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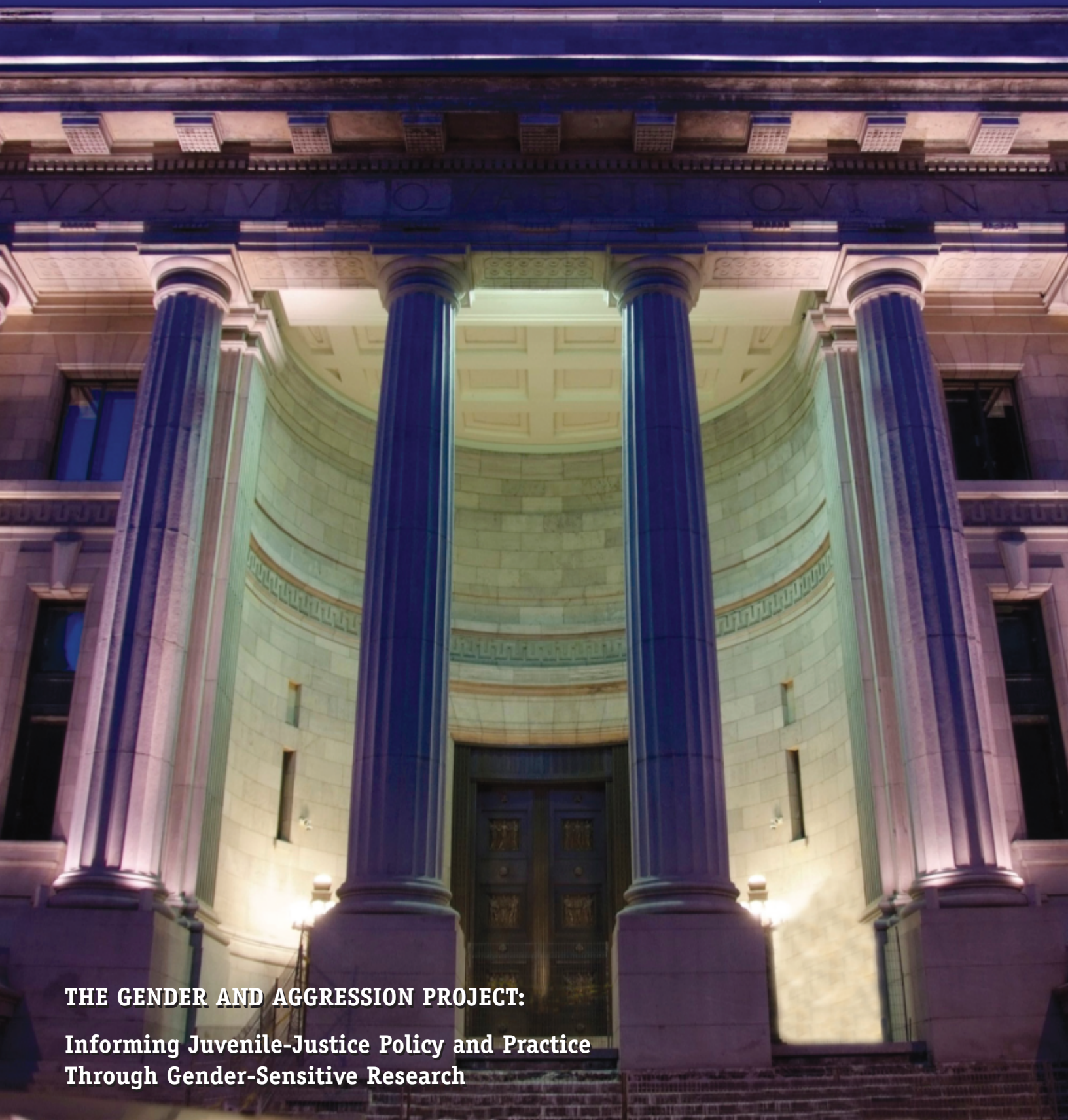
Court Review, Volume 46, Issues 1-2 (Complete)

Volume 46, Issues 1-2

Court Review

THE JOURNAL OF THE AMERICAN JUDGES ASSOCIATION



THE GENDER AND AGGRESSION PROJECT:

Informing Juvenile-Justice Policy and Practice Through Gender-Sensitive Research

Volume 46, Issues 1-2

Court Review

THE JOURNAL OF THE AMERICAN JUDGES ASSOCIATION

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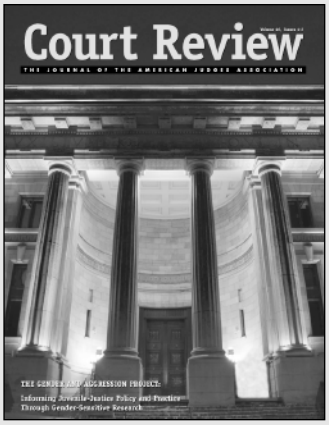
Court Review

THE JOURNAL OF THE AMERICAN JUDGES ASSOCIATION

Volume 46, Issues 1-2 2009-2010

EDITOR'S NOTE

This double, special issue focuses findings from the "Gender and Aggression Project," a U.S.-Canadian collaboration of extremely careful and talented social science researchers. Although the project focuses on juveniles, and only some of AJA's members preside in juvenile cases, the research described here is valuable for AJA's judges for several reasons, I believe. First, what is true for juveniles is often true for young adults. The psychosocial findings about risk and vulnerability presented in these articles will inform judges about people you see in your courtrooms, even if you are not a juvenile court judge or a general jurisdiction judge with a juvenile docket. Second, we often know less about females than we do about males. Throughout the articles, we learn about differences between juvenile boys and girls. Knowing that there are such differences—and understanding a bit about what some of those differences might be—will help judges in their work. Third, and now we are getting to some of the most important parts of this special issue, the authors present a *program of research*. Science advances in fits and starts. We learn a little each time we study something. But in a *program of research*, one begins to get a deeper, more nuanced sense of complex phenomena. In these articles, the authors communicate the array of insights they have gleaned. They have selected results that have relevance for law and policy. Fourth, the research presented here has been peer-reviewed. The importance of peer-review, I believe, is often underappreciated by the legal profession. Social scientists do not always "get it right," no matter how hard we try. Independent peers review our work, to check against over-interpretations of the implications of data we have collected, or suggest (or even require) different analyses of the data to ensure that when a study asserts there is a statistically significant relationship between variables or a statistical difference between groups that the correct statistic was used. Often statistics have assumptions that should be met before such tools are deployed. It is easy to overlook this, and peer-review is a system that helps ensure that research is not presented as finding differences (or failing to find differences), when, in fact (if we could know the true state of affairs), it is not the case. Peer-reviewers are integral to the quality control of scientific findings, both in and of themselves and how they are communicated. Peer reviews are not a guarantee of accurate science. Again, any one study may be mistaken in its findings. Nevertheless, peer review helps to make sure that any one study is representing itself correctly, and a program of research serves as a protection against an incorrect inference about the true state of the world based on any one study. Of course, knowledge derived from science is more complex than what I am presenting here, but you get the point. This special issue, then, presents reports of a cross-jurisdictional (indeed, a multinational) program of high-quality research undertaken by careful researchers from the U.S. and Canada. I know reading research is dry, but it is a pleasure to read through these studies and learn about gender and aggression. I hope you agree. —Alan Tomkins



Court Review, the quarterly journal of the American Judges Association, invites the submission of unsolicited, original articles, essays, and book reviews. *Court Review* seeks to provide practical, useful information to the working judges of the United States and Canada. In each issue, we hope to provide information that will be of use to judges in their everyday work, whether in highlighting new procedures or methods of trial, court, or case management, providing substantive information regarding an area of law likely to be encountered by many judges, or by providing background information (such as psychology or other social science research) that can be used by judges in their work. Guidelines for the submission of manuscripts for *Court Review* are set forth on page 5. *Court Review* reserves the right to edit, condense, or reject material submitted for publication.

Advertising: *Court Review* accepts advertising for products and services of interest to judges. For information, contact January Serda at (757) 259-1864.

Photo credit: Mary Watkins (mayrswatkinsphoto@earthlink.net). The Quebec Court of Appeals hears cases in this columned neoclassical building built in 1926 as the city's main criminal court. It features massive bronze doors that are richly carved and a vast main hall with dome-shaped skylights. The building is now named the Edifice Ernest-Cormier after its architect, who is regarded by many in Canada as the greatest architect of his generation. Cormier died in 1980 at age 94.

 Court Review is published quarterly by the American Judges Association (AJA). AJA members receive a subscription to *Court Review*. Non-member subscriptions are available for $35 per volume (four issues per volume). Subscriptions are terminable at the end of any volume upon notice given to the publisher. Prices are subject to change without notice. Second-class postage paid at Williamsburg, Virginia, and additional mailing offices. Address all correspondence about subscriptions, undeliverable copies, and change of address to Association Services, National Center for State Courts, Williamsburg, Virginia 23185-4147. Points of view or opinions expressed in *Court Review* are those of the authors and do not necessarily represent the positions of the National Center for State Courts or the American Judges Association. ISSN: 0011-0647.

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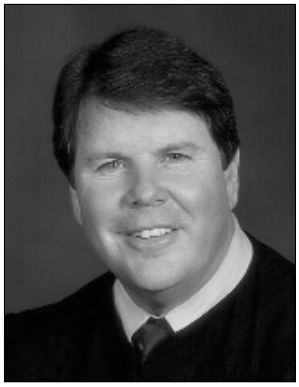
Outgoing President's Column

Jim McKay

Last September, I was sworn in as president of the American Judges Association. This October, in Denver, Colorado, I turned over the reins of this venerable organization to our new president, Judge Mary Celeste. Because of scheduling, I actually got an opportunity to serve 13 months as president of the AJA instead of the normal 12. However, I have to say that is seems like last week I was sworn-in in Las Vegas. I believe the term is "tempus fugit," and never was that expression more appropriate than today. I think one of the reasons why time flew by without any major headaches was because of the extremely competent Executive Committee that I served with; the members of that committee met every crisis head-on and helped make my job easier.



While we are still fighting membership numbers, we seem to have found a way to increase our registration statistics at our annual conferences by cooperating with the state of our conference venue. In Denver, the conference was a success based on the registration statistics. We had attendance from more than 200 judges from all over the United States and Canada. Those numbers are high because of our cooperation with the state of Colorado, which agreed to co-host their traditional fall conference with our annual conference. We are planning the same configuration in New Orleans in 2012 with the Louisiana Judicial College, which will turn over all of their fall judiciary conference planning to the AJA for a combined meeting.

