of self-importance and a concomitant expectation of special treatment, as well as a callous antipathy toward others, encompassing both an unawareness of others' needs and feelings and a readiness to use others in the service of self-enhancement" (DSM-5; American Psychological Association, 2013). The domain of antagonism is comprised of six lower order facets including manipulativeness, deceitfulness, grandiosity, attention seeking, callousness, and hostility (DSM-5; American Psychological Association, 2013).

Low Agreeableness and Antagonism. Research has shown that the FFM trait of agreeableness and the PID-5 trait of antagonism are strongly and negatively correlated. Watson and colleagues (2013) found that antagonism was negatively correlated (r=-.72) with agreeableness. The results of a study by Thomas and colleagues (2013) found a similar negative association. Agreeableness is also negatively correlated with externalizing disorders, conduct disorders, and substance use disorders (Kotov et al., 2010; Malouff, Thorsteinsson, & Schutte, 2005). The correlation between low

agreeableness and antagonism indicates a potential relationship between antagonism and externalizing dysfunction.

Psychoticism. Psychoticism includes "exhibiting a wide range of culturally incongruent odd, eccentric, or unusual behaviors and cognitions, including both process (e.g., perception, dissociation) and content (e.g., beliefs) (DSM-5; American Psychological Association, 2013). The domain of Psychoticism is comprised of three lower order facets including unusual beliefs and experiences, eccentricity, and cognitive and perceptual dysregulation (DSM-5; American Psychological Association, 2013).

High Openness and Psychoticism. Research has shown that the FFM trait of openness and the PID-5 trait of psychoticism are moderately and positively correlated. Thomas and colleagues (2012) found that the three lower order facets of Psychoticism were significantly correlated with the Openness domain of the FFM. However, the results of a study by Watson and colleagues (2013) evidenced a more mixed interpretation of the relationship between Openness and Psychoticism. Although Psychoticism has been shown to have positive association with traits related to openness to experience (DeYoung et al., 2012; Watson et al., 2013), the relationship is complicated by the manner in which Openness is measured. For example, although Psychoticism is correlated positively with fantasy and art appreciation, it is negatively correlated with intellect (DeYoung et al., 2012). Therefore, depending on the manner in which Openness is measured and modeled it could have a positive, negative, or no correlation with psychoticism (Watson et al., 2013). The correlation between high openness, as described by the FFM, and psychoticism indicates a potential relationship between psychoticism and externalizing dysfunction. The correlation between low agreeableness and

antagonism indicates a potential relationship between antagonism and externalizing dysfunction.

Summary. To summarize, the personality domains of negative affectivity, detachment, disinhibition, antagonism, and psychoticism have been selected as distal predictors of internalizing and externalizing dysfunction for the current study due to their connection to previous research that has indicated a relationship between similar personality domains and internalizing and externalizing dysfunction (Ozer & Benet-Martinez, 2006; Gallardo-Pujol & Pereda, 2013; Pickering, Farmer, & McGuffin, 2004; Watson et al, 2013; Thomas et al., 2013). The PID-5 was closely modeled after the widely validated and replicated FFM. Research has supported this contention and revealed strong correlations between neuroticism, extraversion, conscientiousness, agreeableness, and openness, and negative affectivity, detachment, disinhibition, antagonism, and psychoticism respectively (Bagby, 2013; Thomas et al., 2013). Furthermore, prior research into specific personality traits including trait anxiety, trait depression, and trait impulsivity, among others (Fischer, Anderson, & Smith, 2004; Messman-Moore, Walsh, & DiLillio, 2010; Paris, 2000; Settles et al., 2011) is closely associated with the lower order facets in each of the PID-5 personality domains (e.g., trait anxiety and the anxiousness facet of negative affectivity).

CHAPTER II

CURRENT STUDY

The present study proposes to investigate the relationship between the PID-5 personality domains of negative affectivity, detachment, disinhibition, antagonism, and psychoticism and the internalizing and externalizing pathology following childhood physical abuse, childhood sexual abuse, or childhood exposure to domestic violence. The proposed study includes several hypotheses. The mediational hypothesis in this thesis is that the indirect effects of childhood abuse via the personality domains on symptom expression are expected to be larger than the direct effect of the abuse on symptom expression alone.

It is also hypothesized that (a) the effects of negative affectivity on internalized maladaptive symptomatology will be magnified by traumatic learning experiences such as CPA, CSA, or CDA, (b) the effects of detachment on internalized maladaptive symptomatology will be magnified by traumatic learning experiences such as CPA, CSA, or CDA, (c) the effects of disinhibition on externalized maladaptive symptomatology will be magnified by traumatic learning experiences such as CPA, CSA, or CDA, (d) the effects of antagonism on externalized maladaptive symptomatology will be magnified by traumatic learning experiences such as CPA, CSA, or CDA (e) the effects of psychoticism on externalized maladaptive symptomatology will be magnified by traumatic learning experiences such as CPA, CSA, or CDA.

CHAPTER III

METHOD

Participants and Procedure

This sample was recruited through Amazon's Mechanical Turk (Mturk) website (Mason & Suri, 2012) during a four-week period in early 2015. Participants provided informed consent for the monetary compensation of $.50. The Qualtrics survey was completed in a single session requiring an average of 45 minutes. Respondents included in the analysis were all at least 18 years of age, United States residents, and identified as either male or female. Qualtrics protocols were excluded from analysis if the respondent left enough PID-5 items blank to preclude the scoring of at least four of the five domain traits. Listwise exclusions were relied upon in the regression analyses to account for missing predictor or criterion data.

Materials

The childhood abuse, trait mediator, and internalized and externalized outcome measures examined in this study are summarized in Table 1.

Childhood Abuse

The Violent Experiences Questionnaire (VEQ-R). The Violent Experiences Questionnaire (VEQ-R; King, 2012; King, 2014a; King, 2014b; King, in press; Mugge, Chase, & King, 2015; Russell, Veith, & King, 2015; Walter & King, 2013) provides indices for 12 different forms of retrospective child and adolescent maltreatment. Score

for each index are interpreted as the number of days per year a specified type of act occurred during the respective four-year time period. Scale scores average those frequencies over the entire 12 year recording period. Scores on each VEQ-R index can range from 0 to a maximum of 104. Childhood physical abuse and exposure to domestic violence represent core indices with a well-defined index window (Physical Acts with or without Physical Injury: pushing, shoving, shaking, striking, kicking, punching, beating, burning, or use of a weapon to inflict pain or injury) either witnessed between, or directly experienced from, a parent or step-parent between the ages of 5 and 16.

Measurement distinctions are made in the VEQ-R between verbal discord, threats of violence, and these physical acts with or without physical injury. Individual VEQ-R indices also contribute to one of four "hostility" factor scores. The VEQ-R Parental Hostility factor dimension includes parental physical abuse, threats of physical violence, and corporal punishment (not differentiated from physical abuse in the factor solution). The Domestic Hostility (i.e., conflict between parents or step-parents) includes physical acts with or without injury, verbal discord, and threats of physical violence. The internal consistency of the Parental Hostility factor score was calculated in college (n = 1,266, α = .89) and national (n = 1,290, α = .95) samples. Test-retest reliability (one week) was established as well (n = 443, r = .80). The internal consistency of the Domestic Hostility factor score was calculated in college (n = 1,266, α = .87) and national (n = 1,290, α = .93) samples. Test-retest reliability (one week) was established as well (n = 441, r = .73).

Sexual Abuse & Assault Self-Report (CSA). This sexual abuse and assault measure (Everson & Knight, 2000) was made available through the Consortium of Longitudinal Studies on Child Abuse and Neglect (LONGSCAN) project coordinated at

the University of North Carolina (www.unc.edu/32epts./sph/longscan/). This scale was developed for use with sexually victimized children and adolescents. Minor wording modifications were made for this adult retrospective format. One item (an attempted but not completed act) was deleted, and two questions about rape were added. Each of the 12 items was scored dichotomously over each of the three developmental periods. The CSA score used for this study was the total number of childhood sexual abuse acts experienced prior to age 16 (scores ranging potentially from 0 to 24). Items contribute to Non-Contact, Actual (or Attempted) Fondling, Actual (or Attempted) Oral-Genital Contact, and Actual (or Attempted) Penetration. The stem items were modified slightly for adult sampling (i.e., "genitalia" instead of "sexual parts", "rape" in place of "put a part of his body inside your private parts"). Item examples included: "Someone made you look at something sexual like pictures or a movie"; "Someone touched your genitalia in some way"; "Someone put their mouth on your genitalia or made you put your mouth on their genitalia." LONGSCAN provides concurrent validation data.

Mental Health: Internalizing Symptoms

Internalizing symptoms include depression, anxiety, post-traumatic stress symptomatology and self-esteem.

