

# Juvenile Training Immersion Program:

## Lesson 4 – Adolescent Development

# ANNOTATED BIBLIOGRAPHY OF KEY ADOLESCENT DEVELOPMENT STUDIES

The following brief summaries highlight several aspects of adolescent development that are important to consider when representing youth in the juvenile justice system. The studies reviewed focus primarily on youth's psychosocial development. Psychosocial development refers to internal psychological processes that are influenced by and interact with social/environmental cues. Many developmental and legal scholars argue that certain psychosocial characteristics of adolescence (susceptibility to peer influence; lack of future orientation; lower impulse control) should mitigate the culpability of young offenders because their decision-making capacities are often still immature and not fully developed. However, some of these same psychosocial characteristics (e.g., lack of future orientation) also speak to youth's vulnerabilities in interrogation settings.

A couple of the studies reviewed discuss youth's cognitive development (e.g., how youth think, reason and process information). Since youth are still developing cognitive capacities, they are at a higher risk than adults of being incompetent to stand trial, and for invalid waivers of *Miranda*.

### **I. Susceptibility to Peer Influences (Psychosocial Development)**

The following four studies speak to the important role peers play in adolescents' poor judgment and risky behaviors. Such evidence helps to explain why adolescents, more so than adults, commit crimes in groups. This is a critical psychosocial characteristic of youth to consider, particularly when we think about issues of mitigation and culpability. Highlighting how a youth may have been influenced by peers involved in the same incident may be critical for mitigating a client's behavior.

**Margo Gardner & Lawrence Steinberg, *Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: An Experimental Study*, 41 DEVELOPMENTAL PSYCHOL. 625 (2005).**

#### **Purpose**

- To investigate the influence of peers on risk-taking and risky decision-making in adolescents and adults.

#### **Methodology**

- An experimental study conducted in a laboratory setting with a sample of 306 individuals recruited from both the community and from an undergraduate university. Participants consisted of three groups: a) adolescents ages 13 to 16 years old; b) youth ages 18 to 22 years old; and c) adults ages 24 and older.
- Researchers used self-report questionnaires and a behavioral task to assess risky decision-making and risk-taking.
  - For the behavioral task, researchers used a simulated driving task on the computer to assess participants' risky decision-making. Participants had to decide whether or not to break as they approached a changing stoplight. The time it took the light to change from yellow to green varied, and so did the probability of crashing in the intersection.

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### Results

- Individuals in middle and late adolescence were much more likely than adults to take more risks and engage in riskier decision-making when tested in groups than when tested alone.

### Relevance

- Demonstrates that adolescents are more susceptible to the influence of their peers than adults, particularly when engaging in risky behavior and/or risky decision-making.

O'Brien et al., *Adolescents Prefer More Immediate Rewards when in the Presence of Their Peers*, 21 J. RES. ON ADOLESCENCE, 747 (2011).

### Purpose

- To test the hypothesis that adolescents' preferences for immediate rewards, versus delayed rewards, increases in the presence of peers.
- To investigate the mechanism underlying the influence of peers on risky decision-making. The authors propose that the presence of peers increases adolescents' sensitivity to the immediate rewards of a risky decision.

### Methodology

- An experimental study conducted in a laboratory setting with a sample of 100 participants, ages 18 through 20.
  - Participants were recruited from a college campus.
  - Participants were asked to bring two friends with them to the study, and were randomly assigned to a group or alone condition.
- Participants were administered a delay-discounting task on the computer.
  - The delay-discounting task required participants to choose between smaller immediate rewards (*e.g.* US \$200 today) or larger delayed reward (*e.g.* US \$1000 in six months).
  - "Discount" refers to the extent to which participants discount the larger reward, due to the delay in receiving the larger reward.

### Results

- Participants who were in the presence of their peers were more likely than when alone to:
  - Prefer immediate rather than delayed rewards.
  - Discount the value of delayed rewards.
- Researchers compared the results of the present study with a study conducted by Laurence Steinberg and colleagues (2009) (see summary on Future Orientation) that used the same delay-discounting task. In the Steinberg and colleagues study, the results of youth age 14 to 15 that did the discounting task alone paralleled the results of 18- to 20-year-olds who completed the task in the presence of peers. Thus, even 18- to 20-year-olds may make immature decisions that resemble 14- to 15-year-olds when they are in the presence of peers.