During these difficult economic times, the AJA is attempting to work along with our states and show them what we do best, which is the education of judges. They have the numbers and we have the expertise, which makes a great marriage. With so many states cutting interstate travel because of funding woes, it only makes sense that the AJA travel where the judges are. While my tenure passed quickly, it was rewarding and fulfilling. I have had the opportunity to meet and work with some of the great judicial minds on the continent. It will not be something I will ever soon forget.

God Bless All.

AMERICAN JUDGES ASSOCIATION FUTURE CONFERENCES

2011 Midyear Meeting
Hilton Head, South Carolina
Westin Hilton Head Island
April 14-16
$209 single/double

2011 Annual Conference
San Diego, California
Westin Gaslamp
September 11-16
$199 single/double

2012 Midyear Meeting
Nashville, Tennessee
Doubletree Hotel
May 17-19
$129 single/double

2012 Annual Conference
New Orleans, Louisiana
Dates and hotel to be determined

2013 Annual Conference
Kohala Coast, Hawaii
The Fairmont Orchid
September 22-27
$219 single/double

THE AJA ANNUAL CONFERENCE: THE BEST JUDICIAL EDUCATION AVAILABLE ANYWHERE FROM THE VOICE OF THE JUDICIARY®

Incoming President's Column

Mary Celeste

Soon after my swearing in as a judge, I received a letter from the American Judges Association offering me a free one-year membership. The letter arrived during my first year "judge jitters," and it was a welcome sight. I thought about how nice of a gesture this was and how I could become involved with the Association.

After being on the bench for a bit, I contacted Judge Terry Elliot, the then education chair, to ask how I could assist with his Education Committee. I found him welcoming and supportive of me as a new judge. I worked on several projects with him, including distance learning, which was then on the cutting edge of education. I inherited the chair of the Education Committee and had the privilege of coordinating the AJA conferences for the next three years.

The highlight of my position as education chair came in 2007 when the AJA joined with the Canadian Association of Provincial Court Judges and the Provincial Court Judges Association of British Columbia for a conference in Vancouver. I had the very good fortune to secure the attendance of United States Supreme Court Justice Ruth Bader Ginsburg, who I introduced at the conference. Wow!

This year is a very special year for me and my relationship with the AJA; it is for me the "perfect storm" indeed. I have been installed as president of the AJA in front of my home team in Denver; I have completed a white paper for the AJA; and I was able to coordinate a joint conference between AJA judges and the judges of Colorado for the AJA's annual conference in Denver. This model of joining efforts with state educators and administrations is an approach that has proven successful. The AJA is now in the process of trying to replicate this joint conference model for our 2011 annual conference in San Diego, California.

I have had the privilege to serve under many great AJA presidents over the last decade. I was appointed by AJA President Michael McAdam to chair the Access to Justice Committee. At the direction of my mentor, Judge Gayle Nachtigal, another AJA president, I was able to conduct a workshop at an AJA midyear conference that resulted in the AJA resolution on access to justice. It was through the appointment to the AJA Executive Committee by AJA President Mike Cicconetti where I really learned about the operations of the AJA and decided to run for office. Judge Eileen Olds, another AJA president, assisted me in attaining that goal. Finally, it was Judge Jim McKay, now our immediate past president, who served as my muse for the new AJA white paper. These past presidents will be a hard act to follow.

As I take the reins from those AJA presidents and leaders before me, I am thankful for the trust in me and for the opportunity to represent the AJA at many of the upcoming national conferences of interest to judges. I promise to represent the association to the best of my ability and to harness the talent of the association.

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NOTICE FOR AMERICAN JUDGES ASSOCIATION MEMBERS

The newsletter of the American Judges Association, *Benchmark*, has been moved from print to electronic publication. If we have your email address on file, we will send *Benchmark* to you each time it is published. *Benchmark* is the official newsletter of the AJA, and it contains notice of AJA activities, elections, awards, and events. This move will help us make sure that you get timely notice of AJA information, and it will also help us in keeping AJA dues as low as possible. You will continue to receive *Court Review* in the mail.

If you haven't provided your email address to the AJA, please send it to us at aja@ncsc.dni.us. We will use it only for authorized correspondence from the AJA.

Court Review Author Submission Guidelines

Court Review, the quarterly journal of the American Judges Association, invites the submission of unsolicited, original articles, essays, and book reviews. *Court Review* seeks to provide practical, useful information to the working judges of the United States and Canada. In each issue, we hope to provide information that will be of use to judges in their everyday work, whether in highlighting new procedures or methods of trial, court, or case management, providing substantive information regarding an area of law likely to encountered by many judges, or by providing background information (such as psychology or other social science research) that can be used by judges in their work.

Court Review is received by the 2,500 members of the American Judges Association (AJA), as well as many law libraries. About 40 percent of the members of the AJA are general-jurisdiction, state trial judges. Another 40 percent are limited-jurisdiction judges, including municipal court and other specialized court judges. The remainder include federal trial judges, state and federal appellate judges, and administrative-law judges.

Articles: Articles should be submitted in double-spaced text with footnotes, preferably in Word format (although WordPerfect format can also be accepted). The suggested article length for *Court Review* is between 18 and 36 pages of double-spaced text (including the footnotes). Footnotes should conform to the current edition of *The Bluebook: A Uniform System of Citation*. Articles should be of a quality consistent with better-state-bar-association law journals and/or other law reviews.

Essays: Essays should be submitted in the same format as articles. Suggested length is between 6 and 12 pages of double-spaced text (including any footnotes).

Book Reviews: Book reviews should be submitted in the same format as articles. Suggested length is between 3 and 9 pages of double-spaced text (including any footnotes).

Pre-commitment: For previously published authors, we will consider making a tentative publication commitment based upon an article outline. In addition to the outline, a comment about the specific ways in which the submission will be useful to judges and/or advance scholarly discourse on the subject matter would be appreciated. Final acceptance for publication cannot be given until a completed article, essay, or book review has been received and reviewed by the *Court Review* editor or board of editors.

Editing: *Court Review* reserves the right to edit all manuscripts.

Submission: Submissions may be made either by mail or e-mail. Please send them to *Court Review*'s editors: Judge Steve Leben, 301 S.W. 10th Ave., Suite 278, Topeka, Kansas 66612, email address: sleben@ix.netcom.com; or Professor Alan Tomkins, 215 Centennial Mall South, Suite 401, PO Box 880228, Lincoln, Nebraska 68588-0228, email address: atomkins@nebraska.edu. Submissions will be acknowledged by mail; letters of acceptance or rejection will be sent following review.

A Review of Findings from the "Gender and Aggression Project" Informing Juvenile Justice Policy and Practice Through Gender-Sensitive Research

Candice L. Odgers, Marlene M. Moretti, & N. Dickon Reppucci

Adolescent girls comprise nearly a third of juvenile arrests, and rates of incarceration among young females have been rising rapidly. Yet, young women continue to be a neglected population in juvenile justice research and service delivery. This special issue is devoted to describing the critical issues that arise when young women come into contact with the juvenile justice system. Over the last decade, our research team has been working together to better understand the lives of justice-involved youth. To this end, we have conducted a multisite longitudinal study that has followed adolescents as they have moved through the juvenile justice system, with our most recent wave of assessments occurring as these young people made the transition back into their communities and into young adulthood. This special issue represents a collection of key findings from the Gender and Aggression Project, with a special emphasis on pathways that young women follow both into and out of the juvenile justice system.

The Gender and Aggression Project (GAP) involved a partnership of researchers from across diverse disciplines who came together to build a common research instrument that could be used within both normative and high-risk populations. The findings reviewed in this special issue are derived from two longitudinal studies that used this common assessment instrument to assess the profiles, risk factors, and outcomes of justice-involved youth in the United States and Canada. Study One, the *Gender and Aggression Project—Virginia Site,* recruited an entire population of females sentenced to secure custody during a 14-month period in a large southeastern state (93% of all admissions). Participants included 141 adolescent females who were, on average, 16 to 17 years of age at the time of the first assessment. The sample was racially/ethnically diverse, with 50.0% self-identifying as African-American, 2.2% as Native American, 1.4% as Hispanic and 8.0% as "Other": the remaining 38.4% identified as Caucasian. Following their sentencing, each participant underwent a 30-day assessment, which included psychological and educational testing, in addition to a full medical examination completed by a physician. Each participant also completed approximately 6-8 hours of individual assessments, including semi-structured clinical interviews, computerized diagnostic assessments, and a self-report protocol. Approximately two years after the initial interview, 78.5% (*N*=102) of eligible study members who had been released into the community for at least six months completed a 2-3 hour in-person assessment focused on reentry into the community and on mental and physical health functioning. The third wave of in-person assessments has just been completed with 120 of the study members being followed into young adulthood. To our knowledge, this is one of the largest in-depth studies of girls who have reached the deep-end of the juvenile justice system for which there is now longitudinal assessments available.

Study Two, the *Gender and Aggression Project—Vancouver Site* followed similar procedures to those outlined above but also included a matched sample of male adolescents and was based in British Columbia, Canada. Participants included 142 adolescents (76 males, 66 females) between the ages of 12 and 18 drawn from custody centers (61%), provincial assessment centers (36%), and probation offices (2%) around British Columbia's lower mainland. Every new female admission to the custody and assessment centers was approached to participate in the study, and a comparable male sample was secured by matching participants on age. At the time that the analyses for the current study were completed, the sample consisted of slightly unequal numbers of males and females as the data collection and matching was still ongoing. The final sample consisted of adolescents who were actively involved in the criminal justice system and/or who had been diagnosed as having severe conduct disorder and behavioral problems.

Youth completed individual assessments comprised of semi-structured clinical interviews, computerized diagnostic assessments, and a battery of self-report measures. Collateral sources of information, including developmental and social histories, pre-sentencing and disposition reports, and psychological assessments, were coded as well. Similar to the procedures outlined in Study One, participants were followed up and assessed at two time points as they made the transition into young adulthood.

OVERVIEW OF KEY ISSUES AND CONTRIBUTIONS

Throughout this special issue on females and the juvenile justice system, investigators from the Gender and Aggression Study share key findings from both the GAP-Virginia and GAP-Vancouver research sites. In the first article, Chauhan and col-

leagues ask whether neighborhood conditions and exposure to violence may help to explain the disproportionate arrest and incarceration of black female adolescents in the United States. Their findings challenge us to look beyond individual-level risk factors, such as age and family structure, and start to consider community-based interventions aimed at reducing crime —particularly violent crime—among youth. This study was one of the first to connect neighborhood factors to serious and violent offending among girls and raises important questions regarding systemic racism in the juvenile justice system and the (over) policing of the most disadvantaged neighborhoods.

