

## ABSTRACT

Title of Thesis: CHILDHOOD ABUSE AND INSTITUTIONAL MISCONDUCT

Carly Brownstein, Master of Arts, 2024

Thesis Directed By: Dr. Rachel Ellis, Assistant Professor  
Department of Criminology and Criminal Justice

Youth with histories of physical and sexual abuse are over-represented in the juvenile justice system. Though an extensive literature exists detailing the relationship between traumatization and subsequent delinquent offending, fewer studies examine how this relationship functions in carceral settings. Using data from the National Survey of Youth in Custody, 2018, the current study examines the relationships between physical and sexual abuse, mental health, gender, and violent institutional misconduct among incarcerated youth. Findings indicate that both boys and girls who experienced physical abuse prior to custody are more likely to be written up for violent misconduct within the facility. However, while girls who were sexually abused are also significantly more likely to receive a write-up for violent misconduct, boys who were sexually abused are not. Further, symptoms of poor mental health partially mediate the association between abuse and violent misconduct write-ups for boys, but not for girls. These results inform policy and practice by highlighting the need for court-based diversion programs for this at-risk group, and/or for further development of needs- and gender-sensitive programming for incarcerated and abused youth.

CHILDHOOD ABUSE AND INSTITUTIONAL MISCONDUCT

by

Carly Brownstein

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Advisory Committee:

Dr. Rachel Ellis, Assistant Professor, Chair

Dr. Greg Midgette, Assistant Professor

Dr. Min Xie, Professor

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## **Chapter 1: Introduction**

On any given day in 2021, nearly 25,000 youth were incarcerated in residential facilities in the United States (Office of Juvenile Justice and Delinquency Prevention, 2023). Juvenile justice interventions are generally designed to rehabilitate young people (Office of Juvenile Justice and Delinquency Prevention, n.d.), partly because their developing minds are more readily shaped by such treatment efforts (National Research Council, 2013). In particular, residential placements, typically reserved for those youth who commit the most severe offenses, aim to ensure the safety and facilitate the reintegration of their residents back into the community (Developmental Services Group, Inc., 2019). Yet, evidence suggests that incarceration is less effective at preventing reoffending than community-based sentences (Aizer & Doyle, 2015). Thus, it is imperative to understand for whom such carceral interventions are successful, and – pertinent to this study – for whom they are unsuccessful.

Violent misconduct is a relevant outcome to study when assessing carceral interventions, specifically in terms of their rehabilitative impacts. Violent misconduct not only threatens the safety of other detained youth and correctional staff, but it can also serve as an indicator of ineffective treatment as it represents continuity in deviant behavior (Trulson et al., 2011) and may predict post-release recidivism (Lattimore et al., 2004; Trulson et al., 2005). Further, punishment for misconduct such as administrative segregation, lengthened incarceration, and/or restrictions on program access may further hinder treatment efforts (Trulson et al., 2010).

The current study investigates the relationships between childhood abuse, mental health, gender, and violent institutional misconduct among incarcerated youth. Research has consistently documented a significant relationship between experiencing physical and/or sexual childhood abuse and committing subsequent delinquency (Braga et al., 2017; Fitton et al., 2020). However,

fewer studies have investigated whether this relationship persists in a carceral setting. This is important to consider as justice-involved juveniles have disproportionately experienced abuse prior to coming into custody (Abram et al., 2004; Baglivio et al., 2014; Fox et al., 2015).

Understanding how this over-represented and vulnerable population actually fare in institutions designed to reintegrate troubled youth back into society thus has important policy implications.

Studies that have explored the relationship between childhood abuse, institutional misconduct, and mental health (Craig et al., 2023; DeLisi et al., 2010) do not assess the differential impacts that specific types of abuse may have on boys and girls. As research has demonstrated both gendered pathways into offending (Daly, 1992; Wright et al., 2012) and gendered predictors of misconduct (Blackburn & Trulson, 2010; Celinska & Sung, 2014; Gover et al., 2008), it is important to assess how such distinctive pathways into offending and varied institutional experiences affect behavior. Further, the results of these prior studies were based on single-state samples from the late 1990s and early 2000s, while the current study uses a contemporary and nationally representative sample. As juvenile correctional policy has shifted toward a more rehabilitative and developmentally-informed lens beginning in the late 1990s (Cavanagh et al., 2022), and because the programming, funding, and populations of juvenile facilities vary greatly by state (Hockenberry, 2022; Office of Juvenile Justice and Delinquency Prevention, 2019), the results of the current study are more generalizable and relevant to current policy discussions.

The current study analyzes data from the National Survey of Youth in Custody, 2018 (NSYC-3). The 6,049 survey respondents range in age from 10 to 25, have all been adjudicated delinquent (i.e., convicted of a crime), and are currently incarcerated in a juvenile correctional facility. In what follows, I first examine whether experiencing physical and/or sexual abuse prior

to coming into custody is associated with a higher likelihood of being written up for violent misconduct while in custody. Under the framework of general strain theory (GST; Agnew, 1992), respondents who were abused may be more likely to engage in misconduct given the many factors in detention that make legitimate coping strategies inaccessible, such as the added strains of imprisonment and lack of mental health services. I subsequently analyze whether gender moderates the association between sexual abuse and violent misconduct. Gender may be salient because the mechanisms that link abuse and misconduct under GST, namely shame and related negative emotions, may vary between boys and girls due to gendered societal stigma. Finally, I assess whether symptoms of poor mental health mediate the relationship between abuse and misconduct, as GST posits that such symptoms mediate the relationship between stressful life events and deviance.

Specifically, using individual-level secondary data analysis of the NSYC-3, I investigate the following research questions: (1) Do youth who report experiencing physical and/or sexual abuse prior to custody have a higher likelihood of being written up for violent misconduct? (2) Do males who report experiencing sexual abuse prior to custody have a higher likelihood of being written up for violent misconduct than females who experienced sexual abuse? (3) Do symptoms of poor mental health mediate the relationship between experiencing abuse and being written up for violent misconduct?

## **Chapter 2: Literature Review**

### *The Relationship Between Childhood Abuse and Delinquency*

Researchers have consistently documented a significant relationship between the experience of childhood abuse and the later commission of delinquent and criminal acts. Widom (1989) popularized the “cycle of violence” theory which posits that abused youth are at a higher risk of subsequent offending than youth who had not been abused. Using a longitudinal design in which individuals with substantiated cases of abuse and neglect were matched with a control group, she found that abused and neglected children were significantly more likely to be arrested in both youth and adulthood. Since this foundational study, others have continued to document such a relationship (Herrera & McCloskey, 2003; Siegel & Williams, 2003; Swanston et al., 2003; Teague et al., 2008; Wright et al., 2004). Further, abuse has been found to relate to other negative life outcomes such as a lower likelihood of high school graduation, a higher likelihood of becoming a parent before adulthood, and a higher likelihood of being fired (Lansford et al., 2007).

Importantly, subsequent studies have deviated from research designs that match controls with substantiated cases from child welfare system (CWS) records and still have found similar results. Though constructing samples for studies using CWS records likely allows for a high degree of construct validity in measuring abuse, it also has the potential to confound the effects of abuse with those of CWS interventions. Because aspects of these interventions, such as foster home placements, may also relate to delinquent behavior, it is difficult to separate the effects of abuse from those of CWS involvement (Font & Kennedy, 2022). Studies using different methodologies, such as those measuring experiences of abuse via self-report (e.g., Currie & Tekin, 2012; Smith & Thornberry, 1995), have continued to document a significant relationship

between abuse and delinquency, suggesting a link that is robust to various methodological approaches.

### *The Prevalence of Abuse Among Justice-Involved Youth*

Relatedly, research has revealed that a disproportionately high rate of abused youth are involved in the justice system as compared to the general population (Baglivio et al., 2014; Coleman & Stewart, 2010; Ford et al., 2007; Ford et al., 2012). A recent meta-analysis conducted by Wanamaker and colleagues (2022) found that about 44 percent of females and 34 percent of males involved in the justice system experienced physical abuse, and about 35 percent of females and 13 percent of males experienced sexual abuse. Comparatively, Giano and colleagues (2020) examined the prevalence of adverse childhood experiences (ACEs) in the US general population and found that about 17 percent of both female and male adult respondents reported experiencing physical abuse, while about 16 and 6 percent of females and males reported experiencing sexual abuse, respectively. Thus, evidence suggests that justice-involved individuals have experienced abuse at a higher rate than those in the general population.

Moreover, Abram and colleagues (2004) found that 11.2% of a sample of detained youth in a Chicago detention center met criteria for posttraumatic stress disorder (PTSD) diagnosis, which exceeds lifetime estimates of PTSD prevalence among community samples (3.5% to 9.2%), suggesting that the disproportionately high levels of abuse among incarcerated youth also translates to higher rates of mental health disorders. Additionally, using a sample of youth from the Florida Department of Juvenile Justice, Fox and colleagues (2015) found that each ACE experienced by an individual increases their risk of becoming a serious, violent, and chronic juvenile offender (rather than an offender with a single non-violent felony conviction) within five years by a factor of 35.

It is also important to note that minority youth, specifically Black and Native/Indigenous youth, are more likely to be involved in both the child welfare and juvenile justice systems (Font & Kennedy, 2022). Even within child welfare system samples, Black youth are more likely than White youth to subsequently become involved with the juvenile justice system (Goodkind et al., 2013), despite the fact that they are no more likely to engage in delinquent behavior (Grogan-Kaylor et al., 2008). As highlighted by Font and Kennedy (2022), further research is needed to understand the factors that drive this disparity in system involvement.

### *Gendered Pathways into Delinquency*

An extensive body of research has highlighted the role that abusive experiences play in distinguishing boys' and girls' pathways to incarceration (Brennan et al., 2012; Espinosa et al., 2013; Simpson et al., 2008). Chesney-Lind (1989) was one of the first scholars to articulate the need for and formulate a feminist model of female delinquency. Noting that girls tended to be arrested for trivial and status offenses at much higher rates than boys, she argued that leading criminological theories of the time that were informed by and explained male delinquency could not explain the unique commission of female delinquency. Since the start of the juvenile justice system in 1899, girls were formally punished for violating traditional gender norms and roles. For instance, girls were brought to court for running away from home or for being "sexually promiscuous." Because the courts were used as a tool for a patriarchal society to keep girls subjugated and limited to the domestic sphere, Chesney-Lind argued that theories of girls' delinquency must take the broader context of patriarchal agencies of social control into account.

Additionally, Chesney-Lind (1989) highlighted a common pathway for girls into delinquency: when girls are victimized by sexual abuse at home, many must run away to protect themselves, which is a status offense in and of itself. Moreover, once out of the home, many girls

commit petty crimes like theft and prostitution to survive on the streets. This archetype of the “street woman” underscored the need for criminologists and policymakers to take girls’ distinctive experiences into account when explaining and responding to their delinquency. Subsequent studies have confirmed the existence of such gendered pathways into offending, with female offenders often experiencing childhood and intimate partner abuse that result in mental health challenges and substance abuse, culminating in the commission of instrumental offenses (Belknap & Holsinger, 2006; Salisbury & Van Voorhis, 2009), or “criminalized survival strategies” (Belknap, 2020).

Since her landmark work, scholars have continued to build on Chesney-Lind’s model of the “street woman” by underscoring how girls and women who are labeled “delinquents” and “criminals” are both victims of circumstance and autonomous agents in control of their own lives. For instance, by analyzing presentence investigation reports of women tried in a felony court, Daly (1992) noted a common theme of “harmed-and-harming women”, or women who had been maltreated in childhood, subsequently developed substance abuse or mental health problems, and then committed violent crime. This calls attention to the fact that some women, even among those who were abused, may not commit crimes solely for survival purposes.

Furthermore, research has highlighted the interconnectedness of race and gender when examining gendered pathways into delinquency. As summarized by Epstein and colleagues (2017), Black girls are treated more punitively than white girls in the juvenile justice system. For example, evidence suggests that they receive harsher sentences than similarly situated white girls (Moore & Padavic, 2010). This may be partly due to their being perceived as less innocent and therefore less needing of protection and support than white girls of the same age (Epstein et al.,

2017). Therefore, one might expect that Black girls who have been abused may be less likely to receive support and more likely to be formally processed for deviant behaviors than white girls.

An intersectional lens is also essential in examining the effects of gender-based violence on criminal justice involvement in adulthood as well as childhood (Crenshaw, 1990). For example, based on interviews with 37 women who were detained at a Riker's Island jail, Richie (1996) coined the term "gender entrapment" to explain how Black women in abusive relationships are criminalized for behaviors that reflect their attempts to adhere to their socially- and culturally-shaped racialized gender roles. Her seminal work added to the feminist pathways literature by uncovering pathways from victimization to criminalization that were highly shaped by social, cultural, and racial contexts.

