

Incorrigibility and the Juvenile Homicide Offender: An Ecologically Valid Integrative Review

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Abstract

The United States Supreme Court decision in *Miller v. Alabama* highlighted the importance of an individual's "incorrigibility" and the prospect of "irreparable corruption" when weighing possible life sentencing for juveniles convicted of homicide. In this review, we study research in multiple content areas spanning homicide recidivism, life-course-persistent or career criminality, and psychopathology and incorrigibility that bears relevance to the risk assessment of juvenile homicide offenders. A well-developed corpus of research and scholarship in these domains documents the severe, lifelong behavioral impairments of the most violent delinquents. In contrast to studies of non-offender student samples and behaviors that bear no ecological validity to juvenile homicide, the research covered herein emanates from epidemiological surveys, birth cohort studies, large-scale prospective longitudinal studies, and correctional studies including homicide offenders and appropriate control groups of other serious delinquents. A rich research foundation in the social, behavioral, and forensic science informs relevant, reliable, and valid forensic assessments of future criminal deviance and incorrigibility in juvenile homicide offenders.

Keywords

incorrigibility, juvenile homicide, recidivism, risk assessment, juvenile justice, life-course persistent offending

Since the founding of the juvenile court in 1899, justice system officials referenced the pathological antisocial behavior of a small cadre of incorrigible youth whose recalcitrance and overall behavioral risk profile belies their chronological age. Judge Merritt Pinckney, who presided in the seminal juvenile court in Cook County, Illinois, offered the following assessment in 1911. "A child, a boy

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especially, sometimes becomes so thoroughly vicious and is so repeatedly an offender that it would not be fair to the other children in a delinquent institution who have not arrived at his age of depravity and delinquency to have to associate with him (Tanenhaus, 2000, p. 13).” Since, landmark decisions relating to preventive detention (*Schall v. Martin* [1984]) and the transfer or waiver process (*Kent v. United States* [1966]) explicitly invoke the seriousness of the offense, violence risk, and the antisocial disposition of the juvenile. More than a century after its founding, incorrigibly delinquent youth are the central focus of the U.S. Department of Justice Office of Juvenile Justice and Delinquency Prevention’s comprehensive strategy for serious, violent, and chronic juvenile offenders (Howell, 2003; Wilson & Howell, 1993). In sum, juvenile justice has always recognized the severe behavioral profile of incorrigible youth.

Despite the long-established salience of incorrigibly antisocial offenders to the administration of justice, recent decisions of the United States Supreme Court have overlooked the compelling scientific evidence about their pathological antisocial development and persistent offending. Specifically, recent decisions that invalidated capital punishment for juveniles (*Roper v. Simmons* [2005]), that disallowed life without parole sentences for non-homicide offenses for juveniles (*Graham v. Florida* [2010]), and that disallowed mandatory life sentences for juvenile homicide offenders (*Miller v. Alabama* [2012]) failed to connect the defendant’s risk profile to well-recognized and methodologically rigorous research studies.

In the first pages of *Roper*, Justice Kennedy unequivocally described Christopher Simmons, age 17, as the instigator of the crimes, as chilling and callous, as criminally versatile and sophisticated, as manipulative and controlling of his younger codefendants, and that he was indifferent to the victim’s anguish and suffering. Experts in the case opined about Simmons psychosocial features (e.g., impulsive, immature, susceptible to influence), his difficult home environment, his poor conduct and school performance, and his history of running away from home to engage in drug and alcohol abuse. Although this history is effectively a forensic profile of a life-course-persistent delinquent, none of that scientific research is accounted for in the Court’s consideration of future dangerousness, although the Court (2012, p. 20) briefly alludes to the existence of persistent offenders:

For most teens, [risky or antisocial] behavior are fleeing; they cease with maturity as individual identity becomes settled. Only a relatively small proportion of adolescents who experiment in risky or illegal activities develop entrenched patterns of problem behavior that persist into adulthood.

In *Graham*, Justice Kennedy described Terrance Jamar Graham in even more clinical, forensic, and criminologically relevant terms. This included Graham’s birth to parents who were crack cocaine addicted throughout his youth, the adverse rearing environment that entailed, ADHD diagnosis, onset of substance use at age 9 years, his involvement in armed criminal violence by age 16, his intentional violation of community release, and his recidivistic involvement in multiple home invasion armed robberies. These characteristics are prognostic of persistent antisocial behavior and directly inform risk assessment among juvenile homicide offenders, but do not fully inform consideration of Graham’s level of behavioral risk. (*Miller v. Alabama*, 2009) According to Justice Kennedy

Here one cannot dispute that this defendant posed an immediate risk, for he had committed, we can assume, serious crimes early in his term of supervised release and despite his own assurances of reform. Graham deserved to be separated from society for some time in order to prevent what the trial court described as an “escalating pattern of criminal conduct,” App. 394, but it does not follow that he would be a risk to society for the rest of his life. Even if the State’s judgment that Graham was incorrigible were later corroborated by prison misbehavior or failure to mature, the sentence was still disproportionate because that judgment was made at the outset.

