



**Title: How Adverse Childhood Experiences Give Way to the Risk for Recidivism for Justice-Involved Girls in the United States**

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## Abstract

There has been a rapid increase in recidivism — defined as “repeating criminal acts after a first offense” — rates in girls in the United States over the past 2 decades, and it is a widely overlooked topic as opposed to recidivism in boys. This literature review delves into the complex relationship between Adverse Childhood Experiences (ACEs) in girls and the heightened risk of risk of recidivism and its outcomes. This review focuses on the short- and long-term outcomes of ACEs, the risk factors specific to girls, and the familial protective factors. The result of this literature review highlights a significant positive correlation between ACES and recidivism rates, with many nuances and specificities relating to each type of ACE and observed criminal behavior in girls. The combination of individual factors, such as demographics and environment, are also discussed in the role they play alongside ACEs. Here we also consider how high levels of bias present in the justice system greatly influences recidivism in youth and through adulthood. By shedding light on the risks of recidivism stemming from ACEs in girls, this review will discuss various preventative and restorative measures that can be put in place to help lower this risk rate.

*Keywords:* recidivism, childhood, girls, adverse childhood experiences

## Introduction

In the past two decades, the rates of recidivism, defined as “repeating criminal acts after a first offense,” among women in the United States has grown exponentially (Yohros, 2023). There has been approximately a 34% increase in recidivism in female youth in the juvenile

justice system, with 40% of justice-involved youth at risk of reoffending as adults (Yohros, 2023). However, there is a drastic difference in the number of studies conducted on girls as opposed to boys, the latter being more prevalent (Braga et al., 2017). Extant data suggest that the family home environment plays an important role in early risk for youth recidivism (Baglivio et al., 2015). Indeed, girls with a history of recidivism also tend to have a parent with a history of recidivism (Evans-Chase, 2014). However, few studies have identified familial influences on recidivism for girls specifically. Identifying early risk factors for recidivism for girls is crucial to prevent the continuation of criminal behavior throughout adulthood (Evans-Chase, 2014) and may also aid the development of gender-specific prevention programming.

Exposure to adverse childhood experiences (ACEs) in the home may be one such early risk factor for recidivism for girls (Baglivio et al., 2015, Craig et al., 2021, Astridge et al., 2023, Saladino et al., 2021). ACEs are a set of traumatic and negative experiences and influences that occur during childhood (as characterized by the CDC). These can include experiencing physical or verbal violence, neglect, assault, substance misuse in the home, mental illness exposure in the home, witnessing all of the formerly stated, and/or other forms of familial dysfunction. The Adverse Childhood Experiences Questionnaire is used to assess the amount of childhood experiences an individual has undergone, which results in an ACE score. An ACE score is a cumulative count of measuring the overall level of impact exposure to early traumas on a scale from 0-10, with higher scores indicating greater exposure to early life traumas. There are three broad categories: abuse, neglect, and household factors. Abuse includes emotional abuse, physical abuse, and sexual abuse; neglect includes emotional neglect and physical neglect; and household factors include parental domestic violence, household substance misuse, household mental illness, divorce/parental separation, and household incarcerated members. Prior studies show that higher ACE scores correspond to higher risk of physical and mental illnesses throughout adulthood, as well as increased risky behaviors (Craig et al., 2021, Colman et al., 2008, Evans-Chase, 2014). Examining what specific factors girls undergo during childhood that lead to future illegal behavior in youth and criminal behavior in adulthood may prevent recidivism and crime rates early on in life and shed light on the prevalence of recidivism for females, as opposed to solely males.

### **ACEs Placing Girls At-Risk for Recidivism: Short- and Long-term Outcomes**

Prior data show that ACEs are a risk factor for recidivism for girls via engagement in behaviors that are linked with criminality (e.g., violence, delinquent behavior, sexual/romantic violence) (Smith et al., 2021). Girls who are exposed to ACEs often display difficulty with regulating their emotions, impulse control, and social skills, which makes them more susceptible to engaging in illegal activity (Colman et al., 2008, Smith et al., 2021). Adolescence is a highly mentally and psychologically vulnerable time period for girls (Craig et al., 2021, Taylor, 2015). Thus, being exposed to the cycle of offense and re-offense in their household also has a greater risk of leading to short-term recidivism in adolescence, as well as long-term through adulthood (Taylor, 2015).