Despite the importance of the feminist pathways literature to the field, the blurred boundaries between victimization and subsequent offending are not unique to female offenders (Beckley et al., 2018; Jennings et al., 2012; Flexon et al., 2016), and not all female offenders fit into this paradigm (Jones et al., 2014). Thus, it is clear there is heterogeneity in offending etiologies both within and between genders, and although abuse may be a catalyst for delinquency, it does not fully explain such behavior.

### *Theoretical Frameworks*

Given the well-documented association between childhood abuse and delinquency, scholars have explored the possible processes that facilitate this relationship. Potential processes have included social learning theory, social control theory, and labeling theory, which I will consider in the sections that follow in terms of their basic tenets, empirical support as an explanation for the abuse-delinquency link, and relevance in a custodial setting. Then, I will motivate my decision to draw on general strain theory as a guiding theoretical framework.

### Social Learning Theory

According to Akers and Jennings (2015), both conforming and deviant behaviors are produced through the same learning processes. The elements of these processes include differential association, definitions favorable and unfavorable to crime, differential reinforcement, and imitation. Specifically, individuals are more likely to commit deviant behavior when they are exposed to others who engage in, internalize values that endorse, receive or witness others receiving positive reinforcement for, and observe significant others participating in deviance. Under this perspective, children who are subjected to abuse may view perpetrators as behavioral models, learning and eventually imitating such violence. This is especially likely if the child sees their abuser is able to “resolve” issues using violence without facing negative consequences. Moreover, a child that is consistently abused may come to understand violence as a legitimate, normal, and acceptable way to handle problems.

In terms of empirical support, social learning theory (SLT) has had limited success in explaining why individuals who experienced abuse are at a heightened risk of committing delinquent acts. To evaluate the theory, studies have tested whether attitudes that endorse or normalize violence mediate the association between maltreatment and later deviance, and have generally found support for this proposition (Brezina, 1998; Herrenkohl et al., 2003; Manzoni & Schwarzenegger, 2018). Other studies have tested and found support for the SLT-informed hypothesis that individuals will imitate the same specific types of violence they were subjected to (Burton, 2003; Felson & Lane, 2009; Wareham et al., 2009). However, these studies were conducted using all male samples, and as noted by Plummer and Cossins (2018), SLT cannot explain the fact that females make up the vast majority of child sexual abuse victims but a very small minority of perpetrators. In their study, they indeed found that although male victims of

sexual abuse were more likely to become perpetrators, their female counterparts were not, suggesting a more nuanced pathway into offending than behavioral imitation.

### *Social Learning Theory in a Carceral Context*

In a correctional setting, SLT as traditionally applied in the abuse-delinquency literature (with the abused child learning from the abuser) may be under-equipped to explain how childhood abuse may lead to misconduct. Because incarcerated youth are no longer near their abusers and become enmeshed in a different social environment, it may be more relevant to consider the ways in which they are influenced by the people around them, namely fellow incarcerated youth. Much research has documented the ways in which correctional institutions can become a training ground for escalating deviant behavior (Dodge et al., 2006; Lambie & Randell, 2013). First, it is common for fearful youth in correctional facilities to become “followers” of more experienced and higher-status peer “leaders” and emulate their antisocial behavior (Amemiya et al., 2016) in order to fit into an inmate culture that values and rewards masculinity and self-dignity (Mitchell et al., 2017). Further, in order to cope with the constant threat of violence and victimization in prison settings, individuals often turn to aggressive precaution mechanisms such as joining a gang to protect themselves (McCorkle, 1992; Ireland, 2011). Gang members in carceral settings often abide by rules that emphasize toughness, loyalty, and internal cohesion which can manifest as violence and other forms of misconduct (Mitchell et al., 2017).

Youth who were victims of abuse may be especially susceptible to imitating the deviant behavior of more experienced peers or joining a gang, as they may be more inclined to view situations as threatening and interpret others’ acts as hostile (McLaughlin et al., 2020), and therefore have a higher perceived need for protection. Indeed, one study found that male inmates

with a history of childhood sexual abuse were more likely to fear they would be raped in prison (Ratkalkar & Atkin-Plunk, 2020). Further, those with histories of trauma are likely to have lower levels of self-efficacy and self-esteem (Turner et al., 2017), thereby attenuating their belief that they can protect themselves from further victimization without the help of others. As such, those youth who were abused may be more fearful of victimization in custody and therefore be more likely to engage in modelled or gang-related violent behavior.

### *Social Control Theory*

Social control theory assumes that humans are naturally self-interested and inclined to commit crime, but their bonds to conventional society in the forms of attachment, commitment, involvement, and belief restrain them from committing such deviant acts (Hirschi, 1969). A child's bonds to conventional society may be weakened by abuse in various ways. First, their emotional attachments to close others may be strained because abuse typically involves betrayal by a trusted adult. Second, they may develop cognitive and emotional problems leading to trouble with schoolwork and extracurriculars, weakening their bonds to commitment and involvement. Finally, they may become disillusioned with a legal system that failed to protect them from abuse, thus attenuating their bonds to belief.

Evidence has been mixed in terms of this framework's explanatory power. While several studies (Barboza & Siller, 2018; Craig et al., 2022; Salzinger et al., 2007) found that variables from social control theory, such as school engagement and attachment to parents, mediated the relationship between abuse and delinquency, others did not (Rebellon & Van Gundy, 2005; Teague et al., 2003). Relatedly, while some studies found that social bonds moderate the effect of abuse on delinquency (Wilkinson et al., 2019), others failed to find such an effect (Craig et al., 2017; Klika & Herrenkohl, 2013). Further complicating findings, Watts (2017) found gender-

specific support for social control theory as a mechanism between abuse and delinquency, uncovering a mediating effect of maternal bond and school attachment for females but not for males, again suggesting that there are aspects to the relationship between abuse and delinquency that cannot be fully explained by the weakening of prosocial bonds to society.

### *Social Control Theory in a Carceral Context*

Social control theory has additional implications for abused youth who are incarcerated. Research has found that receiving social support from close others, such as family and friends, who live outside of confinement settings can alleviate incarcerated individuals' feelings of isolation and strengthen their stake in conformity by instilling hope about their future (Cochran, 2012). For incarcerated youth, receiving visits from family has been found to improve mental health (Monahan et al., 2011) and behavior (Agudelo, 2013). Yet, individuals who were abused, for obvious reasons, often have strained relationships with their families (Kong et al., 2019; Savla et al., 2013) and therefore may not have this support and the protective measures against misconduct that come with it.

Evidence is also mixed as to whether prosocial bonds with non-offending adult mentors can mitigate the risk that abused youth will engage in delinquency (Baetz & Widom, 2020; Brown & Shillington, 2017; Scanlon et al., 2019). Even if such bonds can serve as a protective measure, many correctional facilities do not allow visits from anyone other than immediate family members (Young & Turanovic, 2022), so it may be difficult for incarcerated youth to maintain relationships with other prosocial adults from the community. Correctional staff and treatment practitioners within the facilities may be able to provide some form of prosocial bond, but due to their "dual roles" of ensuring both security and rehabilitation (Sankofa et al., 2018), relationships between staff and inmates will always have an element of coercion and a power

imbalance. Further, “inmate codes” that dictate loyalty to other inmates and prohibit snitching (Mitchell et al., 2017) likely dissuade youth from forming close relationships with staff.

Education can also serve as an important stake in conformity, but due to the wide variety of education levels and the high prevalence of learning disabilities among incarcerated youth (Leone & Wruble, 2015), juvenile corrections facilities often do not provide the highest quality education (Steele et al., 2016). Youth dealing with chronic traumatic stress may be at an even further disadvantage in terms of finding academic success and fulfillment in carceral settings as they often develop learning disabilities and perform poorly in school (Kerig & Becker, 2010). Therefore, incarcerated youth who were abused may be unlikely to form strong ties to conventional society via emotional attachment or education.

### *Shame, Stigma, and Labeling*

Alternatively, other scholars have proposed labeling, focusing on the feelings of shame and stigma, to explain the relationship between childhood abuse and delinquency. Survivors of childhood abuse must make sense of their victimization in some way. Many cope by attributing blame for the abuse to themselves, which may or may not be encouraged through manipulation on the part of the abuser. This shame can be exacerbated in situations where the abuser is in a caretaking role, either because the child must continue relying on their abuser for care, or because in order to psychologically protect a positive image of their caretaker, they must turn attributions for the abuse inward rather than outward (Sekowski et al., 2020). Evidence indicates that shame is a common feeling in survivors of childhood abuse (MacGinley et al., 2019).

Only a limited number of studies have explicitly tested shame and stigmatization as a mechanism through which abuse leads to deviant behavior. Under Lemert’s (1951) traditional labeling theory, stigmatization following deviant behavior (primary deviance) can create a

deviant identity which reinforces subsequent deviant behavior (secondary deviance). Feiring, Miller-Johnson, and Cleland (2007) argue that labeling theory is equipped to explain the relationship between abuse and delinquency; in this case, the primary deviance is not a delinquent act, but instead is victimization. The authors found support for this framework, in that abuse led to feelings of stigmatization among youth with substantiated cases of sexual abuse, which led to anger and affiliation with deviant peers which, in turn, led to delinquency. Alternatively, shame provoked by abuse may lead to delinquency if youth replace feelings of inward-facing shame with outward-facing blame (Feiring et al., 1996), which may increase their likelihood of engaging in violent behavior (Gold et al., 2011).

#### *Shame and Stigma of Male Sexual Violence Victims*

Evidence has revealed that girls have experienced sexual abuse at a higher rate than boys both in the general population and among justice-involved youth (Barth et al., 2013; Dierkhising et al., 2013). It is important to note that female survivors of sexual abuse experience significant societal stigma and shame which create barriers to disclosure and help-seeking and have deleterious effects on overall wellbeing (Kennedy & Prock, 2016). However, it is possible that male survivors of sexual abuse experience these feelings particularly acutely due to societal stigma emerging from the discrepancy between hegemonic perceptions of rape victims and those of masculinity. While rape victims are commonly seen as feminine and weak, men are expected to be invulnerable and dominant (Hlavka, 2017). Thus, myths about male sexual violence victims endure, among them being the notion that men cannot be raped, that men should be able to defend themselves against rape, and that men who are raped must be gay (Turchik & Edwards, 2011). When surveyed, respondents tend to view male victims as less credible, more blameworthy, and less harmed than female victims (Broussard et al., 1991; Rogers & Davies,

2007). Moreover, these perceptions have been found to relate to homophobia and traditional beliefs about masculinity and gender roles (Davies & Rogers, 2004).

Due to such stigma, it is unsurprising that male sexual abuse victims face unique challenges. Male survivors commonly report feeling shame, emasculation, fear of not being believed or being labeled gay, self-blame, anger, and disgust (Easton & Kong, 2017; Hlavka, 2017). Such feelings discourage victims from disclosing their abuse, thus preventing or delaying many from getting the help and support that they need (Easton, 2013; Romano et al., 2019; Weiss, 2010). As a result, male survivors of childhood sexual abuse have been found to use maladaptive strategies to manage their distress, such as emotional suppression and cognitive avoidance, at a higher rate than adaptive strategies such as emotional acceptance and social support seeking (Snow et al., 2022). These maladaptive strategies, coupled with the desire to regain a lost sense of hegemonic masculinity, lead to outward displays of anger, aggression, and hostility among sexually victimized males (Alaggia & Millington, 2008; Easton & Kong, 2017; Hlavka, 2017; Romano & De Luca, 2001).

#### *Shame, Stigma, and Labeling in a Carceral Context*

In addition to societal stigma, the hypermasculine atmosphere of male correctional facilities may exacerbate boys' feelings of shame and other negative emotions stemming from their abuse. Harris (2000) defines hypermasculinity as the "exaggerated exhibition of physical strength and personal aggression" (p. 785) in order to gain social status. This behavior typically stems from men being in positions of inferiority where they have to take orders from others. The experience of subordination is acute in a correctional setting, where, as Sykes (1958) describes, men lose their autonomy and independence, must submit to guards, and are stigmatized by the outside society. A common response to this is hypermasculinity, behavior expressed through the

physical and sexual dominance of others (Harris, 2000). Such behavior can help provide a sense of masculine identity for incarcerated individuals who cannot access the traditional means of doing so, such as earning money and having heterosexual relationships (Michalski, 2017). Inmate codes and prison status hierarchies, reinforced by both inmates and staff, often revolve around competition, hierarchy, sexism, and homophobia (Abrams et al., 2008), so incarcerated individuals adopt such behaviors in order to survive, fit in, and gain and maintain status (De Viggiani, 2012; Karp, 2010). Therefore, boys in juvenile correctional facilities who were sexually abused may be inclined to compensate for their perceived lack of masculinity by exhibiting violent behavior to preempt further victimization.