The next set of papers describes the mental and physical health profiles of justice-involved girls. Within this series, Russell and Marston build a convincing case that young women are the most psychiatrically impaired population in correctional settings today. The authors document the high rates of mental disorders such as attention-deficit-hyperactivity disorder (ADHD), conduct disorder, major depression and anxiety among this population and highlight the increased risk for reoffending and self-harm among these vulnerable youth as they make the transition back into their communities. The authors conclude with the powerful message that girls in the system represent not only a juvenile justice population, but that they comprise a substantial and largely untreated mental health population as well. To better respond to the needs of these young women, the authors summarize recommendations for screening, assessment, treatment, and aftercare with this population.

In the second article focused on mental health, Obsuth and Moretti review the high rates of substance use disorders and co-occuring mental health problems among this population. The authors draw attention to the role that early exposure to drugs and alcohol may play in placing adolescents on a negative life trajectory and outline how substance use disorders can promote criminal behavior and increase the risk for a wide range of poor outcomes. Their review indicates that justice-involved youth may be particularly vulnerable to the long-term effects of substance use and demonstrates the need for targeted interventions with this population, ideally beginning in early adolescence when many of these young people are first experimenting with drugs and alcohol.

Finally, Robins, Odgers, and Russell present new research profiling the physical health and medical problems experienced by girls in the justice system. While the state is under a moral and legal obligation to meet the physical health needs of juveniles in their care, recent legal challenges by the American Civil Liberties Union and others illustrate that the juvenile justice system is often falling short of these obligations. The authors document the wide range of health problems experienced by incarcerated girls—including high rates of injury risk, suicide attempts, HIV risk behaviors, obesity, and asthma. By tracking the physical health of girls over time, the authors illustrate that the health risks and medical problems among these young women persist as they make the transition into young adulthood and back into their communities. Despite the fact that this should be one of the healthiest periods of their lives, incarcerated girls are presenting extremely high rates of illness, injury, and disease risk. Recommendations for improved screening and medical treatment are provided.

The next set of papers focus on the role that aggression and violence play in the lives of these young women, and raise the important question of whether our traditional models and predictors of violence also "work" for girls. To this end, Penney and Lee review findings from the Gender and Aggression Project related to the prediction of aggression and violence among girls. Their review highlights important questions for juvenile justice decision makers to examine when considering risk for future violence among adolescents. Recently, a number of tools designed to predict future violence among (primarily male) adults have been extended downward to populations of adolescents. One of the most prominent instruments, the Psychopathy Checklist—Youth Version (PCL-YV), has garnered significant attention as well as a great deal of controversy regarding its use. Unfortunately, while this class of instruments has been shown to predict violence among adults, very few studies have been conducted with adolescents. As Lee and Penny detail, this instrument has been recommended for use with girls. However, there is no evidence to support its use with this population, and research from our team suggests that psychopathy, as measured by the PCL-YV, does not actually predict future offending or violence among girls. Instead, the authors argue that it may be more productive to consider gender-specific domains of risk—such as victimization experiences and relationship contexts—when trying to understand why rates of violence among girls are on the rise. Their summary suggests new ways forward in trying to understand "hot" and "interpersonal" acts of aggression among girls, while urging caution before applying models of violence and tools that have been validated only on male populations.

In an effort to understand how the types of early victimization experiences that Lee and Penny identified as being important for girls may translate into future violence and aggression Bartolo, Peled, and Moretti focus on two types of social-cognitive processes—rejection sensitivity and anger rumination. Throughout their review, the authors explore how a more nuanced understanding of these processes could assist sentencing and rehabilitation decisions. The authors also review findings from the Gender and Aggression Project suggesting that girls may be particularly sensitive to interpersonal threats and, in part due to their early childhood experiences of abuse, may be more likely to react strongly and aggressively in situations where they perceive that they are being rejected by others. They conclude that many of these young women may have a diminished capacity for controlling their behavior within interpersonal situations and, as such, advocate for a careful consideration of the relationship contexts in which they are embedded.

Following up on the importance of interpersonal relationships in the lives of these young women, Oudekerk and Reppucci provide a window into the role that romantic relationships may play in promoting criminal involvement among girls in the justice system. The authors review research illustrating that both males and females involved in antisocial behavior engage in assortative mating—that is, they are more likely to partner with antisocial individuals. While partner selection does not appear to have an effect on the criminal involvement of males, girls with antisocial partners tend to engage in more criminal behavior and are more likely to per-

sist in a criminal lifestyle as they age. Interestingly, finding a positive romantic partner tends to reduce the risk for future offending among girls and may be a protective factor—or a pathway out of criminal justice involvement. Their findings from the Gender and Aggression Project reinforce the message that assortative mating may have adverse consequences for young women and illustrate that girls with antisocial partners are close to 11 times more likely to engage in violence! Their chapter illustrates the extreme rates of physical violence in the relationships of girls involved in serious offending and point to both early victimization experiences and partner age differences as important factors in helping to explain the young adult outcomes of these young women.

The final paper in this special issue presents a way forward with respect to interventions and policy recommendations for justice-involved adolescents. In this article, Moretti and colleagues summarize key factors that should be considered when designing and delivering interventions to justice-involved girls. The authors emphasize the importance of early intervention and prevention efforts, but also highlight effective and promising programs—such as CONNECT—that are being delivered following detection by the juvenile justice system. The review of intervention and prevention programs that have been shown to work with high-risk populations, both during early childhood and adolescence, allows us to conclude this issue on a positive note. That is, although resources for program delivery with this population are often limited, interventions and services that have proven efficacy do exist and, if properly implemented, have the potential to greatly improve the lives of justice-involved youth.

Together this collection of articles outlines key issues facing justice-involved female adolescents and aims to translate findings from our research team to inform policy and treatment within juvenile justice contexts. In many ways, we are just beginning to understand the complicated and often violence-ridden pathways that these young women are following as they make their way through the juvenile justice system. The hope is that research findings from our team and others can be used to help tailor juvenile justice policy and develop interventions that are sensitive to the unique risk profiles, offending behaviors, and treatment needs of these young women.

Candice L. Odgers, Ph.D., is an Assistant Professor at the University of California, Irvine. Her research focuses on the developmental course of childhood behavioral problems and the consequences of early exposure to alcohol and drugs. Dr. Odgers's research has been covered by a number of media outlets including, US News and World Report, *the* London Times, Scientific American, *and the BBC. In 2007, Dr. Odgers received the Saleem Shah Award for Early Career Excellence in Psychology and Law and, most recently, was named as a William T. Grant Foundation Scholar. Correspondence about this article should be directed to Dr. Candice L. Odgers, Department of Psychology and Social Behavior, University of California Irvine, 4312 Social and Behavioral Sciences Gateway, Irvine, CA 92697, email: codgers@uci.edu.*

Marlene M. Moretti, PhD., is Professor of Psychology, Simon Fraser University. She holds a Canadian Institutes of Health Research (CIHR) Senior Research Chair from the Institute of Gender and Health. She has published widely in the fields of developmental psychopathology, social and clinical psychology, development and evaluation of treatment programs, and mental health policy. Dr. Moretti leads a multisite research program on adolescence, gender, and aggression funded through the CIHR; serves on numerous government and research committees; consults in areas of research and program development; and has developed interventions to support caregivers of high-risk youth. She is committed to advancing mental health programs to support youth and their families.

N. Dickon Reppucci, Ph.D., is Professor of Psychology at the University of Virginia. He has been Director of its Community Psychology program, with its emphasis on law and children and diversity, since 1976, and been the mentor to more than 50 Ph.D. students. He has received the Distinguished Contributions in Research Award from the Society for Community Research and Action (1998) and the American Psychology/Law Society Mentoring Award (2007). He is author or co-author of four books, including The Sexual Abuse of Children (1988) with Jeffrey Haugaard and Preventing Child Abuse and Neglect through Parent Education (1997) *with Preston A. Britner and Jennifer L. Woolard, and more than 150 articles and chapters, including the 2008 co-recipient of the Society for Research on Adolescence Social Policy Award for Best Article*—Testimony and Interrogation of Minors: Assumptions of Immaturity and Immorality *published in the* American Psychologist. *His major areas of research are juvenile competence, juvenile justice, and child abuse. He is currently investigating police perceptions of juvenile interrogations and aggressive, violent female juvenile offenders.*

Court Call Full Page Ad

Racial Disparities among Female Juvenile Offenders:

The Contribution of Neighborhood Disadvantage and Exposure to Violence in Antisocial Behavior

Preeti Chauhan, Mandi L. Burnette, & N. Dickon Reppucci

Significant racial disparities exist within the juvenile justice system.[1] Across age and gender, black and minority Americans are disproportionately represented within the justice system as compared to white Americans.[2] In examining issues related to disproportionate minority contact, research has historically focused almost exclusively on males, given their greater presence in the system. However, the representation of females in the juvenile justice system is rising.[3] For instance, from 1980 to 2003, the proportion of girls under the age of 18 who were arrested increased for both the Violent Crime Index (i.e., aggravated assault, rape, robbery, and murder) and the Property Crime Index (i.e., larceny, motor vehicle theft, arson, and burglary).[4] Hence, as the gender gap in arrest rates continues to decrease and the overrepresentation of minorities persists, it becomes important to consider two crucial questions: 1) Are black and white female juvenile offenders different in terms of their risk profiles? and 2) Do these risk profiles differentiate the pathways by which these two groups of girls reengage in antisocial behavior? [5]

This article summarizes the prevalence and function of neighborhood- and individual-level risk factors for antisocial behavior among black and white female juvenile offenders from the Gender and Aggression Project (GAP)—Virginia Site, which consisted of a sample of incarcerated girls followed into the community. Specifically, we examined the prevalence of the following risk factors: 1) *absolute* neighborhood disadvantage, defined as the percentage of female-headed households, people on public assistance, people below the poverty line, and people unemployed using census data at tract level, 2) *relative* disadvantage, defined as the amount of income inequality within a given census tract,[6] 3) physical victimization by parents and/or peers, and 4) witnessing criminality and violence within the environment. We next determined whether racial differences existed with regard to these risk factor—that is, are black versus white female offenders more likely to have grown up in disadvantaged neighborhoods and/or to have witnessed violence within their surroundings. Finally, we assessed whether these risk factors operated differently by race. In other words, we wanted to know whether specific risk factors—such as growing up in a disadvantaged neighborhood—were more predictive of antisocial behavior for black versus white girls. These findings have the potential to lead to a better understanding of the discrepant representation of minorities in the judicial system and provide an opportunity to tailor interventions and reentry programs to divergent population needs.