Depression and Anxiety Symptom Indices. The Costello-Comrey Depression and Anxiety Scales (CCDAS; Costello & Comrey, 1967) were comprised of 14 and 9 items respectively that were scored on a nine-point metric (1=absolutely not/never; 9=absolutely/= always). CCDAS reliability and validity has been established previously in the literature (Lindberg, 2002; Haj-Yahia, 2000; Costello & Comrey, 1967; Corcoran and Fischer, 1987). Previous studies have found excellent internal consistency with split-

half reliabilities of .70 and .90 for the anxiety and depression scales respectfully, as well as test-retest reliability of .70 for the overall measure (Costello & Comrey, 1967; Lindberg, 2002). In addition, the CCDAS has been noted to have "fair" concurrent validity in several studies (Costello & Comrey, 1967; Corcoran & Fischer, 1987).

Rosenberg Self-Esteem Scale (RSE). The RSE (Rosenberg, 1965; Cronbach's α = .91) is a ten-item self-esteem index which relied on a four-point index (1=strongly agree; 4=strongly disagree). The RSE has demonstrated strong reliability and validity throughout a number of studies and is considered one of the most widely used measures of global self-esteem (Byrne, 1996). Overall, internal consistency reliability for the RSE is strong at .90, in addition the RSE has a Gutman scale coefficient of reproducibility of .92.

Screen for Post-Traumatic Stress Symptoms (SPTSS). The CPTSS (Carlson, 2001) is a 17-item self-report measure of PTSD symptomatology scored on a ten-point scale (0=never; 10=always). The SPTSS items yielded a Cronbach's α = .91. Item-total correlations were all statistically significant ($p<.001$) and ranged from $r = .49$ to $r = .75$. Internal consistency was high as reflected by the Cronbach's alpha of .91. In addition study results of criterion-related validity analyses indicate that the SPTSS can achieve high levels of sensitivity in identifying patients with a PTSD diagnosis (Carlson, 2001). Additionally, construct and concurrent validity have also been shown to be good with SPTSS scores correlating highly with scores on more detailed PTSD measures (Carlson, 2001).

Internalized Aggregate Score (INT). An aggregate INT score was calculated as the mean standard (z) score from the four internalized symptom indicators (CCDAS

Anxiety, CCDAS Depression, SPTSS & RSE-reversed) selected for analysis in the present study (α=.85)

Mental Health: Externalizing Symptoms

Externalizing symptoms include aggression, conduct difficulties, and impulsivity.

Buss-Perry Aggression Questionnaire (BPAQ). The BPAQ (Buss & Perry, 1992) is a 29-item survey scaled on a six-point metric (0=extremely uncharacteristic; 5=extremely characteristic) segregated into four subscales (Physical Aggression; Verbal Aggression; Trait Anger; Trait Hostility). BPAQ subscale reliabilities (ranging from .72 to .89) have been established previously (Buss & Perry, 1992; Buss & Warren, 2000) with all four of these subscale indices linked extensively in the literature to angry and aggressive behavior (Archer & Webb, 2006; Gerevich, Bacskai, & Czobor, 2007).

Conduct Disorder Symptoms (Conduct). A customized survey was developed to quantify the number of core DSM-5 Conduct Disorder symptoms respondents exhibited prior to age 15. Each of the 15 symptoms was scored 0 or 1 with a total CDS score generated from the sum.

Barratt Impulsivity Scale-11 (BIS-11). The BIS-11 (Patton et al., 1995) is a 30-item self-report survey scaled on a four-point metric (1=rarely/never; 4=almost always/always) that provides indices for the three second-order factors of Attentional Impulsivity (AI), Motor Impulsivity (MI), and Non-Planning Impulsivity (NPI). The BIS-11 has been reported to be the most commonly administered self-report measure for the assessment of impulsiveness (Stanford et al., 2009). Overall, the BIS-11 total score has a Cronbach's alpha of 0.83. Additionally, the second order subscales used in this study, Motor, Non-planning, and Attentional impulsivity have alphas of .59, .72, and .74

respectively (Stanford et al., 2009). The BIS-11 is also highly correlated with similar self-report measures (Stanford et al., 2009). The BIS-11 has also evidenced good internal consistency and test-retest reliability with alphas ranging from .71 to .83 (Field et al., 2015; Aichert et al., 2012; Stanford et al., 2009).

Externalized Aggregate Score (EXT). An aggregate EXT score was calculated as the mean standard (z) score from the eight externalized symptom indicators (BPAQ-Anger, BPAQ-Hostility, BPAQ-Verbal Aggression, BPAQ-Physical Aggression, Conduct, AI, MI, NPI) selected for analysis in the present study (α=.81).

Personality Traits

Personality Inventory for the DSM-5 (PID-5). The PID-5 (Krueger, Eaton et. Al. 2011) is a 220-item self-report inventory characterized in the DSM-5 as an exemplar source for the measurement of five personality pathology dimensions (Negative Affectivity versus Emotional Stability; Detachment versus Extraversion; Antagonism versus Agreeableness; Disinhibition versus Conscientiousness; & Psychoticism versus Lucidity) and 25 constituent facet traits. This domain and facet structure has been supported by extensive factor-analytic research. Each item of the PID-5 is measured on a four-point scale (1=Very False or Often False; 4 = Very True or Often True) with periodic score reversals to identify invalid response sets. Although, a new measure, recent data on the PID-5 has shown internal consistencies of .84, .75, .87, .83, and .80 for Negative Affectivity, Detachment, Psychoticism, Antagonism, and Disinhibition respectively (Quilty et al., 2013). Additionally, all of the facet scales demonstrated

Cronbach's alphas of .70 or higher. The facet scales within each domain were strongly correlated with r = .41 for Negative Affectivity, r = .42 for Detachment, r = .53 for Antagonism, r = .39 for Disinhibition, and r = .68 for Psychoticism (Quilty et al., 2013).

Table 1: Raw Score Ranges for Predictor and Dependent Variables.

Variables	Source	Score Ranges
Domestic Hostility	VEQ-R; King, 2002	0-104
Parental Hostility	VEQ-R; King, 2002	0-104
Childhood Sexual Abuse (CSA)	Longscan; Runyan et al., 1998	0-24
Negative Affectivity	PID-5; Krueger, Eaten et al, 2011	23-92
Detachment	PID-5; Krueger, Eaten et al, 2011	24-96
Disinhibtiion	PID-5; Krueger, Eaten et al, 2011	22-88
Antagonism	PID-5; Krueger, Eaten et al, 2011	21-84
Psychoticism	PID-5; Krueger, Eaten et al, 2011	33-132
Internalizing Symptomatology		
Depression and Anxiety	CCDAS; Costello & Comrey, 1967	14-126 (depression) 9-81 (anxiety)
Self-Esteem	RSE; Rosenberg, 1965	0-30
Post-Traumatic Stress	SPTSS; Carlson, 2001	0-170
Externalizing Symptomatology		
Aggression	BPI; Buss & Perry, 1992	0-145
Conduct Problems	DSM-5 Conduct Disorder Diagnostic Criteria	0-13
Impulsivity	BIS-11; Patton et al., 1995	30-120

*Higher scores indicate increased symptomatology

Analytic Strategy

Aggregated (CSA, parental hostility, and domestic hostility) and individual childhood maltreatment scores will be examined as predictors of current internalized and externalized symptoms of psychological distress. This aggregated "Abuse" score (mean standard score for the three maltreatment indices) will be used in multiple regression analyses to test Sex, Abuse, Trait, and associated interaction effects. A set of mediation analyses will be conducted to estimate the relative direct and indirect (mediated via respective Trait factors) effects of the maltreatment variables on the aggregate internalized and externalized symptom clusters.

CHAPTER IV

RESULTS

Descriptive Statistics

The sample for this study was comprised of 526 respondents (353 women, 173 men) who completed the PID-5 (105 withdrew prior to initiation). The sample was ethnically diverse (Caucasian, 77.3%; African American, 6.9%; Hispanic, 4.4%; Bi-racial/Multi-racial, 4.6%; Asian American, 3.4%; Native American, 1.5%; Other, 1.9%) and ranged widely in age (Age 18-24; 17.9%; Age 25-39, 49.2%; Age 40-59, 28.1%; Age 59 or older, 4.8%).

The PID-5 domain scores were internally consistent in the present sample (Negative Affectivity, α=.97; Detachment, α=.96; Antagonism, α=.96; Disinhibition, α=.93; Psychoticism, α=.96). Domain scores covaried substantially within the sample (Negative Affectivity–Detachment, r =.70; Negative Affectivity–Antagonism, r =.57, Negative Affectivity– Disinhibition, r =.46; Negative Affectivity–Psychoticism, r =.70; Detachment–Antagonism, r =.55; Detachment–Disinhibition, r =.45; Detachment-Psychoticism, r =.69; Antagonism-Disinhibition, r =.57; Antagonism-Psychoticism, r =.67; Disinhibition-Psychoticism, r =.54). Facet and domain scores (Table 2) from this national sample closely approximated descriptive data from a community volunteers sample (Fossati et al., 2013) but were somewhat higher (Fruyt et al., 2013) and lower

(Quilty et al., 2013) than those generated from college and mental health outpatient samples respectively.

