DIFFERENTIAL IMPACT OF TRAUMA ON RECIDIVISM AMONG JUVENILE OFFENDERS

by

AMY MICHELLE PERKINS

(Under the Direction of Georgia Calhoun)

ABSTRACT

A significant amount of youths involved in the juvenile justice system have experienced childhood a traumatic event or been exposed to trauma and the mental health consequences of such events may have assisted in the development of the mental health and behavioral problems that resulted in juvenile court involvement. Additionally, within the juvenile justice population, there has been a current trend toward increase recidivism rates. This study examined the relationship between trauma exposure and recidivism rates in a sample of juvenile offenders. Results of the statistical analyses suggest that there are not significant differences between the rates of recidivism of juvenile offenders with a history of trauma and those without. It was determined that there are significant differences between the rates of recidivism between male and female offenders when both have experienced trauma exposure, with males experiencing higher rates of recidivism. It was also found that there are differences between recidivism rates in males who have been exposed to trauma and male offenders who have not been exposed to trauma. It was determined that there are significant differences between the rates of recidivism when the second offense is a felony offense in a group of juvenile offenders with a history of trauma. The clinical implications of this study highlight the importance of assessing for trauma

history several months *after* a juvenile enters into the juvenile justice system, and not just upon initial entry. The goal for mental health clinicians should be to identify formative experiences and ways of coping that developed as a result of suffering trauma (including the trauma of entering into the juvenile justice system), not to determine mental health diagnoses or issues.

INDEX WORDS: trauma, recidivism, juvenile offenders, juvenile justice

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DEDICATION

This work is dedicated to many individuals:

To my husband, William, whose support, time, and love are priceless. To my children, Mia, Max, and Evie Grace, who have made finishing this document infinitely harder and, yet, more satisfying than I could have imagined at the outset. To my sisters, Lindley and Katie, and brother, Ben, whose love and humor keep me grounded. To my dad, who thinks I am special. To Bill and Gene, who have provided so much support and encouragement. And lastly, to my mom, who instilled in me an inquiring mind, a love of education, and the belief that I could grow up to be whatever I wanted.

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CHAPTER ONE

Due to the increasing numbers of children and adolescents becoming involved in the juvenile justice system, this vulnerable population has become an important issue for psychological research. In 2009, 1,906,600 juveniles were arrested in the United States for violent crimes (85,890 murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault), property crimes (417,700 burglary, larceny-theft, motor vehicle theft, and arson), and non-index crimes (1,403,010 crimes such as other assaults, drug abuse, disorderly conduct, violation of liquor laws, status offenses). Regarding violent crimes in 2009, 47 % involved white youth, 51 % black youth, 1 % Asian youth, and 1 % American Indian youth. For property crime arrests, 64 % involved white youth, 33 % black youth, 2 % Asian youth, and 1 % American Indian youth (Puzzanchera and Adams, 2011).

Because of the high incidence of psychological disorders in children and adolescents involved in the juvenile justice system, psychological evaluations are utilized to identify mental health problems and provide treatment recommendations in this system. While there is some variability in the nature and types of instruments used in assessing juvenile offenders, the Minnesota Multiphasic Personality Inventory – Adolescent (MMPI-A; Butcher et al., 1992) has been identified as the most frequently used self-report personality measure utilized (Archer & Newsome, 2000), and is a popular tool among forensic psychologists working within the juvenile justice system (Archer, Buffington-Vollum, Stredny, & Handel, 2006). The MMPI-A is used with the juvenile offender population to assess pathology and the profiles from this instrument provide descriptive information about the respondent's mental health and personality.

Specific MMPI-A profiles for juvenile offenders who have experienced trauma have been established in previous research (Murray, Glaser, & Calhoun, 2013). These researchers have identified 17 items on the MMPI-A as having a significant relationship with trauma grouping, creating a model that acted as a "reasonably good" predictor of trauma group membership (Murray, Glaser, & Calhoun, 2013). While additional research on the use of , the MMPI-A as an instrument to identify those in the juvenile justice system who have likely experienced trauma needs to be done, the findings of Murray et al. appear promising.

Additionally, recent theoretical models of the developmental psychopathology of delinquency associate offending behavior with experiences of trauma and give trauma a prominent place as a potential catalyst that sets youth on the pathway toward delinquent behavior and increases the likelihood of remaining on that pathway (Kerig & Becker, 2010). The link between offending and trauma has been established; however, there has yet to be research specifically investigating the link between traumatic experiences and recidivism rates. Therefore it would be beneficial to understand the potential link between trauma and recidivism within the juvenile offender population.

Purpose of the Study

The current study will explore the potential relationship between trauma exposure as measured by the MMPI-A and recidivism. Adolescents involved in the juvenile justice system completed an MMPI-A and participated in an in-depth interview that inquired into the individual's trauma history as part of a psychological evaluation. These participants were then identified as having experienced trauma based on specific MMPI-A profiles. The juvenile offenders' recidivism rates were tracked using the Georgia Department of Juvenile Justice's Juvenile Tracking System. The participants were tracked over a two-year period from the date of

their first offense. Recidivism was coded using Blumstein & Larson's (1971) method. Recidivism comprises two elements: 1) the commission of an offense, 2) by an individual already known to have committed at least one other offense (Blumstein & Larson, 1971). An offense constitutes a criminal act as well as status offenses, but does not include a violation of parole without the inclusion of a new charge. Recidivism rates were also examined across gender and race to identify the influence of trauma exposure on recidivism for juvenile offenders of different genders and races.

The purpose of the proposed study is to advance the knowledge regarding the link between trauma exposure and recidivism rates. If juvenile offenders exposed to the previously mentioned traumatic events are identified, the practitioner working with the child could tailor their intervention in an effort to decrease recidivism. Identifying such youth might involve further exploration of the youth's trauma history and possible symptoms and behaviors related to those symptoms in light of that trauma exposure.

Statement of Problem

Over the past decade, increasing attention has been drawn to the unmet mental health needs of detained youth. Rates of mental health problems among detained youth are approximately three times higher than the general adolescent population (Grisso, 2004). The majority of youth who are placed in secure juvenile correctional facilities have a diagnosable mental health disorder (Fazel, Doll, & Långström, 2008; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). Trauma exposure among children and adolescents in the community has been estimated to range from 15% (Cuffe et al., 1998) to 69% (Norris, 1992). Rates of trauma exposure in samples of juvenile offenders have ranged from 70% to 92.5%, which is consistently higher than community samples (Abram et al., 2004; Cauffman, Feldman, Waterman, & Steiner,

1998; Dixon, Howie, & Starling, 2005). Given that the majority of juvenile detainees have experienced trauma (Kerig, Arnzen Moeddel, & Becker, 2011) and as many as 50% of youth in the juvenile justice system evidence PTSD symptoms (Kerig & Becker, 2012), particular attention has been drawn to posttraumatic stress disorder (Kerig, Vanderzee, Becker, & Ward, 2011).

Additionally, recent research related to the pathology of delinquency has shown that trauma exposure can set youth on the pathway toward antisocial behavior and increases their likelihood of remaining on that pathway (Kerig & Becker, 2010). Exposure to trauma may cause significant mental health difficulties, including PTSD, separation anxiety/other anxiety disorders, major depressive disorder, attention deficit/hyperactivity disorder, brief psychotic disorder/psychotic disorder NOS, oppositional defiant disorder, conduct disorder, substance abuse disorders, self-injurious behaviors, alexithymia, sexual behavior problems, positive psychotic symptoms, psychological dissociation, and somatoform dissociation (Ackerman, Newton, McPherson, Jones, & Dykman, 1998; Caffo, Forresi, and Lievers, 2005; Putnam, 1997; Streeck-Fischer & van der Kolk, 2000). This research suggests that trauma, particularly prolonged trauma such as childhood maltreatment, affects a youth so profoundly that it results in a diminished ability to regulate affect, increased rigidity in thinking, and limited coping skills. Further, prolonged trauma exposure interferes with the youth's ability to empathize, decreases appropriate social skills, impulse control, ability to self-regulate, and contributes to the development of a poor future orientation (Caffo, Forresi, and Lievers, 2005). Each of these issues are hypothesized to lead to increased psychological, behavioral, and relational problems over the course of adolescence, which may result in juvenile court involvement. Therefore, a research priority is to examine the interrelations among PTSD, other mental health problems, and

recidivism among delinquent youth. However, recent findings also suggest that the effects of trauma exposure may differ as a function of a youth's characteristics, including gender, race, and age (Kerig & Becker, 2012). Therefore, it is important to identify to what extent individual characteristics of age, gender, and race in combination with trauma exposure, predict offending behavior and recidivism.

Although research has demonstrated that younger age, minority racial status, and male gender are significant predictors of recidivism, few studies have examined the relation between specific mental health problems and recidivism. However, the existing current research suggests that mental health problems may be associated with recidivism (Trulson, Marquart, Mullings, & Caeti, 2005; Vermeiren, Schwab-Stone, Ruchkin, de Clippele, & Deboutte, 2002). Particularly, substance abuse has be implicated as a predictor of delinquency behavior and the persistence of this behavior (D'Amico, Edelen, Miles, & Morral, 2008; Marczyk, Heilbrun, Lander, & DeMatteo, 2003; Mulvey et al., 2010), and almost half of youth involved in the juvenile justice system report being under the influence of drugs or alcohol when engaging in the delinquent behaviors that led to their placement in the system (Sedlack & Bruce, 2010). Also, Lederman, Dakof, Larrea, and Li (2004) found that girls with previous/subsequent involvement in the juvenile justice system reported more substance use than girls who were detained for the first time. Conversely, among incarcerated boys, Wierson and Forehand (1995) found that non-recidivists were more likely to have a substance abuse diagnosis than those who recidivated. However, further analyses revealed that both substance abuse and CD predicted recidivism among Caucasian boys, whereas a diagnosis of ADHD, younger age at first conviction, offense severity, and not having a depressive disorder predicted recidivism among African American

boys. Wierson and Forehand (1995) concluded that mental health problems most likely play a role in recidivism among juvenile offenders.

Minority youth with mental health problems may be particularly at risk for both initial and longstanding juvenile justice involvement. In a prospective study of youth who used Medicaid and were also receiving mental health services, Cauffman, Scholle, Mulvey, and Kelleher (2005) found that youth who were older, exhibiting more externalizing problems, and from minority backgrounds were more likely to come into contact with the juvenile justice system. In addition, Benda and Tollett (1999) found that minority youth were 1.4 times more likely than Caucasian youth to recidivate within one year. Trulson et al. (2005) also provided evidence that mental health problems may be directly related to recidivism. These results suggest that mental health problems may be implicated in recidivism, and although gender differences may be present, further research is needed to replicate and extend these findings.

The relation between trauma exposure and recidivism is notably understudied. However, studies have shown that male offenders with PTSD have lower levels of impulse and aggression control than their peers (Steiner, Garcia, & Matthews, 1997). In addition, Smith, Leve, and Chamberlain (2006) found that, among girls court-mandated to out-of-home placement and treatment, posttraumatic stress symptoms were associated with the number of past criminal referrals within the past year. Similarly, Becker and Kerig (2011) found a significant relation between detained boys' previous trauma exposure and both the severity of delinquency and the number of arrests in a youth's history. Although increasing attention has been drawn to the prevalence of mental health symptoms, and trauma exposure in particular, among juvenile justice-involved youth, limited research is available that examines the specific relationship between trauma exposure and its potential influence on recidivism rates. If a link is identified,

this information may lead to more effective treatment recommendations and intervention delivery.