SELF-REPORT VERSUS OFFICIAL REPORTS OF ANTISOCIAL BEHAVIOR

The study of antisocial behavior is complex, and adding further ambiguity is the fact that differences often exist depending on the source of data. Two primary sources exist for assessment of antisocial behavior: self-reported behavior and official records of offending. A significant body of research examining the merits of each of these measurement methods exists. Using both indicators is ideal as each provides unique information. However, the decision as to which indicator is actually used is often informed by: 1) the specific research question (i.e., whether the outcome of interest is getting "caught"

Footnotes

1. David Huizinga, Terence Thornberry, Kelly Knight, & Peter, Lovegroove, Disproportionate Minority Contact in the Juvenile Justice System: A Study of Differential Minority Arrest/Referral To Court in Three Cities (U.S. Dep't of Justice) (2007), *available at* http://www.ncjrs.gov/pdffiles1/ojjdp/grants/219743.pdf); Charles Puzzanchera, Anne L. Stahl, Terrence A. Finnegan, Nancy Tierney, & Howard N. Snyder, Juvenile Court Statistics 1998 (Off. Juv. Just. & Delinq. Prevention) (2003); Richard E. Redding & Bruce Arrigo, *Multicultural Perspectives on Delinquency among African-American Youth: Etiology and Intervention*, *in* Comprehensive Handbook of Multicultural School of Psychology 710 (C. Frisby & C. Reynolds eds., 2005).
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3. Howard N. Synder & Melissa Sickmund, Juvenile Offenders and Victims: 2006 National Report (Off. Juv. Just. & Delinq. Prevention, U.S. Dep't. Just.) (2006), *available at* http://ojjdp.ncjrs.org/ojstatbb/nr2006/index.html.
4. From 1980 to 2003, the proportion of girls increased from 10% to 18% for the Violent Crime Index, with the majority of it being attributed to aggravated assault. For the Property Crime Index, the proportion of girls increased from 19% to 32%.
5. We were unable to examine racial differences with regard to other minorities given the relatively smaller numbers. Nineteen girls were of other ethnicities including Native American, Hispanic, and Other. Black girls constituted 69 girls from our sample, whereas white girls constituted 53.
6. Note that criminologist and sociologists often refer to income inequality as relative deprivation.

versus actually engaging in an antisocial act), 2) logistic constraints (i.e., access to either or both forms of information), and 3) methodological constraints (i.e., is self-report of offending accurate? (How often do police catch the person committing the antisocial behavior?). Some evidence suggests that risk factors such as neighborhood disadvantage and family processes operate similarly for both outcomes—self-report of offending and official records.[7] The analyses presented below examine data from both sources.

DOES NEIGHBORHOOD DISADVANTAGE CONTRIBUTE TO RACIAL DISPARITIES IN FEMALE ANTISOCIAL BEHAVIOR?

Research has found that neighborhood disadvantage, or *absolute* disadvantage, explains a significant portion of the racial disparity observed in antisocial behavior.[8] That is, the racial gap in offending is believed to be propelled by three salient factors: 1) black versus white Americans are more likely to inhabit disadvantaged neighborhoods that have higher rates of crimes,[9] 2) black Americans are less able to leave high-crime neighborhoods compared to their white counterparts,[10] and 3) low-income white families rarely live in the same level of disadvantage as black families.[11]

Other research has found that *relative* disadvantage or income inequality predicts antisocial behavior.[12] Theoretically, income inequality can create frustration and promote interpersonal competition for limited material and social resources, which in turn drives antisocial behavior. Hence, the higher rates of antisocial behavior among black Americans may be due to social comparison in income inequality rather than *absolute* disadvantage. The impact of both types of neighborhood factors on racial disparities in antisocial behavior has been demonstrated empirically: 1) at a macro-level or population level using census data and official crime reports and/or 2) at a micro-level or individual level within high-risk populations, specifically adults, boys, and psychiatric inpatients.

Does this male-based research translate to female juvenile offenders? For both boys and girls, the impact of neighborhood factors is rather small in magnitude *after accounting for individual-level risk factors* such as age and family structure.[13] Similar to boys, girls who live in disadvantaged neighborhoods are subjected to greater risks such as exposure to violence and deviant peers as compared to girls in advantaged neighborhoods.[14] However, it has been argued that the impact of certain neighborhood factors likely differs for males and females given that girls present with a different risk profile such as differences in age of onset, levels of familial aggression, and gang involvement.[15] Hence, the *pathway* between neighborhood disadvantage and female antisocial behavior may be different for girls as compared to boys.

IS EXPOSURE TO VIOLENCE AN IMPORTANT RISK FACTOR FOR FEMALE ANTISOCIAL BEHAVIOR?

Experiencing and witnessing violence are particularly relevant for female juvenile offenders because rates of exposure are extremely high among incarcerated girls[16] and linked with antisocial behavior.[17] With regard to racial differences, in non-incarcerated samples, Black Americans are more likely to both

7. David S. Kirk, *Examining the Divergence across Self-Report and Official Data Sources on Inferences about the Adolescent Life-Course of Crime,* 22 J. QUANTITATIVE CRIMINOLOGY 107 (2006).
8. Robert J. Sampson, Jeffrey D. Morenoff, J & Stephen, Raudenbush, *Social Anatomy of Racial and Ethnic Disparities in Violence*, 95 AM. J. PUB. HEALTH 224 (2005) (study found that approximately 60% to 70% of the racial disparities in antisocial behavior can be explained by neighborhood-level factors).
9. Ruth D. Peterson, & Lauren J. Krivo, *Macrostructural Analyses of Race, Ethnicity and Violent Crime: Recent Lessons and New Directions for Research.* 31 ANN. REV. SOC. 331 (2005); Robert J. Sampson, *The Embeddedness of Child and Adolescent Development: A Community-Level Perspective on Urban Violence*, *in* VIOLENCE & CHILDHOOD IN THE INNER CITY 31 (Joan McCord ed., 1997).
10. Scott J. South & Steven F. Messner, *Crime and Demography: Multiple Linkages, Reciprocal Relations,* 26 ANN. REV. SOCIOLOGY 83 (2000).
11. Greg J. Duncan, Jeanne Brooks-Gunn, & Pamela K. Klevanov, *Economic Deprivation and Early Childhood Development,* 65 CHILD DEV. 296 (1994); Faith Peeples & Rolf Loeber, *Do Individual Factors and Neighborhood Context Explain Ethnic Differences in Juvenile Delinquency?*, 10 J. QUANTITATIVE CRIMINOLOGY 141 (1994).
12. Martin Daly, Margo Wilson, & Shawn Vasdev, *Income Inequality and Homicide Rates in Canada and the United States*, 43 CAN. J. CRIMINOLOGY 219 (2001); Miles D. Harrer & Darrell Steffensmeier, *The Differing Effects of Economic Inequality on Black and White Rates of Violence*, 70 SOC. FORCES 1035 (1992); John R. Hipp, *Income Inequality, Race, and Place: Does the Distribution of Race and Class Within Neighborhoods Affect Crime Rates?*, 45 CRIMINOLOGY 665 (2007).
13. Leionik Kroneman, Rolf Loeber, & Allison E. Hipwell, *Is Neighborhood Context Differently Related to Externalizing Problems and Delinquency for Girls Compared to Boys?* 7 CLINICAL CHILD & FAM. PSYCHOL. REV. 109 (2004); Tama Leventhal & Jeanne Brooks-Gunn, *The Neighborhood They Live In: The Effects of Neighborhood Residence on Child and Adolescent Outcomes.* 12 PSYCHOL. BULL. 309 (2000).
14. Erin M. Ingoldsby & Daniel S. Shaw, *Neighborhood Contextual Factors and Early-Starting Antisocial Pathways.* 5 CLINICAL CHILD & FAM. PSYCHOL. REV. 21 (2002).
15. Kroneman et al., *supra* note 13.
16. Candice L. Odgers & N. Dickon Reppucci, Female Young Offenders: A Meta-Analytic Approach, paper presented at the Vancouver Conference on Aggressive and Violent Girls: Contributing Factors and Intervention Strategies (2002). In their review of the literature on female juvenile offenders, Odgers and her colleagues found estimates of experiencing violence to be as high as 90% in some samples. *See also* Angela Dixon, Pauline Howie, & Jean Starling, *Psychopathology in Female Juvenile Offenders,* 45 J. CHILD PSYCHOL. & PSYCHIATRY 1150 (2004).
17. Nancy Guerra, L. Rowell Huesmann, & Anja Spindler, *Community Violence Exposure, Social Cognition, and Aggression among Urban Elementary School Children*, 74 CHILD DEV. 1561 (2003); Beth E. Molnar, Angela Browne, Magdalena Cerda, & Stephen L. Buka, *Violent Behavior by Girls Reporting Violent Victimization.* 159 PEDIATRICS & ADOLESCENT MED. 731 (2005); Cathy S. Widom, *Child Abuse, Neglect, and Adult Behavior: Research Design Findings on Criminality, Violence and Child Abuse,* 59 AM. J. ORTHOPSYCHIATRY 355 (1989).

experience and witness violence. Evidence is mixed as to whether these risk factors have a greater influence on antisocial behavior among black Americans. However, when racial differences are observed, black Americans experience more detrimental outcomes.[18] Hence, witnessing and experiencing violence may help to explain some of the reasons for the disproportionate representation of black Americans in the justice system at an individual (versus a neighborhood) level.

DO BLACK AND WHITE FEMALE JUVENILE OFFENDERS DIFFER IN TERMS OF THEIR RISK PROFILES OF NEIGHBORHOOD DISADVANTAGE AND EXPOSURE TO VIOLENCE?

Findings from our research team indicated that black female juvenile offenders are more likely to live in disadvantaged neighborhoods at an absolute and relative level as compared to white female juvenile offenders. As stated, *absolute* and *relative* neighborhood disadvantage was assessed using census data at a tract level. Census tracts average about 4,000 people, have relatively homogenous characteristics, and are defined by significant physical boundaries such as rivers and major streets. We used four indicators for *absolute* disadvantage: 1) percentage of people below the poverty line, 2) percentage of households on public assistance, 3) percentage of female-headed households, and 4) percentage of people unemployed. For *relative* disadvantage, we created the Gini index to measure income inequality. This index was calculated by examining household income distribution within each census tract. A score of zero indicates that all households have similar incomes and one indicates that income is disparate. Black girls lived in more disadvantaged neighborhoods than their white counterparts with respect to all four indicators of *absolute* disadvantage. That is, they lived in neighborhoods that had higher percentages of female-headed households, people unemployed, households on public assistance, and people below the poverty line. Similarly, black girls were also more likely to live in *relatively* disadvantaged neighborhoods as compared to white girls. As such, this suggests that their neighborhood had greater income disparity and were more heterogeneous, with regard to income, as compared to white girls.