In contrast, Justice Thomas's dissent opinion does utilize the criminological research, specifically the science about life-course-persistent versus adolescence-limited offender prototypes (Moffitt, 1993), and how Graham's social background, psychopathology, and offense history clearly comport with persistent criminal conduct that continues throughout adulthood.

In *Miller*, Justice Kagan described Kuntrell Jackson who at age 14 perpetrated capital felony murder and aggravated robbery and had extensive juvenile arrest history and Evan Miller who at age 14 perpetrated murder in the course of arson, had extensive adverse childhood experiences, early-onset psychopathology and multiple suicide attempts beginning at age 6, and extensive substance abuse. Referencing *Roper* and *Graham*, Justice Kagan (2012, p. 10) expressed that juveniles "lack the ability to extricate themselves from horrific, crime-producing settings . . . a child's character is not as 'well formed' as an adult's; his traits are 'less fixed' and his actions less likely to be 'evidence of irretrievable depravity.'" Justice Kagan continued that the Court's rationale in these cases rested on appropriate science. Specifically, Kagan wrote, "Deciding that a 'juvenile offender forever will be a danger to society' would require 'mak[ing] a judgment that [he] is incorrigible'—but 'incorrigibility is inconsistent with youth.'" Nevertheless, the Court directs an individual trial court to make a risk assessment of the defendant's incorrigibility and irreparable corruption suggesting, "we do not foreclose a sentencer's ability to make that judgment in homicide cases . . ." (2012, p. 21).

The *Miller* Court's decision has prompted lower courts to revisit the criminal prospects of juvenile murder defendants as well as those previously convicted and sentenced to life terms. Scientific understanding of incorrigibility and irreparable corruption is therefore essential as courts across the United States consider *Miller*-category defendants. In this review, we synthesize research in multiple content areas spanning homicide recidivism, life-course-persistent or career criminality, psychopathology, and incorrigibility that demonstrate explicit relevance to the risk assessment of juvenile homicide offenders.

Homicide Recidivism

Multiple research samples substantiate the risk of homicide and continued serious recidivism among convicted homicide offenders. Studies from Australia, Canada, Finland, the Netherlands, Russia, Sweden, and the United States document that the relative risk of a homicide by a prior homicide offender is exponentially higher compared to non-murderers (Broadhurst et al., 2018; Cale et al., 2010; Golenkov et al., 2013; Liem, 2013; Tiihonen & Hakola, 1994; Tiihonen et al., 1995; Vaughn et al., 2009; Vries & Liem, 2011). To illustrate, an epidemiological study of 1,089 homicide offenders reported a 250-fold increased risk of murder in the year post-release among prior murderers relative to those in the general population (Eronen et al., 1996). Another study of 92 convicted murderers followed for up to 5 years after release from prison, found that more than half recidivated and nearly 20% recidivated with a new violent offense (Liem et al., 2014). Three of the 92 convicted murderers perpetrated another murder. These raw numbers obfuscate the robust risk of murder among convicted murderers relative to the general population. In these data, three of 92 offenders committed another murder, which equates to a homicide rate of 3,261 per 100,000. To put this into perspective, the current homicide rate in the United States is five per 100,000, which is a difference in magnitude of over 652 times.

Studies employing additional data similarly demonstrate the pronounced risk of recidivism and additional homicide among those who previously murdered. A study of 52 released murderers reported that 54% committed new crimes and 23% committed new violent crimes within a mean follow-up period of 9 years (Gottlieb & Gabrielsen, 1990). Two of the 52 murderers subsequently murdered again, which is equivalent to a homicide rate of 3,846 per 100,000. That rate is 769 times greater than the current homicide rate in the United States.

Analyses of data from 682 male felons similarly indicate strong evidence for continuity in homicide offending. Controlling for age, race, and history of armed rape, armed robbery, assault to kill, armed burglary, and aggravated assault on police, prior first degree murder was significantly associated with subsequent multiple homicide offending and subsequent homicide charges (DeLisi, Ruelas, et al., 2019). Given the number of violent behaviors statistically controlled in their study, the unique predictive validity of prior homicide on subsequent homicide is significant. Because homicide offenders serve proportionately longer sentences than non-homicide offenders and thus have less opportunity to reoffend in the community relative to serious offenders who did not murder (Baay et al., 2012; Liem, 2013), the comparatively high recidivism outcomes are all the more meaningful.

Homicide offending also has prognostic value for homicide occurring within correctional facilities. Among a large sample of more than 1,000 prisoners, convicted murderers were significantly more likely to perpetrate an inmate murder even when accounting for other risk indicators such as violence history, security threat group or prison gang history, confinement history, weapons history, criminal history, sentence length, and demographic factors (DeLisi & Butler, 2020). The significant association between homicide conviction and prison murder remained regardless of model specification (at probabilities ranging from $p < .05$ to $p < .001$), which indicates important continuity in homicide offending from the community to correctional context.