Table 2. Maltreatment, Trait, and Symptom Measure Descriptive Statistics.

Variable	*N*	*M*	*SD*	Range
Childhood Maltreatment Indices				
Child Sexual Abuse	526	3.87	5.46	0-24
Parental Hostility	485	15.06	26.41	0-104
Domestic Hostility	501	14.43	25.37	0-104
PID-5 Trait Domains				
Antagonism	523	0.71	0.51	0–2.91
Disinhibition	523	1.11	0.41	.14–2.46
Detachment	522	0.99	0.56	.06–2.65
Negative Affectivity	520	1.16	0.49	.26–2.56
Psychoticism	526	0.76	0.62	0-3.00
Internalized Symptom Indices				
Depression Symptoms	516	3.68	1.73	0.42-9.00
Anxiety Symptoms	515	4.45	1.76	1-9
PTSD Symptoms	490	50.56	31.17	0-136
Self-Esteem Index	521	1.85	0.70	0-3
Externalized Symptom Indices				
Buss-Perry Questionnaire				
Trait Anger	502	17.99	5.87	7-35
Trait Hostility	499	21.62	7.79	8-40
Verbal Aggression	504	13.49	4.25	5-25
Physical Aggression	495	21.60	7.42	9-45
Barratt Impulsivity Scale				
Attentional Symptoms	517	2.13	0.61	0.83-4.00
Motor Symptoms	517	2.08	0.45	1.00-4.00
Non-Planning Symptoms	517	2.20	0.52	1.00-3.75
Conduct Disturbance	526	1.90	2.43	0-12

Bivariate Correlation Analyses

The internalized and externalized symptom clusters overlapped substantially (r = .57, p < .001) in this sample. As often found in the literature, Parental and Domestic Hostility also co-occurred with regularity (r = .76, p < .001). Childhood sexual abuse incidents were less closely associated with Parental (r = .27, p < .001) and Domestic (r =

.23, $p < .001$) Hostility. Significant relationships were found as well between all five of the PID-5 trait dimensions (*Mr* = .60, ranging from .44 to .72). None of these coefficients varied significantly in strength on the basis of respondent gender.

PID-5 Trait Correlates. The five PID-5 trait measures were linked significantly to both the internalized (Table 3) and externalized (Table 4) aggregate scores for both the women and men. With one exception (Detachment-Verbal Aggression among men), every PID-5 domain and symptom (internalized and externalized) indicator was highly correlated ($p < .01$).

Abuse Correlates. Aggregated childhood maltreatment (Abuse) scores provided significant predictors of aggregated internalized and externalized symptoms for both the women and men. Aggregated Abuse was also associated with most constituent internalized (3/4 & 4/4) and externalized (5/8 & 6/8) indices for the women and men respectively. Sexual abuse was closely related to most of the symptom indices. Parental and Domestic Hostility was linked to the symptom indices roughly half of the time. The threshold for statistical significance was $p < .01$, and many of the non-significant associations trended closely toward that threshold.

Gender Considerations. Men in this sample generated significantly higher scores on the BPAQ-Verbal (d =.31, $p < .01$), BPAQ-Physical (d =.26, $p < .01$), Motor Impulsivity (d =.25, $p < .05$), conduct disorder symptoms (d =.43, $p < .001$), Antagonism (d =.51, $p < .001$), Disinhibition (d =.41, $p < .001$), Detachment (d =.18, $p < .05$), and Psychoticism (d =.26, $p < .01$) scales. Women scored higher on the CCDAS-Anxiety (d =.23, $p < .05$) scale.

Fisher z-transformations (Fisher, 1915) were used to test whether or not the observed bivariate correlation coefficients differed in strength as a function of respondent gender (Bond & Richardson, 2004; Cox, 2008; Ferguson, 1981). Gender differences in correlation strength were not found between the childhood maltreatment (or any of its three constituents) and INT aggregate scores. Antagonism and Disinhibition links with INT were, however, significantly stronger for the men than the women in the sample. Aggregate Abuse correlates with the individual internalized symptom indicators did not differ in strength between the men and women. The correlation strengths of childhood sexual abuse and parental hostility maltreatment with the internalized symptom indicators did not differ by respondent sex. Domestic Hostility was more closely associated with the internalized anxiety indicator among the men than women.

Gender differences in correlation strength were not found for any of the trait predictors in regard to their relationship with the EXT aggregate score. Correlations between the EXT aggregate and the child sexual abuse, parental hostility, and aggregate Abuse scores did not differ in strength by gender. EXT and Domestic Hostility was significantly stronger among the men than the women. Aggregate Abuse correlates with the individual externalized symptom indicators differed in strength between men and women for only one variable (BIS-11 Motor Impulsivity). The correlation strengths of the three childhood maltreatment indices with their externalized symptom indicators did not differ by respondent gender. The correlation strengths of the Disinhibition trait and externalized symptom indicators did not differ by respondent sex. Antagonism associations were significantly ($p < .05$) stronger for women in two cases ($BPAQ_{Verbal}$ & $BPAQ_{Anger}$) and men in another (Conduct Disorder symptoms). Detachment, Negative

Affectivity, and Psychoticism relationships with BIS-11 Motor Impulsivity were all significantly stronger for the men.

Table 3. Bivariate Correlates of Predictors and Internalized Symptoms by Gender.

Predictor Variable	INT	CCDAS Depression	CCDAS Anxiety	Rosenberg Self-Esteem	CPTSS PTSD
Women					
Aggregate Abuse	**.29** (306)	**.33** (322)	.11 (322)	**-.17** (321)	**.35** (307)
LONGSCAN Sexual Abuse	**.23** (331)	**.27** (351)	**.14** (351)	**-.14** (352)	**.29** (333)
VEQ-R Parental Hostility	**.25** (310)	**.26** (326)	.09 (326)	-.13 (325)	**.30** (311)
VEQ-R Domestic Hostility	**.20** (322)	**.24** (338)	.04 (338)	-.12 (338)	**.25** (323)
Antagonism vs Agreeableness	**.38** (328)	**.34** (348)	**.37** (348)	**-.25** (349)	**.38** (330)
Disinhibition vs Conscientiousness	**.35** (330)	**.35** (350)	**.27** (350)	**-.24** (351)	**.34** (332)
Detachment vs Extraversion	**.78** (328)	**.76** (348)	**.54** (348)	**-.53** (349)	**.73** (330)
Negative Affectivity vs Emotional Stability	**.81** (327)	**.68** (347)	**.75** (347)	**-.57** (348)	**.71** (329)
Psychoticism vs Lucidity	**.61** (331)	**.51** (351)	**.49** (351)	**-.41** (352)	**.61** (333)
Men					
Aggregate Abuse	**.37** (144)	**.26** (154)	**.30** (153)	**-.27** (156)	**.46** (146)
LONGSCAN Sexual Abuse	**.29** (154)	.17 (165)	**.22** (164)	**-.21** (169)	**.36** (157)
VEQ-R Parental Hostility	**.23** (146)	.18 (156)	.20 (155)	-.16 (158)	**.30** (148)
VEQ-R Domestic Hostility	**.32** (149)	**.25** (159)	**.25** (158)	**-.24** (161)	**.39** (151)
Antagonism vs Agreeableness	**.55** (154)	**.42** (165)	**.44** (164)	**-.39** (169)	**.57** (157)
Disinhibition vs Conscientiousness	**.54** (153)	**.40** (163)	**.48** (162)	**-.40** (167)	**.57** (156)
Detachment vs Extraversion	**.79** (153)	**.72** (164)	**.59** (163)	**-.59** (168)	**.76** (156)
Negative Affectivity vs Emotional Stability	**.83** (152)	**.62** (163)	**.77** (162)	**-.61** (167)	**.78** (155)
Psychoticism vs Lucidity	**.66** (154)	**.47** (165)	**.55** (164)	**-.51** (169)	**.68** (157)