Though there is a relative dearth of research on the experiences of female prisoners, qualitative work has shed light on social structures and gendered expectations in women's prisons. For instance, even in women's prisons, incarcerated individuals reinforce patriarchal structures, valuing masculinity and devaluing femininity. Those who present as more masculine are rewarded with status and resources, and sexually exploit those who present as more feminine (Gorga, 2017; Sumner & Sexton, 2015). Similar to boys, girls in juvenile correctional facilities also use violence to form social hierarchies, with girls known as "fighters" gaining respect from fellow girls and staff alike (Flores, 2013) As such, it is possible that the same discrepancies between masculine identities and hegemonic perceptions of sexual abuse survivors as feminine encourage female survivors of sexual abuse to display violence to protect themselves and counteract their feelings of shame and vulnerability in correctional facilities.

However, due to the overwhelming prevalence of trauma histories among girls in the justice system (Chesney-Lind & Shelden, 2013; Hubbard & Pratt, 2002; Siegel & Williams, 2003), policymakers have developed and implemented gender-responsive programming which

emphasizes a trauma-informed approach to treating girls in the justice system (Day et al., 2015; Zahn et al., 2009). Gender-responsive programs aim to address gendered risk factors such as trauma and unhealthy relationships in a safe and respectful environment (Bloom et al., 2003). For example, some programs help girls to develop supportive relationships with positive adults and peers in order to supplant those of abusive families, and others educate girls on sex and healthy relationships in order to heal trauma from sexual abuse and abusive partners (Chesney-Lind et al., 2008). Therefore, girls in correctional facilities are more likely than boys to have access to treatment and programming that normalizes and validates their experiences of abuse and teaches them adaptive coping strategies.

### General Strain Theory

While the social learning, social control, and shame/stigma frameworks help elucidate why victims of abuse may be more likely to offend both in and out of carceral settings, they cannot explain why most victims will never go on to commit delinquency (Bender, 2010). On the other hand, general strain theory (GST; Agnew, 1992) is equipped to explain why only some individuals who experience abuse-related negative emotions go on to commit delinquency, as GST incorporates concepts from the previous theories that explain how strain may or may not lead to deviance. Further, it introduces the concept of poor mental health as a mediating factor between strain and delinquency, which is prevalent among both abused (Cecil et al., 2017) and juvenile-justice involved populations (Underwood & Washington, 2016), and thus is important to consider in the context of the current study.

Agnew posits that an individual can experience three kinds of strains: (1) the failure to achieve personal goals, (2) the loss of something of perceived positive value, or (3) the acquisition of something of perceived negative value. Such strains, he argues, will engender

negative emotions which an individual must cope with in some way. Some individuals may be able to deal with these emotions using legitimate outlets, but others will resort to illegal coping strategies. An individual's selection of a coping strategy is dependent on (1) strain characteristics such as its magnitude, duration, and subjective fairness, (2) individual characteristics such as temperament, problem-solving skills, and perceived costs and benefits of delinquent coping, and (3) environmental characteristics such as conventional social support, social learning, and a social environment that makes it difficult to engage in legitimate coping (Agnew, 1992; Agnew et al., 2002).

Central to GST is the experience of negative emotions, which subsequent scholars have advocated should include symptoms and diagnoses of poor mental health (e.g., Aseltine et al., 2000; Kaufman, 2009). Poor mental health is common among survivors of both physical and sexual abuse as trauma can create detrimental effects on functioning and development (Anda et al., 2006) that often result in mental health problems that can last into adulthood (Cecil et al., 2017; Daniélsdóttir et al., 2024; Springer et al., 2007). For instance, trauma can change the anatomy of the brain and alter hormonal stress response systems (Leeb et al., 2011), such that youth with trauma histories may have impaired judgment and decision-making capabilities, be more likely to perceive situations as threatening, have trouble regulating emotions, and become provoked more easily (Kerig & Becker, 2010). In this way, GST can be applied as a linking mechanism from childhood abuse to poor mental health to delinquency. Studies have generally found that negative emotions and symptoms of poor mental health do mediate the relationship between maltreatment and deviant behavior (Brezina, 1998; Craig et al., 2019; Hollist et al., 2009; Iratzoqui, 2018; Maschi et al., 2008).

Other studies have attempted to more fully test the GST-proposed pathways from abuse to mental health struggles to delinquency by conditioning on the contextual variables that are said to influence choice of coping strategy. For instance, Watts and McNulty (2013) found that the effects of childhood abuse on adolescent offending are mediated by depressive symptoms, and in line with Agnew's (1992) hypothesis that social bonds condition an individual's response to strain, they found that controlling for maternal closeness reduces the effect of sexual abuse on offending to insignificance for females, but not for males. This is especially relevant to the current study as it demonstrates that the negative emotions experienced by male survivors of abuse are not as easily tempered by social bonds, similar to the gender-specific effects of social bonds found by Watts (2017).

#### *General Strain Theory in a Carceral Context*

General strain theory also allows for the integration of the two leading explanations of institutional misconduct, importation and deprivation theory. Under importation theory, incarcerated people "import" into prison their preexisting beliefs, values, attitudes, and behaviors (Irwin & Cressey, 1962). Accordingly, misconduct is a reflection of their underlying traits that led to criminal behavior in the first place. Deprivation theory suggests that the "pains of imprisonment" such as lack of access to goods and services can prompt deviant adaptations among inmates, such as illicit bartering systems (Sykes, 1958). In a systematic review of the predictors of misconduct, Steiner and colleagues (2014) found support for both theories. Underlying characteristics of inmates, such as mental health problems and substance abuse issues, were found to be risk factors for misconduct, consistent with importation theory. In support of deprivation theory, the authors also found institutional factors such as higher security

levels to be associated with misconduct. Therefore, it is important to consider both individual and environmental characteristics when explaining deviance that occurs within detention centers.

Blevins and colleagues (2010) argue that GST can integrate these two models. With GST as a framework, pains of imprisonment can be relabeled as strains, and underlying characteristics of inmates can condition responses to strains. In the current study, youths import their experiences of abuse and the feelings of shame, blame, and anger that likely contributed to their delinquency and will further affect their behavior inside the detention center. They further experience and/or are fearful of the “pains” of victimization and therefore may adapt by displaying violence in order to fend off attacks.

Also important to consider in applying GST to the context of youth detention centers is the lack of legitimate coping strategies for incarcerated youth. Childhood abuse as a strain produces complex negative emotions and mental health problems (Chaplo et al., 2016; Gallo et al., 2018; Martin et al., 2015). These issues can only be effectively addressed with treatment from mental health professionals. However, incarcerated youth have limited access to treatment (Developmental Services Group, Inc., 2017). Not all juvenile facilities screen every individual for mental health needs (Hockenberry et al., 2016), and many youth who need treatment do not actually receive services (Rogers et al., 2001; Teplin et al., 2013). As such, abuse as a strain may be especially likely to result in illegitimate coping, such as violent misconduct, in juvenile detention centers, because legitimate coping strategies are not available.

### *Theoretical Framework of the Current Study*

In the context of the current study, childhood abuse is a strain under the category of the acquisition of something of perceived negative value. This strain is high in magnitude as it inflicts a significant amount of physical, emotional, and mental damage. Several constraints to

nondelinquent coping prevent youths in custody from dealing with the ensuing negative emotions and mental health problems (e.g., shame, depression, fear, etc.) in legitimate ways. First, individual coping resources, like problem-solving skills and self-esteem, may be underdeveloped due to mental health challenges which emerge from abuse and are further exacerbated by the lack of mental health services in detention. Further, drawing on social control theory, abused youth in custody likely have weak conventional social support due to dysfunctional family relations and being separated from other sources of prosocial relationships. Additionally, the benefits of delinquent coping likely outweigh the costs, as violent misconduct can be used as a preemptive protective or status-enhancing measure for youth who already feel stigmatized by their abuse experiences. Finally, based on social learning arguments, youth in custody are surrounded by other delinquent peers who likely model, justify, and receive social rewards for engaging in violent misconduct. As a result, youth in custody who have experienced abuse may be predisposed to committing violent misconduct.

In terms of gender differences, though both boys and girls who were sexually abused must cope with feelings of shame, stigma, and vulnerability in an environment that values masculinity, gender-responsive programming likely allows girls to safely discuss and cope with their experiences of sexual abuse in a way that normalizes and validates their experiences, mitigating feelings of shame and allowing them to cope in nonviolent ways. Therefore, boys who were sexually abused may have feelings of shame and vulnerability that they feel can only be alleviated through violence.

#### Motivation for the Current Study

Two prior studies have examined the relationship between childhood abuse and institutional misconduct among incarcerated youth using mental health as a mediating variable.

First, DeLisi and colleagues (2010) examined the effects of trauma exposure on institutional misconduct, and found that youth with more extensive trauma histories were more likely to engage in misconduct and suicidal activity. Craig, Zettler, and Trulson (2023) built on this study to investigate how mental health intervenes in the relationship between traumatization and misconduct. They found that youth with greater traumatization histories had more severe substance abuse problems and more negative emotions such as anger, depressive symptoms, and anxious feelings when they came into custody. In turn, they found that those youth with more traumatic histories exhibited more misconduct and suicidal activity.

Though these prior studies are similar to the current one, the current study contributes to the literature in a number of ways. First, the current study measures the effects of abuse, while the previous studies measure the effects of traumatic experiences, which include experiencing/witnessing terrible events. As prior research has shown that experiencing victimization has different and larger effects on delinquency than witnessing violence (Wilson et al., 2009), this study fills a gap in the literature by assessing how such unique effects of abuse victimization operate in institutional settings. Second, the current study explicitly examines the differential impacts of sexual abuse on males and females in custody, which is relevant both to the gendered pathways literature and in informing gender-responsive juvenile justice programming. Third, the current study is more generalizable and relevant to current policy and practices than the previous studies, as the data comes from a nationally representative survey administered in 2018 while the data for DeLisi and colleagues' (2010) study was collected from California youth in 1998 and the data for Craig and colleagues' (2022) study was collected from Texas youth in 2005. This is important as juvenile correction centers vary with time and by state in terms of objectives, programming, and funding (Cavanagh et al., 2022; Hockenberry, 2022).

The literature reviewed has demonstrated the theoretical and empirical base from which the current study's research questions and hypotheses are built. First, I hypothesize that incarcerated youth who experienced physical or sexual abuse prior to coming into custody will be more likely to be written up for violent misconduct than those who did not experience abuse. This is based on the consistent relationship found between childhood abuse and delinquency, and the fact that the theoretical links between abuse and delinquency (strained bonds, negative emotions, constraints to healthy coping mechanisms) are still present and likely exacerbated in detention centers. Furthermore, I hypothesize that gender moderates the relationship between sexual abuse and violent misconduct write-ups, with the effect of sexual abuse being stronger for boys than for girls. Males experience unique societal stigma that engender shame, and coupled with the hypermasculine environment of a correctional facility and the lack of specific programming to address and normalize their experiences, this may lead to violence as a form of self-protection and/or outwardly manifested negative emotions. Finally, I hypothesize that symptoms of poor mental health mediate the relationship between abuse and violent misconduct write-ups given the empirical support of GST's conceptual model from abuse to negative emotions to delinquency.

## **Chapter 3: Data and Methods**

### *Data Source*

The current study uses data from the National Survey of Youth in Custody, 2018 (NSYC-3) to investigate the relationship between abuse experienced prior to custody and write-ups for violent institutional misconduct among incarcerated youth. This survey is the third iteration of the NSYC, with the first two being administered in 2008-2009 and 2012, respectively. The NSYC-3 is a cross-sectional interview, administered in 2018, of adjudicated youth housed in correctional facilities. It is conducted by the Bureau of Justice Statistics (BJS) as part of mandated data collection under the Prison Rape Elimination Act and is intended to determine the prevalence of sexual assault in juvenile detention facilities (United States Department of Justice, 2022).

The NSYC-3 sampling universe included juvenile detention facilities from all 50 states and the District of Columbia that met a number of criteria: the facility must (1) house at least ten adjudicated youth, (2) have at least 25% of its population made up of adjudicated youth, and (3) hold youth for at least 90 days. The sampling frame included both state-run facilities and privately- or locally-run facilities contracted through the state. Using the 2015 Census of Juveniles in Residential Placement, the researchers deemed 486 facilities initially eligible for the sample. All state-run facilities and all non-state-run facilities that housed more than 20 adjudicated juveniles were included in the sample. In the next stage of the multistage stratified sampling procedure, BJS used a probability subsampling procedure to sample non-state facilities that housed less than 20 adjudicated juveniles, and determined some of these facilities to be out of scope for reasons such as closing prior to data collection. This resulted in researchers

excluding 148 out of 486 facilities from the sample. With a facility-level response rate of 98.2%, the final sample included 332 facilities.