Buttressing the robust evidence of homicide recidivism among adults, continuity in homicide and other violent offending is also evident in studies employing samples of juvenile homicide offenders. In totality, these studies reveal very high recidivism outcomes that substantiate the pronounced risk for continued offending among juvenile murderers. A study of 20 teenagers who perpetrated or attempted murder during the late 1970s to early 1980s and followed for 5 to 15 years upon release from custody revealed that 60% had new convictions and these crimes more commonly were violent in nature including sexual assault, armed robbery, and reckless endangerment (Hagan, 1997). One of those incidents involved a previously convicted juvenile murderer who later drove a car into two victims in an attempt to kill them.

An empirical examination of the entire population of juvenile homicide offenders in the Netherlands between 1992 and 2007 reported a severe risk profile and substantial evidence of antisocial conduct after their murder conviction (Vries & Liem, 2011). Among the 137 murderers, most had poor self-control, high psychopathology, problematic family backgrounds, and associated with other delinquent peers. More than two-thirds had substance abuse history, one-third possessed weapons, and the average juvenile murderer had three prior arrests and initiated their delinquent career at age 15. After release from custody following their murder conviction, 59% recidivated and 20% of the new criminal acts were for violent offenses. Four percent of the juvenile homicide offenders attempted or completed another homicide.

A study of institutionalized delinquents placed in the California Youth Authority indicated that juveniles who previously perpetrated murder had a 1,467% increased likelihood of murdering again despite controlling for several other forms of violent delinquency, generalized delinquency, and demographic factors (DeLisi, Bunga, et al., 2019). Evidence for continuity among juvenile homicide offenders also pertains to the rarest types of juvenile killers, namely those who perpetrate sexual homicide. A study of 22 juveniles who had committed sexual homicide, of whom 11 were released from custody and followed up to 9 years, found that 55% recidivated. Among those six offenders who recidivated, three of them perpetrated additional sexual homicides and thus were serial sexual homicide offenders (Myers et al., 2010).

A prospective study of offending patterns of 26 juvenile homicide offenders followed to age 28 years demonstrated pronounced, severe outcomes. After their release from custody following a homicide conviction, 71% committed a new offense and nearly one in three engaged in high-rate offending into adulthood (McCuish et al., 2018). Importantly, that study followed 26 later-released

juvenile murderers, but there was an additional offender in their data set not released from custody because he had murdered another inmate while serving his sentence for the previous murder conviction. That 1-in-27 juvenile homicide offenders subsequently murder is equivalent to a homicide rate of 3,704 per 100,000, which is nearly 741 times larger than the current homicide rate of five per 100,000 in the United States.

Studies with longer follow-up time intervals reveal even worse recidivism outcomes among juvenile murderers. A 30-year follow-up of 59 former juvenile homicide offenders found that of the 48 released from prison, 88% perpetrated additional criminal acts and 10% attempted or completed additional homicides. Of the total recidivism of this cohort, 60% of the new offenses were violent crimes (Khachatryan et al., 2016a, 2016b, 2016c). Further, these 48 released juvenile homicide offenders had an average of 7.5 arrests each, with one offender evidencing 30 arrests during the follow-up. Known violent offenses averaged 3.04 among the group with one offender having 23 violent offenses after release (Khachatryan et al., 2016b). At least 29 of the 48 juvenile murderers returned to prison with 17 having multiple (and up to six) subsequent prison sentences (Khachatryan et al., 2016c).

A 30-year follow-up investigation of eight offenders who had perpetrated sexual homicide during adolescence revealed similarly poor prognosis. Two of the eight juvenile homicide offenders subsequently escaped from prison including one youth who was never legally released from prison custody. In addition to the escapes, misconduct in jail and prison was frequent and included sexual battery, aggravated assault, assault and battery, arson, and smuggling contraband (Khachatryan et al., 2016a). Of those who were released from prison, two had no new arrests and the other four had 22 total arrests, of which 12 were new violent crimes including aggravated assault with a deadly weapon, robbery, aggravated assault, and assault and battery.

Institutional adjustment among juvenile homicide offenders is also an important predictor of future recidivism (Caudill & Trulson, 2016; Trulson, DeLisi, & Marquart, 2011; Trulson, Haerle, et al., 2011). In a study of 221 juvenile homicide offenders, those who engaged in assaultive behavior toward correctional staff and repeatedly disrupted institutional rules and programs—both behavioral indicators of incorrigibility—predicted recidivism up to 10 years after release from confinement (Caudill & Trulson, 2016).

Juvenile homicide offenders who are gang-affiliated also exhibit higher recidivism post-release. Gang murderers had 51% higher odds of re-arrest and greater than 89% higher odds of felony re-arrest after release from custody (Trulson et al., 2012). Irrespective of gang involvement, juvenile homicide offender status itself increased the odds of felony re-arrest by 72%.

Not only is juvenile homicide offending a robust predictor of subsequent violence perpetration and continued offending, but also the most intransigent forms of career criminality discussed in the next section. The 30-year longitudinal study of 59 juvenile homicide offenders who killed in the early 1980s reported that 54% of those who murdered as part of a group had five or more arrests after release from custody, meeting the standard empirical criterion for habitual criminality. Juvenile murderers who did not kill in a group context also showed increased risk for career criminality, with more than 36% accumulating five or more additional arrests after release (Khachatryan et al., 2016b, 2016c; also see, Khachatryan et al., 2018).