High rates of exposure to violence were present among both black and white female juvenile offenders. With regard to experiencing violence, we asked girls whether a father, mother, friend, or romantic partner had: 1) pushed, grabbed, or shoved her in an argument; 2) threw something at her; 3) slapped, kicked, bit, or hit her with a fist; and/or 4) hit her with an object in the six months before incarceration. As illustrated in Table 1, the majority of girls experienced some form of violence by her parents (65%) and by her peers (75%). Black and white girls reported experiencing similar levels of violence by both parents and peers.[19] Experiencing violence by fathers was less prevalent than by mothers, but this is likely a function of high rates of father absence within the girls' families.

With regard to witnessing violence, we asked girls if she saw the following, six months before incarceration, in her home, school, and/or neighborhood: 1) someone getting beat up, 2) somebody getting stabbed or shot, 3) guns, 4) guns being shot, 5) somebody getting arrested, and 6) gang activity. Nearly all girls (98%) reported witnessing violence; estimates were lower for violence at home (66%) compared to school (94%) and neighborhood (94%). This highlights the substantial violence and criminality that these girls witness within multiple contexts. Black and white girls reported similar levels of witnessing violence.

ARE BLACK AND WHITE FEMALE JUVENILE OFFENDERS DIFFERENT WITH REGARD TO POST-RELEASE SELF-REPORT AND OFFICIAL RECORDS OF OFFENDING?

There were no racial differences in self-report of offending, but black girls had higher official reports of offending. With regard to self-report of offending, we asked each girl if she had engaged in violent behaviors since her release. These behaviors included: 1) carried a gun, 2) used a weapon to get money or things from people, 3) used a weapon (stick, knife, gun, rocks) while fighting with another person, 4) participated in gang activity, 5) been in a fistfight, 6) attacked someone with the idea of seriously hurting or killing that person, and 7) shot at someone. We also asked if she had engaged in the following delinquent behaviors since her release: 1) driven while drunk or high, 2) sold marijuana, pot, or hashish, 3) sold hard drugs (other than pot), such as heroin, cocaine, acid, or others, 4) broken or tried to break into a building or vehicle to steal something, 5) stolen or tried to steal a motor vehicle such as a car or a motorcycle to keep or sell, and 6) been paid to have sexual relations with someone

As Table 1 illustrates, after release, the majority of girls (60%) continued to engage in antisocial behavior with about half (54%) engaging in violent behaviors and a third engaging in delinquent behaviors (31%). Black and white girls reported approximately equivalent levels of antisocial behavior after release.

About half of the girls were rearrested with more having charges for nonviolent offenses than for violent offenses. Violent arrest charges included murder, assault and battery, and robbery. Nonviolent arrest charges included driving while under the influence, grand larceny, and breaking and entering. According to official records, black girls were more likely that white girls to be rearrested; this was true for nonviolent but not violent crimes.

18. Diana J. English, Cathy Spatz-Widom, & Carol Brandford, Childhood Victimization and Delinquency, Adult Criminality and Violent Criminal Behavior: A Replication and Extension, (final report submitted to U.S. Nat'l Inst. Just.) (2001), *available at* http://www.ncjrs.gov/pdffiles1/nij/grants/192291.pdf; Matthew T. Zingraff, Jeffrey Leiter, Kristen A. Meyers, & Matthew C. Johnsen, *Child Maltreatment and Youthful Problem Behavior*, 31 Criminology 173 (1993).
19. The differences in exposure to violence (both experiencing and witnessing violence) were statistically analyzed at a continuous level even though only categorical data are presented.

TABLE 1: EXPOSURE TO VIOLENCE AND POST-RELEASE ANTISOCIAL BEHAVIOR AMONG BLACK AND WHITE JUVENILE OFFENDERS			
	TOTAL	BLACK	WHITE
EXPERIENCED VICTIMIZATION			
By Parents	65%	70%	59%
• Father	39%	33%	47%
• Mother	56%	62%	48%
Peers	75%	77%	72%
• Friends	64%	62%	65%
• Romantic Partners	55%	62%	46%
WITNESSED VIOLENCE			
• All context	98%	98%	98%
• Home	55%	53%	58%
• School	94%	94%	94%
• Community	94%	95%	92%
SELF-REPORT OF OFFENDING			
• Total	60%	61%	61%
• Violent Behaviors	53%	55%	51%
• Delinquent Behaviors	31%	28%	35%
OFFICIAL RECORDS OF OFFENDING			
• Rearrested	52%	66%	34%
• Nonviolent Charge	22%	27%	16%
• Violent Charge	30%	39%	18%

DO RISK FACTORS DIFFERENTIATE THE PATHWAY TO ANTISOCIAL BEHAVIOR AMONG BLACK VERSUS WHITE FEMALE JUVENILE OFFENDERS?[20]

After release, according to self-report of antisocial behavior, witnessing violence was associated with delinquent behaviors and experiencing violence by parents was related to violent behaviors. When breaking this down by race, experiencing violence by parents was associated with violent behavior for white girls but not for black girls. On the other hand, witnessing violence was associated with violent and delinquent behaviors for black girls but not white girls. A similar pattern emerged with regard to official records of reoffending. Hence, even though both groups experienced similar levels of these risk factors, witnessing and experiencing violence played a different role in terms of their ability to predict reoffending. It may be that black girls who return to disadvantaged neighborhoods may continue to witness violence and have "access to" antisocial behavior more readily and regularly than white girls who live in less disadvantaged neighborhoods. Furthermore, for those living in disadvantaged neighborhoods, coercive and even aggressive parenting may be used as a method to keep girls at home and out of trouble and may not necessarily translate to the same negative outcomes for white girls. [21]

For the group as a whole, a*bsolute* neighborhood disadvantage was related to official records of offending, but not self-reported antisocial behavior. The association between neighborhood disadvantage and rearrest was stronger for black girls. Furthermore, *relative* neighborhood disadvantage, or higher level of income inequality, was not associated with reoffending for either group.

20. For more detailed results, *see* Preeti Chauhan & N. Dickon Reppucci, *The Impact of Neighborhood Disadvantage and Exposure to Violence on Self Report of Antisocial Behavior among Girls in the Juvenile Justice System, 38,* J. YOUTH & ADOLESCENCE 401 (2009); Preeti Chauhan, N. Dickon Reppucci, & Eric Turkheimer, *Racial Differences on the Associations of Neighborhood Disadvantage, Violence Exposure and Criminal Recidivism among Female Juvenile Offenders,* 24 BEHAV. SCI. & L. 531 (2009).
21. Previous research has found that corrective parenting may be used in more disadvantaged neighborhoods to protect children and that stronger forms of physical discipline among black families do not necessarily translate to negative outcomes. Sara V. Dixon, Julia A. Graber, & Jeanne Brooks-Gunn, *The Role of Respect for Parental Authority and Parenting Practices in Parent-Child Conflict among African American, Latino, and European American Families,* 22 J. FAM. PSYCHOL. 1 (2008); Patrick H. Tolan, Deborah Gorman-Smith, & David B. Henry, *The Development of Ecology of Urban Males' Youth Violence, 39,* DEV. PSYCHOL. 274 (2003).

LIVING IN A DISADVANTAGED NEIGHBORHOOD INCREASED THE ODDS OF OFFICIAL ARREST FOR NON-VIOLENT CRIMES BY TENFOLD[22]

As noted, black girls were more likely to be rearrested, particularly for nonviolent crimes, compared to white girls. However, once neighborhood disadvantage was added to the equation, race was no longer predictive of nonviolent rearrest. That is, being black mattered less than living in a disadvantaged neighborhood. In fact, living in a disadvantaged neighborhood increased the odds of being rearrested for a noviolent crime by about tenfold. This suggests that the high rearrest rates among black girls are related to factors within their neighborhood as opposed to higher engagement in antisocial behavior. It further indicates that factors within their neighborhoods such as heavy policing and differential surveillance could be playing a strong role in whether the girls are getting caught for their antisocial behavior, but not whether they are actually engaging in antisocial behavior.

IMPLICATIONS

Because of the pronounced racial disparities observed in offending statistics and the relative lack of information available on female offenders, we explored whether racial differences existed in the impact of neighborhood characteristics and exposure to violence among black and white girls. Similar to results on boys and adults, we observed a racial disparity in official offending statistics. However, this higher involvement in antisocial behavior was not reflected in self-reported antisocial behavior among these girls. Given that behaviors were equivalent across race, differences in rearrest rates may stem from the way the justice system monitors or processes antisocial behavior among black versus white girls. This finding suggests that there are likely systemic biases that exist within the broader society that contribute to the overrepresentation of minorities in the justice system, perhaps particularly with nonviolent crimes. One possibility is that the higher rates of rearrest for black girls may be due to other community-level factors such as higher police surveillance and willingness by police to arrest individuals in disadvantaged neighborhoods.

Interestingly, the concept of relative disadvantage was not associated with antisocial behavior and may be less relevant for females in general. While research has generally found a robust relationship between income inequality and violence using official statistics and crime data, no studies have examined whether this concept applies to both men and women. From an evolutionary perspective, relative disadvantage may be a stronger predictor for male antisocial behavior because men may be more influenced by social status and social hierarchy.

Regardless of racial differences in neighborhoods, there were equivalent and high levels of exposure to violence by both groups. This further confirms that girls in the juvenile justice system experience high levels of adverse experiences across relationships and contexts, highlighting the need for rehabilitation programs. Indeed, victimization was virtually universal among this group, and girls in deprived neighborhoods are not experiencing additional victimization.

Our work further indicates that pathways to antisocial behavior may differ by race. For white girls, we found experiencing violence by parents emerged as a more potent risk factor for both forms of antisocial behavior even though the overall prevalence was equivalent for the two groups. This would suggest an increased importance of what the girls personally experience rather than what is going on in their environment. Witnessing violence, especially in the community, emerged as a potent risk factor for both forms of antisocial behavior among black girls. Even though girls are personally witnessing this violence, the results suggests the added importance of community factors in the maintenance of antisocial behavior among black girls.

These findings have strong implications with regard to addressing the issue of racial disparities and antisocial behavior within the juvenile justice system. Traditional mental health treatment, while necessary, operates at an individual level and is perhaps best suited to address individual-level problems (e.g., child abuse, psychopathology). However, our data suggest that to reduce racial disparities in antisocial behavior, particularly among black girls, more needs to be done within their communities to address the global phenomenon of poverty and the disadvantages that accompany this issue (e.g., community violence).

For instance, community programs and after-school programs using a positive youth development model that serves all youth (rather than just deviant youth) can provide these youths with an opportunity to learn skills and interact with positive adults and nondeviant peers.[23] High-structure, close supervision programs can prevent youth from associating with deviant peers and witnessing violence and redirect them to more prosocial activities. Community-level improvements such as the YMCA, community centers, and boys and girls clubs where youth can congregate with adult supervision would also be beneficial toward achieving these goals.