Hypothesis

Based on previous research linking mental health and recidivism rates, as well as the research regarding trauma exposure and its link to delinquent behavior, the following hypotheses regarding the impact of trauma exposure on the recidivism rates of juvenile offenders were made:

Hypothesis 1: Will juvenile Offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma produce higher recidivism rates than those who do not identify trauma exposure?

Hypothesis 2: Will rates of recidivism vary differentially across specific types of trauma?

Hypothesis 3: Will rates of recidivism vary differentially across specific demographic variables, specifically race and gender when members of these demographic groups have also been identified as experiencing trauma?

Hypothesis 4: Will rates of recidivism vary differentially across specific types of offense, specifically felony and misdemeanor offenses?

Definition of Terms

Trauma

For the purposes of this study, trauma is defined by Terr (1991) as "the mental result of one sudden, external blow or a series of blows, rendering the young person temporarily helpless and breaking past ordinary coping and defensive operations" (pg. 11), and includes not only events that are a shock/surprise to the victim, but also events that occur over a period of time and the victim can anticipate or be aware of their possibility.

Posttraumatic Stress Disorder (PTSD)

In 2013, the American Psychiatric Association revised the PTSD diagnostic criteria in the fifth edition of its Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). The diagnostic criteria are specified below.

Diagnostic criteria for PTSD include a history of exposure to a traumatic event that meets specific stipulations and symptoms from each of four symptom clusters: intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity. The sixth criterion concerns duration of symptoms; the seventh assesses functioning; and, the eighth criterion clarifies symptoms as not attributable to a substance or co-occurring medical condition. Two specifications are noted including delayed expression and a dissociative subtype of PTSD, the latter of which is new to DSM-5. In both specifications, the full diagnostic criteria for PTSD must be met for application to be warranted.

Criterion A: stressor

The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, as follows: (one required)

1. Direct exposure.
2. Witnessing, in person.
3. Indirectly, by learning that a close relative or close friend was exposed to trauma. If the event involved actual or threatened death, it must have been violent or accidental.
4. Repeated or extreme indirect exposure to aversive details of the event(s), usually in the course of professional duties (e.g., first responders, collecting body parts; professionals repeatedly exposed to details of child abuse). This does not include indirect non-professional exposure through electronic media, television, movies, or pictures.

Criterion B: intrusion symptoms

The traumatic event is persistently re-experienced in the following way(s): (one required)

1. Recurrent, involuntary, and intrusive memories. Note: Children older than six may express this symptom in repetitive play.
2. Traumatic nightmares. Note: Children may have frightening dreams without content related to the trauma(s).
3. Dissociative reactions (e.g., flashbacks) which may occur on a continuum from brief episodes to complete loss of consciousness. Note: Children may reenact the event in play.
4. Intense or prolonged distress after exposure to traumatic reminders.
5. Marked physiologic reactivity after exposure to trauma-related stimuli.

Criterion C: avoidance

Persistent effortful avoidance of distressing trauma-related stimuli after the event: (one required)

1. Trauma-related thoughts or feelings.
2. Trauma-related external reminders (e.g., people, places, conversations, activities, objects, or situations).

Criterion D: negative alterations in cognitions and mood

Negative alterations in cognitions and mood that began or worsened after the traumatic event: (two required)

1. Inability to recall key features of the traumatic event (usually dissociative amnesia; not due to head injury, alcohol, or drugs).
2. Persistent (and often distorted) negative beliefs and expectations about oneself or the world (e.g., "I am bad," "The world is completely dangerous").

3. Persistent distorted blame of self or others for causing the traumatic event or for resulting consequences.
4. Persistent negative trauma-related emotions (e.g., fear, horror, anger, guilt, or shame).
5. Markedly diminished interest in (pre-traumatic) significant activities.
6. Feeling alienated from others (e.g., detachment or estrangement).
7. Constricted affect: persistent inability to experience positive emotions.

Criterion E: alterations in arousal and reactivity

Trauma-related alterations in arousal and reactivity that began or worsened after the traumatic event: (two required)

1. Irritable or aggressive behavior
2. Self-destructive or reckless behavior
3. Hypervigilance
4. Exaggerated startle response
5. Problems in concentration
6. Sleep disturbance

Criterion F: duration

Persistence of symptoms (in Criteria B, C, D, and E) for more than one month.

Criterion G: functional significance

Significant symptom-related distress or functional impairment (e.g., social, occupational).

Criterion H: exclusion

Disturbance is not due to medication, substance use, or other illness.

Specify if: With dissociative symptoms.

In addition to meeting criteria for diagnosis, an individual experiences high levels of either of the following in reaction to trauma-related stimuli:

1. Depersonalization: experience of being an outside observer of or detached from oneself (e.g., feeling as if "this is not happening to me" or one were in a dream).
2. Derealization: experience of unreality, distance, or distortion (e.g., "things are not real").

Specify if: With delayed expression.

Full diagnosis is not met until at least six months after the trauma(s), although onset of symptoms may occur immediately.

Juvenile Offender

For the purposes of this study, a juvenile offender is an individual under the age of 18 who has been adjudicated of an offense, which may include status offenses. These individuals are involved in the juvenile justice system either through the probation office or through juvenile detention.

Recidivism

For the purposes of this study, recidivism comprises two elements: 1) the commission of an offense, 2) by an individual already known to have committed at least one other offense (Blumstein & Larson, 1971). An offense constitutes a criminal act as well as status offenses, but does not include a violation of probation without the inclusion of a new charge.

CHAPTER TWO

Psychological Disorders in the Juvenile Offender Population

Recent studies have identified higher levels of mental health problems among adolescents (i.e. those under the age of 18 years) involved in the juvenile justice system than are found in the general population of adolescents (Costello et al., 2002; Meltzer, Gatward, Goodman, & Ford, 2000). Outcomes for this group into adulthood are known to be poor; they are at increased risk of mental health problems (Maughan & Kim-Cohen, 2005). For example, Teplin and colleagues (2002) discovered that, overall, 66% of males and 73% of females involved in the juvenile justice system met criteria for at least one mental health diagnosis, including conduct disorder. Interestingly, 60% of male juvenile detainees and 70% of female juvenile detainees still qualified for a mental health diagnosis after excluding conduct disorder. These results indicate that youth involved in the juvenile justice system have a higher rate of mental health diagnosis compared to youth in the community (Maughan & Kim-Cohen, 2005).

There are many hypotheses as to why youths involved in the juvenile justice system have such a high prevalence of mental health disorders. One such hypothesis involves the influence of trauma exposure in childhood/adolescence as a catalyst for mental health problems that lead an individual down the pathway to delinquency (Ford, et al., 2007). Childhood and/or adolescent exposure to trauma, particularly chronic trauma in the form of childhood maltreatment, can result in a variety of mental health difficulties and impede appropriate personality and behavioral development to such a degree that while all victims of childhood trauma do not end up in the juvenile justice system or with serious psychopathology, a significant number of individuals in

the juvenile justice system or who have serious psychopathology have been victims of childhood trauma (Ford, et al., 2007).

Trauma and Juvenile Justice

Research studies indicate a high prevalence of witnessing and experiencing trauma events among nationally representative samples of juvenile offenders, ranging from 45% to 90% (Abram et al., 2004; Ford, Hartman, Hawke, & Chapman, 2008). More recently, it has been estimated that approximately 56% of adolescents involved in the juvenile justice system have experienced of witnessed some type of trauma (Perkins, Calhoun, & Glaser, 2014). The different types of events reported by juvenile offenders vary but often include multiple forms of trauma exposure. In one study of 264 detained youth, 48% of the sample experienced traumatic loss, 38% of the sample experienced accident, illness, or disaster-related trauma, and 30% of the sample experiences some form of victimization (including physical or sexual abuse, and family or community violence; Ford et al., 2008).

This level of exposure represents a serious mental health concern, as there is an estimated 2.18 million youth arrested each year in the United States (Puzzanchera, 2009). Many justice involved youth who are trauma exposed also meet diagnostic criteria for posttraumatic stress disorder (PTSD). Recent studies suggest lifetime PTSD prevalence between 11.2% and 50% in samples of juvenile offenders, with several studies reporting comparable rates of current PTSD diagnoses in their sample (Erwin, Newman, McMackin, Morrissey, & Kaloupek, 2000; Steiner, Garcia, & Matthews, 1997). A conservative comparison of disorder prevalence estimates across these studies suggests that rates of PTSD among justice-involved youth are two to three times higher than those identified for community samples.

The majority of incarcerated youth have experienced traumas, including sexual and physical abuse, domestic violence, and street violence (Carrion & Steiner, 2000; McMackin, Leisen, Sattler, Krinsley,& Riggs, 2002). Meta-analytic studies and research reviews confirm the common-sense view that trauma exposure increases risks for a range of negative outcomes (Paolucci, Genuis,&Violato, 2001). The high rates of trauma exposure in incarcerated youth, and the known negative effects of trauma, support the view that traumatic stress is a causative factor in the range of emotional, social, and behavioral problems of incarcerated youth.

There is some evidence that incarcerated youth experience physical traumas at markedly higher rates than other youth, even when incarcerated. Woolf and Funk (1985) reviewed medical records of 369 residents of a secure residential school. Over half (n = 191) had physical traumas severe enough to require medical treatment. There were high rates of injuries from self-inflicted injuries (13%), suicide attempts (9%) and injuries in fights (22%). The authors estimated that these rates are four to eight times greater than for non-incarcerated youth. The highest rates of PTSD are found in sexually assaulted people, with PTSD occurring at over twice the rate of those assaulted in a non-sexual manner (McNally, 1999). Specific to incarcerated youth, Brown et al. (1999) found that sexually abused youth had higher rates of internalizing problems and those exposed to domestic violence had higher rates of externalizing problems. Existing research suggests that incarcerated youth have experienced high rates of trauma exposure, and suffer serious consequences from these traumas.

Youth who report child maltreatment both through official case records or self-reports, are found to be at higher risk for delinquent or criminal involvement in both adolescence and adulthood (Smith & Thornberry, 1995; Widom & Maxfield, 1996). In addition, more severe forms of maltreatment (i.e., chronic or frequent maltreatment) have been found to be associated

with more severe and chronic delinquent behavior and the relation between child maltreatment and justice involvement holds across gender and ethnicity (Smith & Thornberry, 1995; Widom & Maxfield, 1996). Other forms of trauma exposure, beyond child maltreatment, have also been linked to delinquency and justice involvement, such as community violence, domestic violence, and traumatic loss (Foy, Ritchie, & Conway, 2012).

Prevalence rates of trauma exposure among youth involved in the juvenile justice system highlight this robust relation. One study found 92% of justice-involved youth reported exposure to at least one type of trauma, and that exposure to multiple traumas was the norm (Abram et al., 2004). Females tend to report higher rates of interpersonal victimization, particularly sexual assault, while males report higher rates of witnessing violence (Foy et al., 2012). For instance, 29% of incarcerated females compared to 3% of their incarcerated male counterparts reported being raped or molested (Wood et al., 2002), and 48% of incarcerated males compared to 17% of incarcerated females reported witnessing some type of violent act (Cauffman et al., 1998).

