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# The Cycle of Violence Behind Bars: Traumatization and Institutional Misconduct Among Juvenile Delinquents in Confinement

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**Matt DeLisi,<sup>1</sup> Alan J. Drury,<sup>1</sup> Anna E. Kosloski,<sup>1</sup> Jonathan W. Caudill,<sup>2</sup> Peter J. Conis,<sup>3</sup> Craig A. Anderson,<sup>1</sup> Michael G. Vaughn,<sup>4</sup> and Kevin M. Beaver<sup>5</sup>**

## Abstract

The prospective link between early life exposure to violence and victimization and subsequent antisocial behaviors is known as the cycle of violence. Although the cycle of violence has been linked to an array of behavioral and psychiatric outcomes, less is known about its relationship to compliance with the juvenile/criminal justice systems. Data from 813 confined delinquents selected from the California Youth Authority and the Traumatic Experiences scale from the Massachusetts Youth Screening Instrument Version 2 (MAYSI-2) were used to examine the cycle of violence and three forms of misconduct. After controlling for other 18 demographics, delinquent history, commitment offense type, and comorbid psychiatric symptoms that are consistent with the importation model of inmate behavior, the authors found that wards with greater exposure to early life trauma evinced more sexual misconduct, suicidal activity, and total misconduct reviewed by the parole board. Implications and discussion for future research are offered.

## Keywords

institutional misconduct, trauma, cycle of violence, delinquency, prison, importation model

Penologists have developed a range of theoretical explanations for inmate maladjustment and misconduct during confinement. Early scholars (e.g., Clemmer, 1940; Hayner & Ash, 1940; Sykes, 1958; Wheeler, 1961) framed prisons as relatively distinct societies with an inmate culture and micro-society characterized by its own argot, norms, codes of conduct, and stratification system. The

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<sup>1</sup>Iowa State University, Ames, Iowa

<sup>2</sup>University of Texas at Dallas, 800 W. Campbell Rd., M/S GR-31, Richardson, TX 75083

<sup>3</sup>Des Moines Area Community College

<sup>4</sup>Saint Louis University, St. Louis, Missouri

<sup>5</sup>Florida State University, College of Criminology and Criminal Justice, Hecht House, Tallahassee, Florida

## Corresponding Author:

Matt DeLisi, Iowa State University, 203A East Hall, Ames, IA 50011. Email: [delisi@iastate.edu](mailto:delisi@iastate.edu)

prison edifice itself, the administrative regime, and the day-to-day enforcement practices of correctional staff were generally punitive and imposed assorted “pains” on prisoners, collectively this perspective is known as the deprivation model (Clemmer, 1940; Sykes, 1958). Additional perspectives were since developed including the importation model that pointed to the importance of individual-level characteristics of offenders and the preprison criminogenic risk factors that they imported into prison (Irwin & Cressey, 1962), the administrative control model that emphasized warden leadership, formalized rules and organization, effective management, custodial culture, programming opportunities, and other features (DiIulio, 1987), and various integrated perspectives that modeled individual- and facility-level variables simultaneously and/or studied dynamic, contextual features of inmate-inmate and inmate-staff interactions that engendered misconduct (Camp, Gaes, Langan, & Saylor, 2003; Griffin & Hepburn, 2006; Hochstetler & DeLisi, 2005; MacDonald, 1999; McCorkle, Miethe, & Drass, 1995; Struckman-Johnson & Struckman-Johnson, 2006; Wooldredge, Griffin, & Pratt, 2001).

Of these perspectives, the importation model has continued to inform penological research and policy (e.g., Berk, Ladd, Graziano, & Baek, 2003; Camp & Gaes, 2005), and importation theory serves as the theoretical guide of the current study. Importation theory was developed as an alternative perspective that cast doubt on the idea that deprivation or facility-specific environmental factors were the most important determinants of inmate behavior and misconduct. According to Irwin and Cressey (1962), “the idea that the prison produces its own varieties of behavior represents a break with the more traditional notion that men bring patterns of behavior with them when they enter prison, and use them in prison” (p. 144). Irwin and Cressey suggested that deviant subcultural values, beliefs, and behaviors that typify the criminal population—which they characterized as the “thief subculture”—are brought inside confinement facilities when offenders are sentenced to prison. Moreover, a similarly deviant subculture—which Irwin and Cressey described as the “convict subculture”—already exists within prisons and offenders navigate these deviant subcultures while serving time.