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### Relevance

- Results suggest that an adolescent tendency towards riskier decision-making in the presence of peers is due to a shift in “reward processing.” Youth tend to value more the immediate rewards of a risky decision (e.g. unprotected sex) than considering the long-term consequences of such a decision (e.g. disease or pregnancy).

**Jason Chein et al., *Peers Increase Adolescent Risk Taking by Enhancing Activity in the Brain’s Reward Circuitry*, 14 DEVELOPMENTAL SCI. F1 (2011).**

### Purpose

- To explore a possible explanation for why peers influence adolescent risk-taking by using fMRI equipment to study brain activity while completing a risk-taking task in the presence of peers.
- Researchers were interested in whether the presence of peers activates regions of the brain differently for adolescents than for adults.
  - The two brain systems thought to be involved in risky decision-making are the cognitive control system and the incentive processing/socio-emotional system.
  - The cognitive control system of the brain is related to impulse control, as well as better reasoning and planning.
  - The incentive processing/socio-emotional system of the brain is associated with the processing of rewards and punishments, as well as emotions and social information.
  - Adolescence is thought to be a time when the incentive processing/socio-emotional system of the brain is easily aroused and highly sensitive to social feedback, while the cognitive control system is still immature and developing.

### Methodology

- An experimental study conducted in a laboratory setting with: 40 participants age 14 to 18 years old; 14 participants age 19 to 22 years old; and 12 participants age 24 to 29 years old.
- Researchers used a simulated driving task on the computer to assess participants’ risky decision-making. Participants had to decide whether or not to break as they approached a changing stoplight. The time it took the light to change from yellow to green varied, and so did the probability of crashing in the intersection.
- While completing the computer driving task, brain activity was assessed using fMRI technology.
  - One group of participants completed the driving task with no peers present. A second group of participants were told that their peers were observing them from a monitor in another room. These observers were allowed to communicate periodically with participants over an intercom. The observers were instructed to let participants know that they were making predictions about the participants’ outcome, but the observers were not allowed to make comments that might overly bias participants’ performance on the task.
  - In order to determine if there was a difference in brain activity when participants completed the game alone or in the presence of peers, brain activity and responses to the driving task were aligned temporally.

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### Results

- Adolescents, more so than young adults or adults, took more risks with peers than when alone, and crashed more with peers than when alone.
- In the presence of peers, adolescents demonstrated heightened brain activity in the incentive processing/socio-emotional system in comparison to young adults and adults.
- Adult participants did not show an increase in the incentive processing/socio-emotional system of the brain during the simulated driving task. Instead, young adults and adults showed more recruitment of the cognitive control system while completing the driving task, both in the presence of peers and alone.

### Relevance

- Results support a neurodevelopmental explanation for the influence of peers on risky behavior in adolescence. The findings suggest that the presence of peers increases the salience of immediate rewards, and activates the incentive processing/socio-emotional system of the brain, which subsequently increases risky decision-making.
- Results also suggest that adults, due to maturation, are better able to recruit the cognitive control system of the brain in order to engage in better-reasoned decision-making when confronted with risky situations.

**Laurence Steinberg & Katherine Monahan, *Age Differences in Resistance to Peer Influence*, 43 DEVELOPMENTAL PSYCH. 1531 (2007).**

### Purpose

- To explore age differences in susceptibility to peer influences:
  - across a diverse demographic group;
  - using a measure specifically designed to examine resistance to peer influences in neutral rather than anti-social scenarios.
- To determine whether growth in resistance to peer influences increases “linearly” (*e.g.*, gradually increases as youth age) throughout adolescence.