Note. * $p < .05$ ** $p < .01$

Table 4. Bivariate Correlates of Predictors and Externalized Symptoms by Gender

Predictor	EXT	Buss-Perry Aggression				BIS-11 Impulsivity			Conduct Disorder
		ANG	HOST	VERB	PHYS	Attention	Motor	Non-Plan	
Women									
Aggregate Abuse	**.27** (285)	.12 (313)	**.20** (308)	.14 (311)	**.27** (310)	**.22** (320)	.11 (320)	**.17** (320)	**.32** (332)
LONGSCAN Sexual Abuse	**.28** (309)	.14 (341)	**.15** (336)	.11 (341)	**.23** (338)	**.19** (349)	.12 (349)	**.16** (349)	**.36** (353)
VEQ-R Parental Hostility	**.21** (288)	.07 (317)	**.16** (312)	.11 (315)	**.25** (313)	**.19** (324)	.11 (324)	**.14** (324)	**.23** (326)
VEQ-R Domestic Hostility	.13 (299)	.06 (329)	**.15** (323)	.11 (328)	**.15** (326)	.13 (337)	.01 (337)	.07 (337)	**.15** (339)
Antagonism vs Agreeableness	**.62** (307)	**.51** (338)	**.32** (333)	**.41** (338)	**.43** (336)	**.41** (346)	**.42** (346)	**.27** (346)	**.37** (350)
Disinhibition vs Conscientiousness	**.62** (309)	**.35** (340)	**.28** (335)	**.32** (340)	**.32** (338)	**.56** (348)	**.52** (348)	**.68** (348)	**.29** (352)
Detachment vs Extraversion	**.50** (309)	**.32** (338)	**.54** (334)	**.23** (339)	**.28** (336)	**.49** (346)	**.15** (346)	**.36** (346)	**.29** (350)
Negative Affectivity vs Emotional Stability	**.60** (308)	**.45** (337)	**.61** (333)	**.26** (338)	**.32** (335)	**.59** (345)	**.25** (345)	**.40** (345)	**.31** (349)
Psychoticism vs Lucidity	**.57** (309)	**.36** (341)	**.43** (336)	**.28** (341)	**.37** (338)	**.55** (349)	**.37** (349)	**.35** (349)	**.33** (353)
Men									
Aggregate Abuse	**.41** (134)	**.28** (150)	**.34** (152)	.12 (153)	**.24** (149)	**.26** (156)	**.29** (156)	.13 (156)	**.35** (157)
LONGSCAN Sexual Abuse	**.31** (141)	**.22** (161)	**.21** (163)	.10 (163)	.08 (157)	**.23** (168)	**.30** (168)	**.20** (168)	**.32** (173)
VEQ-R Parental Hostility	**.26** (135)	.18 (152)	**.26** (154)	.07 (154)	**.24** (151)	.14 (158)	.13 (158)	.05 (158)	.19 (159)
VEQ-R Domestic Hostility	**.37** (138)	**.23** (155)	**.29** (157)	.10 (158)	**.27** (153)	**.21** (161)	**.25** (161)	.09 (161)	**.27** (162)
Antagonism vs Agreeableness	**.62** (138)	**.34** (161)	**.31** (163)	**.25** (163)	**.32** (157)	**.52** (168)	**.55** (168)	**.32** (168)	**.51** (173)
Disinhibition vs Conscientiousness	**.71** (139)	**.43** (159)	**.39** (161)	**.27** (161)	**.29** (155)	**.69** (166)	**.60** (166)	**.65** (166)	**.39** (171)
Detachment vs Extraversion	**.54** (140)	**.31** (160)	**.44** (162)	.15 (162)	**.29** (156)	**.56** (167)	**.40** (167)	**.30** (167)	**.40** (172)
Negative Affectivity vs Emotional Stability	**.69** (139)	**.40** (159)	**.52** (161)	**.23** (161)	**.36** (155)	**.62** (166)	**.48** (166)	**.39** (166)	**.44** (171)
Psychoticism vs Lucidity	**.60** (141)	**.32** (161)	**.41** (163)	**.20** (163)	**.33** (157)	**.57** (168)	**.52** (168)	**.27** (168)	**.44** (173)

Note. * $p < .05$. ** $p < .01$

Regression Analyses

Standardized beta weights are provided in Table 5 for the eight multiple regression analyses conducted on internalized and externalized aggregate scores. Regression model results for aggregated Internalized symptom scores were as follows: Antagonism, R (7,441) = .51(SE=.72), $p < .001$; Disinhibition, R (7,441) = .47 (SE=.73), $p < .001$; Detachment, R (7,440) =.79 (SE=.51), $p < .001$; Negative Affectivity, R (7,440) = .83

(*SE*=.47), $p < .001$; Psychoticism, $R(7,442) = .64$ (*SE*=.64), $p < .001$. Regression models for aggregated Externalized symptom scores were as follows: Antagonism, $R\ (7,410) = .66$ (*SE*=.49), $p < .001$; Disinhibition, $R\ (7,409) = .68$ (*SE*=.48), $p < .001$; Detachment, $R\ (7,410) = .54$ (*SE*=.55), $p < .001$; Negative Affectivity,$R\ (7,410) = .68$ (*SE*=.49), $p < .001$; Psychoticism, $R\ (7,411) = .63$ (*SE*=.51), $p < .001$.

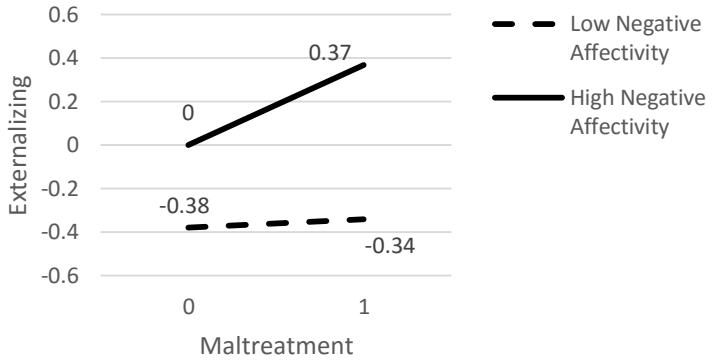
Table 5. Standardized Beta Weight Summary for Gender, Aggregate Abuse, and Trait Effects.

Variance Source	Antagonism		Disinhibition		Detachment		Negative Affectivity		Psychoticism	
	INT	**EXT**	**INT**	**EXT**	**INT**	**EXT**	**INT**	**EXT**	**INT**	EXT
Gender	**.142** (.001)	-.024 (.537)	**.120** (.006)	-.031 (.416)	**.114** (.000)	-.092 (.040)	.003 (.923)	**-.186** (.000)	**.107** (.005)	**-.107** (.008)
Abuse	**.263** (.000)	**.236** (.000)	**.244** (.000)	**.189** (.000)	.049 (.168)	**.156** (.002)	**.117** (.000)	**.165** (.000)	**.156** (.000)	**.170** (.000)
Trait	**.411** (.000)	**.577** (.000)	**.372** (.000)	**.595** (.000)	**.778** (.000)	**.450** (.000)	**.790** (.000)	**.566** (.000)	**.595** (.000)	**.539** (.000)
Gender x Abuse	-.012 (.790)	-.059 (.157)	-.016 (.726)	-.032 (.447)	-.044 (.230)	-.048 (.400)	.023 (.449)	.004 (.927)	-.026 (.548)	-.088 (.064)
Gender x Trait	-.051 (.258)	-.018 (.677)	-.089 (.044)	-.049 (.220)	-.007 (.821)	-.024 (.612)	-.038 (.185)	-.089 (.028)	-.014 (.720)	-.027 (.534)
Abuse x Trait	.019 (.722)	.105 (.046)	.012 (.792)	.041 (.322)	-.027 (.437)	-.011 (.824)	.016 (.579)	**.133** (.002)	-.183 (.885)	.087 (.093)
Gen x Trait x Abuse	.128 (.022)	**.260** (.000)	.101 (.034)	.103 (.020)	.038 (.293)	.040 (.480)	.077 (.014)	**.184** (.000)	.097 (.043)	**.236** (.000)
N	449	418	449	417	448	418	448	418	450	419

Note. INT=Internalized Aggregate. EXT=Externalized Aggregate. Abuse=Maltreatment Aggregate. Significant ($p < .01$) standardized beta weights bolded (probabilities in parentheses).

Table 5 highlights in bold the statistically significant ($p < .01$) factors that predicted the aggregated internalized and externalized symptom clusters. Aggregated maltreatment was significant in all but one analysis, and the PID-5 trait domains were strongly associated with the criterion scores across the table. Significant gender by abuse and gender by trait interactions were notably absent. While the abuse by trait interaction was significant in only one case, several of this same interactions did differ significantly between men and women (i.e., gender by abuse by trait interactions). These are depicted in Figures 3, 4 and 5.