Unfortunately, Irwin and Cressey (1962) did not specify a particular set of variables that should be used to operationalize preprison antisociality that would theoretically predict institutional misconduct. As such, penologists and correctional officials alike have centered on multiple risk factors that have been shown to be empirically linked to misconduct. In their recent review of the literature, Byrne and Hummer (2008) assessed, “A variety of inmate characteristics have been linked to higher levels of prison violence and disorder. Based on this purported link, prison classification systems are designed to identify those inmate characteristics (age, race, prior incarceration, prior record, instant offense, mental health history, etc.) that are likely to be associated with an inmate’s risk level while incarcerated—risk to self, risk to other inmates, risk to the community (due to escape), and risk to prison staff” (p. 58).

Beyond these offender-based variables, there is also considerable evidence that various forms of violence, abuse, depravity, and suffering that occur in early life environments engender maladaptive and antisocial behaviors across contexts including periods of confinement (Farrington & Welsh, 2007; DeLisi & Muñoz, 2003; Gover, 2004; Maas, Herrenkohl, & Sousa, 2008; McCord, 1991; Patterson, 1982; Teague, Mazerolle, Legosz, & Sanderson, 2008; Wright, Tibbetts, & Daigle, 2008). Indeed, environmental exposure to violence figures directly or indirectly in many theoretical explanations of crime including social learning, cultural deviance, general strain, differential oppression, and self-control. The long-term consequences of violence exposure, particularly forms occurring in the family home, such as child abuse and child neglect are thought to be particularly catastrophic. For example, McGloin and Widom (2001) conducted a 22-year follow-up study of 676 certified cases of persons who were abused and neglected between 1967 and 1971 and a control group of 520 persons. Psychiatric assessments were done to evaluate adult success in eight domains of functioning, which were employment, residency, education, social activity, psychiatric disorder,

substance abuse, official arrests, and self-reported acts of violence. Among the formerly abused or neglected treatment group, resilience was defined as persons who were successful in at least six of the eight domain areas. Just 22% of individuals met the criteria for resilience. This means that more than two decades after their victimization and exposure to adverse environments, nearly 80% of formerly maltreated persons continued to suffer across multiple domains of life. Broadly conceptualized, the prospective link between early life exposure to violence and victimization and subsequent antisocial behaviors is known as the cycle of violence.

## Literature Review

Cathy Spatz Widom is generally viewed as the scholar who most popularized the cycle of violence hypothesis. In a critical review of the literature, Widom (1989a) examined seven facets of the hypothesis including studies of the relationship between abuse and neglect to delinquency, profiles of violent and homicidal offenders, studies of the relationship between being abused and abusing others, studies of violent behavior, studies of aggressive behavior in infants and children, studies of the relationships between abuse, withdrawal, and self-destructive behaviors, and studies of witnessing violence. Overall, Widom (1989a) concluded that an understanding of the long-term consequences of violence exposure is limited by methodological weaknesses in the literature. Although conventional wisdom held that early life violence exposure was damaging for human development, the idea generally lacked empirical validation.

In her landmark empirical study, Widom (1989b) compared 908 persons who were substantiated cases of child abuse or neglect between 1967 and 1971 and a matched control sample of 667 respondents and found that those who had been abused or neglected were significantly more likely than controls to have arrests for delinquency, for adult crimes, and for adult violent crimes. Those who had been abused or neglected also had an earlier onset of antisocial behavior, greater likelihood of running away, more self-destructive behaviors and suicide attempts, greater frequency of offending, and greater likelihood of chronic offending. A 6-year follow-up revealed that by age 32 more than 50% of the abused and neglected sample had been arrested (Maxfield & Widom, 1996). Being abused or neglected as a child increased the likelihood of experiencing arrest as an adolescent by 59%, as an adult by 28%, and for a violent crime by 30% (Widom & Maxfield, 2001).

In the intervening years, an assortment of scholars has refined the cycle of violence hypothesis and examined its dynamics relative to a range of outcomes. Dodge, Bates, and Pettit (1989) found that physical abuse victimization in childhood predicted aggression while controlling for the child's temperament, health factors, poverty, marital violence, and family stability. Moreover, abused children develop deviant patterns of processing social information and this hostile attribution bias contributes to additional behavior problems. In a 12-year prospective study, Lansford, Dodge, Pettit, Bates, Crozier, and Kaplow (2002) found that maltreatment during childhood predicted adolescent aggression, anxiety, depression, dissociation, social problems, thought problems, social withdrawal, school absence, and perceptions of attending college beyond the effects of family and child traits that are correlated with maltreatment.