Witnessing a family/household member, particularly a parental figure, going in and out of the prison system influences many factors in girls (Evans-Chase, 2014). According to Bandura's Social Learning Theory, children learn to engage in behaviors that are modeled by others, including parents and caregivers. As such, children who are exposed to ACEs in the home environment may mimic behaviors they have seen (Evans-Chase, 2014). Exposure to ACEs in the home may also worsen mental health outcomes and lead to criminal behavior via engagement in negative coping strategies (e.g., drug and alcohol use) to manage

trauma-related stressors (Braga et al., 2017). Early exposure to substance use (including illegal drugs, prescription medications, and alcohol) in the home — which is prevalent in households with high recidivism rates — also raises risk of substance misuse in girls in many different ways. Children who are in households with parents who have SUD's (substance use disorders) are 2.7-4.2 times as likely to develop SUD's as well. This is because of the exposure at home, as well as increased mental illnesses, leading to substance use as a coping mechanism. Early exposure to substance use in the home may also normalize use during childhood and adolescence (Smith et al., 2021, Edwards et al., 2022, Baglivio et al., 2015). Preventing this intergenerational transmission of recidivism in girls requires a breaking of the cycle through increased home and family support (Evans-Chase, 2014).

### **Risk Factors Unique to Girls**

Risk factors for recidivism tend to differ between girls and boys. Girls tend to experience sexual and domestic abuse more often than boys — who tend to experience neglect more than girls — which can have both emotional and physical effects, and change their behavior (Colman et al., 2008). Additionally, girls and boys tend to cope differently with exposure to ACEs. For example, girls tend to display substance use/misuse as a means of coping or self-pleasure, while increased substance use for boys tends to be associated with increased violent crimes and related criminal activity. Girls also tend to develop different forms of mental illnesses than boys: there is a higher rate of mood-related disorders — such as depression or borderline personality disorder (BPD) — in girls, while there are more behavioral disorders — such as attention-deficit/hyperactivity disorder (ADHD) — in boys. This leads to different types of behaviors being exhibited by both parties, as those with mood-related disorders tend to carry out milder petty crimes, while those with behavioral disorders tend to carry out more extreme violent crimes (Smith et al., 2021).

Studies have shown that boys tend to be more heavily influenced by similar familial and household factors as girls but are more likely to engage in aggression and violent behavior from adolescence into adulthood, which is more prone to reoffense. However, girls that are exposed to these factors in childhood but do not offend until adulthood tend to reoffend in steady, smaller “minor” crimes (such as petty theft or fraud) over the course of their lives. When they commit one or multiple offenses as youth, they are prone to offending more sporadically in adulthood, partaking in more serious and violent crimes.

### **Familial Protective Factors**

Identifying households with maltreatment and disconnections in family dynamics early on in childhood is crucial to prevent risk for a juvenile offense. Some protective factors include strong familial bonds, preventing substance misuse disorders, access to/pursuit of education, parental mental and physical well-being, parental emotional regulation, and rule enforcement (Duke et al., 2010, Jacobs et al., 2020). Detecting familial factors and providing specific therapy to bridge a familial gap or address trauma symptoms/impact when an adult figure in a household has multiple offenses can prevent the cycle from continuing (Jacobs et al., 2020).

Understanding the connection between ACEs and recidivism in girls is essential to creating a better future for them within, as well as outside, the justice system. These three main points — ACEs Placing Girls At-Risk for Recidivism: Short- and Long-term Outcomes, Risk Factors Unique to Girls, and Familial Protective Factors — highlight the direct trajectories and ways in which girls are affected by ACEs in regards to recidivism, as well as in comparison with boys.