Trauma, Race, Ethnicity, and Gender

Race & Ethnicity

Due to the face that minority youth are disproportionately represented in the juvenile justice system, as well as the tendency for research to generalize findings without regard to race/ethnic differences, examining race as a possible factor influencing trauma exposure and the mental health consequences of trauma in juvenile offenders is important. According to the most recent National Incidence Study of Child Abuse and Neglect (Sedlak et al., 2010), which provides estimates of the incidence of child abuse and neglect as defined in Chapter 1 based on national information on substantiated and unsubstantiated reports of abuse and neglect, Black children had significantly higher rates of suspected and substantiated maltreatment than White

and Latino/a children. This discrepancy was seen across all previously discusses types of maltreatment (physical abuse, sexual abuse, and neglect). Another study also found overrepresentation of referrals and investigations for maltreatment among Black children, and underrepresentation for White children (Fluke, Yuan, Hedderson, & Curtis, 2003). However, these results do not imply that Black and White children experience maltreatment in disproportionate amounts, just that there is disproportionate reporting and investigation of Black and White children relative to what would be expected based on population. Additionally, it has been long argued that poverty significantly affects rates of maltreatment, with children who fall below the poverty line at higher risk for experiencing maltreatment (Berger, 2004). A recent study identified that, when controlling for poverty, there is not disproportionate Black representation in filed reports of child maltreatment (Drake, Lee, & Jonson-Reid, 2009).

A review of the literature found that Blacks do not differ significantly from Whites in diagnostic rates of PTSD (Pole, Gone, & Kulkarni, 2008). However, this review did not examine different types of trauma, only PTSD reactions to any type of trauma. Multiple research studies found that Black and Latino/a children and adolescents had more severe psychological reactions to experiencing abuse/neglect than their White counterparts, including depressive symptoms, and behavior and self-esteem problems (Sanders-Phillips, Moisan, Wadlington, Morgan, & English, 1995; Stein, Golding, Siegel, Burman, & Sorenson, 1988). One study compared the psychological functioning of Black and Latina female adolescent victims of sexual abuse (Sanders-Phillips, et al., 1995). This study supported previous findings that Latina victims had higher levels of depression than their Black counterparts. The article suggested this could be due to many factors including identified differences in the victim's relationship with the perpetrator, reportedly less maternal support following disclosure, and an earlier age of onset of abuse.

However, other research has not found such racial/ethnic differences in psychological reactions (Mannarino, Cohen, & Gregor, 1989).

A study of risk and protective factors for mental health outcomes among low-income African-American children found childhood maltreatment to be a strong risk factor for internalizing and externalizing problems compared with counterparts of the same race with no history of maltreatment (Gabalda, Thompson, & Kaslow, 2010). Another study found that African-American males with a history of childhood maltreatment were more likely to become involved in the juvenile justice system than same race counterparts who did not have such a history (Williams, Van Dorn, Bright, Jonson-Reid, & Nebbitt, 2010).

Gender

Juvenile female offenders have high rates of trauma exposure. For instance, Cauffman, Feldman, Waterman, and Steiner (1998) showed that most incarcerated females are exposed to multiple types of trauma. Recent studies have revealed that witnessing a violent crime and being confronted with traumatic news are the most frequently reported sources of trauma in female juvenile offenders (Dixon, Howie, & Starling, 2005). In particular, a high lifetime PTSD incidence (67%) has been observed among young women in custody (Cauffman et al., 1998) compared with the general population's incidence range of 1–14% (American Psychiatric Association, 1994). It has been documented that chronic exposure to violence results in the numbing of feelings or substance use and increased risk-taking behaviors, including violent activities, in an attempt to cope with or adapt to the feeling of being unsafe (Crimmins et al., 2000). Additionally, Giaconia et al. (1995) found that those with any history of PTSD symptomatology were more likely than those without to have behavioral or emotional problems, interpersonal problems, academic failure, suicidal behavior, and health problems. Based on the

previous studies (Dixon et al., 2005), there is evidence that juvenile offenders with PTSD experience higher rates of comorbid psychiatric disorders than those without PTSD. In particular, evidence suggests that young female offenders with PTSD have more comorbidity than those without PTSD, with depression, substance abuse/dependence, psychoses and eating disorders occurring significantly and more frequently (Ariga, Uehara, Takeuchi, Ishige, Nakano,& Mikuni, 2008).

Recidivism

Cottle, Lee, & Heilbrun (2001) conducted a meta-analysis to identify risk factors that best predict juvenile recidivism, defined as re-arrest for offending of any kind. They reviewed twenty-three published studies, representing 15,265 juveniles. They discovered eight groups of significant predictors for recidivism: (a) demographic factors (race, gender, and age), (b) offense history, (c) family and social factors, (d) educational factors, (e) intellectual and achievement scores, (f) substance use history, (g) clinical factors, and (h) formal risk assessment. They noted that the domain of offense history was the strongest predictor of reoffending; other relatively strong predictors included family problems, ineffective use of leisure time, delinquent peers, conduct problems, and nonsevere pathology (Cottle, Lee, & Heilbrun, 2001). Each of these domain areas has been identified through subsequent research.

Currently within the juvenile justice population, there has been a trend toward increase recidivism rates, especially for those who are not incarcerated. Court-involved, non-incarcerated juvenile offenders comprise approximately two-thirds of the juvenile justice population (Puzzanchera, 2009). It has been estimated that between one-half and one-third of this population has a diagnosable psychiatric condition (Gavazzi et al., 2006). A majority of these youth present with symptoms of conduct disorder and substance use disorders (Vermeiren, Jespers, & Moffitt,

2006). Studies have found that these juveniles with substance use disorders and psychiatric problems are at increased risk for substance-related recidivism (Vermeiren et al., 2006), persistent reoffending and self-reported antisocial activity (Schubert, Mulvey, & Glasheen, 2011). Additionally, co-occurring substance use and psychiatric ("dual diagnosis") disorders have been linked with higher risk for future detention in youth court-ordered for forensic mental health evaluation (Conrad, Tolou-Shams, Rizzo, Placella, & Brown, 2014).

Several studies have tried to identify specific predictors of recidivism other than mental health and drug use. When evaluating the influence of childhood sexual abuse on recidivism, the role of externalizing disorders (one of the strongest predictors of recidivism among juvenile justice youth) must also be considered (Gavazzi et al., 2006). It has been estimated that over 40% of incarcerated juveniles meet criteria for a disruptive behavior disorder (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002) and longitudinal studies suggest that these disorders are persistent across a period of two years (Teplin, Welty, Abram, Dulcan, & Washburn, 2012). This may increase the child's chance of reoffending within the two year period. Among boys, a diagnosis of conduct disorder (CD) is one of the strongest predictors of adult antisocial behavior (Pardini & Fite, 2010). Oppositional defiant disorder (ODD) symptoms have also been shown to predict later criminal charges and conduct problems among boys (Pardini & Fite, 2010). Although externalizing disorders are more prevalent among boys they likely also contribute to recidivism among girls (Conrad, Tolou-Shams, Rizzo, Placella, & Brown, 2014).

Previous research has also indicated that age at first offense is indicative of higher rates of recidivism. Upon their initial admission to juvenile detention, younger offenders have higher rates of anger/irritability compared to older offenders (Cauffman, 2004). In addition, the younger offenders also report higher levels of depressed/anxious symptoms compared to their

older peers. Also, younger juvenile offenders have been found to be more likely to recidivate than their older peers (Cottle, Lee, & Heilbrun, 2001). Young offenders evidence high rates of both internalizing and externalizing symptoms, which in combination contribute to increased risk for future juvenile justice involvement (Cottle, Lee, & Heilbrun, 2001).

Additionally, researchers have found that the strongest predictor of recidivism is a history of drug use (Barrett, Ju, Katsiyannis, & Zhang, 2015). Researchers note that this finding is particularly interesting given the strong association between adolescent drug use and lack of parental control in the family (Steinberg 2011). It has also been found that lower age at first referral and lower severity of first offense are predictors of repeat offending (Barrett et al. 2010). While the latter finding might seem counter-intuitive, it may be due in part to the fact that the most common status offense is truancy and that failure to comply with mandatory attendance orders will automatically result in a referral for contempt of court in many states (Barrett, Ju, Katsiyannis, & Zhang, 2015).

Another study found that for children and adolescents with any juvenile justice involvement, having a mental health diagnosis of any kind significantly increased these children's odds of criminal recidivism (Yampolskaya & Chuang, 2012). However, previous research has failed to establish a consistent relationship between mental health disorders such as depression, attention deficit disorder, and psychosis and subsequent criminal recidivism (Cropsey et al., 2008). One possible explanation is that the youth with these specific diagnoses are perceived as having more severe mental health problems and therefore are more likely to be diverted to the public mental health system after arrest. It is also possible that the youth with more serious symptomatology received more intensive intervention either while incarcerated or shortly after, perhaps leading to a reduction in repeat offences (Yampolskaya & Chuang, 2012).

Recidivism Race, Ethnicity, and Gender

It appears that there is an interaction between race, ethnicity, and gender when it comes to recidivism. However, there are specific connections between race/ethnicity and recidivism. The first connection can be made in regards to the placement of juvenile offenders in detention and the effects of this action. The concern is that these youthful offender detention placements are harmful for a number of reasons. First, many times the detention experience itself is a causal factor in subsequent reoffending (Mallett & Julian, 2008). This increased recidivism outcome runs counter to the U.S. juvenile justice system's policy goals of community safety, youth accountability, and youth rehabilitation (U.S. Department of Justice, 2010). And second, though it is not fully understood, race is a significant predictor of detention placement outcomes: African American offenders are six times more likely and Hispanic offenders three times more likely than Caucasian offenders to be detained, even when many of the legal factors are controlled (National Council on Crime and Delinquency, 2007; Puzzanchera, Adams, & Snyder, 2008). Because these non-white offenders are more likely to be detained, it would follow that they are also more likely to reoffend, based on previous research.

Further, Zahn and colleagues (2008) have suggested that there are gender differences in recidivism risk and that abuse experiences in childhood are often the precipitant for delinquent behavior in girls (Zahn et al., 2008). The difference in adult male and female pathways to recidivism has been highlighted in the adult literature (Reisig, Holtfreter, & Morash, 2006). Studies focused on recidivism among adult women have shown that sexual abuse in childhood, interpersonal relationships (e.g., association with negative male partners and limited sources of interpersonal support) and substance use are associated with increased recidivism risk for women (Hubbard & Pratt, 2002). However, males appear to become involved in the juvenile justice

through association with deviant peers, physical aggression (toward person or property), or oppositional attitudes and behaviors (Conrad, Tolou-Shams, Rizzo, Placella, & Brown, 2014).

Barrett, Ju, Katsiyannis, & Zhang (2013) found overwhelming evidence of the role of early social and psychological adversity in female delinquency. Particularly important is the impact of mental health disorders. In their study, females who had been diagnosed with a mental health disorder involving impulse control or aggression were approximately 11 times more likely to commit a criminal offense than females who had not been so diagnosed. While it is not possible to show a direct causal effect of mental illness on delinquency, it is important to recognize that in over 60% of cases of female juvenile offenders with a diagnosis of an aggressive disorder, the diagnosis of aggression preceded any involvement with the juvenile justice system. The role of attachment problems in the development of psychopathology among females has been previously noted (Barrett et al. 2013); in fact there is some evidence that early disruptions in parent–child relationships may have even more serious repercussions for females than for males (Benda 2002).