Facilities that granted *in loco parentis* (i.e., facilities with legal authority to act in the place of detained youths' parents) or parental guardian consent to interview minors provided researchers rosters of adjudicated youths. In buildings deemed to have sufficient interviewing capacity (based on the number of available days for interviews, interviewing rooms, and interviewers), all adjudicated youth were interviewed. In those without sufficient interviewing capacity, youth were randomly sampled to be interviewed, resulting in a total sample of 12,362 youth. However, there was a relatively low youth-level response rate of 54.6%. About 23% of youth did not participate due to lack of consent from a parent or guardian, 14% did not want to do the interview, and 8% were excluded for other reasons, such as providing responses deemed too extreme or inconsistent, not completing the entire interview, or not being in the facility at the time of the interview.

Thus, a total of 6,910 youth participated in the survey, and the overall response rate for the survey, calculated by multiplying the facility and youth response rates, was 53.6%. This is relatively low compared to other nationally representative surveys of incarcerated populations. The response rate for the Survey of Prison Inmates, collected in 2016, is around 70% (United States Bureau of Justice Statistics, 2021), and the response rate for the National Inmate Survey, collected from 2011 to 2012, is 60% (United States Bureau of Justice Statistics, 2019). However, the relatively low response rate is expected due to the fact that interviewing incarcerated juveniles, unlike interviewing incarcerated adults, requires either *in loco parentis* or parental guardian consent.

The interviews were administered in a private setting with audio computer-assisted self interviews. Interviewers were in the room with the youth as they took the survey but were not able to see the computer screen, thus mitigating any privacy issues that may lead to response error. Youth were randomly assigned to either a sexual victimization questionnaire (taken by 90%, or 6,211, of the youth) or an alternative questionnaire (taken by 10%, or 699, of the youth) so that staff, youth, and interviewers were unaware of which survey the youth would take. Those that took the sexual victimization questionnaire either received the Older Youth questionnaire (for ages 15 and older) or the Younger Youth questionnaire (for ages 14 and younger). The two surveys differed only in wording, with younger youth receiving less explicitly-worded screeners for questions regarding sexual victimization that occurred within the facility.

Thus, the population to which this study applies is adjudicated youth incarcerated in medium- to large-sized detention facilities in the United States. The analytic sample for the current study, which excludes any respondents deemed missing because they refused to answer relevant questions or indicated they don't know the answer to questions in the publicly available data, consists of 5,007 incarcerated youth. This is around 81% of the sample of youth who took the sexual victimization questionnaire. There are a few limitations to consider with this data. First, the self-reports of misconduct are not corroborated by administrative records. As such, there is no opportunity to verify these self-reports. However, BJS reviewed the data quality and removed any responses assessed to be extreme or inconsistent, resulting in removal of 162 responses. Second, the low youth response rate of 54.6%, combined with the fact that 23% of all sampled youth did not participate due to lack of consent from a parent or guardian, could introduce nonresponse bias to the study which could be related to the key independent variable, abuse. For instance, abusive parents may be concerned that their child would reveal their abuse

in such a survey, and thus refuse to grant consent. Third, the sampling frame excluded any small and/or short-term facilities. Importantly, these could also be the facilities most lacking in resources to effectively and safely treat incarcerated youth, and thus could be important in understanding how abused youth behave in carceral settings.

Despite the limitations, these data align well with the current study. First, the survey contains questions about victimization and abuse prior to custody, providing information essential to the research questions. Further, the survey was administered in an accessible manner by synchronizing audio instructions with the computer instructions, and by offering both English and Spanish versions of the questionnaire. Therefore, youth with disabilities and/or who are not proficient in English were able to participate in the study. Finally, the NSYC-3 is the only contemporary and nationally representative survey of youth in custody, collected under the reputable direction of the BJS.

### Measures

#### Dependent Variable

*Violent write-up* is the dependent variable which measures the construct of institutional misconduct. This binary indicator is measured as the youth's disclosure of whether he or she has been written up for a violent offense while in custody (for either fighting with other youth, fighting with staff, or threatening staff). Respondents who replied yes to any of these questions were coded as a 1, and those who responded no to all of them were coded as a 0.

There are several limitations to this variable. First, construct validity is questionable, as there are a few ways that write-ups may not actually capture misconduct. Some instances of misconduct may not be detected or reported by staff, or may not be reported by the respondent on the survey. However, the current study attempts to minimize the influence of staff discretion

by only including write-ups for violent misconduct and excluding write-ups for rule breaking “such as talking back to staff, being out of place, or not following directions” (United States Department of Justice, 2022, p. 22), as it is likely that staff use less discretion in writing up more severe and violent misconduct. Further, the binary nature of this variable makes it difficult to differentiate individuals who commit misconduct chronically from those who only do occasionally. I conduct a sensitivity analysis using two alternative measures of institutional misconduct, *rules write-up* and *isolated* which are both binary variables that measure rule-breaking generally rather than serious violent offenses. Though these measures of less serious misconduct raise concerns related to discretion as mentioned above, if the estimates remain similar using these measures, it lends more credibility to the results.

### Independent Variables

The two key independent variables are *physical abuse* and *sexual abuse*, operationalized as binary indicators of whether the youth reported that he or she experienced physical or sexual abuse, respectively, prior to coming into custody. The instructions preceding the questions regarding both physical and sexual abuse are as follows: “The next question is about the time before you came to the facility. The question is about grown-ups who were in your life or who took care of you, like parents, babysitters, siblings, facility staff, teachers, adults who lived with you or others who watched you” (p. 19, 159).

The question used to assess physical abuse asks, “Before you came to this place, did a grown-up in your life hit, beat, kick, or physically abuse you in any way?” (p. 159). It is important to note that although the question does provide a few behavioral-specific examples of abuse, it is likely that individuals define abuse differently. For instance, one may define spanking as a typical punishment while another may define it as physical abuse. This is not a limitation,

however, given that the literature tells us that both self-reported experiences of abuse as well as administratively verified reports of abuse are correlated with subsequent deviant behavior (Smith et al., 2008).

The question regarding sexual abuse asks, “Before you came to this place, had anyone ever forced you to have any kind of sexual contact?” (p. 19). Again, one must note that youths likely define sexual contact differently. For instance, some may not realize that certain actions are sexual, or may have been convinced by their abuser that what they were doing was normal through grooming and desensitization to sexual acts (Craven et al., 2006; Winters et al., 2020). Therefore, it is possible that the study could be under-reporting the prevalence and effect of sexual abuse among incarcerated youth.

With these considerations in mind, these questions align well with the current study, given the specific instructions that ask respondents about their experiences before coming to the facility, as well as the various examples of people who could have perpetrated the abuse.

### Control Variables

Control variables include *male, age, gang affiliation, prior group home exposure, prior juvenile corrections exposure, prior residential treatment exposure, months in facility, staff facility victimizations, youth facility victimizations, offense type, race/ethnicity, youth-to-staff ratio, total staff, facility procedural justice score, facility type, and facility gender*. Each control has been found to significantly predict misconduct (Steiner et al., 2014; Trulson, 2007) and therefore is important to include in order to determine the relationship between abuse and misconduct without confounding influences.

Gender acts as both a control variable as well as a moderating variable in the relationship between sexual abuse and misconduct. Gender is measured by the youth’s response to how they

currently describe themselves (male, female, transgender, something else, or not sure). Responses indicating an identity other than male or female were excluded, as the relationship between queer identities, abuse, and misconduct is a complex issue beyond the scope of the current study. Thus, *male* is a binary indicator, with 1 indicating male and 0 indicating female.

*Age* is a continuous variable ranging from ages 10 to 25. Though most states do not classify those over 21 as juveniles, in some states, such as California, it is possible for individuals who were sentenced as juveniles to remain in juvenile correctional facilities until they are 25 (CA Dept. of Corrections and Rehabilitation, n.d.). It is important to control for age in this analysis because those of different ages may respond to abuse differently. For instance, under the GST framework (Agnew, 1992), younger children may not have had time to process their trauma and develop healthy coping mechanisms, and thus may be more likely to behave violently. Further, research has shown age to be a predictor of misconduct, with older individuals being less likely to engage in misconduct (Kuanliang & Sorensen, 2008), even among juvenile populations (Trulson et al., 2010).

*Gang affiliation*, a binary indicator of the youth's response to the question, "Are you a member of a gang in this facility?" (p. 17) is controlled for because it is theoretically related to both abuse and misconduct. For example, those who were abused may be more likely to join a gang for protection, and those in gangs may be more likely to get into fights due to gang-related obligations. Further, gang affiliation has consistently been found to be a significant predictor of institutional misconduct among adults (Griffin & Hepburn, 2006; Steiner et al., 2014) and youth (Trulson, 2007; Trulson et al., 2010).

*Prior juvenile corrections exposure*, *Prior group home exposure*, and *Prior residential treatment exposure* are binary indicators of whether the youth has (1) been incarcerated in a

juvenile correctional facility, (2) been placed in a group home, foster home, or independent living program, or (3) been in a substance abuse or other residential treatment program prior to their current incarceration. Such previous exposures to residential placements have the potential to affect an individual's experiences and behavior within the current facility, as previous out-of-home placements have been found to be predictive of misconduct in current institutions (Trulson, 2007).

*Months in facility* is a continuous variable that accounts for the fact that the more time youth have spent in the facility, the more chance they have to be written up. On the other hand, youth who have been incarcerated for a longer time may have had more time to adjust to life in the institution and develop legitimate coping mechanisms. Generally, prior research has found that adult inmates who had served more time were more likely to commit misconduct (Kuanliang & Sorensen, 2008; Steiner et al., 2014), but the results on the effects of time served for juveniles have been mixed (Craig & Trulson, 2019; Tasca et al., 2010).

*Staff facility victimizations* and *youth facility victimizations* are counts of the number of times youth indicated they have been sexually victimized by staff and by other youth, respectively. These victimizations within the facility could have similar strain-related effects as prior abuse, and thus should be accounted for. Further, these variables are important to include because studies have found that those with a history of abuse are more likely to be victimized in prison (Ahlin; 2021; Wolff et al., 2007), and that in-prison victimization can increase the likelihood of engaging in misconduct (Hochstetler & DeLisi, 2005).

*Violent offense*, *Property offense*, *Drug offense*, *Technical offense*, and *Status offense* are dummy variables that account for the most serious offense that the youth is in the facility for (see **Appendix A** for the specific offenses that fall into each category). *Status offense* serves as the

comparison group. Offense type may be related to both abuse and misconduct, as studies have found that those who experienced physical abuse in childhood are more likely to commit violent offenses (Felson & Lane, 2009), and also that those who commit violent offenses are more likely to commit violent institutional misconduct (Craig & Trulson, 2019).

*White, non-Hispanic, Black, non-Hispanic, Hispanic, Other race, and Multiracial* are binary race/ethnicity indicators recoded from a categorical race variable. In the analysis, *White, non-Hispanic* is used as a reference group. Race is controlled for in order to ensure that the effect of race is removed from that of abuse on misconduct. This is important as research shows that even when controlling for legal and extralegal factors, minority youth are more likely to be written up for institutional misconduct (Oglesby-Neal & Peterson, 2021).

*Youth-to-staff ratio* is a continuous measure of the ratio of youth in the facility to the number of frontline staff. This serves as a measure of surveillance and crowding, with a smaller ratio indicating that there is sufficient staff to monitor the activities of the youth in the facility. With a smaller ratio of youth-to-staff, youth may be more likely to be written up for misconduct given the higher level of supervision. Alternatively, youth may be less likely to commit misconduct at all, as more supervision could result in more deterrence or a greater capacity to instill effective treatment. Prior studies have found mixed results in terms of the effects of inmate-to-officer ratio on adult inmates' misconduct (Glazener & Nakamura, 2020; Steiner et al., 2014). However, there is reason to believe this ratio may be significant within youth detention facilities as youth tend to view relationships with juvenile correctional staff as more positive and mentoring (Fagan & Kupchik, 2011; Kupchik, 2007). Therefore, the ability to foster deeper relationships with staff could be more meaningful in inhibiting youths' violent behavior.

*Total staff* is a continuous measure of the total number of frontline supervision staff, direct care staff, and correctional officers. Including both this measure and the *youth-to-staff ratio* measure serves to control for both the size and crowding level of the facility, which are significantly related to both individual and facility levels of misconduct (Steiner et al., 2014; Steiner & Wooldredge, 2009).