## Methods

### Literature Search/Selection Criteria

A literature search was conducted to explore the association between ACEs and various risk factors related to recidivism among females under the age of 18 in the United States. The search used two databases: Google Scholar and EBSCO, with a publication time frame ranging from January 2000 to September 2023. The search was limited to papers published in English. Additionally, the search focused on studies conducted in the United States to ensure relevance to the local context of the United States justice system and environmental/regional/cultural factors. Studies were required to discuss females or girls that were under the age of 18 at the time of first offense. Studies were either required to be in the form of peer-reviewed journals and include quantitative data. Studies related to ACEs were not required to use the ACEs questionnaire, but were required to have a quantitative assessment tool of ACE-related constructs. Studies were excluded if they were published prior to January 2000, were conducted outside of the United States, or included data solely about females or girls over the age of 18 with no mention of childhood or ACEs leading to adulthood, or there was no data collected in females.

### Search Strategy and Data Extraction

The following search strings were used to examine ACEs: ACEs OR adverse childhood experiences or substance abuse OR transitional experiences OR interventions OR relationships OR family/history OR family influences. The search strings for recidivism included: recidivism OR crime OR prisoners OR juvenile offender OR juvenile. Studies were required to report data in females, but were not limited to solely female samples. Studies were extracted if they reported on both ACEs and recidivism.

## Results

### Study Characteristics

13 papers were extracted and included in the review according to these criteria. There were 8 literature reviews and 5 direct experiments examined. Majority of the papers were published between 2010 and 2022. Three secondary research studies pulled samples from a specific state's criminal justice system records, and 4 reviews pulled from a national level. Nine studies used either the cumulative ACE score assessment, or another quantitative scale of measuring familial influences or childhood experiences/exposures. i.e. n-point self reported scales where least-greatest indicates severity of experiences. Ten studies discussed recidivism. Nine studies used either the official ACE Score measure, or another form of quantitative measurement. Six studies focused on SUD's. Seven studies focused on physical and sexual abuse, and 4 studies focused on mental illnesses/personality disorders.

### Main Findings

A summary of the main findings are presented in Table 1 and are presented by subheadings that correspond to the three aims of the review. Six studies talked about the effects and conditions of girls specifically, while the other 7 were not specific to gender. Four studies focused on substance use and SUD's in positive correlation to recidivism risk rates. Four studies discussed physical and sexual abuse as a primary factor in increasing recidivism risk, while 1 study claimed physical and sexual had little to no influence in recidivism in girls. Four studies discussed the importance of environmental factors over ACEs in positive link to recidivism rates,

while 1 study said that environmental factors had less impact in recidivism risk rates than ACEs. Two studies discussed the protective measures for re-offenders.

### ***ACEs as a Risk Factor for Recidivism in Girls: Short- and Long-term Outcomes***

Studies showed that substance misuse and sexual abuse do not seem to have a direct correlation to recidivism rates in girls (Astridge et al., 2023). They do suggest a significant correlation leading to mental and physical illness, which may spiral and result in criminal behavior, but there is not support for a direct link to recidivism (Astridge et al., 2023, Saladino et al., 2021). Experiencing different ACEs result in development of different mental illnesses. This may result in different illegal behaviors from adolescence through adulthood and shows that the trajectories of juvenile to adult crime may depend on the ACE outcomes.

### ***Risk Factors Unique to Girls***

Across all of the studies that discussed gender-based ACEs, there was a trend that suggests different effects in girls and boys. The ACEs that affect girls more often are different than those that tend to affect boys (Astridge et al., 2023, Edwards et al, 2022., Taylor, 2015). There is a higher prevalence in experiencing physical and sexual abuse for girls, while there is a higher prevalence in subjection to and results of substance use, leading to substance misuse disorders in boys (Edwards et al., 2022).

There is also an observed trend in how these ACEs manifest in their behaviors through adolescence and adulthood in regard to gender. The *presence* of ACEs tends to increase the recidivism risk rate for females, while the *absence* of ACEs tends to increase the recidivism rate for males (Astridge et al., 2023). Additionally, boys tend to carry out violent crimes from a younger age and continue this at a steady rate throughout adulthood (Saladino et al., 2021, Smith et al., 2021). Girls, however, are observed to commit more petty crimes in childhood and adolescence, but follow a trajectory that leads them to sporadic violent crime in adulthood (Colman et al., 2008).