In a landmark study, Caspi et al. (2002) added clarity to the cycle of violence by showing that those with the low-activity polymorphism in the gene encoding the neurotransmitter-metabolizing enzyme monoamine oxidase A (MAOA) and who were maltreated were likely to develop antisocial behavior. Conversely, persons with the high-activity MAOA allele and who were abused were less likely to offend. A replication study by Widom and Brzustowicz (2006) on an American sample found that genotypes associated with high levels of MAOA activity insulated abused and neglected Whites from subsequent criminal behavior, but the genetic effect was not observed for African Americans. Finally, the cycle of violence has also been studied for its linkages to low intelligence and reading difficulty (Perez & Widom, 1994), student disconnection with teachers and educational

problems (Karcher, 2002), antisocial personality disorder (Luntz & Widom, 1994), risky sexual behaviors (Widom & Kuhns, 1996), depression, suicide and mental health problems (Horwitz, Widom, McLaughlin, & White, 2001; Widom, 1999; Widom, Dumont, & Czaja, 2007), gender differences in criminal offending (Fagan, 2001), and minor, property, and violent delinquency (Heck & Walsh, 2000; Fagan, 2005; Smith & Thornberry, 1995).

Although not necessarily framed as tests of the cycle of violence hypothesis, other prior research also illustrates the linkages between early-life abuses and traumatization and subsequent offending particularly among serious, habitual offenders (DeLisi, 2005; Farrington & Welsh, 2007). For instance, Krischer and Sevecke (2008) compared detained delinquents and a community sample of students and found moderate-to-large effect sizes for greater trauma among the correctional sample for emotional abuse (Cohen's  $d = .42$ ), physical abuse (Cohen's  $d = .66$ ), sexual abuse (Cohen's  $d = .34$ ), emotional neglect (Cohen's  $d = .67$ ), and physical neglect (Cohen's  $d = .33$ ). Traumatization also contributed to elevated scores on psychopathy instruments among delinquent males. The study of Loucks and Zamble (2000) on institutional misconduct and recidivism among 100 Canadian female prisoners found significant correlations between childhood sexual abuse victimization and institutional misconduct (Pearson  $r = .39$ ) and adolescent physical abuse and institutional misconduct (Pearson  $r = .44$ ). In other studies of institutionalized youths, prior traumatization has been linked to chronic weapons carrying (Vaughn, Howard, & Harper-Chang, 2006) and severe psychopathology, substance use, generalized criminal behavior, and criminal justice system involvements (Vaughn, Freedenthal, Jenson, & Howard, 2007). Interestingly, few studies have explored the cycle of violence hypothesis vis-à-vis juvenile institutional misconduct. To address this gap in the research literature, the current research goal was to empirically extend the cycle of violence hypothesis by studying juvenile institutional misconduct using prior trauma experiences and 18 additional individual-level risk factors (e.g., psychosocial characteristics, age, sex, race, ethnicity, instant offense type, prior violence, prior property, prior drug, prior incorrigibility, and prior juvenile justice escapes) that are consistent with importation theory (Irwin & Cressey, 1962) among a large cohort of confined delinquents.

## Method

### *Participants and Procedures*

Data were derived from a cohort of 813 serious delinquents committed to the California Youth Authority between 1997 and 1999 who were originally studied to assess mental health problems among the institutionalized delinquent population (Haapanen & Steiner, 2003, 2006). The original study by Haapanen and Steiner (2003, 2006) had a sample of  $n = 836$ . Twenty-three wards were not administered the screening questionnaire because of scheduling problems at their facility, thus the response rate is 97.3%. There are no reported differences between these samples and the CYA population (Haapanen & Steiner, 2003).

The original study was conducted to explore the usefulness of the instruments used in the CYA's Treatment Needs Assessment (TNA) battery. Wards who completed screening questionnaires were followed to determine whether they were subsequently placed in mental health programs, were prescribed medications used to treat serious mental health problems, and/or were identified by staff as requiring these services. The TNA battery included four self-report assessments that were administered during the educational testing phase of the clinic process with 8 to 15 wards at a time by case-work staff at the reception center. Assessments were machine scored using Scantron technology and used to supplement official mental health records maintained at ward institutions and in the CYA central office. Research staff reviewed master files to obtain information on criminal history, ensure that Scantron case files matched the ward who completed it, and validated information obtained

from facility or field files. Unfortunately, inter-rater reliabilities were not reported; however, full description of study procedures is available (Haapanen & Steiner, 2003). In addition to psychiatric information, the data contained an array of variables pertinent to the study of institutional behavior, including demographics, prior juvenile history and juvenile justice system involvements, commitment and sentencing information, and official records of misconduct handled through the CYA's Disciplinary Decision-Making System (DDMS).