Enhancing community surveillance, such as neighborhood watch programs, while promoting neighborhood cohesion may also be beneficial in reducing community violence. This would both reduce the violence witnessed by community members and reduce opportunity to participate in violence by more deviant individuals. Using churches, schools, and other community settings as meeting places for discussing concerns within the neighborhoods can help to foster neighborhood cohesion.

In sum, race encompasses a complex sociocultural phe-

22. Preeti Chauhan, N. Dickon Reppucci, Mandi L. Burnette, & Scott Reiner, *Race, Neighborhood Disadvantage, and Antisocial Behavior among Female Juvenile Offenders*, 38 J. COMMUNITY PSYCHOL. 532 (2010).
23. Kenneth A. Dodge, Thomas J. Dishion & Jennifer Lansford, *Deviant Peer Influences in Intervention and Public Policy for Youth*, 20 SOC. POL'Y REP. FOR SOC'Y FOR RES. IN CHILD DEV. 3 (2006), *available at* http://www.srcd.org/documents/publications/SPR/spr20-1.pdf.

nomenon. Race-specific processes that occur at both a neighborhood and a personal level are functioning to differentiate the pathways by which these girls reenter the justice system and engage in violent behaviors. To address issues related to racial disparities in antisocial behaviors, policies must be evaluated and implemented at the community level.

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Profiles of Mental Disorder among Incarcerated Adolescent Females

Michael A. Russell & Emily G. Marston

In recent years, the number of adolescent females sentenced to custody in the juvenile justice system has increased substantially, such that girls now comprise nearly one third of all juvenile arrests in the United States.[1] A striking fact about these incarcerated adolescent female offenders is that approximately 75% suffer from one or more psychiatric disorders.[2] In fact, rates of psychiatric disorder appear even higher among detained female youth than detained male youth,[3] suggesting that incarcerated adolescent females may be the most psychiatrically impaired population in today's juvenile justice system. To make matters worse, recent studies have shown that many incarcerated adolescent females have *more* than one psychiatric disorder—a phenomenon known as *comorbidity*,[4] which is associated with a more difficult treatment response and severe impairment in life activities compared to single disorders.[5] Thus, it is apparent that mental health problems among incarcerated adolescent females are both prevalent and severe, demanding attention from researchers, clinicians, and policymakers alike.

If left untreated, mental health problems among delinquent female youth may lead to a variety of poor outcomes, such as increased suicide risk, substance dependence, involvement in violent or unstable relationships, and parenting difficulties.[6] Moreover, each of these poor outcomes may ultimately serve to strengthen the intergenerational cycle of criminal behavior and psychiatric impairment. For example, intergenerational research has shown that mothers with histories of aggression are likely to experience enduring behavioral, social, and health problems and are more likely to use harsh and ineffective parenting strategies, all of which may be transmitted to offspring via parental modeling of these behaviors and the unwholesome effects of growing up in risky, unhealthy home environments such as those often concomitant with antisocial parenting.[7]

Despite the high-prevalence rates of mental disorder documented among incarcerated female youth, most of these young women are not receiving adequate mental health treatment,[8] perhaps because many juvenile justice facilities are unable to provide the staff and resources necessary to meet this treatment need. Finding a way for the juvenile justice system to meet the treatment needs of delinquent female youth is important given the system's legal and moral obligation to provide mental health services for adolescents in their charge (see Articles H.49, H.51, and H.53 of the *United Nations Rules for the Protection of Juveniles Deprived of their Liberty*)—an obligation that can be best met through empirically informed efforts at mental health screening and assessment and appropriate allocation of limited treatment resources.

What follows is a description and review of prevalence rates for some of the most frequently occurring disorders among adolescent female offenders: conduct disorder (CD), attention deficit hyperactivity disorder (ADHD), major depressive disorder (MDD), and generalized anxiety disorder (GAD). Prevalence rates from the Gender and Aggression Project—Virginia and Vancouver sites (described in the introduction of this special issue by Odgers, Moretti, & Reppucci) will also be presented. Next, we will discuss the ways in which these mental health problems may increase the risk for reoffending and suicidal behavior—two important markers of continued maladjustment. Finally, we provide evidence-based suggestions for mental health professionals and policymakers working to

Footnotes

1. Howard N. Synder & Melissa Sickmund, Juvenile offenders and victims: 2006 National Report (Off. Juv. Just. & Delinq. Prevention, U.S. Dep't. Just.) (2006), *available at* http://ojjdp.ncjrs.org/ojstatbb/nr2006/index.html.
2. Linda A. Teplin et al., *Psychiatric Disorders in Youth in Juvenile Detention*, 59 Arch. Gen. Psychiatry 1133 (2002).
3. Thomas Grisso, Double Jeopardy: Adolescent Offenders with Mental Disorders (2004); Elizabeth Cauffman, *A Statewide Screening of Mental Health Symptoms among Juvenile Offenders in Detention*, 43 J. Am. Acad. Child Adolescent Psychiatry 430 (2004); Dorothy L. Espelage, et al., *A Cluster-Analytic Investigation of MMPI Profiles of Serious Male and Female Juvenile Offenders*, 42 J. Am. Acad. Child Adolescent Psychiatry 770 (2003).
4. Karen M. Abram et al., *Comorbid Psychiatric Disorders in Youth in Juvenile Detention*, 60 Arch. Gen. Psychiatry 1097 (2003); Angela Dixon et al., *Psychopathology in Female Juvenile Offenders*, 45 J. Child Psychol. Psychiatry 1150 (2004); Dina D. Domalanta et al., *Prevalence of Depression and Other Psychiatric Disorders among Incarcerated Youths*, 42 J. Am. Acad. Child Adolescent Psychiatry 477 (2003); Thaddeus P. M. Ulzen & Hayley Hamilton, *The Nature and Characteristics of Psychiatric Comorbidity in Incarcerated Adolescents*, 43 Can. J. Psychiatry 57 (1998).
5. Rob V. Bijl & Anneloes Ravelli, *Psychiatric Morbidity, Service Use, and Need for Care in the General Population: Results of the Netherlands Mental Health Survey and Incidence Study*, 90 Am. J. Pub. Health 602 (2000).
6. Dorothy O. Lewis et al., *A Follow-Up of Female Delinquents—Maternal Contributions to the Perpetuation of Deviance*, 30 J. Am. Acad. Child Adolescent Psychiatry 197 (1991); Robert Vermeiren et al., *Mental Health Problems in Juvenile Justice Populations*, 15 Child Adolescent Psychiatry N. Am. 333 (2006).
7. Lisa Serbin & Jennifer Karp, *Intergenerational Studies of Parenting and the Transfer of Risk from Parent to Child*, 12 Curr. Dir. Psychol. 138 (2003).
8. Lewis et al., *supra* note 6; Vermeiren et al., *supra* note 6; Leslie Acoca, *Investigating in Girls: A 21st Century Strategy*, 6 Juv. Just. 3 (1999).

improve the lives of adolescent females who are struggling with mental disorders in juvenile justice contexts.

PSYCHIATRIC DISORDERS IN THE GENDER AND AGGRESSION PROJECT

High rates of psychiatric disorder have been found repeatedly among incarcerated adolescent females. Our study, the Gender and Aggression Project, was no exception—93.6% of the Virginia (VA) sample and 87.7% of the Vancouver, British Columbia (BC) sample met diagnostic criteria for at least one psychological disorder. Psychological disorders are often classified according to two types: externalizing, characterized by "outward" or external signs of psychopathology (such as hyperactivity/impulsivity and aggression, seen in ADHD and conduct disorder, respectively); and internalizing, characterized by "inward" or internal signs of psychopathology (such as depression or anxiety).

In this article, Part 1 of Mental Health Profiles and Outcomes, we focus on describing the characteristics and prevalence rates of the most commonly occurring disorders among incarcerated adolescent females in both externalizing and internalizing categories, the outcomes associated with these disorders, and how the juvenile justice system might best address the difficult assessment and treatment issues this population often presents. Part 2 of Mental Health Profiles and Outcomes (Obsuth, Watson, & Moretti) covers the prevalence rates of substance use, abuse, and dependence among adolescent offenders; the considerable overlap between these conditions, mental health problems, and crime; and the ways in which the juvenile justice system may best address these problems.

Externalizing Disorders

Conduct Disorder. Conduct disorder (CD) is defined as a persistent pattern of behavior in which age-appropriate societal norms and the rights of others are consistently violated, and is characterized by frequent involvement in a diverse array of antisocial activities. Given this description, it is perhaps unsurprising that the majority of adolescent female offenders meet diagnostic criteria for CD. Rates of CD among adolescent female offenders range from a low of 17% to a high of 96%,[9] with a recent meta-analysis providing an average estimate of 52.8%.[10] These rates are substantially higher than those documented for adolescent females in the general population, where prevalence rates range from 0.8% to 9.2%.[11] Rates of CD among girls in the Gender and Aggression Project were high. In the VA and BC samples, 86.9% and 67.7% met diagnostic criteria for CD, respectively.

High rates of psychiatric disorder have been found repeatedly among incarcerated adolescent females.