Moreover, methodological issues suggest that recidivism outcomes of juvenile homicide offenders are much worse than published studies indicate. As Heide et al. (2001, p. 105) concluded:

The 60% failure figure is a conservative one. This measure of failure captures only offenders who committed acts deemed serious enough to warrant revocation and return to prison, or conviction and another commitment to the correctional system in Florida. Offenders who were arrested and/or convicted of less serious charges were not considered failures in this study. Accordingly, the 60% failure figure presents an optimistic picture; the actual percentage of offenders who stayed out of trouble with the

criminal justice system upon release is obviously lower than the 40% of offenders considered successes in this study.

In addition, outcomes reflected in conviction, or even arrest, do not account for the entirety of one's offense history. Some violent offenders, in particular many sex offenders, may have prolific offense histories relative to a smaller number of arrests. Thus, the research statistics reflect only identified re-offenses rather than actual re-offenses.

In sum, prior homicide offending is the strongest predictor of subsequent homicide offending. Juvenile homicide offenders perpetrate a subsequent murder at a rate of 3,000–4,000 per 100,000, a metric that is 600–800 times the current homicide rate in the United States. Juvenile murder is *ipso facto* an indicator of a behavioral pathway that is persistent and serves to increase liability for diverse forms of antisocial behavior.

Life-Course-Persistent or Career Criminality

Violent conduct during childhood and adolescence, including homicide offending, shows strong prognostic effects for several types of offending across early, middle, to late adulthood. Longitudinal research indicates that violent offending between ages 10 to 20 years increases the likelihood of violent conduct between ages 21 and 39 years by a factor of seven, and increases the likelihood of violent conduct between ages 40 and 61 years nearly tenfold. Violent conduct in childhood and adolescence increases the odds of nonviolent offending during the same developmental periods by a factor of 19. Both self-reported and official convictions for violence during childhood and adolescence are strongly predictive of violent offending across adulthood with odds ratios ranging from 2.81 to 8.49 times increased likelihood (Farrington, 2019). Consequently, juvenile homicide offending is a robust predictor of a range of antisocial behaviors occurring long after the initial murder.¹

Practitioner and clinical observations about a subgroup of severely and chronically antisocial youth received scientific validation in Wolfgang et al. (1972) study of 9,945 boys born in Philadelphia, Pennsylvania in 1945 and followed until adulthood. The researchers found the distribution of delinquency is highly asymmetric with most individuals—roughly 65% of a population—not engaging in crime as measured by police contact. About 30% of the study population was engaging in crime albeit at intermittent and often low levels. However, a small cadre engaged in crime recurrently across the life course. Within this sample, 627 boys, constituting 6% of the birth cohort, were chronic offenders who accounted for 52% of the total delinquency and 63% of all Index offenses. The 6% were responsible for 71% of murders, 73% of rapes, 82% of robberies, and 69% of aggravated assaults. A critical inference from their study is that the more violent the crime, the more likely a chronic delinquent youth perpetrated it.

A replication study of 27,160 boys and girls born in Philadelphia in 1958 found that 7% of the cohort was chronically delinquent and accounted for 61% of total delinquency, 60% of murders, 75% of rapes, 73% of robberies, and 65% of aggravated assaults in the population (Tracy et al., 1990). Serious, violent, and chronic delinquency had strong prognostic effects on continued arrest activity well into adulthood. Evidence for criminal continuity was strongest among those who already perpetrated the most serious crimes (Kempf-Leonard et al., 2001).

The distinction of incorrigibly antisocial youth, variously described as chronic offenders, habitual offenders, career criminals, or the severe 5% is among the most consistently confirmed scientific findings in criminology (Blumstein et al., 1986; DeLisi, 2005, 2016; DeLisi & Piquero, 2011; Moffitt, 1993, 2018; Piquero et al., 2003; Vaughn et al., 2011, 2014). To illustrate, an epidemiological study of the Swedish population born between 1958 and 1980 found that 1% of the population accounted for 63% of all violent convictions including murder. The greatest predictors of a life-course among the persistently violent group were male sex, personality disorder, violent crime

convictions during adolescence, drug-related offenses, nonviolent criminality, substance use disorder, and major mental disorder (Falk et al., 2014).² Habitual offending denotes enduring, lifelong conduct patterns. A meta-analysis of 73 studies from multiple nations confirmed that approximately 5%–10% of the population accounts for half of the incidence of crime in the population with greater disproportionality for the most violent offenses (Martinez et al., 2017).

Early in life, a bevy of psychosocial risk factors and recurrent antisocial conduct heralds a developmental course portending serious and violent offending through adolescence and adulthood (Caspi et al., 2016; Farrington & Loeber, 2011; Farrington et al., 2012; Moffitt, 2018; Moffitt & Caspi, 2001; Moffitt et al., 2002, 2011; Vaughn et al., 2014). Research involving six prospective longitudinal studies in Canada, New Zealand, and the United States consistently showed the salience of aggression, conduct problems, oppositional behavior, and hyperactivity in predicting the most severe offending careers (Broidy et al., 2003). Studies of institutionalized youth similarly found that more extensive and severe delinquency history and earlier emergence of conduct problems and juvenile justice system contacts were significantly linked to greater risk of homicide offending (Bonner et al., 2020; Trulson et al., 2016).