## Measures

**Traumatic experiences.** The Massachusetts Youth Screening Instrument Version 2 (MAYSI-2; Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001) Traumatic Experiences Scale was used to operationalize the cycle of violence. The 5-item scale measures lifetime exposure to traumatic events, such as experiencing a terrible event, experiencing intrusive memories of a terrible event, being in danger of serious injury or death, witnessing serious injury or death, and being in danger of rape or actual rape victimization. Separate scales are used for males and females. The Traumatic Experiences Scale is unique, in that it measures lifetime exposure to severe events. Conversely, the other MAYSI-2 subscales measure the past few months. In this way, the Traumatic Experiences scale approximates the mechanisms in the cycle of violence because it measures traumatic events, exposure, and victimization occurring distally to an offender's commitment to prison. Following prior research (Vaughn et al., 2006; Vaughn et al., 2007), the MAYSI-2 Traumatic Experiences Scale was dichotomized ( $M = .18$ ,  $SD = .38$ ) such that those that scored 5 (17.6% of the sample) on the original continuous scale (or 1  $SD$  above the mean) were measured as high trauma = 1 and all others were measured as lower trauma = 0. The Traumatic Experiences Scale is the only subscale in the MAYSI-2 that does not have normed cut scores (Grisso & Barnum, 2006), all other scales do but their original continuous measurement was retained. We chose the 1  $SD$  above cut point because there is precedence in the literature (Vaughn et al., 2006; Vaughn et al., 2007).

**Substance use.** The MAYSI-2 Alcohol/Drug Use Scale is intended to identify youths who are using alcohol or drugs to a significant degree and who are at risk of substance dependence and/or abuse. The scale has eight items that are concerned with various negative consequences of substance abuse and characteristics of substance use that are thought to represent factors for abuse, such as being so drunk you could not remember, use drugs to feel better, others think you drink too much, been drunk or high at school, and so on ( $M = 3.52$ ,  $SD = 2.97$ ).

**Angry-irritable.** The MAYSI-2 Angry-Irritable Scale is intended to assess explicit feelings of pre-occupying anger and vengefulness, as well as a general tendency toward irritability, frustration, and tension related to anger. The scale has nine items, four of which explicitly concern angry mood and thoughts, three of which are concerned with irritability and risk of impulsive reactions, and the last two items of which pertain to behavioral expression of anger ( $M = 3.65$ ,  $SD = 2.89$ ).

**Depressed-anxious.** The MAYSI-2 Depressed-Anxious Scale is a 9-item scale intended to measure symptoms of mixed depression and anxiety (e.g., nervous, worried, or lonely). Five items inquire about manifestations of anxiety and inner turmoil and four items are concerned with depressed mood ( $M = 2.58$ ,  $SD = 2.22$ ).

**Somatic complaints.** The MAYSI-2 Somatic Complaints Scale is a 6-item scale that assesses somatic complaints, such as feeling shaky, feeling clammy, having shortness of breath, having an upset stomach, having racing heart beat, having sleep problems, and so on ( $M = 2.37$ ,  $SD = 1.92$ ).

**Suicidal ideation.** The MAYSI-2 Suicide Ideation Scale contains 5-items including thoughts of suicide, wishing that you were dead, feeling that life was not worth living, feeling like hurting self, and giving up hope to live ( $M = .96$ ,  $SD = 1.31$ ).

**Thought disturbances.** The MAYSI-2 Thought Disturbances Scale is intended to indicate the possibility of serious mental disorder involving problems with reality orientation. The scale has five items, four of which refer explicitly to altered perceptions in reality that are frequently associated with psychotic disorders. The remaining item refers to a condition of derealization that is a more general abnormality of perception and consciousness. It is sometimes an early indication of a psychotic state, but it may simply arise in anxiety or dissociative states as well ( $M = 1.04$ ,  $SD = 1.25$ ). Internal reliability for the MAYSI-2 with the current data was adequate ( $\alpha = .77$ ), which is consistent with prior research showing the psychometric and empirical validity of the measure (Ford, Chapman, Pearson, Borum, & Wolpaw, 2008; Grisso & Quinlan, 2005).

**Demographic and preincarceration delinquency controls.** Twelve control variables were used based on their empirical links to institutional misconduct (Berg & DeLisi, 2006; Byrne & Hummer, 2007; Byrne, Hummer, & Taxman, 2008; DeLisi, 2003; Trulson, 2007; Trulson & Marquart, 2002). Five of these are demographics including age ( $M = 16.88$ ,  $SD = 1.11$ , range = 12.6–20.4) that was continuously coded and sex (male 81.2%,  $n = 660$ , female 18.8%,  $n = 153$ ), which was dichotomized. There is evidence that psychiatric symptoms, victimization, and exposure to abuse are higher among incarcerated women (DeLisi, 2002; Ford et al., 2008; Gover, 2004; Warren, Hurt, Loper, Bale, Friend, & Chauhan, 2002) and may operate differently by gender. To assess this, negative binomial regression models were analyzed separately by gender and did not yield different results.