### Methodology

- Used data that had been previously collected from three different studies in order to have a diverse group of participants who varied in age (10 to 30), gender, social class and ethnicity.
  - Additionally, the samples consisted of individuals from the community, as well as those who had been arrested.
- Resistance to Peer Influence (RPI) was measured by a self-report questionnaire that directed participants to choose between two statements in order to best describe how they would respond to pressure from peers in different scenarios.

### Results

- Results indicate that youth from ages 14 to 18 increase in their resistance to peer influences. By 18, youth appear to reach maturity in regard to resistance to peer influence, and show little growth in this capacity. In fact, their scores are comparable to those of 30-year-olds.
- Additionally, researchers reported demographic differences with some groups, showing more resistance to peer influences than others.

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### Relevance

- Although teenagers may be more susceptible than adults to the influence of their peers, middle adolescence is an important time period for developing a resistance to peer influences.

### II. Sensation-Seeking and Impulsivity (Psychosocial Development)

These findings speak particularly to the issue of immaturity and culpability, and are important to consider when mitigating illegal behavior in adolescents. In general, youth are more likely than adults to display less impulse control and more sensation-seeking behaviors. It appears that these characteristics are a normal part of adolescent development.

**Laurence Steinberg et al., *Age Differences in Sensation-Seeking and Impulsivity as Indexed by Behavior and Self-Report: Evidence for a Dual Systems Model*, 44 DEVELOPMENTAL PSYCHOL. 1764 (2008).**

### Purpose

- To explore age differences in sensation-seeking (tendency to seek stimulating and novel experiences) and impulsivity (lack of self-control).
- Researchers predicted that sensation-seeking and impulsivity:
  - Occur along different timetables
  - Are connected to the increased vulnerability to risk-taking found in adolescence

### Methodology

- An experimental study conducted in a laboratory setting with a sample of 935 individuals, ages 10 to 30 years. Participants were recruited from the community in several cities across the United States.
- Used both self-report questionnaires and behavioral tasks to assess sensation-seeking and impulsivity.

### Results

- Age differences were found for both impulsivity and sensation-seeking, but they developed along different timetables.
  - Sensation-seeking behaviors increased between the ages of 12 to 15 (initiating around the beginning of puberty), and then steadily declined.
  - Impulsivity was found to steadily decline from age 10 through adolescence and well into early adulthood. Adolescents younger than 16 demonstrated significantly less impulse control than 16- to 17-year-olds, and 16- to 17-year-olds demonstrated significantly less impulse control than 22- to 25-year-olds.

### Relevance

- After age 15, adolescent vulnerability to risky behavior steadily decreases as sensation-seeking decreases, and impulse control continues to increase into early adulthood.
- Evidence from this study is consistent with adolescent brain research that demonstrates that the brain systems (cognitive control system) linked to impulse control and self-regulation does not fully develop until early adulthood. In contrast, the brain systems (socio-emotional system) linked with sensation-seeking becomes more highly aroused in early adolescence.

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Elizabeth P. Shulman & Elizabeth Cauffman, *Reward-Biased Risk Appraisal and Its Relation to Juvenile Versus Adult Crime*, 37 *LAW & HUM. BEHAV.* 412 (2013).

### Purpose

- To explore whether age influences how individuals assess potential risks and rewards when facing dangerous situations.
- Researchers hypothesized that:
  - Compared to adults, adolescents have a reward bias. They perceive more rewards than risk when facing a dangerous situation.
  - Higher reward bias is associated with higher engagement in illegal activity.

### Methodology

- Researchers conducted two experiments examining aspects of the dual system theory of normative development which demonstrates that adolescent and adult brains operate in fundamentally different ways such that adolescents cognitive control networks (impulse control and self-regulation) is not fully developed until adulthood, while socio-emotional control networks (related to desire for novel situations and sensations) is highly stimulated during adolescence.
- Subjects in the first study were ethnically diverse, males and females, working or middle class, between the ages of 10-30, with no involvement in the legal system.
  - Subjects were asked:
    - How many times they engaged in four types of law breaking behavior (fighting, threatening someone, vandalism, and theft) during the past six months.
    - To imagine themselves engaging in risky behavior (e.g. having unprotected sex, stealing from a store, or fighting) and rate the likelihood of a negative outcome, the seriousness of the negative consequence, and how potential costs compare to potential benefits.
- The second study replicated the first, but with a sample consisting of community and court-involved youths and adults.
  - Although the court-involved subjects were at the pre-adjudication phase, more than half of them had either pled guilty or had been previously found guilty.
  - Data was analyzed using five groups: 12-13 years old (early adolescence), 14-15 years old (middle adolescence), 16-17 years old (later adolescence), 18-21 years old (late adolescence), and 22-24 years old (young adults).