### ***Familial Protective Factors***

Preventative measures are essential for at-risk girls, and helplines can be a vital resource. Schools, institutions, and even juvenile detention centers themselves can establish confidential helplines that girls can access in times of crisis or uncertainty. These helplines can serve as a bridge to their families, counselors, or support networks. By maintaining open lines of communication, they can better address issues and feelings before they have the chance to escalate into criminal behavior.

Of course, not every case is the same, so there must be restorative measures for those that lacked preventative measures. Positive rehabilitation can be an incredibly strong protective factor in reducing the recidivism rate, and familial protective factors can be instrumental in successful rehabilitation (Evans-Chase, 2014). Support, guidance, and a sense of belonging, can be provided and reinforced in the home and family, which are all essential for rehabilitation efforts to be effective.



**Table 1. Summary of Study Characteristics and Findings**

Author and Year	Subheading	Study Type	Sample Characteristics (% female, age range)	Measuring Method	Recidivism Risk/% Recidivism	Main Findings
Astridge et al., 2023	1, 2	Review	Aged 10-19, females and males	Cumulative ACE score	99.1%	+ ACEs have a direct link to recidivism risk rates  + females experience more ACEs than males  - physical and sexual abuse are not directly related to recidivism
Taylor, 2015	2, 3	Longitudinal	17% female	4-point self-reported scale  Logistic regression analyses	96%	+ family support levels relate to gendered recidivism pathways  + high family support decreases recidivism rates in females
Saladino et al., 2021	2, 3	Review	<18	no ACE measure  Functional Family Therapy Model (FFT)	87%	+ family relationships have a strong impact on delinquency and substance misuse rates in youth  - environmental effects have a more direct link to recidivism than familial effects  + adolescents that have parents with justice system involvement are more likely to carry out criminal activities
Quinn et al., 2004	1	Longitudinal	aged 5-21	Cumulative ACE score	92%	+ ACEs increase risk for recidivism and violent behavior in females  - ACEs are directly linked to recidivism rates fully



						dependent on racial factors in females in that their risk for being convicted is dependent on their race/ethnicity.
Edwards et al., 2022	2, 3	Review	aged >18, female	no ACE measure	77% - 99%	+ ACEs increase the risk of alcoholic SUDs by 6x, and drug-related SUDs by 10x  + women who experienced childhood trauma are 40% more likely to experience mental health conditions in adulthood  + substance abuse and criminal offending is a cycle  + women usually commit smaller scale crimes than men
Baglivio et al., 2015	1	Cross-sectional Study	aged 7 - 17	Cumulative ACE score	75% - 93%	+ Experiencing ACEs increases risk of early offense and recidivism
Colman et al., 2008	1, 2	Longitudinal	Females aged 16 - 28	no ACE measure  4-point self-reported Substance Abuse scale  Mental Health Screen Scores  Woodcock Johnson achievement tests	96%	+ Most (81%) girls who offended transitioned to offending in the adult criminal justice system.  - Racial identity is one of the primary factors in risk for recidivism due to racial bias in the justice system.  + Girls that underwent various forms of physical and sexual abuse are more likely to reoffend.
Smith et al., 2021	1, 2	Longitudinal	Females aged >18	Cumulative ACE score	did not discuss recidivism	+ ACE scores are significantly higher in those with SUD's and children of those with





						<p>SUD's.</p> <p>+ Females have been found to be exposed to more ACEs in their lifespans than males, substance abuse being the primary coping mechanism (leading to higher rate of SUD's in females than males)</p>
Braga et al., 2017	1	Review	aged <18	no ACE measure	did not discuss recidivism	<p>+ Maltreatment in childhood is correlated with antisocial behaviors in adulthood.</p> <p>+ Physical and sexual abuse in childhood are linked to aggressive behaviors, while neglect is linked to antisocial behaviors.</p>
Craig et al., 2017	1, 3	Review	aged <56	Cumulative ACE score	did not discuss recidivism	<p>+ ACEs increase risk of recidivism.</p> <p>- There is a larger impact on behavior in adulthood from environmental factors than ACEs.</p>
Duke et al., 2010	1, 3	Cross-sectional	aged 6th, 9th, and 12th grade	Linear and Logistic Regression Models	97%	<p>- The most commonly reported adverse experience was alcohol abuse in a household member that caused further problems.</p> <p>- Most ACEs lead to violent behavior in all adolescents, regardless of gender.</p>
Evans-Chase, 2014	1, 3	Review	<18	Cumulative ACE score	75% - 93%	<p>+ Youth in juvenile justice facilities in the U.S. face disproportionately higher rates of ACEs than those not criminally involved.</p> <p>+ 50% of incarcerated adolescents have an</p>