Finally, girls reported higher levels of anger/irritability symptoms than boys at the time of their first detention assessment, and boys reported higher rates of alcohol/drug use upon their initial admission to juvenile detention than girls (Lederman et al., 2004). Across multiple admissions to detention, however, somatic complaints decreased for boys only, whereas alcohol/drug use increased for both boys and girls. Consistent with previous research (Trulson et al., 2005; Vermeiren et al., 2002), substance use may be implicated particularly in an increased risk for recidivism (Sedlack & Bruce, 2010).

Trauma and Recidivism

Research related to trauma and recidivism in relatively new, and the relationship remains unclear. However, it has been found that although young offenders may be more likely to persist in the juvenile justice system than older adolescents in general, research indicates that young adolescents exposed to trauma may be particularly likely to recidivate (Cottle et al., 2013). Becker and colleagues (2012) investigated the differential roles that trauma and demographic factors play in predicting recidivism and mental health functioning among adjudicated youth followed over a three-year period. Consistent with the idea that involvement in the juvenile justice system itself may be associated with iatrogenic effects, particularly for traumatized youth (Griffin, 2002; Mahoney, Ford, Ko, & Seigfried, 2004), the investigators found that mental health problems associated with alcohol and drug abuse increase over the course of multiple admissions to detention. The researchers discovered that analyses of recidivism rates reveal a triple interaction effect: Female African American youth with PTSD are the most likely to reoffend (Steinberg, Chung, & Little, 2004).

Solomon, Davies, and Luckham (2012) hypothesized that exposure to trauma disrupts adolescent girls' decision-making capacities, with PTSD symptoms such as hyper-arousal interfering with information processing and independent thinking. The authors also examined whether the association between trauma and impaired decision making is mediated by specific emotional disturbances. Their results indicated that the relations between trauma exposure and decision making are accounted for by increases in anger, substance abuse, depression, somatic complaints, and suicidal ideation (Solomon, Davies, and Luckham, 2012). The authors believe that these findings provide insights into what may lie beneath the re-offending behavior among girls, and point to the possibility that their antisocial acts may reflect more desperation than cold

calculation, akin to what Ford, Chapman, Mack, and Pearson (2006) referred to as "survival coping."

Becker and colleagues (2012) found that compared to Caucasian youth, young African American youth with either full or partial PTSD were most likely to recidivate, and African Americans girls with PTSD were particularly vulnerable to repeat admissions to juvenile detention. In considering gender differences, it is important to note that girls have been found to be less likely to recidivate than boys overall; however, African American girls have been found to be more likely than boys to recidivate when PTSD is present, suggesting that PTSD symptoms play an important role in understanding reoffending (Becker, et al, 2012). This finding is notable given that previous research has found the MAYSI-2 Traumatic Experiences scale to negatively predict recidivism (Marczyk et al., 2003) in spite of other research demonstrating that a history of trauma contributes to recidivism risk (Cottle et al., 2001; Mulder et al., 2011). It also appears that the role of PTSD in recidivism may be particularly salient for girls. This is the case, even though boys are more likely to recidivate than girls (Cottle et al., 2001; Lanctôt & Le Blanc, 2002). In addition, although girls may be less likely than boys to persist in serious forms of delinquency, they may differentially draw the attention of the juvenile justice system for minor infractions such as status offenses due to "net-widening" within the juvenile justice system (Schwartz & Steffensmeier, 2012). Overall, it appears that that those girls experiencing PTSD symptoms are among those most at-risk for future juvenile justice involvement, with younger and African American girls especially vulnerable.

Summary

As just reviewed, trauma in childhood have been found to be associated with significant mental health issues and increased involvement in the juvenile justice system. Youth involved in

the juvenile justice system have a higher incidence of experiencing trauma than those not involved in the justice system. Also, youth in the juvenile justice system tend to have a higher rate of mental health disorders than community samples. Research suggests that experiences of trauma many be a causal factor in the mental and behavioral problems demonstrated in youth involved in the juvenile justice system. Additionally, recidivism continues to be an area of concern related to youth in the juvenile justice system. Age at first offending, substance use, and mental health status have all been associated with higher rates of recidivism. Gender and race/ethnicity also appear to play a role in re-offending behavior. Research has indicated that there is a link between the experience of trauma and increased rates of recidivism. Specifically, those who have evidenced symptoms of PTSD appear to be more likely to re-offend than those who do not evidence PTSD symptomology. In order to better serve the juvenile offender population, it will be important to examine the relationship between trauma exposure and recidivism rates. This study will examine the consequences of trauma exposure to those involved in the juvenile justice system and its impact on re-offending behavior. The study will also look at the potential interactions of gender, race, ethnicity, and trauma exposure on recidivism rates.

CHAPTER THREE

Method

Research has found that a significant number of youths involved in the juvenile justice system have been exposed to traumatic events. Further, it has been shown that there is a link between trauma and delinquent behavior as well as link between PSTD symptomology and recidivism. Additionally, the MMPI-A, the most commonly used assessment measure among forensic psychologists working with this population, has been suggested to identify youth in the juvenile justice population who have experienced traumatic events. This study examined the link between trauma experiences and recidivism rates, as well as the interaction among variables such as race, ethnicity, and gender, related to trauma and recidivism.

Participants

The individuals who participated in this study were adolescents referred by the Department of Juvenile Justice located in a southeastern city of the United States to participate in a psychological evaluation to identify mental health disorders and treatment and/or placement recommendations, or to receive counseling services through a University-based counseling program. According to the most recent demographic information about the youths arrested in this county for 2013, 74% were African American, 10% Hispanic/Latino, and 13% White. Additionally, 38% or youths arrested in this county were female, 8% were under the age of 12, 55% were between the ages of 13 and 15, and 40% were 16 years old and up (Georgia Department of Juvenile Justice, 2013). An economic description of the county is captured in the statistic that 69.5% of students attending public school were considered economically

disadvantaged in the 2008-2009 school year. Also, 34.3% of children ages 0-17 lived below the poverty line in this county in 2009 (Boatright, 2011).

The psychological evaluations were conducted by doctoral graduate students trained in psychological assessment or by licensed psychologists. The psychological evaluations consisted of a measure of cognitive ability, a measure of personality, an in-depth clinical interview with the youth, and a review of the youth's juvenile justice records. Cases were chosen for this study from the archival collection of psychological evaluations conducted from 1998 through 2010. Psychological evaluations to be included in the study were selected according to three criteria: 1) the subject of the evaluation was between the ages 14 and 18 years old (the age range for which the MMPI-A is normed for use), 2) the subject completed an MMPI-A, and 3) an in-depth clinical interview in which the topics of childhood maltreatment and grief and loss were specifically addressed. Psychological evaluations in which these topics were not specifically addressed were not included, as it is possible the youth experienced these events, but did not volunteer the information without prompting from the evaluator. Further, cases were chosen based on available follow-up information regarding recidivism. Participant recidivism data was collected through the Department of Juvenile Justice database. Cases were included if recidivism data was available after a two year period from the date of the psychological evaluation.

After reviewing the evaluations, 154 evaluations were identified as meeting criteria for inclusion in this study. There were substantially more males than females in the final sample (Male N = 121; Female N = 33). The adolescent sample is ranged in age from 14 to 18, with the mean age being 15.3 years old and the median being 15.1 years old. The racial breakdown consisted mainly of African-American (N = 78) and White (N = 61) youths. There were also 13 Latino/a youths, 1 youth who identified as Biracial and 1 youth who identified as Asian.

Charges ranged from status offenses (N = 35) to drug charges (N = 21) to crimes against property (N = 27) and crimes against persons, including battery and aggravated assault (N = 39). Cases were separated into two groups, Trauma History (N = 67) and No Trauma History (N = 87) based on whether the subject of the evaluation endorsed one of the five identified types of trauma or denied any trauma history. Within the trauma history group, the cases were further assigned to one of the four identified types of trauma: Physical Abuse (N = 16), Sexual Abuse (N = 9), Grief and Loss (N = 23), and Multiple Types of Trauma (N = 19).

Instruments

Minnesota Multiphasic Personality Inventory – Adolescent (Butcher, et al., 1992).

The MMPI-A is an empirically based measure of adolescent psychopathology, the MMPI-A test contains adolescent-specific scales, and other unique features designed to make the instrument especially appropriate for youth. It offers reports tailored to particular settings, the MMPI-A test helps provide relevant information to aid in problem identification, diagnosis, and treatment planning for youth (ages 14–18) (Butcher, et al., 1992). The MMPI-A is a 478 true-false self-report measure of personality and psychopathology. It was normed with clinical and nonclinical populations, with the norming sample consisting of approximately 2,500 adolescents ranging in age from 14 to 18. The norm sample closely resembled the U.S. Census data, with 76% of the sample consisting of White adolescents, 12% Black adolescents, and the remaining 12% consisting of adolescents identified as Asian, Hispanic, Native American, and "Other" (Archer, 2005). It consists of seven validity scales, ten clinical scales, 15 content scales, and a variety of supplementary scales. It has demonstrated acceptable test-retest reliability and internal consistency, comparable with the MMPI-2 (Butcher, et al., 1992). Test-retest correlations for the clinical scales over a one week period have a median r = .80. Concurrent validity of the MMPI-

A has been examined with juvenile offenders. One study found elevations on MMPI-A were strongly correlated with counselor ratings of behavior and mental health problems in a sample of juvenile offenders (Toyer & Weed, 1998).

In the present study, the MMPI-A is used to identify exposure to trauma in adjudicated youth. Murray, Glaser, & Calhoun (2013) identified 17 items as being able to differentiate between the trauma history and no trauma history among the juvenile offender population. These findings strongly indicate that the MMPI-A can be used as a tool that assists clinicians in identifying adolescents in the juvenile justice system who have a history of trauma exposure.

The item content endorsed on these 17 items describes an adolescent who is significantly anxious and depressed, and experiences these symptoms through somatic and physical complaints; an individual who feels a considerable amount of anger and alienation, and expresses these emotions through externalizing behaviors; an individual who feels socially isolated, experiences some degree of fear at home, and denies having anyone in their family in whom they can confide (Murray, Glaser, & Calhoun, 2013). This item profile corresponds with research that shows individuals who experience childhood maltreatment do not solely demonstrate symptoms associated with PTSD, but also often symptoms associated with other comorbid anxiety and mood disorders, as well as psychotic symptoms and suicidal ideation (Famularo, Fenton, Kinscherff, & Augustyn, 1996).

Analyses

To examine the hypotheses, a chi squared analysis will be conducted to determine the effect of experiencing trauma (trauma history vs. no trauma history) on the dependent variable, recidivism rate.

Limitations

The overall sample size was adequate for the statistical analyses conducted. However, a larger sample was needed to adequately compare all of the groups originally identified for inclusion in analyses. Specifically, the sample sizes for female juvenile offenders, Latino/a juvenile offenders, Asian juvenile offenders, and Biracial juvenile offenders is relatively small.

As previously mentioned, self-report is a valid means of obtaining information about trauma history. However, it is possible that juvenile offenders with a history of trauma exposure denied this information during the psychological evaluation and were incorrectly placed in no trauma history group. This may have influenced the group means and diminished the differences in scores between the trauma history group and the no trauma history group.

Another limitation for this study is the lack of information provided by the participants in terms of previous and potentially on-going mental health treatment. Because this information was not gathered, it may be that the participants were being treated by a mental health professional and that this relationship diminished the participants' potentially unhealthy response to the trauma exposure. Therefore, if the participant were involved in productive therapy, his/her likelihood of increased recidivism rates would decrease. This variable was not assessed for and therefore not controlled for in the current study.