### Results

- The results of the first study found:
  - Reward bias increased during adolescence (peaking for 16-17 year olds), and decreased with age above 17.
  - Males demonstrated more reward bias than females.

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- Males, people with low IQs, and those who were younger reported engaging in more law-breaking behaviors during the past six months than their counterparts who were female, had higher IQs, and were older.
- The results of the second study found:
  - Among those involved with the legal system, younger subjects displayed more reward bias than older, court-involved subjects.
  - The impact of age on reward bias was robust and held, even when they only looked at subjects who had pled guilty or had been found guilty. It also held when they examined data based on the type of crime (property vs. person) committed.

### Relevance

- The studies demonstrated that, compared to adults, youth are less likely to see the risk involved in dangerous situations. A youth's ability to perceive risk is influenced by development.
- Evidence from this study is consistent with adolescent brain research conducted over the last decade which demonstrates that adolescent and adult brains operate in fundamentally different ways.

### III. Future Orientation and the Ability to Delay Rewards (Psychosocial Development)

This study demonstrates that youth, more so than adults, lack consideration of future consequences. While these findings speak to issues of mitigation and culpability, they also suggest that youth's difficulty in thinking about long-term consequences may make them vulnerable to being coerced into waiving *Miranda* rights or making a statement.

Laurence Steinberg et al., *Age Differences in Future Orientation and Delay Discounting*, 80 *CHILD DEV.* 28 (2009).

#### Purpose

- To investigate age differences in future orientation and the ability to delay rewards.

#### Methodology

- An experimental study conducted in a laboratory setting with a sample of 935 individuals, ages 10 to 30 years. Participants were recruited from the community in several cities across the United States.
- Used both self-report questionnaires and behavioral tasks to assess future orientation and preference for delayed versus immediate rewards.
  - Self-report questionnaire assessed participants' abilities to think about the future, plan ahead and anticipate future consequences.
  - Behavioral task was a "delay-discounting" task, a standardized measure designed to assess participants' tendencies to choose immediate versus delayed rewards. This task was administered on a computer and presented participants with several choices between a smaller amount of pretend money that they could receive immediately (*i.e.*, \$5.00) versus a larger amount of money they could receive in a week (*i.e.*, \$100).

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### Results

- Researchers did find age differences in future orientation as measured by the self-report questionnaire and the behavioral task.
  - Younger adolescents, more so than individuals age 16 and older, demonstrated a weaker orientation toward the future.
    - Younger adolescents were less likely to think about the future and anticipate future consequences of decisions.
    - Planning ahead continued to develop into young adulthood.
  - In the “delay-discounting” task, younger adolescents, more so than individuals age 16 and older, preferred smaller immediate rewards than larger delayed rewards.

### Relevance

- The evidence suggests that adolescents’ (in contrast to adults’) preference for immediate versus delayed rewards is more closely linked to adolescents’ ability to think about the future and anticipate future consequences, and not their ability to self-regulate.
- The authors also note that “future orientation” has different dimensions, and adolescents’ ability to anticipate consequences may occur along a different timetable than their ability to plan ahead.
  - Authors suggest that adolescents’ difficulty in anticipating future consequences is more closely linked to a sensitivity to rewards, which is attributed to development of a particular brain system (socio-emotional system), more highly aroused in early adolescence.
- The authors note that evidence demonstrating adolescents’ weakened future orientation, or inability to anticipate the consequences of their actions, is often applied to discussions of adolescents’ capacity for “premeditation” or “planfulness” in the context of criminal culpability.
- However, adolescents’ weakened future orientation may increase their vulnerability to coercion in the interrogation context, as well.