The sample was ethnically diverse and included Hispanics (46%,  $n = 375$ ), African Americans (28%,  $n = 226$ ), Caucasians (17%,  $n = 140$ ), and Asian, Pacific Islander, American Indian, or other (9%,  $n = 72$ ). Prior research on confined delinquents suggests racial and ethnic differences in terms of psychosocial functioning and behavioral history (Vaughn, Howard, Foster, Dayton, & Zelner, 2005; Vaughn, Wallace, Davis, Fernandes, & Howard, 2008), thus dummy codes for Hispanics, African Americans, and Caucasians were created (the residual racial category was not included because of its heterogeneity). Six measures of preincarceration delinquency career included were total prior violent offenses ( $M = 2.93$ ,  $SD = 2.67$ , range = 0–18), total prior property offenses ( $M = 2.83$ ,  $SD = 3.09$ , range = 0–21), total prior drug offenses ( $M = .57$ ,  $SD = 1.34$ , range = 0–19), total prior other offenses ( $M = 2.19$ ,  $SD = 2.33$ , range = 0–18), total prior incorrigibility offenses ( $M = .16$ ,  $SD = .64$ , range = 0–7), and total prior escape from juvenile justice custody offenses ( $M = .16$ ,  $SD = .64$ , range = 0–7). Offense type spanned four categories: violent (52%,  $n = 423$ , coded = 1), property (30.4%,  $n = 247$ , coded = 2), drug (6.2%,  $n = 50$ , coded = 3), and other law violation (11.4%,  $n = 93$ , coded = 4).

**Dependent variables.** Three retrospective, count measures of institutional misconduct were examined: sexual misconduct was any sexual contact with wards or staff ( $M = .22$ ,  $SD = 1.87$ , range = 0–51), suicidal activity ( $M = .09$ ,  $SD = .53$ , range = 0–9), and a summary measure of total incidents of misconduct received by the parole board ( $M = 3.65$ ,  $SD = 5.88$ , range = 0–82). For sexual misconduct, 10.8% ( $n = 88$ ) experienced at least one event of misconduct. For suicidal activity, 5.9% ( $n = 48$ ) experienced at least one event of misconduct. For total incidents of misconduct reviewed by the parole board, 72.3% ( $n = 588$ ) experienced at least one event of misconduct. These forms of misconduct encompassed internalizing, externalizing, and general forms of noncompliance and spanned the previous 24 months of the ward's confinement (all wards had equal exposure time of 24 months in confinement). The summary measure includes assault against staff, assault against other wards, and aggressive actions (e.g., threatening staff and possession weapon) does not include

**Table 1.** Difference of Means for Misconduct and Comorbid Psychiatric Symptoms

Group	<i>n</i>	Mean	<i>SE</i>	<i>t</i> value	<i>p</i>
Total incidents reviewed by parole board					
Low trauma	670	3.43	.20	2.04	.04
High trauma	143	4.53	.73		
Suicidal activity					
Low trauma	670	.07	.02	2.68	.01
High trauma	143	.20	.06		
Sexual misconduct					
Low trauma	670	.15	.02	2.17	.03
High trauma	143	.52	.36		
Substance use					
Low trauma	670	3.37	.12	3.21	.001
High trauma	143	4.24	.22		
Angry-irritable					
Low trauma	670	3.32	.11	7.42	.0000
High trauma	143	5.23	.22		
Depressed/anxious					
Low trauma	670	2.19	.08	11.95	.0000
High trauma	143	4.44	.17		
Somatic complaints					
Low trauma	670	2.14	.07	7.57	.0000
High trauma	143	3.44	.14		
Suicidal ideation					
Low trauma	670	.81	.05	7.22	.0000
High trauma	143	1.66	.13		
Thought disturbances					
Low trauma	670	.91	.05	6.93	.0000
High trauma	143	1.69	.11		

sexual misconduct and suicidal activity. All measures of misconduct reflect convictions formally processed through the DDMS (Haapanen & Steiner, 2003).

### Analytical Strategy

The analytical strategy involved two steps. First, difference of means *t* tests were conducted comparing the high trauma group to wards with lower traumatization history for institutional misconduct and comorbid psychiatric symptoms (Table 1). Second, multivariate negative binomial regression models were conducted. Incidents of prison misconduct are count data that are bound by zero, have heteroskedastic error terms, are positively skewed, and are overdispersed. These conditions necessitate negative binomial regression that has become the preferred method for analyzing count data in correctional and forensic psychology, particularly research on inmate misconduct (Walters, 2007). Baseline negative binomial regression models were run for all three dependent variables. To help ensure reliable estimates, sensitivity analyses with bootstrap resampling with 50 replications were calculated for all negative binomial regression models (Tables 2–4). A diagnostic dispersion parameter that exceeds zero confirms that negative binomial regression is a more appropriate modeling strategy compared to other approaches to modeling count data, such as Poisson regression. The likelihood ratio (LR) chi-square for each model are LR  $\chi^2 = 165.49, p < .0001$  (sexual misconduct), LR  $\chi^2 = 34.85, p < .0001$  (suicidal activity), and LR  $\chi^2 = 1754.61, p < .0001$  (total misconduct reviewed by parole board).