These profiles have enduring criminogenic value. Assorted risk indicators for juvenile homicide do not simply become inert once the murder has occurred, but continue to increase the likelihood for sustained criminal involvement into adulthood. Risk profiles for incorrigible delinquency and juvenile homicide are many times the same predictors of lifelong criminal conduct (Ahonen et al., 2016; DeLisi et al., 2016; Vries & Liem, 2011; Baglivio & Wolff, 2017b). Longitudinal research of the Pittsburgh Youth Study, a high-risk sample of 1,517 males of whom 39 perpetrated homicide found that childhood risk factors for homicide have enduring predictive validity through age 38 years (Ahonen et al., 2016). Prior violence conviction more than quadrupled the risk of violent offending into adulthood. Individuals who exhibited a multitude of risk factors for violence, such as the chronic offending youth who committed murder, were exponentially more likely to be violent later in life. In the Pittsburgh data, those with three risk factors had 666% higher odds of subsequent violent conduct and those with four risk factors had 1,655% higher odds of later violence (Ahonen et al., 2016).

These findings are not unique to the United States. International data on juvenile homicide offenders reinforces the litany of risk indicators that predicted their homicide offense and also confer predictive validity for antisocial conduct occurring years after they committed murder during adolescence. As Vries and Liem (2011, p. 492) advised in their 15-year study of the population of juvenile homicide offenders in the Netherlands, “all criminal history risk factors (previous number of offenses, age at first offense, and age at homicide offense), influence recidivism prevalence significantly—especially in the long run.”

Externalizing Psychopathology and Incorrigibility

The sustained conduct problems of juvenile homicide offenders are part of highly externalizing psychopathology, exhibited as aggressive behaviors directed toward one's environment. At the assessment level, such behaviors manifest in those with Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Attention-Deficit/Hyperactivity Disorder (ADHD), psychopathy and Anti-social Personality Disorder (ASPD).

An 8-year census of 363 juvenile homicide perpetrators revealed that nearly 50% of juvenile homicide offenders had prior legal reprimands or convictions by age 16 (Rodway et al., 2011). Nearly one in two had history of drug misuse and 24% had a history of alcohol abuse. The prevalence of CD and symptoms of emerging personality disorders were about double the prevalence of these conditions in the general population. Half of juvenile homicide offenders had delayed developmental milestones in early childhood. This adverse background coincided with a similarly severe behavioral history of repeated conduct problems and recalcitrance to treatment or

correctional intervention. Seventy-three percent of juvenile homicide offenders had discipline problems, nearly half was expelled, and one in three were placed in an alternative educational setting due to self-regulation problems.³

Nationally representative research clarifies juveniles on a life-course antisocial pathway evince morbidities that are similarly enduring in their developmental course. In the National Epidemiologic Survey on Alcohol and Related Conditions, which has a nationally representative sample of more than 43,000 participants, more than 80% of life-course-persistent offenders use drugs, more than 45% have a lifetime substance use disorder, nearly 61% have a personality disorder, and 39% have ASPD (Kerridge et al., 2020). These prevalence estimates are double to nearly 20-fold higher than non-offenders in the population who never commit juvenile homicide. Compared to the general population, life-course-persistent offenders have increased odds of every form of psychopathology other than anxiety disorders, and have significantly greater externalizing psychopathology involving aggressive and violent acts compared to normative adolescence-limited offenders.

Numerous factors distinguished juvenile offenders on a life-course-persistent trajectory compared to adolescence-limited or non-offending adult pathways. Life-course-persistent offenders are more likely to not complete high school and have low socioeconomic status. Juvenile murderers and those on a life-course-persistent trajectory have greater and more varied childhood trauma exposure compared to other youth (Baglivio et al., 2014; Fox et al., 2015; Shumaker & Prinz, 2000). A consequence of trauma exposure is that it exacerbates externalizing psychopathology that facilitates continued violent offending across the life course. Along with delinquent career and institutional misconduct, various forms of childhood neglect predict post-release recidivism among juvenile homicide offenders and other serious violent delinquents (Craig et al., 2020; Trulson & Caudill, 2017). Within the context of individualized sentencing, many of the qualities and historical events that disadvantaged a defendant and therefore could be considered mitigating nevertheless would predispose that same person to have a higher likelihood of career criminality well-beyond the murder of which he is now convicted.