CHAPTER FOUR

Trauma History and Recidivism Rates

To determine if juvenile offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma produce higher recidivism rates than those who do not identify trauma exposure, the relationship between the independent variable ,trauma history (trauma history, N = 67, no trauma history, N = 87) and the dependent variable, recidivism rates (the juvenile has recidivated within 2 years of original psychological evaluation, N = 89, the juvenile has **not** recidivated within 2 years of original psychological evaluation, N = 65) was examined using a Chi-Square Test for Independence. The Chi-Square statistic was not significant *(p = .058)*, indicating that there is not a significant relationship between trauma and recidivism rates in the current sample of juvenile offenders, see Figure 1.

Type of Trauma and Recidivism Rates

To determine if rates of recidivism varied across specific types of trauma, the relationship between the type of trauma (physical abuse, N = 16, sexual abuse/assault, N = 9, grief and loss, N = 23, multiple types of victimization, N = 19) and recidivism rates (the juvenile has recidivated within 2 years of original psychological evaluation, N = 89, the juvenile has **not** recidivated within 2 years of original psychological evaluation, N = 65) was examined using a Chi-Square Test for Independence. The Chi-Square test statistic was not significant *(p = 0.448)*, indicating that there is no significant relationship between the type of trauma experienced by a juvenile offender and recidivism rates in the current sample, see Figure 2.

Demographic Variables, Trauma, and Recidivism Rates

To determine if rates of recidivism vary differentially across specific demographic variables, specifically race and gender when members of these demographic groups have also been identified as experiencing trauma, each demographic variable was examined independently in regards to its relationship to recidivism rates.

First, the relationship between race of the juvenile offender (African American, N = 78, Caucasian, N = 61, Latino/a, N = 13, Biracial, N = 1, Asian American, N = 1), trauma history (trauma history, N = 67, no trauma history, N = 87) and recidivism rates (the juvenile has recidivated within 2 years of original psychological evaluation, N = 89, the juvenile has **not** recidivated within 2 years of original psychological evaluation, N = 65) was examined using a Chi-Square Test of Independence. The Chi-Square test statistic was not significant *(p = .055)*, see Figure 3.

Second, the relationship between gender of the juvenile offender (Male, N = 121, Female, N = 33), trauma history (trauma history, N = 67, no trauma history, N = 87) and recidivism rates (the juvenile has recidivated within 2 years of original psychological evaluation, N = 89, the juvenile has **not** recidivated within 2 years of original psychological evaluation, N = 65) was examined using a Chi-Square Test of Independence. The Chi-Square test statistic was significant *(p = .002)*, see Figures 4, 5, and 6. This demonstrates that there is a relationship between the gender of the juvenile offender who was experienced trauma and rates of recidivism. It appears that in this sample of juvenile offenders, male offenders are more likely to have higher rates of recidivism when they have experienced trauma than females who have experienced trauma. Also, males are more likely to recidivate when they have experienced trauma versus their male peers who have not experienced trauma.

Trauma History and Type of Charge

To determine if rates of recidivism vary differentially across specific types of charges, specifically misdemeanors and felony charges, when members of these groups have also been identified as experiencing trauma, each type of charge (misdemeanor or felony) variable was examined independently in regards to its relationship to recidivism rates.

To determine if juvenile offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma produce higher recidivism rates in regards to felony charges than those who do not identify trauma exposure, the relationship between the independent variable, trauma history (trauma history, N = 67, no trauma history, N = 87) and the dependent variable, receiving a felony charge (the juvenile has received a felony charge within two years of original psychological evaluation, N = 35, the juvenile has **not** received a felony charge within two years of original psychological evaluation, N = 119) was examined using a Chi-Square Test for Independence. The Chi Square test statistic was found to be significant *(p = .021)*, indicating that there is a relationship between a juvenile's trauma history and the recidivism rates specifically related to felony charges, see Figure 5.

To determine if juvenile offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma produce higher recidivism rates in regards to misdemeanor charges than those who do not identify trauma exposure, the relationship between the independent variable, trauma history (trauma history, N = 67, no trauma history, N = 87) and the dependent variable, receiving a misdemeanor charge (the juvenile has received a misdemeanor charge within two years of original psychological evaluation, N = 64, the juvenile has **not** received a misdemeanor charge within two years of original psychological evaluation, N = 90) was examined using a Chi-Square Test for Independence. The Chi Square test statistic was

found to be not significant *(p = .292)*, indicating that there is no relationship between a juvenile's trauma history and the recidivism rates specifically related to misdemeanor charges, see Figure 6.

Summary

It was found that those juvenile offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma, do not produce higher recidivism rates than those who do not identify trauma exposure; hypothesis one was not supported. Second, it was found that rates of recidivism do not vary differentially across specific types of trauma; hypothesis two was not supported. Third, it was found that rates of recidivism did not vary differentially across race when members of different racial groups have also been identified as experiencing trauma. However, it was found that rates of recidivism *did* vary differentially across gender when members of these groups have also been identified as experiencing trauma. Specifically, it was found that males who have been identified as experiencing a trauma have higher rates of recidivism than males who have not been identified as experiencing a trauma. Additionally, males who have been identified as experiencing a trauma have significantly higher recidivism rates than females who have been identified as experiencing a trauma. Finally, it was found that rates of recidivism vary differentially across specific types of offense, specifically felony and misdemeanor offenses. Specifically, of juvenile offenders who have recidivated, those who have been identified as experiencing a trauma have higher rates of felony offenses committed than juvenile offenders who have not been identified as experiencing a trauma.

Figure 1

Trauma History Yes/No * Recidivism Yes/No Crosstabulation

			Recidivism Yes/No		
			N	Y	Total
Trauma History Yes/No	no	Count	42	45	87
		% within Trauma History Yes/No	48.3%	51.7%	100.0%
		% within Recidivism Yes/No	64.6%	50.6%	56.5%
		% of Total	27.3%	29.2%	56.5%
	Y	Count	23	44	67
		% within Trauma History Yes/No	34.3%	65.7%	100.0%
		% within Recidivism Yes/No	35.4%	49.4%	43.5%
		% of Total	14.9%	28.6%	43.5%
Total		Count	65	89	154
		% within Trauma History Yes/No	42.2%	57.8%	100.0%
		% within Recidivism Yes/No	100.0%	100.0%	100.0%
		% of Total	42.2%	57.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.019[a]	1	.082		
Continuity Correction[b]	2.474	1	.116		
Likelihood Ratio	3.042	1	.081		
Fisher's Exact Test				.100	.058
N of Valid Cases	154				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 28.28.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.140	.082
	Cramer's V	.140	.082
N of Valid Cases		154	

Figure 2

What type of trauma history reported * Recidivism Yes/No Crosstabulation

			Recidivism Yes/No		
			N	Y	Total
What type of trauma history reported	Physical Abuse	Count	5	11	16
		% within What type of trauma history reported	31.3%	68.8%	100.0%
		% within Recidivism Yes/No	7.7%	12.4%	10.4%
		% of Total	3.2%	7.1%	10.4%
	Sex abuse/assault	Count	3	6	9
		% within What type of trauma history reported	33.3%	66.7%	100.0%
		% within Recidivism Yes/No	4.6%	6.7%	5.8%
		% of Total	1.9%	3.9%	5.8%
	Grief and Loss	Count	7	16	23
		% within What type of trauma history reported	30.4%	69.6%	100.0%
		% within Recidivism Yes/No	10.8%	18.0%	14.9%
		% of Total	4.5%	10.4%	14.9%
	Multiple types of victimization	Count	8	11	19
		% within What type of trauma history reported	42.1%	57.9%	100.0%
		% within Recidivism Yes/No	12.3%	12.4%	12.3%
		% of Total	5.2%	7.1%	12.3%
	No reported trauma history	Count	42	45	87
		% within What type of trauma history reported	48.3%	51.7%	100.0%
		% within Recidivism Yes/No	64.6%	50.6%	56.5%
		% of Total	27.3%	29.2%	56.5%
Total		Count	65	89	154
		% within What type of trauma history reported	42.2%	57.8%	100.0%
		% within Recidivism Yes/No	100.0%	100.0%	100.0%
		% of Total	42.2%	57.8%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.698[a]	4	.448
Likelihood Ratio	3.767	4	.439
N of Valid Cases	154		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 3.80.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.155	.448
	Cramer's V	.155	.448
N of Valid Cases		154	

Figure 3

race * Recidivism Yes/No * Trauma History Yes/No Crosstabulation

Trauma History Yes/No				Recidivism Yes/No N	Recidivism Yes/No Y	Total
no	race	African American	Count	19	29	48
			% within race	39.6%	60.4%	100.0%
			% within Recidivism Yes/No	45.2%	64.4%	55.2%
			% of Total	21.8%	33.3%	55.2%
		Caucasian	Count	20	11	31
			% within race	64.5%	35.5%	100.0%
			% within Recidivism Yes/No	47.6%	24.4%	35.6%
			% of Total	23.0%	12.6%	35.6%
		Hispanic	Count	3	5	8
			% within race	37.5%	62.5%	100.0%
			% within Recidivism Yes/No	7.1%	11.1%	9.2%
			% of Total	3.4%	5.7%	9.2%
	Total		Count	42	45	87
			% within race	48.3%	51.7%	100.0%
			% within Recidivism Yes/No	100.0%	100.0%	100.0%
			% of Total	48.3%	51.7%	100.0%
Y	race	African American	Count	9	21	30
			% within race	30.0%	70.0%	100.0%
			% within Recidivism Yes/No	39.1%	47.7%	44.8%
			% of Total	13.4%	31.3%	44.8%
		Caucasian	Count	14	16	30
			% within race	46.7%	53.3%	100.0%
			% within Recidivism Yes/No	60.9%	36.4%	44.8%
			% of Total	20.9%	23.9%	44.8%
		Hispanic	Count	0	5	5
			% within race	0.0%	100.0%	100.0%
			% within Recidivism Yes/No	0.0%	11.4%	7.5%
			% of Total	0.0%	7.5%	7.5%
		Biracial	Count	0	1	1
			% within race	0.0%	100.0%	100.0%
			% within Recidivism Yes/No	0.0%	2.3%	1.5%
			% of Total	0.0%	1.5%	1.5%

		Asian American	Count	0	1	1
			% within race	0.0%	100.0%	100.0%
			% within Recidivism Yes/No	0.0%	2.3%	1.5%
			% of Total	0.0%	1.5%	1.5%
	Total		Count	23	44	67
			% within race	34.3%	65.7%	100.0%
			% within Recidivism Yes/No	100.0%	100.0%	100.0%
			% of Total	34.3%	65.7%	100.0%
Total	race	African American	Count	28	50	78
			% within race	35.9%	64.1%	100.0%
			% within Recidivism Yes/No	43.1%	56.2%	50.6%
			% of Total	18.2%	32.5%	50.6%
		Caucasian	Count	34	27	61
			% within race	55.7%	44.3%	100.0%
			% within Recidivism Yes/No	52.3%	30.3%	39.6%
			% of Total	22.1%	17.5%	39.6%
		Hispanic	Count	3	10	13
			% within race	23.1%	76.9%	100.0%
			% within Recidivism Yes/No	4.6%	11.2%	8.4%
			% of Total	1.9%	6.5%	8.4%
		Biracial	Count	0	1	1
			% within race	0.0%	100.0%	100.0%
			% within Recidivism Yes/No	0.0%	1.1%	0.6%
			% of Total	0.0%	0.6%	0.6%
		Asian American	Count	0	1	1
			% within race	0.0%	100.0%	100.0%
			% within Recidivism Yes/No	0.0%	1.1%	0.6%
			% of Total	0.0%	0.6%	0.6%
	Total		Count	65	89	154
			% within race	42.2%	57.8%	100.0%
			% within Recidivism Yes/No	100.0%	100.0%	100.0%
			% of Total	42.2%	57.8%	100.0%

Chi-Square Tests

Trauma History Yes/No		Value	df	Asymp. Sig. (2-sided)
no	Pearson Chi-Square	5.099[b]	2	.078
	Likelihood Ratio	5.151	2	.076
	N of Valid Cases	87		
Y	Pearson Chi-Square	5.934[c]	4	.204
	Likelihood Ratio	8.080	4	.089
	N of Valid Cases	67		
Total	Pearson Chi-Square	9.262[a]	4	.055
	Likelihood Ratio	10.089	4	.039
	N of Valid Cases	154		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .42.

b. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.86.

c. 6 cells (60.0%) have expected count less than 5. The minimum expected count is .34.