**Table 2.** Negative Binomial Regression Model for Sexual Misconduct ( $n = 813$ )

Variable	Observed coefficient	Bootstrap SE	z
Trauma symptoms	.76	.38	1.98*
Thought disturbances	-.01	.16	-0.07
Suicidal ideation	.02	.15	0.11
Somatic complaints	-.19	.11	-1.74
Anxiety/depression	-.08	.09	-0.76
Anger-irritability	.16	.08	2.13*
Substance use	.04	.05	0.66
Caucasian	1.41	.79	1.79
African American	1.32	.60	2.19*
Hispanic	.59	.73	0.80
Sex (female = 2)	-.20	.33	-0.61
Offense type	.42	.12	3.35*
Age	-.55	.13	-4.28*
Prior violence	.13	.08	1.56
Prior property	.06	.05	1.25
Prior drug	-.16	.13	-1.23
Prior other	-.06	.07	-0.81
Prior incorrigibility	.46	.21	2.21*
Prior escape	-.31	.30	-1.04
Wald $\chi^2$ (20)	152.34*		
Log likelihood	-339.98		

\* $p < .05$ .

## Findings

As shown in Table 1, wards with high traumatization engaged in significantly higher levels of misconduct for total incidents reviewed by the parole board ( $t = 2.04, p = .04$ ), suicidal activity ( $t = 2.68, p = .01$ ), and sexual misconduct ( $t = 2.17, p = .03$ ). The high trauma offenders engaged in nearly three times the suicidal activity, about 3.5 times the sexual misconduct, and 1.3 times the total misconduct. Wards with high trauma experiences had significantly worse mental health upon intake to confinement evidenced by elevated scores on the MAYSI-2 scales for substance abuse ( $t = 3.21, p = .001$ ), anger and irritability ( $t = 7.42, p = .0000$ ), depression and anxiety ( $t = 11.95, p = .0000$ ), somatic complaints ( $t = 7.57, p = .0000$ ), suicidal ideation ( $t = 7.22, p = .0000$ ), and thought disturbances ( $t = 6.93, p = .0000$ ) which tap psychotic symptoms. For depression/anxiety and suicidal ideation, the high trauma group's means scores were more than two times greater than remaining wards' mean scores.

To put the difference of means analyses in the context of the cycle of violence, on admission to prison, wards with greater traumatization histories have significantly worse substance abuse problems, are more angry, depressed, and anxious, present with physiological problems that are psychiatric in nature, are more likely to contemplate suicide, and have more disturbed thought problems suggesting quasipsychotic episodes.

Turning to the multivariate models, trauma was significantly related to sexual misconduct (coefficient = .76,  $z = 1.98$ ) even after controlling for the other predictor variables. Wards with elevated scores on the MAYSI-2 anger-irritable scale were also more likely to commit sexual forms of misconduct. Younger wards, African Americans, those with more prior incorrigibility offenses in their juvenile history, and those committed for less serious offenses were also significantly involved in sexual misconduct (Table 2).

**Table 3.** Negative Binomial Regression Model for Suicidal Activity ( $n = 813$ )

Variable	Observed coefficient	Bootstrap SE	z
Trauma symptoms	.66	.35	1.90*
Thought disturbances	-.17	.25	-0.66
Suicidal ideation	.12	.16	0.77
Somatic complaints	.09	.13	0.67
Anxiety/depression	-.01	.11	-0.06
Anger-irritability	.12	.11	1.08
Substance use	-.03	.06	-0.50
Caucasian	1.14	5.20	0.22
African American	.29	5.18	0.06
Hispanic	.01	5.16	0.00
Sex (female = 2)	1.58	.29	5.41*
Offense type	.35	.16	2.14*
Age	-.45	.15	-2.91*
Prior violence	-.02	.06	-0.34
Prior property	.01	.08	0.07
Prior drug	.04	.17	0.23
Prior other	.05	.10	0.49
Prior incorrigibility	-.01	4.16	-0.02
Prior escape	-.44	.30	-0.11
Wald $\chi^2$ (20)	97.07*		
Log likelihood	-192.63		

\* $p < .05$ .