Youth with CD and personality styles characterized by callousness, low empathy, remorselessness, and emotional deficits illustrate problematic psychopathic qualities. A variety of prospective longitudinal studies, including the National Longitudinal Survey of Children and Youth and Incarcerated Serious and Violent Young Offender Study, report causal linkages between adolescent psychopathic features and a variety of severe conduct problems including homicide, habitual offending, and gang activity (Dupéré et al., 2007; McCuish et al., 2014, 2015). Juveniles with the earliest onset, most extensive, most criminally versatile, and most violent delinquent careers were also those with the most psychopathic features (Cale et al., 2015; Corrado, DeLisi, et al., 2015; Corrado, McCuish, et al., 2015). Across studies, the patterning of serious, violent, and chronic delinquent offending is directly commensurate with the severity of psychopathic personality features in the researched juvenile offenders.⁴

One reason for the interrelationship between behavioral disorders, homicide offending, and criminal continuity is the increased likelihood of homicidal ideation. Externalizing psychopathology relates to homicidal ideation in a gradient fashion, such that offenders with the greatest evidence of homicidal ideation experience greater psychopathology, especially behavior disorders. For example, youth with homicidal ideation have five times more CD symptoms than youth without it (DeLisi et al., 2017). In the Nationwide Emergency Department Sample from the Healthcare Cost and Utilization Project, which has a sample of in excess of 17 million participants, conduct disorders increased the odds of homicidal ideation nearly 1,500% and ADHD increased the odds of homicidal ideation by more than 600% (Vaughn et al., 2020). Using the same data source, ASPD produced 2,406% increased odds of homicidal ideation (Carbone et al., 2020). ASPD has a prolonged developmental course and a fifteen-fold increased likelihood of convictions for violent crime during adulthood (Reising et al., 2019).

ASPD is strongly associated with violent conduct. A survey of 4,664 young adult ages 18–34 years reported a prevalence of ASPD symptomatology among nonviolent males at 3.6% (Coid et al., 2013). Among violent males, the prevalence was 29.2% and among gang members, the prevalence was 85.8% meaning the prevalence was about 24-fold higher among young gang males compared to males in the general population. Moreover, ASPD symptomatology conferred 57.4 times higher likelihood of gang membership compared to the general population. Since immersion in violent crime potentiates situations likely to result in homicide, Coid et al. (2013) also examined the associations between ASPD and use of violence if disrespected and violent ruminations. Controlling for ten other psychiatric factors, ASPD symptomatology increased the risk of being violent if disrespected by 5.5–33.6 times and increased the likelihood of violent ruminations by 7.5–45.3 times.

A common developmental feature of juvenile murderers (Ahonen et al., 2016; Beaudry et al., 2020; Vries & Liem, 2011) is the presence of ADHD. A meta-analysis of studies that included 15,442 individuals with childhood ADHD examined its association with long-term criminal activity including homicide and criminal justice system involvement. Overall, ADHD contributed to earlier onset of externalizing conduct, more than doubled the likelihood of adolescent and adult arrests, more than tripled the likelihood of adjudications or convictions, and nearly tripled the risk of incarceration. In every study that included murder, attempted murder, or a composite measure of serious violent crime, ADHD produced a significantly higher risk of violence (Mohr-Jensen & Steinhausen, 2016). In sum, behavioral disorders serve as a major driver of homicidal ideation and perpetration.

A systematic review of juvenile homicide research between 1989 and 2012 identified several behavioral factors indicative of incorrigibility (Gerard et al., 2014). These included delinquency, violence, early-emerging contact with the juvenile justice system and problematic educational history involving suspensions, expulsions, and multiple placements due to the youth's emotional and behavioral regulation problems. This profile involves family risk factors and early-emerging behavioral indicators that translates into maladaptive conduct in multiple life domains that endure through adulthood (Broidy et al., 2003; Farrington, 2020; Gerard et al., 2014; Zagar et al., 2009a, 2009b).

This incorrigibility profile runs a lengthy developmental course. A prospective longitudinal study of males followed from age 8 years to age 61 years revealed that boys who were repeatedly in trouble at home and school at age 8–10 years increased the likelihood of violence, convictions, and anti-social personality features between twofold and fourfold. Boys who were difficult to discipline during childhood were two to three times more likely to be violent, criminal, and exhibit antisocial traits *5 decades later*. A high frequency of dishonesty as indicated by repeatedly lying to adults increased the likelihood of these antisocial outcomes nearly threefold (Farrington, 2020).

Treatment inefficacy among juvenile murderers is another indicator of their incorrigibility. Capital offender programs within the Office of Juvenile Justice and Delinquency Prevention include residential placement and rigorous cognitive behavioral interventions that aim to achieve aggression replacement, empathy induction, and thinking strategies that replace antisocial cognitions. Unfortunately, modest intervention effects do not translate into recidivism differences among juvenile murderers who received interventions compared to those who did not (National Council on Crime and Delinquency & Howell, 1995).

Other interventions have shown promise at reducing recidivism among juvenile murderers. Haerle (2016) examined recidivism outcomes among violent juvenile offenders (71% of whom were homicide offenders) in the Violent Offender Treatment Program and found that stronger doses of treatment produced more favorable recidivism outcomes. However, the percent decreases in the odds of recidivism ranged between 2.27% and 25.62% (depending on intervention dosage) and the average reduction in recidivism was a modest 12.25%. Moreover, nearly 30% of those in the

program were non-homicide offenders. Thus it is unclear how well juvenile murderers fared compared to other youth.