Symmetric Measures

Trauma History Yes/No			Value	Approx. Sig.
no	Nominal by Nominal	Phi	.242	.078
		Cramer's V	.242	.078
	N of Valid Cases		87	
Y	Nominal by Nominal	Phi	.298	.204
		Cramer's V	.298	.204
	N of Valid Cases		67	
Total	Nominal by Nominal	Phi	.245	.055
		Cramer's V	.245	.055
	N of Valid Cases		154	

Figure 4

gender * Trauma History Yes/No * Recidivism Yes/No Crosstabulation

Recidivism Yes/No				Trauma History Yes/No		
				no	Y	Total
N	gender	Male	Count	38	14	52
			% within gender	73.1%	26.9%	100.0%
			% within Trauma History Yes/No	90.5%	60.9%	80.0%
			% of Total	58.5%	21.5%	80.0%
		Female	Count	4	9	13
			% within gender	30.8%	69.2%	100.0%
			% within Trauma History Yes/No	9.5%	39.1%	20.0%
			% of Total	6.2%	13.8%	20.0%
	Total		Count	42	23	65
			% within gender	64.6%	35.4%	100.0%
			% within Trauma History Yes/No	100.0%	100.0%	100.0%
			% of Total	64.6%	35.4%	100.0%
Y	gender	Male	Count	38	31	69
			% within gender	55.1%	44.9%	100.0%
			% within Trauma History Yes/No	84.4%	70.5%	77.5%
			% of Total	42.7%	34.8%	77.5%
		Female	Count	7	13	20
			% within gender	35.0%	65.0%	100.0%
			% within Trauma History Yes/No	15.6%	29.5%	22.5%
			% of Total	7.9%	14.6%	22.5%
	Total		Count	45	44	89
			% within gender	50.6%	49.4%	100.0%
			% within Trauma History Yes/No	100.0%	100.0%	100.0%
			% of Total	50.6%	49.4%	100.0%

Total	gender	Male	Count	76	45	121
			% within gender	62.8%	37.2%	100.0%
			% within Trauma History Yes/No	87.4%	67.2%	78.6%
			% of Total	49.4%	29.2%	78.6%
		Female	Count	11	22	33
			% within gender	33.3%	66.7%	100.0%
			% within Trauma History Yes/No	12.6%	32.8%	21.4%
			% of Total	7.1%	14.3%	21.4%
	Total		Count	87	67	154
			% within gender	56.5%	43.5%	100.0%
			% within Trauma History Yes/No	100.0%	100.0%	100.0%
			% of Total	56.5%	43.5%	100.0%

Chi-Square Tests

Recidivism Yes/No		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
N	Pearson Chi-Square	8.142[c]	1	.004		
	Continuity Correction[b]	6.397	1	.011		
	Likelihood Ratio	7.846	1	.005		
	Fisher's Exact Test				.008	.006
	N of Valid Cases	65				
Y	Pearson Chi-Square	2.499[d]	1	.114		
	Continuity Correction[b]	1.761	1	.185		
	Likelihood Ratio	2.528	1	.112		
	Fisher's Exact Test				.134	.092
	N of Valid Cases	89				
Total	Pearson Chi-Square	9.166[a]	1	.002		
	Continuity Correction[b]	8.006	1	.005		
	Likelihood Ratio	9.164	1	.002		
	Fisher's Exact Test				.003	.002
	N of Valid Cases	154				

Symmetric Measures

Recidivism Yes/No			Value	Approx. Sig.
N	Nominal by Nominal	Phi	.354	.004
		Cramer's V	.354	.004
	N of Valid Cases		65	
Y	Nominal by Nominal	Phi	.168	.114
		Cramer's V	.168	.114
	N of Valid Cases		89	
Total	Nominal by Nominal	Phi	.244	.002
		Cramer's V	.244	.002
	N of Valid Cases		154	

Figure 5

Felony Yes/No * Trauma History Yes/No Crosstabulation

			Trauma History Yes/No		
			no	Y	Total
Felony Yes/No	N	Count	73	46	119
		% within Felony Yes/No	61.3%	38.7%	100.0%
		% within Trauma History Yes/No	83.9%	68.7%	77.3%
		% of Total	47.4%	29.9%	77.3%
	Y	Count	14	21	35
		% within Felony Yes/No	40.0%	60.0%	100.0%
		% within Trauma History Yes/No	16.1%	31.3%	22.7%
		% of Total	9.1%	13.6%	22.7%
Total		Count	87	67	154
		% within Felony Yes/No	56.5%	43.5%	100.0%
		% within Trauma History Yes/No	100.0%	100.0%	100.0%
		% of Total	56.5%	43.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.013[a]	1	.025		
Continuity Correction[b]	4.182	1	.041		
Likelihood Ratio	4.984	1	.026		
Fisher's Exact Test				.033	.021
N of Valid Cases	154				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.23.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.180	.025
	Cramer's V	.180	.025
N of Valid Cases		154	

Figure 6

Trauma History Yes/No * Mis Yes/No Crosstabulation

			Mis Yes/No		
			N	Y	Total
Trauma History Yes/No	no	Count	53	34	87
		% within Trauma History Yes/No	60.9%	39.1%	100.0%
		% within Mis Yes/No	58.9%	53.1%	56.5%
		% of Total	34.4%	22.1%	56.5%
	Y	Count	37	30	67
		% within Trauma History Yes/No	55.2%	44.8%	100.0%
		% within Mis Yes/No	41.1%	46.9%	43.5%
		% of Total	24.0%	19.5%	43.5%
Total		Count	90	64	154
		% within Trauma History Yes/No	58.4%	41.6%	100.0%
		% within Mis Yes/No	100.0%	100.0%	100.0%
		% of Total	58.4%	41.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.506[a]	1	.477		
Continuity Correction[b]	.298	1	.585		
Likelihood Ratio	.505	1	.477		
Fisher's Exact Test				.512	.292
N of Valid Cases	154				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 27.84.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.057	.477
	Cramer's V	.057	.477
N of Valid Cases		154	

CHAPTER FIVE

Summary of the Study

Exposure to trauma can lead to significant mental health issues, including PTSD, an increase in mood disorders, increased substance use and abuse, and other behavioral disorders (Caffo, Forresi, and Lievers, 2005; Famularo et al., 1996; Putnam, 1997; Streeck-Fischer & van der Kolk, 2000). Further, more recent research has shown that trauma exposure in childhood and adolescence may increase the likelihood of problematic behavioral patterns and these patterns can lead to involvement in the juvenile justice system (Ford, Chapman, Mack, & Pearson, 2006). Ford and his colleagues (2006) have suggested that trauma, and more specifically prolonged trauma, results in increased susceptibility to psychological, behavioral, and relational problems over the course of adolescence, and that this may result in juvenile court involvement. Exposure to trauma in adolescence in samples of juvenile offenders ranges from 70% to 92.5%, which is consistently higher than rates of trauma identified in the adolescent population in the community (Abram et al., 2004; Dixon, Howie, & Starling, 2005; Garland et al., 2001).

Currently within the juvenile justice population, there has been a trend toward increased recidivism rates, especially for those who are not incarcerated. Court-involved, non-incarcerated juvenile offenders comprise approximately two-thirds of the juvenile justice population (Puzzanchera, 2009). It has been estimated that between one-half and one-third of this population has a diagnosable psychiatric condition (Gavazzi et al., 2006). A majority of these youth present with symptoms of conduct disorder and substance use disorders (Vermeiren, Jespers, & Moffitt, 2006). Additionally, although young offenders may be more likely to persist in the juvenile

justice system than older adolescents in general, research indicates that young adolescents exposed to trauma may be particularly likely to recidivate. Researcher indicates that there is a link between the experience of trauma and increased rates of recidivism. Specifically, those who have evidenced symptoms of PTSD appear to be more likely to re-offend than those who do not evidence PTSD symptomology (Cottle et al., 2013).

Often, systems that come into contact with children who have been exposed to traumatic events, particularly the juvenile justice system, may be more likely to identify behavioral symptoms, such as acting out, rule-breaking behavior, and agitation, and professionals within those systems may not make a connection between these externalizing symptoms and the traumatic events in a youth's past. Additionally, recidivism rates may be viewed by professionals in the juvenile justice system as being a sign of anti-social behavior or as indicative of a relationship with substances. Trauma history may not be considered when looking at a juvenile offender's rates of recidivism.

The current juvenile justice system is focused on externalizing symptomology like specific problem behaviors rather than internalizing symptomology like anxiety and depression. And while psychological evaluations are a routine part of the juvenile justice system in order to identify mental health disorders and treatment needs for adjudicated youths, these evaluations may not investigate a history of trauma exposure or emphasize a connection between trauma exposure and the individual's externalizing symptoms and disruptive behaviors, even though research has identified trauma's strong influence on the mental health of youths involved in the juvenile justice system (Ford, et al., 2007).

The Minnesota Multiphasic Personality Inventory – Adolescent (MMPI-A; Butcher et al., 1992) is the most commonly used self-report measure of adolescent psychopathology (Archer &

Newsome, 2000). Its widespread use in forensic evaluations with juvenile offenders (Archer, et al., 2006) has led to significant research into the validity of its use with this population (Baum, Archer, Forbey & Handel, 2009). Because of the extensive use of this instrument with the juvenile justice population, researchers have been able to identify specific response patterns that differentiate between juvenile offenders with a reported history of trauma and those without a reported trauma history (Murray, Calhoun, & Glaser, 2014). Because trauma history can now be identified through a reliable and valid method that does not involve a detailed clinical interview or trauma questionnaire, it may be possible for professionals to be more aware of the role that trauma plays in recidivism rates within the juvenile offender population. In order to better serve the juvenile offender population, it will be important to examine the relationship between trauma exposure and recidivism rates.

This study attempted to address this need and examined the recidivism rates of juvenile offenders who had been identified through the profiles and responses on the MMPI-A produced by a sample of juvenile offenders with and without a trauma history. Specifically, this study examined the consequences of trauma exposure to those involved in the juvenile justice system and its impact on re-offending behavior. The study also investigated the potential interactions of specific demographic variables on recidivism rates. Finally, this study explained the potential link between the type of charge committed and recidivism rates.