#### IV. Capacities Related to Adjudicative Competence and Validity of *Miranda* Warnings (Cognitive and Psychosocial Development)

These studies demonstrate that *on average*, younger youth (15 and under) may be more likely to have impairments related to adjudicative competence and *Miranda* comprehension. These impairments are most likely due to the fact that they are still developing cognitive capacities (*i.e.*, the capacity to think, reason and process information). However, it is important to understand that older youth may demonstrate impairments as well, particularly if they have lower IQs or have learning disabilities. In addition, youth’s psychosocial immaturity (*e.g.*, compliance with adults) makes them more vulnerable than adults to coercion in interrogation settings.

**Jodi Viljoen & Ronald Roesch, *Competence to Waive Interrogation Rights and Adjudicative Competence in Adolescent Defendants: Cognitive Development, Attorney Contact, and Psychological Symptoms*, 29 LAW & HUM. BEHAV. 723 (2005).**

### Purpose

- The following study explored the relationship of youth’s cognitive development, psychological symptoms and attorney-client contact to capacities related to adjudicative competency and *Miranda* waiver.



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### Methodology

- Participants were 152 youth detained in a pre-trial detention facility (73 females and 79 males) between 11 and 17 years old.
- Interviews were conducted with youth over the course of two different sessions in the detention facility.
- In the first session, youth were given Grisso’s Instruments for Assessing Understanding and Appreciation of *Miranda* Rights, as well as an assessment of capacities related to adjudicative competence created by Roesch and colleagues: The Fitness Interview Test. In the second testing session, participants were given a battery of tests assessing cognitive abilities and psychological symptoms. Also, participants were asked how many times they met with their lawyer and how long they spent with their lawyer.

### Results

- Researchers had multiple research questions; however, some of the more significant results were:
  - Older youth performed better on tests related to adjudicative competence and *Miranda* comprehension and reasoning than younger youth.
  - Cognitive abilities (e.g., general intellectual ability) for youth who are 11 to 15 years old are significantly lower than for youth who are aged 16 and 17.
  - Cognitive abilities were strongly related to participants’ performance on the tests related to adjudicative competence and *Miranda* comprehension and reasoning.
  - Psychological symptoms (e.g., depression, anxiety, behavior problems) were not related to performance on *Miranda* instruments regarding adjudicative competence. However, a symptom of ADHD (e.g., excitation) was related to understanding of *Miranda* warnings, as well as communication with attorneys on a measure of adjudicative competence.
- Youth who had more contact with and time spent with attorneys demonstrated better understanding of adjudicative proceedings and *Miranda* warnings.

### Relevance

- Results suggest that teenagers are still developing cognitive abilities in adolescence. As a result, youth who are 11 to 15 years old are at a much higher risk of being found incompetent to stand trial.
- Also, due to still-developing cognitive capacities, younger youth are at a higher risk of not giving an “intelligent and knowing” *Miranda* waiver.
- Results also suggest that adolescents’ limitations in capacities related to adjudicative competence and *Miranda* comprehension are not generally a result of psychopathology, as is often the case with adults. Although symptoms of ADHD may play a role in youth’s legal capacities.

**Thomas Grisso et al., *Juveniles’ Competence to Stand Trial: A Comparison of Adolescents’ and Adults’ Capacities as Trial Defendants*, 27 LAW & HUM. BEHAV. 333 (2003).**

### Purpose

- To investigate the influence of cognitive and psychosocial maturity on adjudicative-related capacities in adolescents.