*Facility procedural justice score* is the facility average score of perceived staff procedural justice. See **Appendix B** for the full procedural justice questionnaire. Each respondent's score can range from 0-27, and each respondent's value for this variable is the average score taken from all respondents in their facility. This is included as a measure of discretion in order to enhance the validity of the model. Controlling for discretion helps to ensure that the model estimates the effect of abuse on misconduct rather than unwarranted write-ups. Further, prior research has found that individuals who view officers as procedurally just are less likely to engage in misconduct (Reisig & Mesko, 2009; Ryan & Bergin, 2022), so this is an important contextual control to include in the model.

*Facility type* is binarized into the following categories: *Detention*, *Training/long-term secure*, *Reception*, *Community-based program*, *Camp*, *Other*, and *Residential Treatment*. *Community-based program* serves as the comparison group. Facilities with higher security levels (i.e., training/long-term secure and detention) may provide youth with less opportunities to engage in misconduct due to high surveillance and restriction of movement, but simultaneously may surround youth with more serious delinquent peers which may increase the likelihood of misconduct under a social learning lens. Indeed, studies tend to find that those in lower-security level prisons are more likely to commit low level offenses (Tahamont, 2019) but those in higher security levels are more likely to commit violent misconduct (Camp et al., 2003; Huebner, 2013).

*Facility gender* is a categorical variable binarized into *all male*, *all female*, and *mixed gender*, with *all male* serving as the reference category. Research suggests differences in female and male prisons in terms of population, subcultures, and available programming (Wooldredge & Steiner, 2016). As such, there are likely different risk factors and opportunities for violent misconduct depending on the gender of facility residents.

#### Mediating Variable

Symptoms of poor mental health were measured using *K6 score*, a youth's score on the 6-item Kessler Psychological Distress Scale (K6; Kessler et al., 2002). Scores range from a low of 0 to a high of 24, with scores over 12 indicating severe psychological distress. See **Appendix C** for the full questionnaire. In community samples of adults, the scale has been found to have good precision and discrimination between cases and non-cases of diagnosed psychological disorders (Kessler et al., 2002). Among samples of adolescents, the K6 score is slightly less predictive of serious psychological distress (Green et al., 2010; Mewton et al., 2016). Despite this, the items on the scale capture the symptoms of depression, anxiety, and hopelessness commonly found to be related to abuse (Springer et al., 2007).

#### Analytic Strategy

The first model equations to be estimated are linear probability models (LPMs) with heteroskedastic-robust standard errors. The inherent heteroskedastic nature of binary dependent variables requires the use of robust standard errors to account for the violation of the homoskedasticity assumption of ordinary least squares regression. Given the large analytic sample size of about 5,000, the robust standard error adjustment is appropriate (White, 1980). Specifically, the main model will run a regression of whether a youth received a *write-up* for a violent offense on whether the youth experienced *physical abuse* and/or *sexual abuse* prior to

coming into custody, as well as the previously mentioned individual- and facility-level control variables. Next, the sample will be split by gender, so a second and third model will analyze the effects of abuse on write-ups for violent misconduct for male and female respondents separately. For these models, coefficients represent the average percentage point change in the likelihood of receiving a write-up for violent misconduct, holding other covariates constant.

Previous research has shown that ordinary least squares (OLS) regression, which LPM falls under, provides efficient and unbiased estimates of parameters if Gauss-Markov assumptions are met (e.g., Puntanen & Styan, 1989). Though LPM violates some Gauss-Markov assumptions, it is a feasible estimation method if measures are taken to address these violations.

Specifically, LPM violates the first Gauss-Markov assumption that the relationship between  $x$  and  $y$  is linear in parameters. In the current study, this assumption is violated due to the binary nature of the dependent variable, whether or not the youth has received a *violent write-up*. There are only two possible values that  $y$  can take on, so the relationship between  $x$  and  $y$  cannot be linear in the population. This means that the estimates from the regression will be biased. However, because the distribution of the dependent variable is relatively even (about 45% of the sample received a violent write-up), the degree of bias in the estimates is relatively low. LPM also violates the sixth assumption (normality of errors), which is that the unobserved factors in the model are normally distributed around the population regression function. This assumption is violated again due to the binary nature of the outcome variable, but can be accounted for with the heteroskedastic-robust standard errors that are used in the models.

To further address the possible issues of LPM, I perform a sensitivity analysis by running a logit model to compare its results to that of the LPM. The benefit of the logit model is that it does not assume linearity in parameters as LPM does, and will not predict  $y$ -values outside of

[0,1] (i.e., it will not predict illogical probabilities). If the coefficients for the key variables remain similar, it will indicate no overt problems with the LPM specification.

The current study also investigates whether symptoms of poor mental health mediate the relationship between abuse and violent misconduct write-ups, both for the full sample and split by gender. A variable,  $M$ , mediates a relationship between an independent variable,  $X$ , and a dependent variable,  $Y$ , when part of the effect of  $X$  on  $Y$  can be explained by  $M$  (Baron & Kenny, 1986). The current study employs the mediate command on Stata which uses the potential outcomes framework for mediation analysis. The potential outcomes framework considers how an individual's outcome would change in either the absence or presence of the independent variable, even though only one of these situations is actually observed (Rubin, 2005). Differences in potential outcomes yield direct effects (the effect of abuse on write-ups controlling for poor mental health), indirect effects (the effect of abuse on write-ups through poor mental health), and total effects (the overall effect of abuse on write-ups, both direct and indirect) of interest (Valente et al., 2020). In these models, the proportion mediated represents the proportion of the relationship between abuse and write-ups that is explained by symptoms of poor mental health.

Specifically, the current study investigates the following research questions and hypotheses:

*Research Question 1:* Do youth who report experiencing physical and/or sexual abuse prior to custody have a higher likelihood of being written up for violent misconduct?

*Research Question 2:* Do males who report experiencing sexual abuse prior to custody have a higher likelihood of being written up for violent misconduct than females who experienced sexual abuse?

*Research Question 3:* Do symptoms of poor mental health mediate the relationship between abuse and violent misconduct?

*Hypothesis 1:* Youth who report experiencing physical and/or sexual abuse prior to custody are more likely to receive a write-up for a violent offense.

*Hypothesis 2:* Males who report experiencing sexual abuse prior to custody are more likely to receive a write-up for a violent offense than females who experienced sexual abuse.

*Hypothesis 3:* Symptoms of poor mental health partially mediate the relationship between abuse and write-ups for violent misconduct.

## Chapter 4: Results

### Descriptive Statistics

**Table 1** displays the descriptive statistics for the overall analytic sample. Of the 5,007 respondents, 45% (45% of males and 38% of females) reported that they had been written up for a violent instance of misconduct since admission to the facility. 31% (28% of males and 52% of females) of the sample indicated that they had experienced physical abuse prior to custody, and 16% (10% of males and 54% of females) indicated that they had experienced sexual abuse prior to custody. These prevalence estimates demonstrate a wide disparity in prior abuse between boys and girls, and are comparable, but somewhat larger, to those found by Wanamaker and colleagues (2022).

The overwhelming majority (89%) of respondents identified as male, and ages ranged from 10 to 25 with an average age of 17 (separate analyses were run limiting the sample to only those below 18, and results did not differ in any notable way). Demographics reveal 40% of respondents to be Black, non-Hispanic, 39% White, non-Hispanic, 16% Hispanic, and about 2% each to be another race or multiracial. About 22% of respondents indicated they were a member of a gang in the facility. A large majority (80%) of the respondents had prior exposure to some sort of confinement facility. Specifically, 77% had previously been in another juvenile correctional facility, 33% had previously been in a residential treatment facility, and 26% had been in a group home, foster home, or independent living program.

Respondents indicated they had been victimized by facility staff between 0 and 365 times, and by other youth between 0 and 208 times. With the large majority of respondents indicating 0 victimizations, the average number of victimizations was 0.66 and 0.22, respectively. The majority of respondents' (55%) most serious offense responsible for current

placement was classified as violent, followed by property (25%), public order (7%), drug (4%), technical (4%), non-violent sexual (2%), and status (2%). Respondents had spent between 0.5 and 87.5 months in the facility at the time the survey was administered, with the average exposure period being 8 months.

The majority (61%) of respondents were housed in a training/long-term facility, followed by residential treatment (17%), detention (14%), community-based (6%), camp (1%), reception (0.07%), and other (0.03%). Most respondents were housed in an all-male facility (71%), followed by mixed gender (23%), and all-female (6%). The ratio of youth-to-staff in the facilities ranged from 0.09 to 5.38, with an average ratio of 1.07 youth per staff member. Between 5 and 334 staff members were employed at each facility, with a mean of 99 staff members per facility. The facility average procedural justice scores ranged from a low of 5 to a high of 27 with an average score of 14.5. Finally, the average K6 score was 8.24, which falls into the category of moderate psychological distress (Kessler et al., 2002).

### Linear Probability Models

Linear probability models assessed the effects of experiencing physical and sexual abuse prior to custody on the likelihood of receiving a write-up for a violent offense. Models were run for the full sample and split by gender.

**Table 2** displays the linear probability model [ $F(32, 4974)=48.98, p < .001$ ] based on the full samples' responses. Experiencing physical abuse ( $\beta=0.08, p<0.05$ ) was associated with an increased likelihood of receiving a write-up for a violent offense, all else equal. Experiencing sexual abuse did not exert significant effects on the likelihood of receiving a write-up for a violent offense. This provides partial support for Hypothesis 1: on average, youth who experienced physical abuse prior to custody are more likely to be written up for violent

misconduct, but youth who experienced sexual abuse prior to custody are no more likely to be written up for violent misconduct than those who did not. To determine whether this was driven by the confounding effects of one type of abuse on the other, **Table 3** shows results of separate analyses run for each type of abuse. The results of those analyses did not differ from those of the main model: sexual abuse still did not exert a significant effect on write-ups even in the absence of the possibly co-occurring effects of physical abuse, and physical abuse ( $\beta=0.08$ ,  $p<0.01$ ) remained a significant predictor of write-ups.

Several control variables also exerted significant negative effects on the likelihood of receiving a write-up for a violent offense. Older youth ( $\beta= -0.03$ ,  $p<0.01$ ), those incarcerated for drug offenses ( $\beta= -0.13$ ,  $p<0.05$ ) and non-violent sexual offenses ( $\beta= -0.13$ ,  $p<0.05$ ) in comparison to status offenses, those in camp facilities ( $\beta= -0.17$ ,  $p<0.01$ ) in comparison to community-based facilities, and those in facilities with higher average staff procedural justice scores ( $\beta= -0.02$ ,  $p<0.01$ ) were all significantly less likely to be written up for a violent offense.

It is somewhat surprising that those incarcerated for status offenses are more likely to be written up for violent misconduct than those incarcerated for drug and non-violent sex offenses, given the trivial nature of most status offenses. However, it is possible that the youth who are sentenced to residential placement for committing status offenses have some characteristics that were not captured in the data set but that led judges to consider them dangerous enough to be incarcerated for such a minor offense. For instance, they may have prior adjudications for violent offenses that stem from a predisposition for violent behavior. Extant studies have found that youth with more prior referrals are more likely to be adjudicated for status offenses (Freiburger & Burke, 2011), but it is unclear whether the severity of the prior offense is also a determining factor in sentencing decisions.

On the other hand, a number of control variables were significantly associated with an increased likelihood of receiving a violent write-up. Black, non-Hispanic ( $\beta=0.16$ ,  $p<0.01$ ) and multiracial ( $\beta=0.10$ ,  $p<0.01$ ) individuals in comparison to non-Hispanic White youth, those affiliated with a facility gang ( $\beta=0.21$ ,  $p<0.01$ ), individuals who were previously in group homes ( $\beta=0.04$ ,  $p<0.05$ ) or in residential treatment facilities ( $\beta=0.07$ ,  $p<0.001$ ), individuals who were victimized by staff ( $\beta=0.002$ ,  $p<0.01$ ) or by other youth ( $\beta=0.002$ ,  $p<0.01$ ), and those who spent more time in the facility ( $\beta=0.006$ ,  $p<0.01$ ) were significantly more likely to be written up for violent misconduct. Further, those incarcerated in training/long-term secure ( $\beta=0.05$ ,  $p<0.1$ <sup>1</sup>) and detention facilities ( $\beta=0.07$ ,  $p<0.05$ ) rather than community-based facilities, and those in facilities with a higher youth-to-staff ratio ( $\beta=0.02$ ,  $p<0.1$ ) or with more staff members ( $\beta=0.001$ ,  $p<0.01$ ) were significantly more likely to be written up for a violent offense.