In the treatment literature with the most serious and violent delinquent youth, even statistically significant differences favoring an intervention compared to a control group result in small effect sizes and thus produce negligible reductions in noncompliance, institutional misconduct, and post-release recidivism (Lipsey, 2009; Whitehead & Lab, 1989). In addition, treatment effects are commonly limited to the duration of the intervention or a brief follow-up period, and do not translate into better outcomes with more extended community exposure. For instance, a study of extremely violent delinquents among whom 10% were homicide offenders found that Multisystemic Therapy produced *increased* antisocial behavior among violent youth during the first month of its use, but then produced reductions in aggressive conduct. Unfortunately, those reductions produced very small effect sizes, and the evaluation period spanned a mere 4 months from the start of the intervention (Asscher et al., 2018). Earlier work had already shown that Multisystemic Therapy decreased externalizing problems only among those deemed “lower callous/unemotional” and “lower narcissism,” suggesting the limited utility of treatment among adolescents with more extensive psychopathic traits (Manders et al., 2013).

Behavioral interventions can also produce unintended and iatrogenic effects. In a study of more than 3,000 serious, violent, and chronic delinquents of whom 566 were homicide offenders, those who received the most treatment had 103% higher odds of institutional misconduct and 47% higher odds of violent misconduct (Butler et al., 2020). Greater treatment involvement was also significantly associated with 116% higher odds of being in the 99th percentile for institutional misconduct and 54% higher odds of being in the 99th percentile for violent misconduct. Thus, even well designed and tailored correctional interventions thus far have proven ineffective in restraining the incorrigible antisocial conduct of the most serious violent offenders. Finally, the prison experience itself confers additional risks for continued antisocial conduct as a function of the youth’s proximity to older, more recalcitrant adult offenders, various pressures to join security threat groups that increase likelihood of institutional misconduct, and inadequate educational, vocational, and treatment opportunities (see, DeLisi et al., 2011; Forst et al., 1989; Haerle, 2019; Hagan, 1997; Heide, 2019, 2020).

Discussion

In its impactful decision in *Miller*, the United States Supreme Court did not account for the body of studies establishing incorrigibility among juvenile homicide offenders specifically and serious, violent, and chronic delinquents generally. Some published perspectives (e.g., Farifax-Columbo et al., 2019; Grisso & Kavanaugh, 2016) promulgate a variety of canards on the incorrigibility issue. Namely, that virtually all convicted juvenile murderers desist from crime as they age, that juvenile homicide is too rare an event to scientifically study,⁵ and that scant evidence exists to substantiate these defendants are persistent in their conduct and/or that they are not amenable to correctional intervention. All of these assertions are patently demonstrated as false by an abundance of ecologically valid research reviewed herein.

Our review of incorrigibility and the juvenile homicide offender makes clear that theory and research that pertain to normative adolescent offenders whose delinquency is trivial, short-lived, and unremarkable is in no way relevant or appropriate to the study of juvenile homicide offenders except as a means to contrast the nominal lawbreaking of most adolescent offenders to juvenile murderers’ entrenched criminality. These are fundamentally different types of offenders.

The quixotic assumption that a juvenile homicide offender will age out of murder when they reach their twenties and pose little to no risk for continued deviance especially when homicide offending itself is a cardinal indicator of severe antisocial development is contrary to the science. A Orich corpus of scholarship on homicide recidivism, life-course-persistent or career criminality,

and externalizing psychopathology and incorrigibility documents the severe, lifelong behavioral impairments of the most serious criminal offenders. The research covered herein emanates from epidemiological surveys, birth cohort studies, large-scale prospective longitudinal studies, and, most importantly from the viewpoint of ecological validity, correctional studies including homicide offenders and appropriate control groups of other serious delinquents.

The concern that the low prevalence (or base rate) of juvenile homicide offending renders it virtually impossible to study is also specious.⁶ A variety of methodological techniques including rare events logistic regression, logistic regression, Poisson regression, and negative binomial regression, all of which can provide rigorous statistical estimation of rare count data, are already in use in the homicide literature (e.g., Baglivio & Wolff, 2017a, 2017b; DeLisi et al., 2016; Loeber et al., 2005). The multitude of risk factors and psychopathology of juvenile homicide offenders emerge early in life often well before their (first) homicide event, and extend across life. Pathological conditions, behavioral disorders, psychopathy, personality disorders and the attendant conduct problems gather momentum from comorbid substance abuse and other deepening social dysfunction.

Because psychopathy, antisocial personality and other personality disorders confer the recognized transactional skills of manipulation, exploitation, and persuasion, a psychopathic or antisocial offender may be unwilling to redirect what he regard as a personal strength. In a different manner, the appetitive perversions of a juvenile sexual offender are private and difficult to fully identify, let alone extinguish. Sexual homicide includes a subset of highly recidivistic violent offenders driven by compulsive predation. Not surprisingly, research has also demonstrated that behavioral modification and psychotherapeutic treatment interventions have to date been ineffective in reversing the recidivism of the most serious homicidal offenders.