In this study, 154 psychological evaluations in which an MMPI-A was conducted with adolescents ranging in age from 14-18 years old, who were referred from the Department of Juvenile Justice in a southern U.S. state, were examined to identify the presence and type of trauma history. Additionally, records from the Department of Juvenile Justice were reviewed to determine recidivism for each of the cases within a two year period. Cases were labeled by

classifications identified from the clinical interview conducted as part of the psychological evaluation. These classifications included trauma grouping (trauma history or no trauma history), type of trauma history (physical abuse, sexual abuse, neglect, grief and loss, and multiple victimizations), race (Black, White, Latino/a, Asian, and Biracial), and gender (male and female), and type of offence upon recidivating (misdemeanor or felony). Each case's trauma history and recidivism rates were compared to determine the relationship with trauma and recidivism rates.

The hypotheses for the present study were:

Hypothesis 1: Will juvenile Offenders who have been identified as having a history of trauma exposure using the MMPI-A groupings for identifying trauma produce higher recidivism rates than those who do not identify trauma exposure?

Hypothesis 2: Will rates of recidivism vary differentially across specific types of trauma?

Hypothesis 3: Will rates of recidivism vary differentially across specific demographic variables, specifically race and gender when members of these demographic groups have also been identified as experiencing trauma?

Hypothesis 4: Will rates of recidivism vary differentially across specific types of offense, specifically felony and misdemeanor offenses?

To examine Hypothesis 1, a chi-square test of independence was conducted to determine the relationship between experiencing trauma (trauma history vs. no trauma history) and recidivism rates (the individual has recidivated within two years of the psychological evaluation vs. the individual did not recidivate within 2 years of the psychological evaluation). To examine Hypothesis 2, a chi-square test of independence was conducted to determine the relationship between specific types of trauma (physical abuse, sexual abuse/assault, grief and loss, and

multiple types of victimization) and recidivism rates. To examine hypothesis 3, a chi-square test of independence was conducted to determine the relationship between specific demographic variables (race and gender) of those who have been identified as experiencing trauma and recidivism rates. First, a chi-square test was conducted to determine the relationship between race (Black, White, Latino/a, Asian, and Biracial) of those who had been identified as experiencing trauma and recidivism rates. Next, a chi-square test was conducted to determine the relationship between gender (male and female) of those who had been identified as experiencing trauma and recidivism rates. To examine Hypothesis 4, a chi-square test of independence was conducted to determine the relationship between experiencing trauma (trauma history vs. no trauma history) and specific type of offence upon recidivating (felony or misdemeanor).

Conclusions

The findings of the chi-square test of independence conducted to determine the relationship between trauma exposure and recidivism rates did not support Hypothesis 1. Juvenile offenders with a history of trauma do not differ from Juvenile Offenders with no history of trauma in regards to their rates of recidivism. This indicates that a juvenile offender who has experienced a trauma is no more likely to recidivate than a juvenile offender who has not experienced a traumatic event. There does not appear to be a relationship between experience of trauma and recidivism rates in this sample of adolescents in the juvenile justice population.

The findings of this study add to the recent research which continues to be unclear regarding the relationship between trauma and recidivism. These results add to the current body of research in that they provide information about the direct link between trauma history and recidivism rates, in that the two do not appear to be directly linked given the current finding. Such a finding is notable given that previous research has found the MAYSI-2 Traumatic

Experiences scale to negatively predict recidivism (Marczyk et al., 2003). The body of research related to trauma and recidivism among the juvenile justice population continues to be wrought with conflicting findings in the research, and this current finding supports the idea that there is not a definitive link between trauma history and re-offending behavior in the juvenile justice population. It may be that the current research is focusing on one's experience of trauma versus one's experience of a PTSD reaction to the traumatic event. It may be that the PTSD reaction is related to an increased recidivism rate in juvenile offenders. Additionally, it is important to note that often times, an adolescent who is incarcerated will perceive that situation as traumatic, and therefore those who were incarcerated may be more likely to re-offend than those who were not. These types of differences where not separated in the current study.

The findings of the chi- square test of independence conducted to determine the relationship between specific types of trauma and recidivism rates did not support Hypothesis 2. This indicates that specific types of traumatic experiences have no relationship with recidivism rates. There does not appear to be a relationship between the type of trauma experienced by the juvenile offenders and rates of recidivism.

This finding is contrary to some of the current literature in that studies focused on recidivism among adult women have shown that sexual abuse in childhood, interpersonal relationships (e.g., association with negative male partners and limited sources of interpersonal support), and substance use are associated with increased recidivism risk for women (Hubbard & Pratt, 2002). Therefore, it would follow that trauma related to sexual abuse/assault may have yielded higher recidivism rates in adolescents as well. This was not the finding in the current research. It is important to consider that the total number of reported cases of sexual abuse/assault that were examined in this study was 9. Therefore, there may not have been enough

participants in this group to yield a significant result. However, it is important to consider that the findings showed *no* relationship between the type of trauma that was experienced by an adolescent in the juvenile justice system and those adolescents' recidivism rates; however, combinations of different factors were not considered, including substance abuse. It may be that factors like substance abuse play an important role in the relationship with the type of traumatic event that the adolescent was exposed to and recidivism rates.

The findings of the chi-square test of independence conducted to determine the relationship between the specific demographic variable of race for those who have been identified as experiencing trauma and recidivism rates did not support Hypothesis 3. This indicates that the race of those who have experienced trauma is not related to the recidivism rates for juvenile offenders. Additionally, the findings of the chi-square test of independence conducted to determine the relationship between the specific demographic variable of the gender of those who have been identified as experiencing trauma and recidivism rates *did* support Hypothesis 3. This suggests that there is a relationship between the gender of the juvenile offender who has experienced trauma and recidivism rates. Specifically, it was found that males who have experienced trauma are more likely to have higher rates of recidivism than their female counterparts.

It is important to consider that these results did not find a relationship between the race of juvenile offenders who have experienced trauma and recidivism rates. Becker and colleagues (2012) found that compared to Caucasian youth, young African American youth with either full or partial PTSD were most likely to recidivate. These results were not replicated in the current study. It is important to note that this study did not compare only White and African American youth. Additionally, those who had experienced trauma may not have met the full criteria for a

PTSD diagnosis in the current study.

In regards to the findings related to the relationship between recidivism rates, trauma, and gender, previous research has found that overall, girls are less likely to recidivate that boys. In this study, it was found that there is a relationship between males in the juvenile justice system who have experienced trauma and higher rates of recidivism. It does seem that males were affected by the trauma in such a way as to have significantly different/higher rates of recidivism when they had experienced a past trauma than their female counterparts. There has been little research conducted regarding gender, trauma, and recidivism rates. While past research has found that African Americans girls with PTSD were particularly vulnerable to repeat admissions to juvenile detention and increased recidivism rates, this research again includes the experience of PTSD symptomology. It does appear that trauma plays an important role in understanding reoffending behavior among male juvenile offenders; however, it may be important to demarcate the difference between those who have experienced a trauma event and those who are currently experiencing symptoms of PTSD as African American girls have been found to be more likely than boys to recidivate when PTSD is present (Becker, et al, 2012). The finding in this research that males have higher rates of recidivism than females when they have a history of exposure to a traumatic event leads to the possibility that males may be reacting differently than females to the traumatic event. It may be that males are more likely to externalize than their female counterparts, and that the exposure to trauma, coupled with their experience in the juvenile justice system as a first time offender, led them to be more likely to engage in further externalizing behavior and to be more likely to re-offend than their female counterparts who may be more likely to internalize.

The findings of the chi-square test of independence conducted to determine the relationship between trauma exposure and receiving a misdemeanor charge within 2 years of the original charge and proceeding psychological evaluation of the juvenile offender did not support Hypothesis 4. It appears that there is not a relationship between trauma exposure among juvenile offenders and misdemeanor charges after the original charge and psychological evaluation. Further, the findings of the chi-square test of independence conducted to determine the relationship between trauma exposure and receiving a felony charge within 2 years of the original charge and proceeding psychological evaluation of the juvenile offender did support Hypothesis 4. This indicates that there is a relationship between trauma exposure by juvenile offenders and a subsequent felony charge within 2 years of the original charge and psychological evaluation. Specifically, the results showed that if a juvenile offender has experienced trauma, has a trauma history, they are more likely to commit a felony within 2 years of their first offense than their counterparts who have not experienced trauma.

These findings are new to the research and have not been vastly studied in the past within the juvenile justice population. It is important to note that there was not a relationship between the experience of trauma and reoffending behavior when the offense was a misdemeanor. This means that those who have experienced trauma and have reoffended are no more likely to commit a misdemeanor than those who have not experience a traumatic event. It may be that because more adolescents in the juvenile justice system commit misdemeanor offenses when they reoffend, the effects of being exposed to a trauma a not significant. It may be that the trauma does have a relationship between reoffending when the charge is a misdemeanor, but that because reoffending behavior is so often a misdemeanor, that the difference between the groups is insignificant.

Conversely, the current study found that there was a relationship between being exposed to trauma and reoffending behavior when the offense was a felony. This means that those who experienced a trauma had higher recidivism rates when their reoffending offense was a felony than those who had not experienced a trauma. It is important to note that those who recidivated with a felony offense may have been affected by their traumatic exposure in such a way as to create significantly higher rates of recidivism when they had been exposed to a trauma. In previous research, adolescents in the juvenile justice system who had been diagnosed with a mental health disorder involving impulse control or aggression were approximately 11 times more likely to commit a serious criminal offense than those who had not been so diagnosed (Barrett et al. 2013). The results from the current study seem to be consistent with these results, in that the effects of exposure to trauma may mimic, initiate, or exacerbate mental health issues and this may have led to the increase in recidivism rates with regards to more serious offenses and felony charges. While it is not possible to show a direct causal effect of mental illness on delinquency from previous research, it is important to recognize that in over 60% of cases of juvenile offenders with a diagnosis of an aggressive disorder, the diagnosis of aggression preceded any aggression related offenses within the juvenile justice system (Barrett et al. 2013). In the current research, it is not clear when the exposure to trauma occurred, but it is important to note that those who experienced trauma had higher rates of recidivism when their subsequent charge was a felony offense than those who had not experienced trauma, leading to the possible conclusion that experiencing a traumatic event leads to a risk of receiving a felony charge in the future. Such a finding is consistent with previous research.

Finally, while there were several insignificant findings in the current study, these findings are important and can add significant contributions to the field of research in the areas of trauma

and juvenile justice. Research is the means by which psychologists expand our knowledge, and it informs practice for clinicians. Additionally, research is made available to most of the psychological community thoughts publication. In actuality, however, published research is biased and does not contain all relevant information, as the predominant exclusion of nonsignificant research findings from publication biases the field of psychology's conclusions and subsequent practice, leading to what Rosenthal (1979) called the "file drawer problem." Particularly in meta-analyses, research conclusions that are drawn from combining results from several published studies could be negated if there remain a certain number of nonsignificant studies out there that are unused in the meta-analysis because they are unknown. Howard et al. (2009) argue that no matter how many corrections are made by estimating the number of "file drawer" studies that exist on any given topic, conclusions from meta-analyses, although better than not considering unpublished and/or nonsignificant studies at all, will still be inaccurate.