The significant and relatively large effect of nonwhite race/ethnicity, net of other covariates, on violent misconduct write-ups is especially troubling. It is consistent with prior work that shows disparate system-involvement of minority youth that do not stem from differences in delinquent behavior (Grogan-Kaylor et al., 2008). Though beyond the scope of the current study, future work should investigate whether negative attributional stereotypes, commonly explored in studies of court officials (e.g., Beckman & Rodriguez, 2021; Bridges & Steen, 1998), operate when juvenile correctional officers decide whether to formally sanction youth for misconduct.

**Table 4** shows results of two linear probability models, one based only on males and one only on females. There are no notable differences between the only-male results and the results

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<sup>1</sup> The current study uses  $p<0.1$  as the minimum level of statistical significance. Though the standard minimum significance level in the field of criminology is typically  $p<0.05$ ,  $p<0.1$  is used in other fields related to the current study such as pediatrics. In the current study it is used due both to the potential harmful effects of Type II errors and due to the smaller sample size of female respondents.

from the full sample, indicating that the results from the full sample analysis were driven by the male respondents. This makes sense considering they make up the vast majority of respondents.

However, the results of the model based only on female respondents differ in a few notable ways. First, along with physical abuse ( $\beta=0.07$ ,  $p<0.1$ ) sexual abuse ( $\beta=0.07$ ,  $p<0.1$ ) also has a significant positive effect on the likelihood of receiving a violent write-up. This finding directly contradicts Hypothesis 2, as the effect of sexual abuse was null for males but significant for females. Possible explanations for this finding will be discussed in the next section.

Next, prior exposure to confinement settings, facility type, youth-to-staff ratio, and total staff exert no significant effects on write-ups for females, though they exerted significant effects for the full sample. This could be due to the smaller sample size of female respondents; the effect sizes for most of these covariates were indeed very small for males. Finally, though the effects of being incarcerated for a drug ( $\beta= -0.16$ ,  $p<0.01$ ) or non-violent sexual offense ( $\beta= -0.16$ ,  $p<0.05$ ) compared to a status offense were relatively modest in size for the full sample, they were not significant for females. It could be the case that female status offenders are truly incarcerated for status offenses alone, while males who commit status offenses are incarcerated due to a perceived underlying propensity for violence. This makes sense in the context of prior literature that shows females are more likely than males to be criminalized for committing status offenses (Tracy et al., 2009), possibly because girls who commit status offenses are seen as violating traditional gender roles and therefore needing harsher intervention to change their behaviors (Chesney-Lind, 1989). Therefore, the girls who commit status offenses may not be any more predisposed to engage in violent behavior than the girls who commit drug or non-violent sex offenses.

Moreover, the results indicate that nonwhite racial identity has larger magnitude effects on the likelihood of violent write-ups for girls than boys. To further assess how intersectional identities affect juvenile correctional experiences, **Table 5** shows the results of a model that includes an interaction term between nonwhite racial identity and female gender identity. The results indicate that compared to both White females and nonwhite males, nonwhite females ( $\beta=0.071$ ,  $p<0.1$ ) are significantly more likely to be written up for violent misconduct, net of other covariates. These results are consistent with prior studies that find Black girls are treated more punitively than White girls in the juvenile justice system (Moore & Padavic, 2010), and provides further evidence that this disparate treatment may extend beyond sentencing and into punishments within correctional facilities. This finding also supports the argument made by intersectionality scholars that the additive effects of both race and gender provide more nuance than looking at these two identities separately (Crenshaw, 1990). While beyond the scope of the current study, future work should build on these findings to investigate further how juvenile corrections experiences are shaped by intersectional identities.

#### Mediation Analyses

**Table 6** reports the results of a mediation analysis of the direct effects of physical abuse on receiving a violent write-up, the indirect effects through the youth's K6 score, and the total effects. When accounting for the other control variables, 37% of the total effect of physical abuse on violent write-ups is accounted for by the youth's K6 score. This partial mediation also indicates that 63% of the effect works through other unidentified mechanisms. As shown in **Table 7**, when the sample is split by gender, 34% of the effect of physical abuse on violent write-ups is mediated by K6 score for males. For females, the 14% mediated is not statistically significant.

As sexual abuse does not exert a significant effect on violent write-ups for the whole sample or for males, **Table 8** reports the mediation results only for the female respondents. Similar to the mediation effect of K6 score for physical abuse, the 13% mediated for sexual abuse is not significant for females. This indicates that the effects of both physical and sexual abuse on write-ups for violent misconduct work through a different mechanism that is not captured by the K6 score. As such, both Hypothesis 3 and general strain theory are only partially supported, and the results indicate even further gendered mechanisms and experiences.

### Sensitivity Analyses

An important limitation of the current study is the nature of the dependent variable, which measures reported write-ups for violent misconduct rather than violent misconduct itself. While there is no measure of self-reported violent behavior, there are other measures of whether deviant behavior was surveilled and punished. First, *rules write-up* is a measure of whether the respondent reporting receiving a write-up since admission to the facility for “breaking facility rules, such as talking back to staff, being out of place, or not following directions” (United States Department of Justice, 2022, p. 22). Second, *isolated* measures whether the youth reported being isolated or secluded in a separate room without contact with other youth because they were accused of breaking the rules (p. 161). These analyses both compare the effects of abuse on different misconduct types, and also test how sensitive the results are to contextual effects such as staff discretion.

**Table 9** reports the results of a linear probability model using *rules write-up* as a dependent variable. The coefficients for the key independent variables are not remarkably different using rules write-up as the outcome. Physical abuse ( $\beta=0.11$ ,  $p<0.001$ ) exerts a slightly

larger effect on write-ups for breaking rules than for violence, but the increase is small at only 3 percentage points.

However, the coefficients for the control variables had a few notable changes. First, identifying as a race other than White had much smaller effects on the likelihood of being written up for violating rules. Second, the magnitude of the effect of different facility types were larger, with those in training/long-term secure and detention facilities being 21 and 25 percentage points, respectively, more likely to be written up for rule-breaking than those in a community-based program. This is likely because there are more rules and stricter enforcement in those facilities, whereas rules against fighting and violence are likely to be present and strictly enforced even in community-based facilities.

Finally, different offense types did not yield significant differences in the likelihood of being written up for violating rules. This could be because as mentioned before, for a juvenile to be incarcerated for a status offense, they may have characteristics that suggest they are dangerous enough to warrant incarceration, such as prior referrals (Freiburger & Burke, 2011). Though prior referrals alone do not indicate risk of violence, youth risk assessment instruments that include a measure of prior offenses have been found to predict violent reoffending (Catchpole & Gretton, 2003). Therefore, it is possible that youth incarcerated for status offenses may be uniquely predisposed to violence, but no more likely than their peers to engage in less serious deviance and rule-breaking. However, this proposed explanation is speculative, and further research into the characteristics of incarcerated status offenders is necessary in order to corroborate it.

As shown in **Table 10**, the effects of abuse on *isolation* for breaking facility rules are similar to those on *rules write-ups*. One notable difference is that being in a residential treatment

facility ( $\beta=0.13$ ,  $p<0.001$ ) rather than a community-based facility is associated with a significantly higher likelihood of being isolated for breaking rules. Yet, those in residential treatment facilities were not significantly more or less likely to be written up for violent offenses or to be written up for violating rules. One possible explanation is that isolation is a more common punishment in residential treatment settings, as it may be deemed important to separate these youth from negative peer influences in order to treat substance abuse problems or to remove them from environments with opportunities for self-harm (Geoffrion et al., 2021).

Finally, **Table 11** shows the results of three logistic regressions (for the full sample, for males only, and for females only) to test the sensitivity of the results to the model specification. The average marginal effects of the key independent variables were very similar to the coefficients from the linear probability models, which indicates no overt problems with the linear probability models.

## **Chapter 5: Discussion and Conclusion**

### *Discussion*

The current study assesses whether the well-documented association between childhood abuse and delinquency extends to carceral settings, whether this relationship differs by gender, and whether it can be explained by poor mental health. Analyses show that both boys and girls who experienced physical abuse prior to custody are significantly more likely to be written up for violent misconduct, consistent with Hypothesis 1. However, while girls who experienced sexual abuse prior to custody are also significantly more likely to be written up for violent misconduct, boys who experienced sexual abuse are not, which is inconsistent with Hypothesis 1 and in direct contradiction to Hypothesis 2. Finally, the results show differential mediating effects of mental health, as symptoms of poor mental health partially mediate the relationship between physical abuse and violent misconduct for boys. However, these symptoms do not significantly mediate the relationship between either physical or sexual abuse and violent misconduct for girls, which provides mixed support for both Hypothesis 3 and general strain theory. The results have a number of implications and plausible interpretations, which I will discuss next.

First, the results indicate that physical and sexual abuse have unique impacts on boys, as physical abuse is associated with an increased likelihood of violent write-ups, but sexual abuse is not. Prior studies that have attempted to disentangle the effects of different maltreatment types have produced mixed results, with some uncovering unique effects of physical rather than sexual abuse on anger, aggression, and violence (Petrenko et al., 2012; van der Put et al., 2015), others not finding a unique effect (Cecil et al., 2017), and others finding the opposite result, with sexual abuse but not physical abuse predicting violent delinquency (Yun et al., 2011).

A possible explanation for this finding rests on social learning theory, in that while physical abuse necessitates violence, sexual abuse does not. The respondents were asked about forced sexual contact, and besides physical domination, force can also indicate threats, coercion, and manipulation. Therefore, if social learning mechanisms explain the relationship between abuse and violent misconduct, it makes sense that those who were subject to physical abuse would go on to enact violence but those who were subject to non-violent sexual abuse would not. However, measures of attitudes toward violence were not available in this data set, so this reasoning could not be tested, and this still does not explain why sexual abuse was associated with violent misconduct write-ups for girls but not for boys. Future work should further investigate the possibly gendered mechanisms by which different maltreatment types lead to violent behavior.

Second, the results suggest that the effects of sexual abuse differ by gender, as sexual abuse is linked to write-ups for violent misconduct for girls but not for boys. This is inconsistent both with hypotheses and with prior literature that argues that females' responses to abuse are likely to imbued with emotions that counteract overt violence and instead are focused inward, such as guilt, depression, and anxiety (Bender, 2010; Hay, 2003; Jang & Johnson, 2005; Sharp et al., 2005). However, it is possible that males who were sexually abused must cope with these types of emotions, typically associated with girls' trauma, that facilitate self-destructive rather than externally-facing violent behavior. Evidence is mixed as to whether this is the case. Though some studies have found that boys who were sexually abused exhibited greater internalizing difficulties, such as withdrawal, inhibition, and depression, than girls who were sexually abused (Lewis et al., 2016), others have found the opposite (e.g., Ullman & Filipas, 2005).

Alternatively, it is possible that although males disclosed on the questionnaire being forced to have sexual contact, they still may not see themselves as victims. Research suggests that male survivors of sexual assault may be less likely than female survivors to self-identify as a victim due to rape myths that perpetuate self-blame and due to gendered scripts revolving around who can and cannot be victimized (Depraetere et al., 2020). Though this sort of unprocessed trauma has been linked to more aggression and violence (e.g., Romano & De Luca, 2001), it is possible that in this sample it instead led to behavioral withdrawal and inhibition. Subsequent research should investigate more thoroughly how boys process their trauma in confinement settings.

Finally, the results indicate that mental health does not significantly mediate the relationship between prior abuse and write-ups for violent misconduct among girls. This seems to be inconsistent with prior literature that proposes mental health problems as a link from trauma to criminal behavior for female offenders (e.g., Jones et al., 2014; Salisbury and Van Voorhis, 2009). However, it may be the case that mental health is only significant for certain types of crime. Though psychological issues that emerge from traumatic events are related to subsequent nonviolent deviance, such as substance abuse and sex work (Belknap, 2020; DeHart, 2008; DeHart et al., 2014), they may not be related to subsequent violent offending. Indeed, two prior studies did fail to find mental health symptoms to significantly mediate the relationship between childhood trauma and violent offending (Broidy et al., 2018; Topitzes et al., 2012). Taken together, the results of prior work and the current study suggest that there may be another mechanism by which girls who experienced childhood abuse are at a heightened risk of violent behavior.

The first alternative mechanism that may link abuse and violent misconduct among incarcerated girls is interpersonal deficits. Girls with abuse histories may be more likely to become involved in situations that could escalate into physical altercations with other girls in the facility. Prior research has found that victimized girls have trouble forming trusting relationships with other girls, and that they are more likely to use unhealthy methods to resolve conflict, such as physical aggression (Kerig et al., 2024). These mechanisms involving attitudes toward and relationships with peers were not measured, but could help to explain why girls who were abused are at a heightened risk of committing violent misconduct.