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### Methodology

- The sample consisted of:
  - 927 youth ages 11 to 17: approximately half were detained in a detention facility or jail and half resided in the community with no current justice system involvement.  
466 adults ages 18 to 24: approximately half were detained in a jail and half resided in the community with no current justice system involvement.
- Interviews were conducted in detention or jail settings for the detained participants and in a laboratory setting for community participants.
  - A standardized measure, the MacCAT-CA, was used to evaluate individuals' capacity to understand, reason about and appreciate critical aspects related to capacities to serve as trial defendants.
  - Another measure, the MacJen, used responses to different vignettes to assess the influence of psychosocial characteristics (*e.g.*, compliance with authorities, risk perception, future orientation) on adolescents' decision-making in the adjudicative context. The MacJen gives three different vignettes that ask youth about the choices they would make in certain legal contexts. The first vignette depicts a youth being asked to respond to a police interrogation. The second vignette asks a youth to decide on whether or not to disclose information to his attorney. The third vignette asks a youth to make a choice about whether or not to accept a plea agreement.

### Results

- *Cognitive Development:* Adolescents 15 years old and younger were significantly more cognitively impaired than 16- and 17-year-old adolescents and young adults in abilities related to competence to stand trial.
  - Adolescents aged 11 to 13 years old showed the most significant impairments.
  - 33% of the 11- to 13-year-olds and 20% of the 14- to 15-year-olds were “as impaired in capacities relevant to adjudicative competence as are seriously mentally ill adults who would likely be considered incompetent to stand trial by clinicians who perform evaluations for courts (p. 356).”
  - Also, adolescents with lower IQs demonstrated significant impairment in capacities.
- *Psychosocial Development:* Psychosocial characteristics such as compliance with authorities, risk appraisal and future orientation were found to influence adolescents' decision-making in three different legal scenarios: confessing to the police, accepting a plea agreement and disclosing to an attorney.
  - Youth 15 years old and younger were significantly more likely than older youth to make decisions that represented compliance with authorities and to choose options associated with higher risks.
  - Those youth who were aged 14 years and younger were significantly less likely to consider the long-term consequences of their choices.

### Relevance

- *Cognitive Development:* Many youth, particularly younger youth and youth with low IQs, are at risk for not being competent to stand trial. Unlike with adult defendants where incompetence may be found due to mental retardation and/or mental illness, youth may be incompetent to stand trial due to developmental immaturity.

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- Not only are youth more likely to be impaired in adjudicative capacities related to understanding, reasoning and appreciation, but psychosocial immaturity may make youth particularly vulnerable to poor decisions in legal contexts. For example:
  - Youth’s tendencies to be more compliant with authorities may increase their vulnerability to police coercion.
  - Youth’s lack of future orientation may impede their ability to fully understand the implications of waiving their right to silence when being interrogated by police.

**Laurence Steinberg et al., *Are Adolescents Less Mature than Adults? Minors’ Access to Abortion, the Juvenile Death Penalty, and the Alleged APA “Flip-Flop”*, 64 AM. PSYCHOL. 583 (2009).**

### Purpose

- Researchers compared adolescents’ cognitive capacities with a composite measure of psychosocial maturity examining risk perception, sensation seeking, impulsivity, resistance to peer influence and future orientation.

### Methodology

- An experimental study conducted in a laboratory setting with a sample of 935 individuals, ages 10 to 30 years. Participants were recruited from the community in several cities across the United States.
- To assess cognitive capacity, a battery of tests assessing basic cognitive skills was administered.
- To assess psychosocial maturity, researchers administered a combination of self-report questionnaires designed to measure risk preference, sensation-seeking, impulsivity, resistance to peer influence and future orientation.

### Results

- Findings support the theory that cognitive maturation and psychosocial maturation occur along different timetables.
- “By age 16, adolescents’ general cognitive abilities are essentially indistinguishable from those of adults, but adolescents’ psychosocial functioning, even at the age of 18, is significantly less mature than that of individuals in their mid-20s.” (p. 592)

### Relevance

- Researchers highlight that adolescents’ poor judgment is not necessarily a result of poor reasoning skills, but more closely linked to adolescents’ psychosocial development.
  - “When it comes to decisions that permit more deliberative, reasoned decision-making, where emotional and social influences on judgment are minimized or can be mitigated, and where there are consultants who can provide objective information about the costs and benefits of alternative courses of action, adolescents are likely to be just as capable of mature decision-making as adults, at least by the time they are 16... In contrast, in situations that elicit impulsivity, that are typically characterized by high levels of emotional arousal or social coercion, or that do not encourage or permit consultation with an expert who is more knowledgeable...adolescent decision-making at least until they have turned 18 is likely to be less mature than adults.” (p. 592)

## V. Desistance

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Edward P. Mulvey et al., *Trajectories of Desistance and Continuity in Antisocial Behavior Following Court Adjudication Among Serious Adolescent Offenders*, 22 DEV. & PSYCHOPATHOLOGY 453 (2010).