ADHD. ADHD is characterized by the display of developmentally inappropriate levels of inattention, hyperactivity, and impulsivity beginning in early childhood and across a variety of settings such as at home, at school or work, and with peers.[12] Recent research has shown that ADHD is *not* just a disorder of childhood; in fact, follow-up studies of children with ADHD have shown that the disorder persists into adolescence and adulthood in the majority of cases.[13] Furthermore, persistent ADHD has been shown to lead to a number of adverse outcomes in adolescence and young adulthood, including mental and physical health problems, poor academic performance, and substance use disorders.[14]

Prevalence rates of ADHD among incarcerated females are substantially higher than for adolescent females in the community, for whom rates of ADHD range from 1.1% to 6.7%.[15] Among incarcerated adolescent females, rates of ADHD range

9. Dixon et al. *supra* note 4; Niranjan S. Karnik et al., *Prevalence of and Gender Differences in Psychiatric Disorders among Juvenile Delinquents Incarcerated for Nine Months*, 60 PSYCHIATRY SERV. 838 (2009); Cindy S. Lederman et al., *Characteristics of Adolescent Females in Juvenile Detention*, 27 INT. J. L. & PSYCHIATRY 321 (2004); Angela A. Robertson et al., *Prevalence of Mental Illness and Substance Abuse Disorders among Incarcerated Juvenile Offenders in Mississippi*, 35 CHILD PSYCHIATRY & HUM. DEV. 55 (2004); Teplin et al., *supra* note 2; Jane Timmons-Mitchell et al., *Comparing the Mental Health Needs of Female and Male Incarcerated Juvenile Delinquents*, 15 BEHAV. SCI. & L. 195 (1997); Ulzen & Hamilton, *supra* note 4.
10. Seena Fazel et al., *Mental Disorders among Adolescents in Juvenile Detention and Correctional Facilities: A Systematic Review and Metaregression Analysis of 25 Surveys*, 47 J. AM. ACAD. CHILD ADOLESCENT PSYCHIATRY 1010 (2008).
11. Rolf Loeber et al., *Oppositional Defiant and Conduct Disorder: A Review of the Past 10 Years, Part I*, 39 AM. ACAD. CHILD ADOLESC. PSYCHIATRY 1468 (2000).
12. AM. PSYCHOLOG. ASS'N. (APA), THE DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (4th ed. 2000).
13. Russell A. Barkley et al., *The Persistence of Attention-Deficit/Hyperactivity Disorder into Young Adulthood as a Function of Reporting Source and Definition of Disorder*, 111 J. ABNORMAL PSYCHOL. 279 (2002).
14. GABRIELLE WEISS & LILY T. HECHTMAN, HYPERACTIVE CHILDREN GROWN UP: ADHD IN CHILDREN, ADOLESCENTS, AND ADULTS (2nd ed. 1993); Russell A. Barkley et al., *Young Adult Outcome of Hyperactive Children: Adaptive Functioning in Major Life Activities*, 45 J. AM. ACAD. CHILD ADOLESCENT PSYCHIATRY 192 (2006); Stephen P. Hinshaw et al., *Prospective Follow-up of Girls with Attention-Deficit/Hyperactivity Disorder into Adolescence: Evidence for Continuing Cross-Domain Impairment*, 74 J. CONSULT. CLIN. PSYCHOL. 489 (2006); Salvatore Mannuzza & Rachel G. Klein, *Long-Term Prognosis in Attention-Deficit/Hyperactivity Disorder*, 9 CHILD ADOLESCENT PSYCHIATRY N. AM. 711 (2000).
15. E. Jane Costello et al., *Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence*, 60 ARCH. GEN. PSYCHIATRY 837 (2003); Patricia Cohen et al., *An Epidemiologic-Study of Disorders in Late Childhood and Adolescence—1. Age-Specific and Gender-Specific Prevalence*, 34 J. CHILD PSYCHOL. PSYCHIATRY 851 (1993).

Rates of anxiety disorders are higher among incarcerated adolescent females than in the general population

from 13% to 68%[16] with a meta-analytic average estimate of 18.5%.[17] In the Gender and Aggression Project, 40.2% in the VA sample and 44.6% in the BC sample met past-year diagnostic criteria for ADHD. The higher-than-average rates of ADHD in these samples may be due to the higher-than-average rates observed for CD, as research has shown that ADHD and CD co-occur in between 30 and 50% of cases in both clinical and epidemiological samples.[18]

Internalizing Disorders

Major Depressive Disorder. Major depressive disorder (MDD) is characterized by the presence of one or more major depressive episodes, discrete time periods lasting two weeks or more during which the person experiences either a depressed mood or a loss of interest or pleasure from activities typically enjoyed in the past.[19] Other symptoms may include significant change in weight (either a loss or gain), increase or decrease in sleep, fatigue, and recurrent thoughts of death.[20] Estimates from large epidemiological studies suggest that 15.4% to 27% of youth report experiencing major depression by the end of adolescence,[21] and the World Health Organization (WHO) has declared MDD to be a leading cause of disability for Americans.[22]

Depression demands increased attention in the juvenile justice system given its predominance among females and its strong association with suicidal thoughts (aka ideation) and behavior,[23] an outcome that will be discussed in further detail later in this article. Despite MDD's high prevalence in the general population, incarcerated adolescent females nonetheless have strikingly *higher* rates of depression, with estimates ranging from 21.6% to 88%.[24] The rate of MDD among incarcerated adolescent females is also significantly higher than for adult females in correctional settings, where a 12% average prevalence rate has been documented.[25] Further, MDD is known to disproportionately affect females when compared to males—at a ratio of 2:1 in the general population[26] and 3:1 among adolescent offenders.[27]

Among girls in the Gender and Aggression Project, 24.5% of those in the VA sample and 32.3% of those in the BC sample met criteria for a current MDE. Rates of MDD in these samples were a bit lower, with 14.4% in VA and 12.2% in BC meeting criteria for current MDD. These rates, while somewhat lower than those reported in other incarcerated samples, nonetheless suggest that depression is a significant problem experienced by nearly 1 in 4 adolescent females in the juvenile justice system.

Generalized Anxiety Disorder. Anxiety disorders are characterized by an excessive amount of worry and apprehension that interferes with the person's ability to function effectively in everyday activities.[28] One of the most common anxiety disorders is generalized anxiety disorder (GAD), which is characterized by pervasive worry that is nonspecific, difficult to control, and occurs more days than not for a period of at least 6 months.[29] A recent nationwide study of adults found that 18.1% of adults in the United States met criteria for at least one anxiety disorder in the past 12 months.[30] Estimates for children and adolescents are somewhat lower but still significant, with prevalence rates ranging from 10% to 15%.[31]

As might be expected, rates of anxiety disorders are higher among incarcerated adolescent females than in the general population, with rates ranging from 12% to 59%.[32] Rates of GAD specifically range from 5% to 7% within this group.[33] GAD was prevalent among girls in the Gender and Aggression Project—13% of girls in the VA sample and 16.2% of those in the BC sample met criteria for GAD within the past six months. For 81% of those in the VA sample who met current diagnostic criteria for GAD, their symptoms began before age 13, indicating that the disorder preceded the experience of

16. Dixon et al. *supra* note 4; Niranjan S. Karnik et al., *supra* note 9; Lederman et al., *supra* note 9; Robertson et al., *supra* note 9; Teplin et al., *supra* note 2; Timmons-Mitchell et al., *supra* note 9; Ulzen & Hamilton, *supra* note 4.
17. Fazel et al., *supra* note 10.
18. Joseph Biederman et al., *Comorbidity of Attention-Deficit Hyperactivity Disorder with Conduct, Depressive, Anxiety, and Other Disorders*, 148 Am. J. Psychiatry 564 (1991).
19. APA, *supra* note 12.
20. *Id.*
21. Ronald C. Kessler et al., *Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication*, 62 Arch. Gen. Psychiatry 593 (2005); Laura P. Richardson et al., *A Longitudinal Evaluation of Adolescent Depression and Adult Obesity*, 157 Arch. Pediatr. Adolescent Med. 739 (2003).
22. World Health Organization (WHO), The World Health Report 2004: Changing History (Annex Table 3: Burden of Disease in DALYs by Cause, Sex, and Mortality Stratum in WHO Regions, Estimates for 2002) (2004).
23. Karen M. Abram et al., *Suicidal Ideation and Behaviors among Youths in Juvenile Detention*, 47 J. Am. Acad. Child Adolescent Psychiatry 291 (2008); Denise B. Kandel et al., *Suicidal Ideation in Adolescence—Depression, Substance Use, and Other Risk-Factors*, 20 J. Youth & Adolescence 289 (1991).
24. Dixon et al., *supra* note 4; Domalanta et al., *supra* note 4; Teplin et al., *supra* note 2; Timmons-Mitchell et al., *supra* note 9.
25. Seena Fazel & John Danesh, *Serious Mental Disorder in 23,000 Prisoners: A Systematic Review of 62 Surveys*, 359 Lancet 545 (2002).
26. APA, *supra* note 12.
27. Fazel et al., *supra* note 10.
28. APA, *supra* note 12.
29. *Id.*
30. Ronald C. Kessler & Philip S. Wang, *The Descriptive Epidemiology of Commonly Occurring Mental Disorders in the United States*, 29 Ann. Rev. Pub. Health 115 (2008).
31. Costello, *supra* note 15.
32. Domalanta et al., *supra* note 4; Lederman et al., *supra* note 9; Teplin et al., *supra* note 2.
33. Dixon et al. *supra* note 4.

incarceration for these girls. This finding suggests that GAD may be a *contributor* to problem behaviors in adolescent female offenders rather than a *result* of incarceration, and as such, warrants further study.

Comorbidity

Comorbidity is defined as the presence of two or more distinct psychiatric disorders in a single case.[34] Because individuals with comorbid psychopathology present multiple disorders at once, treatment planning for these individuals is much more difficult than for those who present a single disorder.[35] Comorbidity is now known to be the rule rather than the exception among children and adolescents in the general population. A large-scale meta-analysis found that if a child or adolescent reported meets criteria for one disorder (disorders included CD, ADHD, depression, and anxiety), he or she had from 3.0 to 10.7 times the odds of meeting criteria for another of these disorders versus those who had no disorders.[36]

Comorbidity is also high among detained adolescent females—a large epidemiological study that included 657 females ages 10-18 found that 56.5% met criteria for two or more disorders.[37] High rates of comorbidity were also observed among girls in the Gender and Aggression Project. In the VA sample, 66.0% met criteria for two or more disorders of the four disorders presented above (CD, ADHD, depression, and GAD); in the BC sample, this rate was 41.5%.

DO MENTAL HEALTH PROBLEMS PREDICT POOR OUTCOMES FOR INCARCERATED YOUTH?

The lives of incarcerated adolescent females are fraught with risk, both in and out of the correctional facility. Many adolescent offenders are rearrested soon after release,[38] and previous research has shown that profound and diverse impairments characterize the adulthoods of delinquent female youth, with one researcher describing these young women as "suicidal, alcoholic, drug addicted, enmeshed in violent relationships, and unable to care for their children" when they reach adulthood.[39] Research into the outcomes of psychiatric disorder among delinquent youth has shown that many of the disorders common in this population are associated with the outcomes that characterize delinquent youth after release, including recidivism, suicidality, substance use problems, hospitalization, and frequent use of psychiatric services.[40] Thus, it seems reasonable that mental health problems may play a role in the cycle of continued maladjustment and offending experienced by delinquent female youth.

Profound and diverse impairments characterize the adulthoods of delinquent female youth.

Among the many problems these youths face, three appear most salient for those working in juvenile justice contexts: recidivism, self-harming or suicidal behavior, and substance abuse, two of which are discussed in the following section (for an in-depth discussion of substance use problems among adolescent female offenders, see Obsuth & Moretti, this issue).