Women



Men

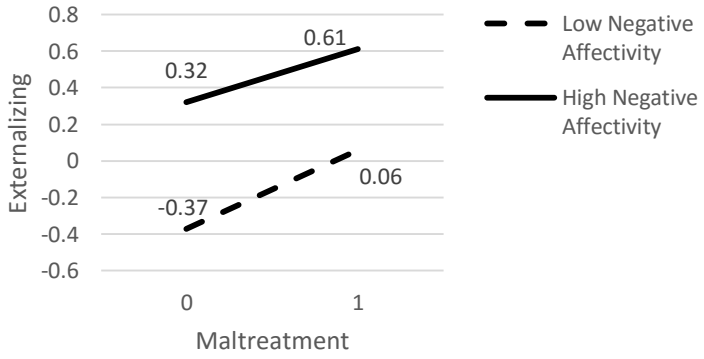
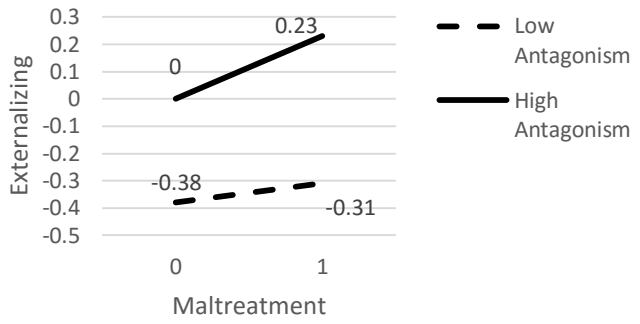


Figure 3. Negative Affectivity Moderating Externalizing Outcome for Women and Men. Three-Way Interaction.

Women



Men

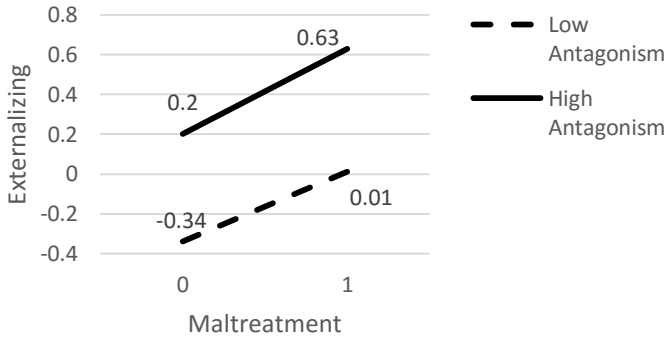


Figure 4 Antagonism Moderating Externalizing Outcome for Women and Men. Three-Way Interaction.

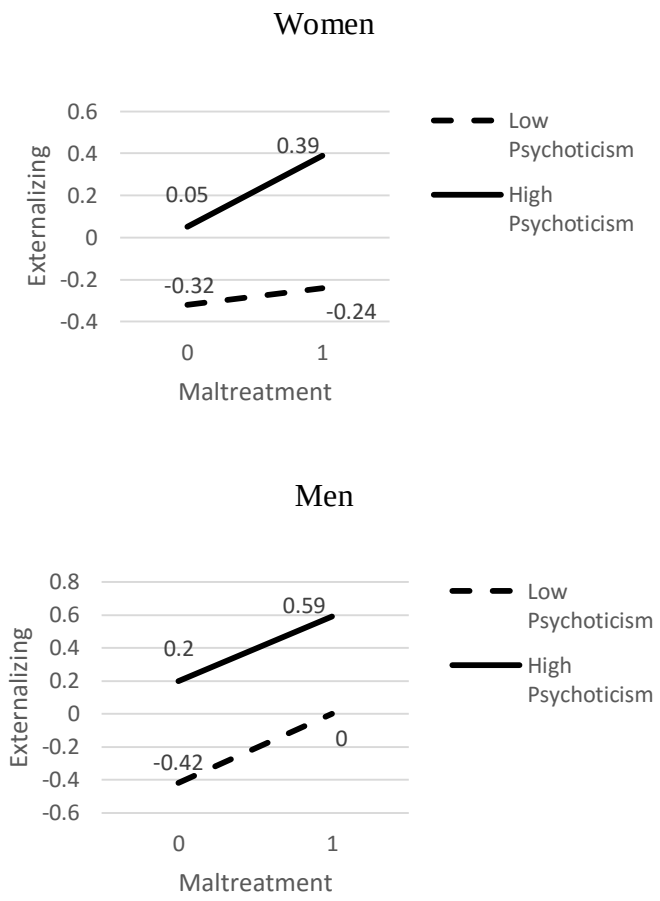


Figure 5. Psychoticism Moderating Externalizing Outcome for Women and Men. Three-Way Interaction.

Table 6 shows the influence of the PID-5 trait domains on INT and EXT. Both Antagonism and Disinhibition evidence a much stronger relationship to externalizing maladaptive symptomatology than internalizing maladaptive symptomatology. Negative Affectivity and Detachment evidence a stronger relationship towards internalizing as opposed to externalizing maladaptive symptomatology. Psychoticism did not appear to differ in strength for either internalizing or externalizing symptomatology.

Table 6 Bivariate Correlations of Personality Trait Impact on Internalizing and Externalizing Symptoms of Distress.

Trait	Internalizing	Externalizing
Antagonism	.42	.63*
Disinhibition	.40	.66*
Detachment	.78*	.52
Negative Affectivity	.82*	.62
Psychoticism	.62	.59

Note. * Asterisk denotes a significantly stronger correlation coefficient for that symptom cluster

Table 7 shows the effectiveness of the PID-5 trait domains and childhood maltreatment variables in predicting the internalized, externalized, and total aggregate symptom scores. Total Aggregate scores were effectively predicted using three (Negative Affectivity, Detachment, & Disinhibition) of the PID-5 dimensions, R (5,410) = .87 (SE=.33), $p < .001$.Internalized Aggregate scores were effectively predicted using three (Negative Affectivity, Detachment, & Antagonism) of the PID-5 dimensions, R (5,469) = .87 (SE=.40), $p < .001$. Externalized Aggregate scores were effectively predicted using three (Negative Affectivity, Disinhibition, & Antagonism) of the PID-5 dimensions, R (5,436) = .76 (SE=.42), $p < .001$. CSA was sufficient as a single childhood maltreatment index to maximally account for Total Aggregate, R (3,392) = .34 (SE=.61), $p < .001$, Internalized Aggregate, R (3,446) = .32 (SE=.79), $p < .001$, and Externalized Aggregate, R (3,415) = .34 (SE=.61), $p < .001$, scores.

Table 7. Standardized Beta Weight Summary for Individual Trait and Maltreatment Index Effects.

Predictor Variables	Total Aggregate (12 Indices)		Internalized Aggregate (4 indices)		Externalized Aggregate (8 indices	
	Beta	*p*	Beta	*p*	Beta	*P*
PID-5 Trait Domain Indices						
Antagonism vs Agreeableness	-.025	.484	-.166	.000	.192	.000
Disinhibition vsConscientiousness	.215	.000	.042	.140	.372	.000
Detachment vsExtraversion	.295	.000	.446	.000	.011	.822
Negative Affectivity vs Emotional Stability	.508	.000	.581	.000	.290	.000
Psychoticism vs Lucidity	.024	.556	-.008	.831	.058	.257
	N = 416		*N* = 475		*N* = 442	
Childhood Maltreatment Indices						
LONGSCAN Sexual Abuse	.240	.000	.211	.000	.260	.000
VEQ-R Parental Hostility	.123	.078	.096	.165	.116	.089
VEQ-R Domestic Hostility	.078	.259	.110	.109	.061	.364
	N = 396		*N* = 450		*N* = 419	

Table 8 provides estimates of the extent to which aggregate maltreatment or CSA effects on internalized or externalized aggregate symptoms are mediated through their impact on the PID-5 trait domains. The indirect effects of aggregated abuse and CSA on the criterion variables were statistically significant in all 16 analyses. The percentage of the total maltreatment effect attributable to mediated by trait changes varied in the prediction of the internalized (Antagonism, 21.2%; Disinhibition, 24.6%; Detachment, 87.3%; Negative Affectivity, 63.4%; & Psychoticism, 53.8%) and externalized (Antagonism, 41.1%; Disinhibition, 46.3%; Detachment, 54.6%; Negative Affectivity, 46.7%; & Psychoticism, 54.1%) symptom clusters. The percentage of CSA indirect effects varied as well in the prediction of the internalized (Antagonism, 37.2%; Disinhibition, 36.2%; Detachment, 93.0%; Negative Affectivity, 66.8%; & Psychoticism, 71.4%) and externalized (Antagonism, 53.2%; Disinhibition, 55.0%; Detachment, 47.3%;

Negative Affectivity, 43.9%; & Psychoticism, 59.0%) symptom clusters. On average, about 50% of the effects of aggregated childhood maltreatment both internalized and externalized symptoms could be accounted for through PID-5 trait mediation. Indirect CSA effects approximated these estimates for the INT (*M* = 61%) and EXT (*M* = 52%) symptom clusters.

Table 8. Standardized Beta Weights for Direct and Mediated Maltreatment Effects on Internalized or Externalized Symptoms.