Second, social control theory could help incorporate contextual factors in explaining how childhood abuse is associated with violent misconduct write-ups for girls specifically. For example, correctional staff might treat girls who disclose previous abuse more harshly than those who do not. Prior research has demonstrated that juvenile correctional workers tend to view girls as more complicated, needy, manipulative, and harder to work with (Bond-Maupin et al., 2002; Gaarder et al., 2004; Galardi & Settersten, 2018; Hodge et al., 2015). Further, Galardi and Settersten (2018) found that male staff were worried that girls would fabricate stories of staff sexual misconduct in order to garner sympathy. If staff already see girls as manipulative, perhaps they are especially suspicious of girls who claim they had experienced abuse prior to custody. Therefore, correctional officers may try to keep their distance from these girls, which may be especially harmful both because juvenile corrections staff are supposed to act as mentors, and because these girls likely do not have functional relationships with their families.

Based on social control theory, if incarcerated girls do not have a trusted and caring adult in their life, they may have less to lose when deciding whether to commit violent misconduct. This lack of attachment is salient when considering the importance of prosocial bonds in

lessening the risk of delinquent behavior for abused girls (Watts, 2017; Watts & McNulty, 2013). Using this same logic, it could also be the case that staff are less likely to excuse the violent behavior of girls they see as deceitful, and therefore be more likely to write them up when they do commit violent misconduct.

Finally, it is possible that the K6 score variable did not adequately measure the mental health symptoms that link trauma to violent behavior. Specifically, there was no item measuring anger, which evidence suggests to be significant in the relationship between abuse and behavioral problems (Bennett et al., 2005; Iverson et al., 2014). It is also important to note that though poor mental health significantly mediated the effect of physical abuse on violent write-ups for boys, it mediated less than half of its total effect. Therefore, the results could be understating the effect of poor mental health for both boys and girls. Future studies should endeavor to include a more complete measure of mental health symptoms that are common among youth with trauma histories, such as avoidance, hyperarousal, anger, aggression, and shame (Kerig & Becker, 2010).

To conclude, these mediation results indicate that GST can only partially explain the relationship between past trauma and violent misconduct write-ups for incarcerated youth. In essence, GST posits that negative emotions (i.e., symptoms of poor mental health) mediate the relationship between adverse life events and subsequent deviant behavior. However, for boys, poor mental health explained less than half of the effect of physical abuse on violent misconduct write-ups. Moreover, for girls, poor mental health did not explain a significant amount of the effect of physical or sexual abuse on violent misconduct write-ups. As such, the results indicate that there are still other mechanisms at work in this relationship that are not accounted for by GST.

### Limitations

Though the current study provides a crucial step in understanding how trauma impacts the experiences of youth in the juvenile justice system, it is critical to highlight a number of limitations in order to improve future research.

First, it is important to reiterate the limitations concerning the data and measures. Due to the self-report nature of the measures for both independent and dependent variables, it is questionable whether the study fully captures all cases of abuse and all instances of violent misconduct. Future studies should endeavor to corroborate self-reports of write-ups for violent misconduct with both (1) administrative records and (2) self-reports of engaging in violent acts in order to ensure construct validity. This would also help to overcome the lack of specificity in the dependent variable by measuring the count of write-ups or violent incidents in a certain time period rather than the presence or absence of a write-up since admission to the facility.

Second, the study is not situated to make causal claims about poor mental health's mediation on the relationship between abuse and violent misconduct due to the uncertainty of temporal ordering. While the measure of write-ups for violent misconduct accounts for write-ups since admission to the facility, the K6 questionnaire asks about feelings in the past 30 days. Therefore, the reported write-up could have occurred before the mental health symptoms appeared. Subsequent works attempting should ensure temporal ordering, which can be established if more time-specific measures are used for the dependent variable.

### Conclusion

Although the juvenile justice system is an era of developmental-based reform and the number of juveniles sentenced to residential placements is declining (Cavanagh et al., 2022), there still remains much work to be done in order to truly address the needs of system-involved

youth. Specifically, youth who experienced childhood abuse are overrepresented in the juvenile justice system and face unique challenges that correctional facilities may be unfit to address. Whilst prior studies have investigated the relationship between trauma, mental health, and institutional misconduct among juveniles, this study is the first to do so with a contemporary and nationally representative sample. Further, it is the first to examine how gender shapes these relationships.

The results of the current study highlight the need for better interventions for justice-involved and abused youth, as those who were abused prior to placement are at a heightened risk of being charged with violent misconduct within the facility. Yet, there is not a one-size-fits-all approach when it comes to addressing the needs of this vulnerable and over-represented population, as effects of abuse vary both by maltreatment type and by gender.

The finding that girls who were abused are at an increased risk of being written up for violent misconduct despite the widespread implementation of gender-responsive programming is unexpected. Yet the existence of such programs does not mean that they are implemented with fidelity to program design, which is a crucial determinant of whether or not they produce desired outcomes (Duwe & Clark, 2015). Principles of gender-responsive programming include creating a safe and respectful environment, and targeting risk factors such as trauma and unhealthy relationships using culturally-sensitive and evidence-based practices (Bloom et al., 2003). If juvenile correctional facilities are unable to abide by these principles, then it is unsurprising that girls who experienced abuse are still at a heightened risk for violent behavior.

Additionally, although poor mental health partially mediates the relationship between abuse and violent misconduct write-ups for boys, it does not for girls. Therefore, programs should target multiple needs and risk-factors rather than focus solely on mental health treatment

in order to enact positive change. In fact, these are the programs that appear to show the most promise in reducing recidivism among both boys and girls (Zahn et al., 2009). For instance, courses on forming healthy relationships, cognitive-behavioral approaches that aid in recognizing and addressing unhealthy thinking patterns, and staff training on trauma responses and conflict de-escalation may be promising in reducing violence among incarcerated and abused youth. Moreover, in an era of decarceration, court-based diversion programs that screen youth with trauma histories can ensure they are not removed from the community and put into a possibly re-traumatizing carceral environment that disrupts their natural aging out of crime (Kerig & Becker, 2010), and these same programs can be administered within the community.

The current study demonstrates that incarcerated youth who experienced prior abuse are more likely to be written up for violent misconduct in confinement settings, suggesting that the well-established relationship between abuse and delinquency (Braga et al., 2017; Widom, 1989) does persist in correctional facilities, with important variation by gender and maltreatment type. Though the current study provides preliminary evidence that carceral sentences are ineffective at rehabilitating youth with trauma histories, this research alone is not sufficient to fully understand the lived experiences of abused youth in the juvenile justice system. Particularly, qualitative studies that put youths' voices at the forefront are crucial in identifying effective solutions that address their distinctive needs and put them on the path toward healing.

## Tables

Table 1. Descriptive Statistics (N=5,007)

Variable	Mean	Standard Deviation	Min	Max
<b>Dependent Variable</b>				
Violent write-up	0.447	0.497	0	1
<b>Independent Variables</b>				
Physical abuse	0.310	0.462	0	1
Sexual abuse	0.156	0.363	0	1
<b>Individual-Level Controls</b>				
Male	0.893	0.309	0	1
Age	16.909	1.585	10	25
Gang affiliation	0.218	0.413	0	1
Prior group home exposure	0.258	0.437	0	1
Prior juvenile corrections exposure	0.774	0.418	0	1
Prior residential treatment exposure	0.334	0.472	0	1
Staff facility victimizations	0.663	7.162	0	365
Youth facility victimizations	0.224	3.840	0	208
Months in facility	8.002	7.940	0.5	87.5
<i>Offense type</i>				
Status	0.020	0.140	0	1
Violent	0.549	0.498	0	1
Property	0.250	0.433	0	1
Drug	0.044	0.205	0	1
Technical	0.040	0.196	0	1
Non-violent sexual	0.023	0.150	0	1
Public order	0.074	0.262	0	1
<i>Race/ethnicity</i>				
White, non-Hispanic	0.391	0.488	0	1
Black, non-Hispanic	0.402	0.490	0	1
Hispanic	0.160	0.367	0	1
Other race	0.023	0.150	0	1
Multiracial	0.024	0.152	0	1
<b>Facility-Level Controls</b>				
Youth-to-staff ratio	1.069	0.557	0.087	5.375
Total staff	99.444	83.060	5	334
Facility procedural justice score	14.537	2.935	5	27

Table continues on next page

Table 1 Continued

Variable	Mean	Std. dev.	Min	Max
<i>Facility type</i>				
Community-based	0.059	0.236	0	1
Training/long-term secure	0.612	0.487	0	1
Reception	0.007	0.084	0	1
Detention	0.135	0.342	0	1
Camp	0.011	0.106	0	1
Residential treatment	0.171	0.376	0	1
Other	0.004	0.062	0	1
<i>Facility gender</i>				
All male	0.709	0.454	0	1
All female	0.061	0.239	0	1
Mixed gender	0.230	0.421	0	1
<b>Mediating Variable</b>				
K6 score	8.242	6.241	0	24

Table 2. Linear regression: Likelihood of a violent write-up

<b>Variable</b>	<b>Coefficient</b>	<b>P&gt;t</b>
Physical abuse	0.078***	0.000
Sexual abuse	0.006	0.751
<b>Individual-Level Controls</b>		
Male	0.008	0.813
Age	-0.033***	0.000
Gang affiliation	0.213***	0.000
Prior group home exposure	0.040**	0.013
Prior juvenile corrections exposure	0.022	0.175
Prior residential treatment exposure	0.066***	0.000
Staff facility victimizations	0.002**	0.003
Youth facility victimizations	0.002**	0.008
Months in facility	0.006***	0.000
<i>Offense type</i>		
Violent	-0.036	0.447
Property	-0.016	0.747
Drug	-0.134**	0.012
Technical	-0.057	0.308
Non-violent sexual	-0.135**	0.022
Public order	-0.029	0.573
<i>Race/ethnicity</i>		
Black, non-Hispanic	0.161***	0.000
Hispanic	0.027	0.176
Other race	0.014	0.756
Multiracial	0.098**	0.025
<b>Facility-Level Controls</b>		
Youth-to-staff ratio	0.023*	0.085
Total staff	0.001***	0.000
Facility PJ score	-0.023***	0.000
<i>Facility type</i>		
Training/long-term secure	0.047*	0.095
Reception	-0.079	0.274
Detention	0.074**	0.026
Camp	-0.172***	0.000
Residential treatment	-0.027	0.364
Other	-0.072	0.371

Table continues on next page

Table 2 Continued

Variable	Coefficient	P>t
<i>Facility gender</i>		
All female	-0.055	0.194
Mixed gender	-0.029	0.122
<b>Constant</b>	1.000***	0.000
<b>Observations</b>	5,007	
<b>R-squared</b>	0.185	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Race coefficients are in comparison to the White, non-Hispanic category.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facility category.

Table 3. Linear regressions: Likelihood of a violent write-up, split by abuse type

Variable	Model 1 Coefficient	P>t	Model 2 Coefficient	P>t
Physical abuse	0.079***	0.000	---	---
Sexual abuse	---	---	0.031	0.116
<b>Individual-Level Controls</b>				
Male	0.004	0.911	0.002	0.944
Age	-0.033***	0.000	-0.033***	0.000
Gang affiliation	0.214***	0.000	0.219***	0.000
Prior group home exposure	0.042**	0.01	0.053***	0.001
Prior juvenile corrections exposure	0.023	0.156	0.023	0.157
Prior residential treatment exposure	0.066***	0.000	0.069***	0.000
Staff facility victimizations	0.002***	0.003	0.002***	0.004
Youth facility victimizations	0.002***	0.007	0.002***	0.002
Months in facility	0.006***	0.000	0.007***	0.000
<i>Offense type</i>				
Violent	-0.031	0.51	-0.033	0.49
Property	-0.012	0.81	-0.015	0.75
Drug	-0.130**	0.014	-0.139***	0.009
Technical	-0.053	0.339	-0.056	0.314
Non-violent sexual	-0.123**	0.036	-0.128**	0.029
Public order	-0.025	0.632	-0.030	0.566
<i>Race/ethnicity</i>				
Black, non-Hispanic	0.160***	0.000	0.148***	0.000
Hispanic	0.026	0.185	0.020	0.312
Other race	0.013	0.763	0.017	0.697
Multiracial	0.107**	0.014	0.090	0.042
<b>Facility-Level Controls</b>				
Youth-to-staff ratio	0.023*	0.08	0.024*	0.073
Total staff	0.001***	0.000	0.001***	0.000
Facility procedural justice score	-0.023***	0.000	-0.022***	0.000
<i>Facility type</i>				
Training/long-term secure	0.048*	0.087	0.050*	0.074
Reception	-0.078	0.281	-0.099	0.173
Detention	0.076**	0.022	0.076**	0.023
Camp	-0.171***	0.000	-0.174***	0.000
Residential treatment	-0.027	0.351	-0.024	0.422
Other	-0.072	0.374	-0.066	0.426

Table continues on next page

Table 3 Continued

<b>Variable</b>	<b>Model 1 Coefficient</b>	<b>P&gt;t</b>	<b>Model 2 Coefficient</b>	<b>P&gt;t</b>
<i>Facility gender</i>				
All female	-0.058	0.171	-0.056	0.185
Mixed gender	-0.030	0.115	-0.026	0.167
<b>Constant</b>	1.007***	0.000	1.003***	0.000
<b>Observations</b>	5,034		5,032	
<b>R-squared</b>	0.186		0.180	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Race coefficients are in comparison to the White, non-Hispanic category.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facility category.