These inaccuracies could not only affect scientific conclusions from meta-analyses, but they could also impact directions for future research. In knowing that a particular research topic or methodology has repeatedly produced nonsignificant results in past studies, future researchers can avoid repeating the same research questions and could avoid wasting time and resources that could otherwise be directed elsewhere. The reverse is also a possibility: nonsignificant findings could illuminate promising avenues for future researchers, avenues which may otherwise remain unexplored.

Implications

Several implications can be drawn from the current findings. The first is related to the experience of being involved in the juvenile justice system. Being involved in the system can be traumatic in itself. The court usually makes decisions about sentencing during the first offense

based on factors related to amenability to treatment, the adolescent's potential threat to the safety of others, and the need for mental health services (Loughran et al., 2009). Other factors include the age of the offending adolescent, current charge, and past delinquent history, family history, and psychological history. However, the adolescent's experience during the process of being arrested, interacting with police officers, probation officers, judges, and even family members may be shocking and potentially traumatic for the adolescent. Depending on sentencing, adolescents may return home on probation, may be sent to live in a group setting, or may be incarcerated. Each of these outcomes may be experienced differentially by each adolescent and thus affect them differently. It is important to consider the effects of the juvenile justice system and how the adolescent responds to the process of the system. Further, typically an adolescent's reaction to the process is not assessed. It may be important to consider how each adolescent responds to her/his involvement in the system and how the experience of the system may have affected the adolescent.

Re-offending behavior may have differing causes and remedies depending upon the factors affecting adolescent offenders and their motives. The delinquent behavior of a youth who is reacting to reminders of past traumatic experiences may be no less dangerous or problematic than that of a youth who is callously indifferent to the law or the harm inflicted on people. Yet, the sanctions and services that can best modify this behavior may be very different in these two cases. In order to ensure fair application of procedure throughout the juvenile justice system, authorities representing the legal system have a responsibility to society and to youths and their families to base their judgments on a full understanding of the role that trauma and victimization can play in youths' actions and in their the process of healing the reaction to traumatic experiences.

Exposure to trauma is unlikely to be the sole cause of re-offending behavior. Genetic influences affecting each individual's basic temperament and approach to life are a major factor in problem behaviors associated with delinquency (Loughran et al., 2009) and also contribute to vulnerability to traumatic stress reactions (Koenen et al., 2005). Family problems with mental illness, drug abuse, or severe parent-child conflict also may contribute to recidivism (Lahey et al., 1999) and may also result from the adolescent's initial involvement in the juvenile justice system.

Living with severe family problems also may teach children that abuse, neglect, and domestic violence are normal, acceptable, or even desirable. Such modeling and reinforcement of these behaviors can lead children to imitate or tolerate these behaviors in family, peer, and community relationships (Cauffman et al., 1998; Steiner et al., 1997). Therefore, behavior that is often linked to higher rates of recidivism also may place youths at risk for experiencing trauma or witnessing traumatic situations in adolescence and in adulthood. While not assuming that trauma exposure causes recidivism in any way or that problematic behavior causes trauma, another practical implication of these research findings for those involved in the decision making process of the juvenile justice system is that no court order is complete without consideration of the role that trauma exposure may have played in the young person's development and current life. This is especially true in male offenders.

Another implication from the current study is the importance of assessing for trauma history several months *after* a juvenile enters into the juvenile justice system, and not just upon initial entry. A trauma history assessment is similar to but also different from a psychological or psychiatric evaluation. The goal should be to identify formative experiences and ways of coping that developed as a result of suffering trauma (including the trauma of entering into the juvenile

justice system), not to determine mental health diagnoses or issues. Those who complete trauma history assessments should have mental health training, specific expertise in evaluating trauma and post-traumatic stress reactions, and access to licensed professionals for consultation as needed. A trauma history assessment may be included in a mental health evaluation, but the purpose is different from that of identifying psychiatric diagnoses.

Trauma history assessments inform the court about how a youth has learned to cope self-protectively as a result of experiencing trauma, if this is the case. The goal of a trauma history assessment is to enable judges to make orders that address the youth's needs for safety and give them help in learning ways of dealing with life that are not merely a repetition of how he or she learned to survive his/her exposure to trauma. These types of assessments are specifically important in order to inform probation officers, judges, and others involved with the juvenile while in the system for the first time so that these individuals can be aware of the specific needs or potential triggers of those who have experienced trauma in order to lessen the likelihood of re-offending behavior.

Another implication of the current findings is that the behaviors linked to one's response to trauma and the behaviors linked to more severe re-offending behavior, i.e. felony charges, may be similar and difficult to separate for the mental health clinician or for the youth involved in the system. Adjudicated youth can experience numerous traumas before incarceration and sometimes even within correctional settings (Wolf & Shi, 2010). Additionally, youth in the juvenile justice system are at particularly high risk for histories of trauma, including abuse and family violence and losses that compromise core attachments with caregivers (Ariga et al, 2008). The adverse effects of trauma on childhood development place the youth at risk for a range of serious problems (e.g., oppositional-defiance, risk taking, substance abuse, impaired impulse

control, and delinquent peer relationships) that may lead to reactive aggression and place the youth at risk for re-offending with felony charges. Unfortunately, clinicians often misinterpret trauma-related symptoms in juvenile offenders as indicators of conduct disorder (CD; Abram et al., 2004), which limits the breadth and scope of treatment. Thus, despite the high prevalence of trauma-related symptoms in youth within the juvenile justice population and the link between trauma symptomology and violence perpetration, many interventions do not expressly focus on treating underlying symptoms of trauma exposure. Because of this lapse in treatment interventions, it may be that the symptomology associated with trauma exposure looks similar to CD and are being linked to more severe re-offending behaviors and felony charges.

Finally, previous research has found that males in the juvenile justice system are at a higher risk for recidivism if they have a diagnosis of conduct disorder (CD) and a low verbal IQ as scored on a standard intelligence test (Becker & Kerig, 2011). However, most of the previous research regarding males in the juvenile justice system has focused on CD and not traumatic exposure. As noted earlier, behaviors that are being diagnosed as CD in males may be more accurately explained as a response to exposure to trauma. Therefore, based on the results of this study that males who have been exposed to trauma are more likely to have higher rates of recidivism than males who have not experienced trauma and also compared to their female counterparts, it is important to consider how the externalizing behavior that males often engage in is being interpreted. It may be that a trauma reaction is being interpreted as CD, and then the trauma symptoms do not get treated and the male is more likely to re-offend because his symptoms have not been treated. As mentioned above, specific aspects of psychiatric and psychological assessment can help to assess for trauma exposure and to identify males who might benefit from trauma based interventions. Additionally, psychological assessments may be

helpful in identifying the male juvenile offenders who are more likely to recidivate based on their history. Specific interventions could be created to specifically target these individuals.

Recommendations for Further Research

Results of this study indicate that juvenile offenders who are male and who have been exposed to or have directly experienced a traumatic event have higher rates of recidivism compared to their female counterparts and to males who have not been exposed to trauma. In past research, Abram and colleagues (2003) found that boys aged 13 and younger were less likely than older boys to meet diagnostic criteria for a mental health disorder. Additionally, for boys aged 16 and older, nearly 90% who had a major mental health problem (e.g., psychosis, manic episode) also had a substance use disorder, compared to 61% or fewer for their younger counterparts (Abram et al., 2003). This research further demonstrated that there is a link between age at first offense and re-offending behavior – specifically, males who became involved in the juvenile justice system at an earlier age were more likely to re-offend than males who became involved at a later age. It has been shown that there is a link between age of first offense and recidivism rates. There may be a link between trauma exposure, age of first offense, and recidivism rates. Therefore, it will be important for future research to consider other demographic variables such as age at first offense in regards to the relationship between trauma exposure and recidivism.

Not only should future research focus on other demographic variables that may be related to re-offending behavior, it will also be important for future researchers to consider other mental health diagnoses and their role in the mediation of the relationship between recidivism rates and trauma exposure in juvenile adolescents. For example, past research has demonstrated a link

between re-offending behavior and substance use (Crimmins et al., 2000). Therefore, in future research it would be important to tease out the potential interaction between recidivism rates, trauma exposure, and substance use. It is important to consider that often substances are used as a way to cope with PTSD symptomology (Kilpatrick et al., 2003), and that substance use is highly linked with re-offending behavior. Therefore it is important to tease out the difference between recidivism rates that are linked to substance use/abuse, and recidivism rates that are particularly linked to trauma exposure. Additionally, there may be an interaction effect between substance use, trauam exposure, and recidivism rates.

Similarly, other mental health diagnoses may interact with trauma exposure and recidivism rates. For example, it has been found that nearly three fourths of all adolescents diagnosed with PTSD had at least one comorbid diagnosis and that interpersonal violence (i.e., sexual and physical assault, witnessed violence) increased the risk of these disorders (Kilpatrick et al., 2003). These findings also suggest a link among trauma, PTSD, and the development of further psychopathology in juvenile offenders. There is a connection between PTSD and commorbidity. There is also a link between PTSD and the potnetial for future mental health diagnosis. Considering the number of adolescents that have been diagnosed with a mental health disorder that are in the juvenile justice system, it is possible that PTSD and a co-occuring disorder may be linked to higher rates of recidivism. Future research should focus on establishing this link more clearly - highlighting the importance of comprehensive diagnosis and treatment of this and other comorbid disorders to ensure the effectiveness of interventions designed to treat behavior that is linked to re-offending.

Further, other research might focus on the difference between experiencing a traumatic event and the development of PTSD symptoms in relation to recidivism rates. Researchers have

found that adolescents within the juvenile justice system experience PTSD symptoms, and that some specific PTSD symptoms such as hyper-arousal interfere with information processing and independent thinking. Erwin and his colleagues (2000) examined whether the association between trauma and impaired decision making is mediated by specific emotional disturbances. Their results indicated that the relations between trauma exposure and decision making are accounted for by increases in anger, substance abuse, depression, somatic complaints, and suicidal ideation (Solomon, Davies, and Luckham, 2012). The authors believe that these findings provide insights into what may lie beneath the re-offending behavior among adolescent offenders. However, these authors are specifically investigating PTSD symptomology. It will be important in the future to distinguish between adolescents who have been exposed to trauma and who are experiencing PTSD symptoms and those who are not. It may be that PTSD symptomology is related to increased risk of recidivism, but that exposure to a trauma is not linked to higher rates of recidivism as this study found. Depending on the findings of this research determining the link between adolescents who are experiencing PTSD symptomology and recidivism, future research should also focus on the possibilities of implementing these findings in the development of prevention and rehabilitation programs based on the treatment of PTSD.

In the future, it will also be important to consider when the trauma occurred for the adolescent; it will be important to look at the onset of trauma symptoms. For example, the traumatic event may have occurred before the first offense that began the adolescent's involvement in the juvenile justice system. On the other hand, the traumatic event may have occurred after the first offense, but before the adolescent has re-offended. Understanding when the traumatic event occurred could have implications regarding the potential link between trauma

exposure and recidivism. If the adolescent has been trying to cope with the traumatic event and is experiencing PTSD symptoms before they were adjudicated, then their delinquent behavior may have been a result of the trauma. On the other hand, if the adolescent experienced the trauma after their first offense, then the traumatic event might be causing additional symptomology and problem behavior. It is possible that, as this study found, there is no link between experiencing a traumatic event and recidivism. However, it might also be that there is a link depending on when the traumatic event happened and the potential interaction between the adolescent's continued involvement in the juvenile justice system and behavior related to experiencing a traumatic event.

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