Trait a↗ ↘b Abuse ----c'-→ Int/Ext	Antagonism		Disinhibition		Detachment		Negative Affectivity		Psychoticism	
	INT	EXT	INT	EXT	INT	EXT	INT	EXT	INT	EXT
Childhood Maltreatment Aggregate										
Trait Direct Effect (b)	**.308**	**.372**	**.292**	**.400**	**.632**	**.295**	**.652**	**.364**	**.473**	**.350**
Abuse Direct Effect (c')	**.260**	**.160**	**.248**	**.144**	.042	**.118**	**.121**	**.144**	**.152**	**.123**
Abuse Indirect Effect (ab)	**.070**	**.107**	**.081**	**.124**	**.288**	**.142**	**.210**	**.126**	**.177**	**.145**
N	449	418	449	417	448	418	448	418	450	419
Childhood Sexual Abuse										
Trait Direct Effect (b)	**.315**	**.386**	**.292**	**.410**	**.640**	**.304**	**.663**	**.379**	**.495**	**.362**
Abuse Direct Effect (c')	**.125**	**.088**	**.127**	**.085**	.014	**.097**	**.068**	**.106**	.057	**.077**
Abuse Indirect Effect (ab)	**.074**	**.100**	**.072**	**.104**	**.187**	**.087**	**.137**	**.083**	**.142**	**.111**
N	482	448	483	448	481	449	479	447	485	450

Note. INT=Internalized Aggregate. EXT=Externalized Aggregate. Significant ($p < .05$) Abuse direct or mediated effects are **bolded (**1,000 bootstrap samples).

CHAPTER V

DISCUSSION

This study explored relationships between childhood maltreatment indicators and mental health symptomatology in adulthood. The central hypothesis in this study was that the indirect effects of child abuse on symptom expression as mediated by personality traits would be substantial and possibly larger than the direct effects alone. This study emphasized the importance of isolating mechanisms through which developmental stressors such as child abuse may lead to maladaptive functioning. Maladaptive trait development was shown as hypothesized to represent one such logical mechanism. Additional abuse by trait interaction hypotheses were also examined. Specifically, combinations of negative affectivity and detachment with childhood maltreatment were expected to predict internalizing symptomatology. Combinations of detachment, antagonism, and/or psychoticism with maltreatment were expected to be associated with externalizing symptoms. The present results provided support for the mediational hypotheses as well a subset of these additional interaction hypotheses.

Preliminary analyses did not raise concerns regarding trait, maltreatment, and/or symptom index multicollinearity. Reliance on standard (z) scores in the regression analyses further limited concerns regarding variable interrelationships. The internal consistency of the internalizing (depression, anxiety, self-esteem, & PTSD indices) and externalizing (impulsivity, conduct, & aggressiveness indices) criterion measures allowed

them to be aggregated as a way of simplifying the primary analyses. Score distributions for all of the predictor, mediator, and criterion variables approximated those reported previously in the literature. This was particularly apparent for the PID-5 facet and domain scores which were consistent with those found in a community sample (Fossati et al., 2013).

While internalizing and externalizing aggregate scores were associated, they did seem to reflect qualitatively different symptom cluster that varied in their relationships with the maltreatment and trait indicators. The trait and abuse indicators were consistently, and often strongly, associated with the internalizing and externalizing aggregate and constituent scores. These correlations were expected given prior research on internalizing and externalizing symptomatology following childhood abuse (Mrug & Windle, 2010; Silva et al., 2014; Paolucci et al., 2001; Fergusson & Horwood, 1998). Each internalizing and externalizing symptom indicator was highly correlated ($p < .01$) with each of the five personality domains.

The PID-5 traits were particularly strong in accounting for the variance in internalizing and externalizing dysfunction in both the men and women in this sample. The personality trait domains accounted for the majority of variance observed in the internalizing and externalizing symptom clusters. Over 75% of the variance in total aggregated symptom score was accounted for by three of the six personality domains (Negative Affectivity, Detachment, & Disinhibition). These same trait dimensions accounted for a similar amount of variance in the internalized aggregate score. Aggregated externalized symptomatology was effectively predicted (R^2 = 58%) by Negative Affectivity, Disinhibition, and Antagonism.

Traits of Negative Affectivity and Detachment were expected to be linked to internalized symptoms. Disinhibition, Antagonism, and Psychoticism were hypothesized to show close associations with externalized symptoms. Both of these hypotheses were supported with evidence extending these trait links to Disinhibition for EXT and Negative Affectivity for INT. Psychoticism did not play a substantial role in accounting for unique variance in either the internalizing or externalizing models (see Table 6).

The childhood maltreatment aggregate provided a solid predictor of both internalizing and externalizing symptomatology. CPA and CDA correlated with the internalizing and externalizing constituent indices about half of the time, while CSA appeared to provide a relatively stronger and more consistent predictor of maladaptive functioning. While relatively weaker as a predictor than the PID-5 trait dimensions, CSA accounted for approximately 10% and 12% of internalized and externalized aggregate scores respectively.

CPA, CSA, CDA, and other forms of childhood maltreatment have been identified as contributing factors in the etiology of a wide range of psychiatric conditions. The "Risk and Prognostic Factors" section of the Diagnostic and Statistical Manual (DSM-5; American Psychiatric Association, 2013) found enough evidence to propose putative links with more than 20 major psychiatric disorders. This was a conservative estimate since it did not include consideration of the personality disorders or developmental adversities that extended beyond maltreatment, abuse, or severe neglect. Research on CSA has suggested that many victims suffer extensive and long-term consequences including elevated risk of revictimization (Follette et al., 1996; Humphrey

& White, 2000). Revictimization in adolescence would have particularly devastating consequences for future psychopathology (Turner et al., 2010).

The present results should not diminish concerns regarding the adverse effects of CPA and CDA. In these regression and mediation analyses the trait factors were successful in accounting for a disproportionate amount of the variance in the criterion measures. Associations between CPA and CDA proved relatively weaker and insubstantial in the mediation analyses. The VEQ-R CPA factor score is comprised of actual physical abuse, threats of abuse, and corporal punishment. The CDA factor score included domestic violence, threats of parental violence, and verbal conflict. These measures provided more generalized indicators of parent-child and parent-parent hostility that proved to be statistically inferior to CSA or especially the PID-5 traits. While CPA and CDA were not effective in accounting for unique variance in either the internalizing or externalizing models, their combination with CSA did seem to enhance the value of the latter in the mediation analyses.

While men scored significantly higher on a number of variables, gender differences in the associations between the maltreatment, trait, and criterion measures in this sample were largely absent. In regard to aggregated internalized symptoms, correlation strengths with the CSA, CPA, or the aggregated maltreatment score were similar for the women and men. Gender differences were not found between the externalized aggregate score and the personality trait domains. Gender differences with CSA, CPA, CDA, and the aggregated abuse variable were also absent. The only gender difference involved CDA and a couple of constituent symptom indicators. There were also several abuse by trait interactions that differed significantly between the men and

women. Examination of Figures 3, 4 and 5 suggests that externalized symptoms among women were negatively altered by childhood maltreatment only when the maladaptive trait scores were elevated (i.e., abuse in isolation had marginal effects). Men seemed strongly affected by both abuse and elevated trait scores (i.e., stronger trait by abuse effect for the women).

The mediation analyses established that the indirect effects of aggregated childhood maltreatment and CSA alone on internalizing an externalizing maladaptive symptomatology were statistically significant in all cases. The results presented in Table 8 provided compelling evidence in support of theoretical models that propose maladaptive trait development secondary to CSA and, to a lesser extent, CDA and CPA as measured by the VEQ-R. While other CSA mediators remain elusive, the PID-5 trait domains warrant systematic exploration as contributing secondary sources of negative CSA outcomes. In fact, in this sample the indirect effects of CSA accounted for 61% and 52% of the internalized and externalized aggregate scores respectively.

Detachment and Negative Affectivity accounted for 93.0% and 66.8% respectively of the CSA effect for internalized maladaptive symptomatology. These results were consistent with hypotheses that they would serve a distinctive role in translating CSA into internalized symptom outcomes. Disinhibition and Antagonism accounted for 55.0% and 53.2% respectively of the CSA effects on externalized symptoms. These results were also consistent with hypotheses that these traits would account for a larger subset of the total CSA effect on externalized symptoms.

Aggregate maltreatment had even stronger direct and indirect effects on the criterion variables. Most of the effects of aggregate maltreatment on INT scores could be

accounted for indirectly through the traits of Detachment (87.3%) and Negative Affectivity (63.4%). These results were consistent with the proposed hypotheses that these traits would have a greater impact on internalized symptoms of distress than Disinhibition and Antagonism.

The percentage of the total maltreatment effect attributable to the mediated traits also varied in predictive ability for externalized maladaptive symptomatology. Disinhibition and Antagonism accounted for 46.3% and 41.1% respectively of the total maltreatment effect for externalized symptomatology. While hypothesized to play a distinctive mediational role, the indirect effects of these two trait dimensions were not larger than those found for Negative Affectivity (46.7%) or Detachment (54.6%).