### Purpose

- To examine patterns of anti-social behavior in serious offenders after court involvement in order to obtain a better understanding of how adolescents' reduce their offending behavior over time.

### Methodology

- Data used in this analysis/article draws from a larger study called the “Pathways to Desistance” in which 1,354 serious offenders are interviewed over a 7 year period.
- Analyses for the current study used 1,119 male adolescents who had been adjudicated of a serious offense (e.g. includes all felony offenses, as well as misdemeanor weapon offenses and misdemeanor sexual assaults).
- Participants ranged between 14 and 18 years old, with an average age of 16. The sample was ethnically diverse: 19.6% white, 41.1% African American, 34.7 % Hispanic. Data was collected in two cities: Philadelphia, PA and Phoenix, AZ.
- Participants for the current analyses were interviewed twice a year for up to 3 years. Interviews consisted of a number of measures to assess self-reported offending, mood/anxiety and substance use problems, attitudes toward the legal system, psychosocial maturity, parenting, peers, as well as prior arrest history. Several demographic characteristics were also collected in addition to an assessment of neighborhood disadvantage.

### Results

- Researchers clustered participants into 5 different groups based on their offending patterns. They highlighted in particular those participants who persisted in offending and those who desisted from offending.
  - Two years after being adjudicated for a serious offense, a majority of youth (73.8%) reduced their offending to low or zero involvement in offending behavior.
  - For those youth who self-reported the lowest level of offending, placement in an institution raised their level of self-reported offending after release from institutional placement.

### Relevance

- The authors conclude that the majority of serious offenders are not necessarily “bad actors” destined for adult criminal activity. Most serious offenders demonstrate low or zero involvement in criminal activity years after court involvement. As a result, this is an important point to raise when highlighting the amenability of a youth to treatment at disposition or in transfer proceedings.
- For youth who have been adjudicated for a serious offense, but demonstrate overall low levels of offending, incarceration or placement in residential treatment facilities has the potential to increase recidivism. As a result, community based alternatives may be a far better rehabilitative option than incarceration or institutional placement, particularly for youth with low levels of overall offending.

## VI. Link Between Trauma and Delinquency

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S.P. Becker & P.K. Kerig, *Post-traumatic Stress Disorder Symptoms are Associated with the Frequency and Severity of Delinquency Among Detained Boys*, 40 J. OF CLINICAL CHILD & ADOLESCENT PSYCHOL. 765 (2011).

### Purpose

- To investigate a sample of detained boys in order to determine if there is a link between Post Traumatic Stress Disorder (PTSD) symptoms and the number and severity of prior arrests.

### Methodology

- Researchers conducted interviews with detained youth in private interview rooms at a detention facility.
- Researchers administered questionnaires that assessed trauma exposure and PTSD symptoms. Delinquency was measured using official arrest records. Investigators examined the number of lifetime arrests, the severity of lifetime delinquency, the number of past-year arrests and the severity of past-year delinquency.

### Results

- 25.3% of boys reported experiencing community violence, 19.3% reported domestic violence and 19.2% reported witnessing community violence.
- PTSD symptoms significantly predicted the number of lifetime arrests, the number of arrests in the past year and the severity of delinquency in the past year.

### Relevance

- Findings suggest that trauma and PTSD symptoms are linked to delinquency.
- Findings demonstrate that a high number of youth in the juvenile justice system are exposed to trauma and experience PTSD symptoms.
- Findings suggest that juvenile justice stakeholders should pay more attention to the needs of youth in the delinquency system who are exposed to trauma.