Wards with high levels of traumatization were also significantly more likely to engage in suicidal activity during confinement (coefficient = .66,  $z = 1.90$ ). None of the remaining MAYSI-2 scales were predictive of suicidal activity including the MAYSI-2 Suicidal Ideation scale. Females, younger wards, and those committed for less serious crimes such as drug or public-order violations also demonstrated greater suicidal activity (Table 3).

As shown in Table 4, wards with higher traumatization accumulated more total incidents of misconduct that were reviewed by the parole board (coefficient = .21,  $z = 1.89$ ). Inmates with elevated scores on anger-irritability and substance abuse and lower scores on somatic complaints also netted more total incident reports. Caucasians and African Americans, younger inmates, and those with more violent juvenile history had lengthier records of noncompliance reviewed by the parole board and thus partially influenced the ward's release.

## Discussion

Using the Traumatic Experiences Scale derived from the MAYSI-2, the current study explored the cycle of violence hypothesis as it relates to institutional misconduct among a sample of confined delinquents selected from the California Youth Authority. Beyond the effects of a slew of additional individual-level risk factors (e.g., psychosocial characteristics, age, sex, race, ethnicity, instant offense type, prior violence, prior property, prior drug, prior incorrigibility, and prior juvenile justice escapes) that are consistent with importation theory (Irwin & Cressey, 1962), wards with high levels of traumatic experiences were significantly worse than other wards in terms of their involvement in institutional misconduct and mental health. Negative binomial regression models enhanced with bootstrap resampling techniques revealed significant effects between traumatization and suicidal activity, sexual misconduct, and total misconduct reviewed by the parole board. Consistent with the

**Table 4.** Negative Binomial Regression Model for Total Incidents Reviewed by Parole Board ( $n = 813$ )

Variable	Observed coefficient	Bootstrap SE	z
Trauma symptoms	.21	.11	1.89*
Thought disturbances	-.06	.05	-1.23
Suicidal ideation	-.04	.05	-0.84
Somatic complaints	-.11	.03	-3.41*
Anxiety/depression	-.01	.03	-0.36
Anger-irritability	.14	.02	7.28*
Substance use	.04	.02	2.78*
Caucasian	.61	.20	3.12*
African American	.53	.20	2.65*
Hispanic	.32	.19	1.65
Sex (female = 2)	-.04	.12	-0.31
Offense type	.08	.05	1.59
Age	-.34	.04	-9.26*
Prior violence	.03	.01	1.87*
Prior property	.00	.01	0.05
Prior drug	-.02	.04	-0.62
Prior other	.03	.02	1.04
Prior incorrigibility	.17	.11	1.52
Prior escape	.01	.04	0.13
Wald $\chi^2$ (20)	440.73*		
Log likelihood	-1846.13		

\* $p < .05$ .

cycle of violence hypothesis (Widom, 1989a, 1989b, 1999), wards with greater lifetime exposure to traumatic events, such as experiencing a terrible event, experiencing intrusive memories of a terrible event, being in danger of serious injury or death, witnessing serious injury or death, and being in danger of rape or actual rape victimization were more noncompliant behind bars.

The current analyses lend partial support to the use of the MAYSI-2 as a predictor of institutional misconduct that is supportive of prior research (Butler, Loney, & Kistner, 2007; Cauffman, 2004; DeLisi et al., 2008; Ford et al., 2008; Vaughn et al., 2006; Vaughn et al., 2007). The Traumatic Experiences Scale was the only MAYSI-2 scale that was significantly associated with all three outcome measures. Also as expected, youths with elevated scores on the anger-irritability scale were significantly involved in both sexual misconduct and total incidents. In their direct test of the cycle of violence hypothesis, White and Widom (2003) similarly found relationships between anger and hostility and intimate partner violence among both males and females that had been abused or neglected as children. This supports the general idea that an angry affective state is one dispositional outcome of early violence victimization and one that predictably can lead to a high incidence of interpersonal confrontation. Youths with elevated scores on the substance abuse scale evinced more total misconduct and an inverse negative relationship emerged for somatic complaints and total incidents. Otherwise, none of the remaining MAYSI-2 scales were predictive of these forms of maladaptive behavior. Of course, this does not suggest that these other measures of mental health were unimportant to the cycle of violence hypothesis. Wards with the greatest exposure to traumatic events also had the worst mental health. As mentioned earlier, all the MAYSI-2 scales are intended to measure experiences occurring within the past few months with the exception of traumatization that is a lifelong measure; conceptually, the traumatic experiences predated the relatively recent psychiatric symptoms. Theoretically, this means that a constellation of mental health problems are sequelae of an earlier trauma or set of traumas. Empirically, the difference of means test shown

in Table 1 suggest that anger, drug use, suicidal ideation, depression, anxiety, and thought disturbances may be consequences of traumatic experiences. Because the current data are cross-sectional, we cannot definitively disentangle the temporal effects. However, the logical structure of these constructs within the MAYSI-2 lends support to the notion that early exposure to violence and trauma lead to problems later in life, and these problems include institutional adjustment as presumed in the importation model of inmate behavior.