CHAPTER VI

LIMITATIONS

Several limitations of the current study should be noted. While the sample was ethnically diverse, it was comprised largely of young adult American women. Future studies would benefit from a wider age range with more balanced gender representation. A second limitation concerns reliance on Amazon's MTurk as a recruitment platform. While recognized as an inexpensive and rapid method of obtaining representative data (Burhmester, Kwang, & Gosling, 2011), potential disadvantages have been identified. MTurk participants do seem to endorse higher levels of mental health symptoms than expected from traditional samples which poses concern about data validity among a subset of respondents (Arditte et al., 2015; Shapiro, Chandler, & Mueller, 2013). A third possible limitation may be posed by the idiosyncratic internalized and externalized symptom indicators selected for inclusion in these analyses. While each index showed evidence of reliability and validity, any number of prospective symptom indicators could have been selected since a single measure of adult internalized and externalized symptom pathology could not be found. Questions could be raised as to the construct validity of these clusters as measures of internalized and externalized distress. A fourth possible limitation is that while the VEQ-R has been shown to be adequate in reliability and validity, alternative CPA or domestic violence indicators may later yield stronger results. A final limitation involves the nature of the cross-sectional data utilized

in this thesis. Participants provided retrospective accounts of abuse events that could have occurred before, during, or after maladaptive trait development. Relationships between childhood maltreatment, trait mediators, and maladjustment indices are presumably all bidirectional in nature. These correlation data derived from a cross-sectional analysis do not provide compelling evidence of cause-effect relationships between the examined variables.

CHAPTER VII

FUTURE DIRECTIONS

The results of the current study provide an impetus to future research related to the importance of personality in psychopathology, especially as it relates to the mediation of childhood maltreatment effects. While not addressed in this study, the factors that differentiate maladaptive from neutral, or even resilient, responses to developmental adversity remain elusive. It would be interesting to conduct trait mediational tests on samples that starkly differ in outcomes secondary to early maltreatment. A better understanding of the mechanisms through which psychopathology emerges may eventually lead to better predictions and interventions following the occurrence of childhood abuse.

APPENDICES

APPENDIX A
CONSENT FORM

University of North Dakota
Consent to Participate in Research

TITLE:	*Personality Disorder Trait Mediation of Childhood Abuse Effects on Internalized and Externalized Symptoms of Distress*
PROJECT DIRECTOR:	*Amy Veith*
PHONE NUMBER:	*(701) 777-3644*
DEPARTMENT:	*Department of Psychology*

STATEMENT OF RESEARCH

A person who participates in research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please contact the primary investigator, Amy Veith, at: amy.veith@my.und.edu.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to participate in a research study about personality traits, childhood experiences, and psychological distress.

The purpose of this research study is to identify the role that personality traits play in the presence and form of psychological distress following childhood abuse or trauma. The proposed study addresses the impact of physical abuse, sexual abuse, and domestic violence during childhood and adolescence on the mental health of individuals.

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately 1,000 people will take part in this study. The study will be conducted through Amazon's Mechanical Turk and the University of North Dakota's Qualtrics website.

HOW LONG WILL THE STUDY TAKE?

Your participation in this study will take approximately 30 minutes.

WHAT WILL HAPPEN DURING THIS STUDY?

If you agree to participate in this study, you will simply click the button at the end of the consent form marked "Continue". Once you have agreed to participate in this study you will be given ten questionnaires used to assess childhood maltreatment, mental health, and personality characteristics. If at any point during the survey you no longer wish to participate, you are free to discontinue the survey. If at any point in the survey you do not wish to answer one or more of the questions, you are free to skip those questions.
Once you have completed the online questionnaires, you will be given a code that will allow you access to your compensation through the Mechanical Turk website.

WHAT ARE THE RISKS OF THE STUDY?

There is minimal risk from your participation in this study. Potential risks may include discomfort in relation to the personal nature of the questions as well as the recollection of prior abuse histories. You are encouraged to discontinue the survey at any time without penalty if you become too uncomfortable. You are also encouraged to leave questions blank that you feel are too personal, without penalty.

If you would like to speak with someone about the feelings you experienced during the survey you are encouraged to contact:

National Domestic Abuse Hotline at: 1-800-799-7233
National Sexual Assault Hotline at: 1-800-656-4673
National Association of Adult Survivors of Child Abuse at: 1-323-552-6150

WHAT ARE THE BENEFITS OF THIS STUDY?

You may not benefit from this study personally. However, we hope that, in the future, other people might benefit from this study through an increase of knowledge about the nature of personality traits and their role in mental health after childhood maltreatment. The knowledge garnered from this study could assist clinicians in the treatment of psychological distress following childhood maltreatment.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for participating in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will be paid for your participation in this study. At the completion of the study you will be provided a code that you may use to access your compensation on the Mechanical Turk website. You will be paid $0.50 for your participation.

WHO IS FUNDING THE STUDY?

The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the UND Research Development and Compliance Office, and the University of North Dakota Institutional Review Board.

Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained through coding, passwords, and limited access. Your responses will not be associated with your name, instead your responses will be given a number. The responses that you provide will be kept in an electronic file with password protection on the primary researcher's computer. Only the primary researcher (Amy Veith) and her advisor (Dr. Alan King) will have access to the responses you provided.

COMPENSATION FOR INJURY

The risks of this study are minimal, however if you take any action to reduce personal distress related to the survey, you will be responsible for that expense. Please recall that you may discontinue the survey or skip any questions at any time without risk or consequence.

IS THIS STUDY VOLUNTARY?

Your participation in this research study is entirely voluntary. You may choose not to participate or you may discontinue your participation at any time without risk or consequence. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

You will be informed by the primary investigator of this study if any new developments may affect your willingness to continue to participate in this study.

CONTACTS AND QUESTIONS?

The researchers conducting this study are Amy Veith, BA., and Alan King, PhD. If you have any questions or concerns please contact Amy Veith at amy.veith@my.und.edu or Dr. Alan King at (701) 777-3644 or alan.king@und.edu.

If you have questions regarding your rights as a research subject, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. You may also call this number about any problems, complaints, or concerns you have about this research study. You may also call this number if you are unable to contact the research staff, or you wish to talk to someone who is independent of the research team.

General information about being a research subject can be found by clicking "Information for Reseach Participants" at this website: http://und.edu/research/resources/human-subjects/research-participants.cfm

By clicking "Continue", you are consenting to participate in this study.

APPENDIX B
VIOLENT EXPERIENCES QUESTIONNAIRE-REVISED (VEQ-R)

Violent Experiences Questionnaire

Directions: Please use the frequency index provided below to indicate how often one or more of the target acts occurred during the specified period of childhood or adolescence.

Acts Directed Toward You by a Parent or Step-Parent:

Parental Discipline (Corporal Punishment): Spanking or other forms of reasonable physical discipline producing mild to moderate pain without physical injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Verbal Conflict: Yelling, cursing, damaging property, and other expressions of anger without any physical injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Threats of Physical Violence: Statements or gestures expressing a threat to inflict physical injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Physical Acts With or Without Physical Injury: Pushing, shoving, shaking, striking, punching, kicking, beating, burning, or use of a weapon to inflict pain or injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Consequences of Any Described Act: Police or other authorities summoned, arrest of a family member, medical services needed, death of a family member, public embarrassment, etc.

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

<u>Conflict Between Your Parents or Step-Parents:</u>

Verbal Conflict: Yelling, cursing, damaging property, and other expressions of anger without any physical injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Threats of Physical Violence: Statements or gestures expressing a threat to inflict physical injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Physical Acts With or Without Physical Injury: Pushing, shoving, shaking, striking, punching, kicking, beating, burning, or use of a weapon to inflict pain or injury

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Consequences of Any Described Act: Police or other authorities summoned, arrest of a family member, medical services needed, death of a family member, public embarrassment, etc.

Ages 5-8

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 9-12

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

Ages 13-16

Never Happened	Happened Only Once	Happened Only Twice	Happened Less Than Five Times	Happened About Once a Year	Happened About Twice a Year	Happened About Once a Month	Happened About Once a Week	Happened More than Once a Week

APPENDIX C
SEXUAL ABUSE AND ASSAULT REPORT

Did any of the below events happen to you during your childhood or adolescence?

*Genitalia refers to breasts, vagina, penis, or buttocks

0= Never Occurred, 3= Severe Abuse or Assault

	Prior to Age 13				Between Ages 13-16				After Age 16			
	0	1	2	3	0	1	2	3	0	1	2	3
1. Someone made you look at something sexual (e.g. pictures, movies)												
2. Someone forced you to look at their genitalia												
3. Someone spied on you or tried to look at you without your clothes on when you didn't want them to?												
4. Someone touched your genitalia in some way?												
5. Someone got you to touch their genitalia in some way?												
6. Someone tried to get you to touch their genitalia in some way, but they weren't able to do it?												
7. Someone put their mouth on your genitalia or made you put your mouth on their genitalia?												
8. Someone put their mouth on your genitalia or made you put your mouth on their genitalia, but weren't able to do it?												
9. A family member raped you?												
10. Someone familiar (outside of the family) raped you?												
11. A romantic partner raped you?												
12. A stranger raped you?												