Table 4. Linear regressions: Likelihood of a violent write-up, split by gender

Variable	Coefficient (males)	P>t	Coefficient (females)	P>t
Physical abuse	0.089***	0.000	0.073*	0.073
Sexual abuse	-0.017	0.462	0.068*	0.092
<b>Individual-Level Controls</b>				
Age	-0.035***	0.000	-0.037**	0.003
Gang affiliation	0.213***	0.000	0.236***	0.000
Prior group home exposure	0.047**	0.006	-0.021	0.639
Prior juvenile corrections exposure	0.030*	0.079	0.006	0.896
Prior residential treatment exposure	0.064***	0.000	0.011	0.793
Staff facility victimizations	0.002**	0.008	-0.005*	0.053
Youth facility victimizations	0.001	0.476	0.002	0.389
Months in facility	0.007***	0.000	0.009**	0.004
<i>Offense type</i>				
Violent	-0.066	0.197	-0.104	0.389
Property	-0.048	0.357	-0.076	0.541
Drug	-0.160***	0.006	-0.178	0.169
Technical	-0.084	0.166	-0.135	0.323
Non-violent sexual	-0.157**	0.012	-0.199	0.286
Public order	-0.054	0.335	-0.157	0.256
<i>Race/ethnicity</i>				
Black, non-Hispanic	0.150***	0.000	0.219***	0.000
Hispanic	0.025	0.232	0.017	0.767
Other race	-0.015	0.748	0.013	0.91
Multiracial	0.083*	0.066	0.288**	0.023
<b>Facility-Level Controls</b>				
Youth-to-staff ratio	0.019	0.157	-0.029	0.517
Total staff	0.001***	0.000	0.000	0.41
Facility PJ score	-0.022***	0.000	-0.035***	0.000
<i>Facility type</i>				
Training/long-term secure	0.047*	0.099	0.132	0.394
Reception	-0.077	0.354	-0.001	0.995
Detention	0.077**	0.024	0.146	0.357
Camp	-0.162**	0.001	---	---
Residential treatment	-0.030	0.315	-0.012	0.936
Other	-0.102	0.299	0.023	0.906

Table continues on next page

Table 4 Continued

Variable	Coefficient (males)	P>t	Coefficient (females)	P>t
<i>Facility gender</i>				
All female	0.098	0.246	-0.051	0.449
Mixed gender	-0.031	0.109	0.057	0.38
<b>Constant</b>	1.069***	0.000	1.357***	0.000
<b>Observations</b>	4,614		609	
<b>R-squared</b>	0.186		0.194	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Race coefficients are in comparison to the White, non-Hispanic category.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facility category.

Table 5. Linear regression: Likelihood of a violent write-up, with race and gender interaction

Variable	Coefficient	P>t
Physical abuse	0.074***	0.000
Sexual abuse	0.007	0.728
<b>Individual-Level Controls</b>		
Female	-0.070*	0.080
Nonwhite	0.107***	0.000
Female*Nonwhite	0.071*	0.090
Age	-0.035***	0.000
Gang affiliation	0.209***	0.000
Prior group home exposure	0.037**	0.022
Prior juvenile corrections exposure	0.024	0.140
Prior residential treatment exposure	0.056***	0.000
Staff facility victimizations	0.002**	0.013
Youth facility victimizations	0.001	0.287
Months in facility	0.007***	0.000
<i>Offense type</i>		
Violent	-0.049	0.309
Property	-0.027	0.582
Drug	-0.152***	0.005
Technical	-0.074	0.189
Non-violent sexual	-0.152	0.010
Public order	-0.042	0.422
<b>Facility-Level Controls</b>		
Youth-to-staff ratio	0.018	0.167
Total staff	0.001***	0.000
Facility PJ score	-0.025***	0.000
<i>Facility type</i>		
Training/long-term secure	0.063**	0.025
Reception	-0.070	0.334
Detention	0.094***	0.004
Camp	-0.172***	0.000
Residential treatment	-0.014	0.631
Other	-0.082	0.331

Table continues on next page

Table 5 Continued

<b>Variable</b>	<b>Coefficient</b>	<b>P&gt;t</b>
<i>Facility gender</i>		
All female	-0.024	0.542
Mixed gender	-0.037*	0.052
<b>Constant</b>	1.100***	0.000
<b>Observations</b>	5,115	
<b>R-squared</b>	0.176	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Nonwhite includes Black, non-Hispanic, Hispanic, multiracial, and other race.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facility category.

Table 6. Mediation results: direct, indirect, and total effect of physical abuse on violent write-ups, full sample

Independent variables	Coefficient	P>t
Direct effect of physical abuse	0.052***	0.001
Indirect effect of physical abuse through K6 score	0.031***	0.000
Total effect of physical abuse	0.083***	0.000
Proportion mediated	0.375***	0.000

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Table 7. Mediation results: direct, indirect, and total effect of physical abuse on violent write-ups, split by gender

Independent variables	Coefficient (males)	P>t	Coefficient (females)	P>t
Direct effect of physical abuse	0.058***	0.000	0.084***	0.026
Indirect effect of physical abuse through K6 score	0.030***	0.000	0.014*	0.061
Total effect of physical abuse	0.088***	0.000	0.097***	0.009
Proportion mediated	0.338***	0.000	0.139	0.119

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Table 8. Mediation results: direct, indirect, and total effect of sexual abuse on violent write-ups, females

Independent variables	Coefficient	P>t
Direct effect of sexual abuse	0.088*	0.058
Indirect effect of sexual abuse through K6 score	0.013**	0.021
Total effect of sexual abuse	0.101***	0.007
Proportion mediated	0.133	0.116

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Table 9. Linear regression: Likelihood of a rules write-up

Variable	Coefficient	P>t
Physical abuse	0.116***	0.000
Sexual abuse	0.020	0.621
<b>Individual-Level Controls</b>		
Male	-0.049	0.243
Age	-0.025***	0.000
Gang affiliation	0.143***	0.000
Prior group home exposure	0.025	0.124
Prior juvenile corrections exposure	0.071***	0.000
Prior residential treatment exposure	0.058***	0.000
Staff facility victimizations	0.001**	0.029
Youth facility victimizations	-0.001	0.74
Months in facility	0.005***	0.000
<i>Race/ethnicity</i>		
Black, non-Hispanic	0.007	0.643
Hispanic	-0.051	0.015
Other race	0.007	0.867
Multiracial	0.066	0.143
<i>Offense type</i>		
Violent	-0.105**	0.037
Property	-0.121**	0.018
Drug	-0.112*	0.055
Technical	-0.009	0.874
Non-violent sexual	-0.194***	0.003
Public order	-0.118**	0.032
<b>Facility-Level Controls</b>		
Youth-to-staff ratio	-0.031**	0.024
Total staff	0.000	0.711
Facility procedural justice score	-0.026***	0.000
<i>Facility type</i>		
Training/long-term secure	0.012	0.7
Reception	-0.077	0.373
Detention	0.019	0.591
Camp	0.005	0.94
Residential treatment	-0.017	0.605
Other	0.123	0.244

Table continues on next page

Table 9 Continued

Variable	Coefficient (entire sample)	P>t
<i>Facility gender</i>		
All female	-0.027	0.539
Mixed gender	-0.039**	0.041
<b>Constant</b>	1.403***	0.000
<b>Observations</b>	5,004	
<b>R-squared</b>	0.097	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Race coefficients are in comparison to the White, non-Hispanic category.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facilities category.

Table 10. Linear regression: Likelihood of being isolated for breaking rules

<b>Variable</b>	<b>Coefficient</b>	<b>P&gt;t</b>
Physical abuse	0.109***	0.000
Sexual abuse	-0.034	0.394
<b>Individual-Level Controls</b>		
Male	0.066	0.124
Age	-0.011**	0.011
Gang affiliation	0.159***	0.000
Prior group home exposure	0.065***	0.000
Prior juvenile corrections exposure	0.066***	0.000
Prior residential treatment exposure	0.038**	0.012
Staff facility victimizations	0.001	0.144
Youth facility victimizations	0.000	0.902
Months in facility	0.008***	0.000
<i>Offense type</i>		
Violent	-0.006	0.883
Property	-0.055	0.211
Drug	-0.055	0.285
Technical	0.025	0.628
Non-violent sexual	-0.022	0.706
Public order	0.000	0.998
<i>Race/ethnicity</i>		
Black, non-Hispanic	0.072***	0.000
Hispanic	0.030	0.124
Other race	0.064	0.141
Multiracial	0.047	0.298
<b>Facility-Level Controls</b>		
Youth-to-staff ratio	-0.016	0.245
Total staff	0.000***	0.000
Facility procedural justice score	-0.032***	0.000
<i>Facility type</i>		
Training/long-term secure	0.208***	0.000
Reception	0.050	0.444
Detention	0.247***	0.000
Camp	0.092	0.103
Residential treatment	0.133***	0.000
Other	0.124	0.161

Table continues on next page

Table 10 Continued

<b>Variable</b>	<b>Coefficient</b>	<b>P&gt;t</b>
<i>Facility gender</i>		
All female	0.035	0.407
Mixed gender	0.046**	0.016
<b>Constant</b>	0.582***	0.000
<b>Observations</b>	5,022	
<b>R-squared</b>	0.197	

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Notes: Race coefficients are in comparison to the White, non-Hispanic category.

Offense type coefficients are in comparison to the status offense category.

Facility type coefficients are in comparison to the community-based facility category.

Facility gender coefficients are in comparison to the all male facilities category.

Table 11. Logit model: Likelihood of receiving a violent write-up on key variables

Variable	Average marginal effects (entire sample)	P>t	Average marginal effects (males)	P>t	Average marginal effects (females)	P>t
Physical abuse	0.079***	0.000	0.089***	0.000	0.077*	0.050
Sexual abuse	0.007	0.719	-0.015	0.496	0.079**	0.047

\* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

## Appendices

### Appendix A: Offense Types

<b>Offense Type Category</b>	<b>Offenses</b>
Status	Running away
	Underage use, possession or consumption of alcohol
	Incorrigible, ungovernable
	Curfew violation
	Truancy
	Other offense that is illegal for underage persons only
	Unknown offense for underage persons only
Violent	Murder, manslaughter, negligent homicide
	Violent sexual assault including forcible rape
	Kidnapping someone
	Assault, aggravated
	Robbery
	Assault, simple
	Other persons offense
Property	Arson
	Burglary, breaking and entering, household larceny
	Auto theft
	Unauthorized use of auto, joyriding
	Theft, non-household larceny
	Property damage, vandalism
	Other property offense
Drug	Drugs or narcotics, trafficking
	Drugs or narcotics, possession
	Testing positive for using drugs
	Other drugs-related offense
Technical	Violating house arrest or electronic monitoring
	Other probation or parole violation
Non-violent sexual	Prostitution
	Statutory rape
	Other non-violent sex offense
Public order	Driving a car under the influence of drugs or alcohol
	Being drunk in public
	Obstruction of justice
	Weapons-related offenses

*Appendix B: Staff Procedural Justice Scale*

<b>Question</b>	<b>Response Options</b>
How many staff explain facility rules clearly?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff use physical force when they don't really need to? (REVERSE CODED)	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff give fair punishments?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff are disrespectful? (REVERSE CODED)	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff give youth the chance to tell their side before making decisions?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff act honestly?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff punish youth even when they don't do anything wrong? (REVERSE CODED)	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff keep their personal opinions about youth out of it when making decisions?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff
How many staff explain their decisions?	0 None of the staff 1 Few of the staff 2 Most of the staff 3 All of the staff

Appendix C: K6 Questionnaire

In the past 30 days, how often did you have each of the following experiences?

<b>Question</b>	<b>Response Options</b>
How often did you feel nervous?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time
How often did you feel hopeless?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time
How often did you feel restless or fidgety?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time
How often did you feel so depressed that nothing could cheer you up?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time
How often did you feel that everything was an effort?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time
How often did you feel worthless?	0 None of the time
	1 A little of the time
	2 Some of the time
	3 Most of the time
	4 All of the time

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