An important limitation of these data and the MAYSI-2 as a proxy measure of the cycle of violence centers on the experiences described in the 5-item measure. Widom's work focuses on three forms of violence—physical abuse, sexual abuse, and neglect—as the progenitors of the cycle of violence dynamic. These are specific forms of trauma, whereas the items in the MAYSI-2 (experiencing a terrible event, experiencing intrusive memories of a terrible event, being in danger of serious injury or death, witnessing serious injury or death, and being in danger of rape or actual rape victimization) are more general and nondescript in terms of their timing. For instance, rape victimization is certainly commensurate with Widom's approach, but the timing of that victimization is not known, only that it occurred over the ward's lifetime. In this way, it could have happened in childhood, which would support the temporal ordering of the cycle of violence, or it could have happened shortly before the youth was detained. Future research should include psychiatric measures of violence, exposure to violence, and traumatization along with measures of crime-specific victimization (see, Gibson et al., 1999; Vaughn et al., 2006).

There are additional limitations of the current study that warrant discussion. First, the measures of misconduct in these CYA data are admittedly limited. They were based on official conviction information on a paucity of offenses, were not validated by self-reports, and perhaps most importantly, were devoid of context. Given the discretionary nature of institutional life, there is reason to be cautious about the validity of official misconduct reports (Hewitt, Poole, & Regoli, 1984; Poole & Regoli, 1980a, 1980b; Van Voorhis, 1994), and it is unknown whether the current official data were influenced by biased correctional officer discretion. Without contextual information (cf., Wolff, Shi, Blitz, & Siegel, 2007; Sisco & Becker, 2007), it is also unknown whether wards committed misconduct proactively, reactively, or intentionally to be removed from the general population and be placed in isolation. This is particularly important in the context of the cycle of violence because those with greater prior trauma might be more vulnerable once confined and their misconduct could be more a reflection of survival rather than overt noncompliance.

Because the current study used individual-level data, it could not empirically examine structural explanations of institutional misconduct vis-à-vis inmate behavior (see Wooldredge et al., 2001). This provides opportunities for future research. For instance, the current analyses found that youths with the highest levels of traumatic experiences were prone to have an array of co-occurring mental health problems, engage in sexual misconduct while confined, act in suicidal ways while confined, and generally amass multiple incidents of misconduct. Would the same relationships hold in juvenile facilities characterized by different security-levels? Does extreme crowding exacerbate the maladjustment of youths with greater prior traumatization? Are there educational or other programming opportunities that moderate the effects of prior trauma and contribute to better adjustment among confined delinquents? These are important research questions that future studies employing data sets with richer measures could examine.

Finally, the current research note indicates that the cycle of violence hypothesis, one which has been evaluated as it relates to alcoholism, drug use, mood and affective disorders, physical health, adult life outcomes, and others, is also germane to juvenile justice. Although the links between various abuses occurring in early life family environments and the subsequent criminal career are well established (DeLisi, 2005; Dodge et al., 1989; Fagan, 2001; Farrington & Welsh, 2007; Gover, 2004; Maas et al., 2008; McCord, 1991; Patterson, 1982; Teague et al., 2008; Widom, 1989b), more research is needed to explore the cycle of violence and its negative effects on the administration

of justice and its bearing on theories of inmate behavior. We hope that the current study is a modest, early step toward a larger program of scholarship that specifies how various distal traumatic experiences culminate in juvenile delinquency, criminal offending, and recurrent failure to comply with the justice system.

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## Bios

**Matt DeLisi** is coordinator of Criminal Justice Studies and Faculty Affiliate of the Center for the Study of Violence at Iowa State University.

**Alan J. Drury** is a doctoral candidate in the Department of Sociology at Iowa State University.

**Anna E. Kosloski** is a doctoral candidate in the Department of Sociology at Iowa State University.

**Jonathan W. Caudill** is a doctoral candidate in the Department of Criminology at the University of Texas at Dallas.

**Peter J. Conis** is a faculty member at Des Moines Area Community College.

**Craig A. Anderson** is distinguished professor in the Department of Psychology and Director of the Center for the Study of Violence at Iowa State University.

**Michael G. Vaughn** is assistant professor in the School of Social Work and Department of Community Health, Division of Epidemiology in the School of Public Health at Saint Louis University.

**Kevin M. Beaver** is assistant professor of Criminology and Criminal Justice at Florida State University.