APPENDIX D
COSTELLO-COMREY DEPRESSION AND ANXIETY SCALES

Please circle the number that best describes your response to each item

Depression Scale

1. I feel that like if worthwhile

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

2. When I wake up in the morning, I expect to have a miserable day

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

3. I wish I had never been born

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

4. I feel there is more disappointment in life than satisfaction

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

5. I want to run away from everything

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

6. My future looks hopeful and promising

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

7. When I get up in the morning I expect to have an interesting day

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

8. Living is a wonderful adventure for me

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

9. I am a happy person

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

10. Things have worked out well for me

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

11. The future always look so gloomy that I wonder if I should go on

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

12. I feel that life is drudgery and boredom

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

13. I feel blue and depressed

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

14. When I look back I think life has been good to me

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

Anxiety Scale

1. I get rattled easily

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

2. When faced with excitement or unexpected situations, I become nervous and jumpy

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

3. I am calm and not easily upset

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

4. When things go wrong I get nervous and upset instead of calmly thinking out a solution

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

5. It makes me nervous when I have to wait

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

6. I am a tense “high strung” person

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

7. I am more sensitive than most other people

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

8. My hands shake when I try to do something

Always	Almost Always	Very Frequently	Frequently	Fairly Often	Occasionally	Rarely	Almost Never	Never
9	8	7	6	5	4	3	2	1

9. I am a very nervous person

Absolutely	Very Definitely	Definitely	Probably	Possibly	Probably Not	Definitely Not	Very Definitely Not	Absolutely Not
9	8	7	6	5	4	3	2	1

APPENDIX E
ROSENBERG SELF-ESTEEM SCALE (RSE)

Please record the appropriate answer per item, depending on whether you strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly Agree
2 = Agree
3 = Disagree
4 = Strongly Disagree

_____ 1. On the whole, I am satisfied with myself
_____ 2. At times I think I am no good at all
_____ 3. I feel that I have a number of good qualities
_____ 4. I am able to do things as well as most other people
_____ 5. I feel I do not have much to be proud of
_____ 6. I certainly feel useless at times
_____ 7. I feel that I am a person of worth, at least on an equal plane with others
_____ 8. I wish I could have more respect for myself
_____ 9. All in all, I am inclined to feel that I am a failure
_____ 10. I take a positive attitude towards myself

APPENDIX F
SCREEN FOR POST-TRAUMATIC STRESS SYMPTOMS (SPTSS)

IN THE BLANK SPACE BEFORE EACH QUESTION, PUT A NUMBER TO TELL HOW MUCH THAT THING HAS HAPPENED TO YOU DURING THE PAST TWO WEEKS. Use the scale below to decide which number to put in the blank space. Put "0" if you never had the experience during the past two weeks, and put "10" if it was always happening to you or happened every day during the past two weeks. If it happens sometimes, but not every day, put in one of the numbers between "0" and "10" to show how much.

(never) 0 1 2 3 4 5 6 7 8 9 10 (always)

____ 1. I don't feel like doing things that I used to like doing.

____ 2. I can't remember much about bad things that have happened to me.

____ 3. I feel cut off and isolated from other people.

____ 4. I try not to think about things that remind me of something bad that happened to me.

____ 5. I feel numb: I don't feel emotions as strongly as I used to.

____ 6. I have trouble concentrating on things or paying attention to something for a long time.

____ 7. I have a hard time thinking about the future and believing that I'm going to live to old age.

____ 8. I feel very irritable and lose my temper.

____ 9. I avoid doing things or being in situations that might remind me of something terrible that happened to me in the past.

____ 10. I am very aware of my surroundings and nervous about what's going on around me.

____ 11. I find myself remembering bad things that happened to me over and over, even when I don't want to think about them.

____ 12. I get startled or surprised very easily and "jump" when I hear a sudden sound.

____ 13. I have bad dreams about terrible things that happened to me.

____ 14. I get very upset when something reminds me of something bad that happened to me.

____ 15. I have trouble getting to sleep or staying asleep.

____ 16. When something reminds me of something bad that happened to me, I feel shaky, sweaty, nervous and my heart beats really fast.

____ 17. I suddenly feel like I am back in the past, in a bad situation that I was once in, and it's like it was happening it all over again.

APPENDIX G
BUSS-PERRY AGGRESSION QUESTIONNAIRE

Please rate each of the following items in terms of how characteristic they are of you.

	Mostly True					Mostly False
	1	2	3	4	5	6
1. Once in a while I can't control the urge to strike another person						
2. Given enough provocation, I may hit another person						
3. If somebody hits me, I hit back						
4. I get into fights a little more than the average person						
5. If I have to resort to violence to protect my rights, I will						
6. There are people who pushed me so far that we came to blows						
7. I can think of no good reason for ever hitting a person						
8. I have threatened people I know						
9. I have become so mad that I have broken things						
10. I tell my friends openly when I disagree with them						
11. I often find myself disagreeing with people						
12. When people annoy me, I may tell them what I think of them						
13. I can't help getting into arguments when people disagree with me						
14. My friends say that I'm somewhat argumentative						
15. I flare up quickly but get over it quickly						
16. When frustrated, I let me irritation show						
17. I sometimes feel like a powder keg ready to explode						
18. I am an even-tempered person						
19. Some of my friends think I'm a hothead						
20. Sometimes I fly off the handle for no good reason						
21. I have trouble controlling my temper						
22. I am sometimes eaten up with jealousy						
23. At times I feel I have gotten a raw deal out of life						
24. Other people always seem to get the breaks						
25. I wonder why sometimes I feel so bitter about things						

26. I know that my "friends" talk about me behind my back
27. I am suspicious of overly friendly strangers
28. I sometimes feel that people are laughing at me behind my back
29. When people are especially nice, I wonder what they want

APPENDIX H
CONDUCT DISORDER SYMPTOMS

Please circle Yes or No in response to the following questions

Have you ever?

Yes No 1.Bullied, threatened, or intimidated others

Yes No 2. Initiated physical fights

Yes No 3. Used a weapon that can cause serious physical harm to others (e.g. bat, brick, broken bottle, knife, gun, etc.)

Yes No 4. Been physically cruel to people

Yes No 5. Been physical cruel to animals

Yes No 6. Stolen while confronting a victim (e.g. mugging, purse snatching, extortion, armed robbery)

Yes No 7. Forced someone into sexual activity

Yes No 8. Deliberately engaged in fire setting with the intention of causing serious damage

Yes No 9. Deliberately destroyed others' property (other than through fire setting)

Yes No 10. Broken into someone else's house, building, or car

Yes No 11. Lied to obtain goods or favors or to avoid obligations (i.e., cons others)

Yes No 12. Stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering, forgery)

APPENDIX I
BARRATT IMPULSIVITY SCALE-11 (BIS-11)

DIRECTIONS: People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and circle the appropriate number on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly.

1	2	3	4
Rarely/Never	Occasionally	Often	Almost Always/Always

1. I plan tasks carefully.	1	2	3	4
2. I do things without thinking.	1	2	3	4
3. I make-up my mind quickly.	1	2	3	4
4. I am happy-go-lucky.	1	2	3	4
5. I don't "pay attention".	1	2	3	4
6. I have "racing" thoughts.	1	2	3	4
7. I plan trips well ahead of time.	1	2	3	4
8. I am self-controlled.	1	2	3	4
9. I concentrate easily.	1	2	3	4
10. I save regularly.	1	2	3	4
11. I "squirm" at plays or lectures.	1	2	3	4
12. I am a careful thinker.	1	2	3	4
13. I plan for job security.	1	2	3	4
14. I say things without thinking.	1	2	3	4
15. I like to think about complex problems.	1	2	3	4
16. I change jobs.	1	2	3	4
17. I act "on impulse".	1	2	3	4
18. I get easily bored when solving thought problems.	1	2	3	4
19. I act on the spur of the moment.	1	2	3	4
20. I am a steady thinker.	1	2	3	4
21. I change residences.	1	2	3	4
22. I buy things on impulse.	1	2	3	4
23. I can only think about one thing at a time.	1	2	3	4
24. I change hobbies.	1	2	3	4
25. I spend or charge more than I earn.	1	2	3	4
26. I often have extraneous thoughts when thinking.	1	2	3	4

27. I am more interested in the present than the future.	1	2	3	4
28. I am restless at the theater or lectures.	1	2	3	4
29. I like puzzles.	1	2	3	4
30. I am future oriented.	1	2	3	4

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