						<p>incarcerated parent, which is directly correlated to aggressive and violent behavior.</p> <p>+ Exposure to violence in youth is directly linked to delinquent behavior.</p> <p>+ Incarcerated youth are more likely than the general population to have lived in poverty prior to incarceration.</p>
Jacobs et al., 2020	1, 3	Review	<18	Logistic Regression Model	no % discussed	<p>- Risk for recidivism should be examined based on the environment rather than the individual's personal circumstances.</p> <p>- Race and economic status are a stronger link to recidivism rates than ACEs.</p>

## Discussion

The link between ACEs in girls and recidivism risk rates are overlooked, while being an increasingly prevalent issue in America (Yohros, 2023). In this review, a positive correlation between ACEs and recidivism risk rates for girls: the higher an ACE score, the more likely it is for a girl to reoffend was found across included studies. There are, of course, various other factors that play into the recidivism risk rates, but ACEs and familial influences are a major influence.

This knowledge allows us to identify who is at higher risk of recidivism from their familial and environmental risks and history of trauma, which gives way to direct intervention and prevention efforts. By addressing the root causes of criminal behavior, we can bring awareness to the alarming statistics and reduce recidivism rates. Promoting rehabilitation and treatment for girls who have experienced ACEs through the lens of trauma-informed care can support in breaking this cycle of trauma.

It is important to note that different ACEs have different effects, meaning there are different risk levels at which an individual can be influenced. For instance, it was seen that substance misuse in the home does not have a direct link to recidivism rates, but can have this indirect ripple effect leading into it (Edwards et al., 2022). Physical abuse, however, is the most common ACE placing girls at high risk for recidivism. Depending on the type of ACE, there is a higher or lower chance of reoffending.

Studies showed that other factors also play into recidivism rates, such as environment, race/ethnicity, and geographic location (Saladino et al., 2021). The presence of racial biases in the justice system also have a significant play into different rates of recidivism in different racial and ethnic demographics (Astridge et al., 2023). For instance, there was an observed direct link between conviction rates and race for Black and White women in the Texas state justice system; however there was no correlation between ethnicity and conviction rates for Hispanic women when compared to non-Hispanic Black and White women. (Craig et al., 2021).

### Limitations

The results of this review should be considered in the context of its limitations. Included studies were within the bounds of January 2000 and September 2023, and even within these bounds, this was not a full systematic review for the purposes of using the most relevant findings relating to recidivism in girls. Additionally, multiple studies contained data collected from self report measures which can allow for underreporting, particularly among adolescent girls in fear of repercussions. A third limitation to consider is the small sample sizes in many of the included studies. Larger, more inclusive samples are required to further understand recidivism in girls. Additionally, most extant data considers criminal behavior as a whole, or focuses on boys, or focuses on adult women, therefore highlighting a gap in the literature on female adolescent recidivism. In sum, it is important for future work to examine this topic to gain a better understanding of the nuances in adolescent recidivism.

### Conclusion

When children grow up in homes where one or more family members are repeat offenders, they are at a significantly higher risk of falling into the same cycle of recidivism (Smith, et al., 2021, Evans-Chase, 2014). The environment in these households can normalize criminal behavior and contribute to a lack of positive role models or ideals for these children and adolescents. Breaking this intergenerational cycle of recidivism requires not only effective



criminal justice reforms, but also efforts to provide support, education, and guidance to children at risk to prevent them from following the same path.

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