Indeed, there are conditions implicated in homicide, such as ADHD, that are successfully treated with psychopharmacologic agents and prove to desist in some during late adolescence. Among those diagnoses noted in this review, the prospect of ADHD resolution in late adolescence would more readily enable a more adaptive behavioral course. On the other hand, the comorbid behavioral adaptations to ADHD, be they in interpersonal relatedness or substance abuse, may introduce other toxic propellants to future predatory and violent behavior even in those who are fortunate enough to evolve out of ADHD.

The criminological science makes clear that continuity, persistence, and continued behavioral risk are the norm among those with the most violent and antisocial backgrounds (Caspi et al., 2016; Moffitt, 1993, 2018; Mohr-Jensen & Steinhausen, 2016). That incorrigibility has sustained continuity into midlife and even at advanced ages. To presuppose that such offenders who killed in their adolescence will pacify merely as they age into their twenties is Pollyanna bias that does not account for the various factors accountable in individualized assessment.

Numerous variables affect each murder defendant uniquely and in so doing, inform individualized assessment of one's future risk. Individualized assessment is the standard of practice in forensic behavioral science examination, and as such reflects upon the practice as a human exercise rather than broad generalization borne of ideological passions or overstatement of the meaning of anticipated neuroanatomical changes. The capacity of the convicted juvenile murderer to overcome an established risk for future criminality and violence through improbably impactful influences always exists, even though treatment initiatives fall short of providing a formula applicable to the most violent and severe of offenders with a homicidal history. That future risk of criminality and violent offense is established in juvenile homicide offenders, a risk not overcome and squelched by the mere passage of time or development alone.


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Notes

1. Although there is important evidence of specialization in criminal offending, as seen in the homicide recidivism literature, the balance of research indicates that criminal offenders are versatile and engage in an assortment of crimes. That offenders are primarily versatile with intermittent evidence of specialization is also true of serious, violent, and chronic juvenile offenders (Baglivio & Wolff, 2017a, 2017b; Farrington et al., 1988; Lattimore et al., 1994; Lussier & Blokland, 2014; Tzoumakis et al., 2013).
2. Several case studies and small, nonrandom samples of juveniles who perpetrate murder or specific forms of homicide, such as mass murder, sexual homicide, or serial murder also exist (Cornell et al., 1987; DiCataldo & Everett, 2008; Hill-Smith et al., 2002; Lewis et al., 1988; Meloy et al., 2001, 2004; Myers, 2004; Myers & Scott, 1998; Myers et al., 1995; Roe-Sepowitz, 2007). While these studies produce interesting descriptive information about these defendants, they commonly lack adequate power for comparative statistical analyses in multivariate models.
3. In the Pittsburgh Youth Study, several dispositional and behavioral features associated with incorrigibility are predictive of homicide offending. The following incorrigibility indicators (with their corresponding odds ratio): suspended from school (4.9), high-risk score (4.4), positive attitude toward delinquency (3.9), disruptive behavior disorder (3.5), serious delinquency (3.3), peer delinquency (3.0), positive attitude toward substance use (2.7), covert criminal behavior (2.7), lack of guilt (2.4), cruelty to people (2.4), bad friends (2.0), and truancy (1.9) significantly predicted juvenile murder convictions. Still other incorrigibility factors were associated with juveniles arrested but not convicted of murder including frequent aggression, low school motivation, low school achievement, and bad relationships with peers—all of which doubled to tripled the likelihood of murder arrest (Farrington & Loeber, 2011; Farrington et al., 2012).
4. Curiously, Grisso and Kavanaugh (2016) cite Lynam et al. (2007) as evidence of poor prognosis of adolescent psychopathy into adulthood. Yet, that is precisely what Lynam et al. (2007) found. Those authors described their study as the first demonstration of the relative stability of psychopathy from adolescence into adulthood. Indeed, those authors and various research teams employing diverse data consistently reported relative to strong continuity in psychopathy across developmental periods (DeLisi et al., 2020; Lee & Kim, 2020; Loney et al., 2007; Lynam, Charnigo, et al., 2009; Lynam, Miller et al., 2009; McCuish et al., 2014, 2015; van Baardewijk et al., 2011). In fact, longitudinal research found that psychopathy scores at ages 8 to 10 correlated strongly with psychopathy scores at age 48 (Bergström et al., 2016), and the conduct problems that unfold from psychopathy reveal similar continuity.
5. To illustrate, Fairfax-Columbo et al. (2019, p. 132) suggested, “Given most research indicating that most juvenile offenders will naturally desist from criminal activity over time, we suggest the default assumption of forensic mental health professionals should be that any individual juvenile offender is also likely to desist. Any adjustment from this base-rate informed assumption requires empirical justification—namely, the existence of factors associated with life-course persistent offending.”
6. The low base rate problem is cited in studies of incorrigibility and future dangerousness (e.g., Cunningham & Reidy, 1998; Cunningham et al., 2010; Fairfax-Columbo et al., 2019) as means to impugn the notion that risk assessment of potentially rare events (e.g., murder and other serious violent recidivism) can be studied with scientific accuracy. The studies herein well demonstrate that it has been and can continue to be conscientiously researched.

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