Recidivism

Recidivism as a term encompasses measured rates of rearrest, convictions, and adolescent self-reported offending after release from juvenile justice settings. Recidivism is a large problem among adolescent offenders, with follow-up studies showing that 55% of adolescent offenders are rearrested within one year.[41] Though the research is sparse, CD, ADHD, and substance use disorders have been linked to increased rates of reoffending after release from a correctional facility.[42] In contrast, one of these studies found that males with major depression were at a *reduced* risk for recidivism.[43] Similarly, among adolescent female offenders, the presence of depression has also been shown to be associated with a reduced risk for reoffending in 2-to-4.5-year follow-up periods.[44] Therefore, whereas externalizing conditions may be risk factors for recidivism, internalizing conditions may actually reduce the chances of official reoffending after release.[45] Considering the lack of research in this area, more study is needed to clarify the role that depression plays in the cycle of recidivism and continued offending among adolescent females.

Given that CD can be virtually universal among adolescent offenders, predicting whether a CD diagnosis increases the chances of recidivism among this population is often not practical. However, researchers and mental health professionals working with adolescent offenders have begun to consider whether other conditions, such as ADHD, may serve as markers of persistent offending among adolescent offenders with CD. Indeed, when ADHD is present in children and adolescents with CD, it is associated with an earlier onset, longer

34. Adrian Angold et al., *Comorbidity*, 40 J. Child Psychol. Psychiatry 57 (1999).
35. E. Jane Costello et al., *The Great Smoky Mountains Study of Youth—Goals, Design, Methods, and the Prevalence of DSM-Iii-R Disorders*, 53 Arch. Gen. Psychiatry 1129 (1996).
36. Angold et al., *supra* note 34.
37. Abram et al., *supra* note 4.
38. Snyder & Sickmund, *supra* note 1.
39. Lewis et al., *supra* note 6, at 197.
40. Vermeiren et al. *supra* note 6.
41. Snyder & Sickmund, *supra* note 1.
42. Richard Dembo et al., *Recidivism among High-Risk Youths—A 2-1/2-Year Follow-Up of a Cohort of Juvenile Detainees*, 26 Int'l. J. Addictions 1197 (1991); Richard Dembo et al., *Predictors of Recidivism to a Juvenile Assessment-Center*, 30 Int'l. J. Addictions 1425 (1995); Robert Vermeiren, et al., *Predicting Recidivism in Delinquent Adolescents from Psychological and Psychiatric Assessment*, 43 Comprehensive Psychiatry 142 (2002).
43. Vermeiren et al., *supra* note 42.
44. Hans Steiner et al., *Personality Traits in Juvenile Delinquents: Relation to Criminal Behavior and Recidivism*, 38 J. Am. Acad. Child Adolescent Psychiatry 256 (1999).
45. Robert Vermeiren, *Psychopathology and Delinquency in Adolescents: A Descriptive and Developmental Perspective*, 23 Clinical Psychol. Rev. 277 (2003).

Suicidality among incarcerated adolescent female offenders is alarmingly high.

duration, and higher severity of CD symptoms.[46] Moreover, the combination of ADHD and CD, more so than either disorder alone, has been shown to predict both a lower verbal IQ[47] and a higher risk for hard drug use and dependence,[48] factors that are known to predict recidivism among both adolescents and young adults.[49]

In light of these considerations, we tested whether ADHD predicted especially poor outcomes during the transition to adulthood for girls in the Gender Aggression Project—Virginia Site. In this sample where CD was virtually universal, ADHD increased in the odds of self-reported offending, mental health impairment, and continued psychopathology approximately two years after release. ADHD also uniquely predicted continued externalizing problems such as aggression and rule-breaking behavior in the transition to adulthood, suggesting that ADHD may play a role in the cycle of continued offending and mental health impairment among adolescent female offenders.

Suicidal or Self-Harming Behavior

The term "suicidality" encompasses a range of thoughts (referred to as "ideation") and behaviors involving deliberate attempts to injure or inflict death upon oneself. Suicidality among incarcerated adolescent female offenders is alarmingly high; across numerous studies, over 50% of the adolescent female offenders investigated reported more than one suicide attempt.[50] A recent study found that suicide rates among female prisoners in the United Kingdom were 20 times higher than in the general population; for female prisoners under 25 years of age, this ratio climbed to 40:1.[51] Research has also consistently shown that suicide rates are higher among adolescent female versus male offenders.[52] The risk for suicide may remain substantial for adolescent females even after release from the correctional facility, as research with recently released women ages 18-24 has shown that the risk for suicide remains elevated compared to women in the general population, especially during the first few weeks after release.[53]

Why are rates of suicidality so high among adolescent female offenders? First, delinquency itself is known to independently predict suicidal ideation and suicide attempts among adolescents in the general population, and the relationship between delinquency and suicidal ideation is particularly strong for females.[54] Second, depression and anxiety disorders are among the most salient predictors of suicidality in incarcerated adolescent populations,[55] and these conditions are often more prevalent among female versus male delinquents.[56] Third, the majority of females in incarcerated settings have experienced severe sexual, physical, or emotional abuse at some point in their lives,[57] factors known to be associated with suicidal and self-harming behavior among incarcerated adolescents.[58] Finally, some studies have also identified predictors of suicidality among incarcerated adolescents that appear specific to females, such as a diagnosis of post-traumatic stress disorder,[59] and impulsivity,[60] which document the unique contributions of these problems to suicidality among delinquent female youth. Together, these findings document the complex roles that mental health and family background factors may play in sustaining the high rates of suicidality among female offenders.

46. Benjamin B. Lahey et al., *Are Attention-Deficit/Hyperactivity Disorder and Oppositional Defiant Disorder Precursors to Conduct Disorder? in* HANDBOOK OF DEVELOPMENTAL PSYCHOPATHOLOGY 431 (A. J. Sameroff et al. eds., 2000).
47. Terrie E. Moffitt, *Juvenile-Delinquency and Attention Deficit Disorder—Boys' Developmental Trajectories from Age 3 to Age 15*, 61 CHILD DEV. 893 (1990).
48. Kate Flory et al., *Relation between Childhood Disruptive Behavior Disorders and Substance Use and Dependence Symptoms in Young Adulthood: Individuals with Symptoms of Attention-Deficit/Hyperactivity Disorder and Conduct Disorder Are Uniquely at Risk*, 17 PSYCHOL. ADDICTIVE BEHAV. 151 (2003).
49. James Bonta et al., *The Prediction of Criminal and Violent Recidivism among Mentally Disordered Offenders: A Meta-Analysis*, 123 PSYCHOL. BULL. 123 (1998); Cindy C. Cottle et al., *The Prediction of Criminal Recidivism in Juveniles: A Meta-Analysis*, 28 CRIM. JUST. BEHAV. 367 (2001); Vermeiren et al., *supra* note 42.
50. RESEARCH ADVISORY SERVICES, TABULATION OF A NATIONWIDE SURVEY OF FEMALE INMATES (Report prepared for Am. Correctional Ass'n Task Force on the Female Offender) (1988), *available at* http://www.ncjrs.gov/App/publications/Abstract.aspx?id=118785; Naomi E. Goldstein et al., *Comorbid Symptom Patterns in Female Juvenile Offenders*, 26 INT'L J. L. PSYCHIATRY 565 (2003).
51. Seena Fazel & Ram Benning, *Suicides in Female Prisoners in England and Wales, 1978-2004*, 194 BRIT. J. PSYCHIATRY 183 (2009).
52. A. O. Battle et al., *Potential for Suicide and Aggression in Delinquents in a Juvenile-Court in a Southern City*, 23 SUICIDE LIFE-THREATENING BEHAV. 230 (1993); Javad H. Kashani et al., *Depression among Incarcerated Delinquents*, 3 PSYCHIATRY RES. 185 (1980); Robert E. Morris et al., *Health Risk Behavioral Survey from 39 Juvenile Correctional Facilities in the United States*, 17 J. ADOLESCENT HEALTH 334 (1995); Paul Rohde et al., *Correlates of Suicidal Behavior in a Juvenile Detention Population*, 27 SUICIDE LIFE-THREATENING BEHAV. 164 (1997); Timmons-Mitchell et al., *supra* note 9.
53. Daniel Pratt et al., *Suicide in Recently Released Prisoners: A Population-Based Cohort Study*, 368 LANCET 119 (2006).
54. Martie P. Thompson et al., *Prospective Associations between Delinquency and Suicidal Behaviors in a Nationally Representative Sample*, 40 J. ADOLESCENT HEALTH 232 (2007).
55. Abram et al., *supra* note 23; Joseph V. Penn et al., *Suicide Attempts and Self-Mutilative Behavior in a Juvenile Correctional Facility*, 42 J. AM. ACAD. CHILD ADOLESCENT PSYCHIATRY 762 (2003).
56. Teplin, *supra* note 2; Fazel et al., *supra* note 10.
57. Dixon et al., *supra* note 4; Domalanta, *supra* note 4.
58. Dianna T. Kenny et al., *Risk Factors for Self-Harm and Suicide in Incarcerated Young Offenders: Implications for Policy and Practice*, 8 J. FORENSIC PSYCHOL. PRACT. 358 (2008).
59. Belinda Plattner et al., *Suicidality, Psychopathology, and Gender in Incarcerated Adolescents in Austria*, 68 J. CLINICAL PSYCHIATRY 1593 (2007).
60. Rohde et al., *supra* note 52.

HOW CAN THE JUVENILE JUSTICE SYSTEM BEST MEET THE MENTAL HEALTH NEEDS OF INCARCERATED GIRLS?

The above sections underscore an important point about adolescent females in the juvenile justice system: this group is not only a juvenile justice population but a mental health population as well—a fact which has profound implications for policymakers and mental health professionals working in juvenile justice settings. The high prevalence of these disorders and the myriad negative outcomes associated with them suggest a strong need for those working in the juvenile justice system to identify, treat, and support adolescent offenders with mental health problems as they negotiate the transition into adulthood, and ultimately, back into the community.

Experts in mental health and juvenile justice have made the following recommendations concerning how the juvenile justice system can best fulfill its custodial obligation to adolescent offenders with mental disorders. First, there is a need for continued efforts in the implementation and improvement of mental health, suicide, and violence risk screening for adolescent offenders.[61] Second, continued treatment and assessment efforts are necessary throughout an adolescent's stay in detention, as many mental health problems may not be readily apparent during early screening periods, such as suicidality and depression.[62] Third, it is important that aftercare programs offer not only supervision but facilitate mental health service acquisition.

Screening and Assessment

Mental health screening differs from mental health assessment in that screening often consists of brief (usually 10-15 minutes) symptom inventories that assess whether the adolescent is at high or low risk for self-harm, violence, or other psychiatric impairment, while mental health assessment refers to in-depth, individualized interviews or instruments that assess more specific psychiatric symptoms than mental health screening. Mental health screening is used to identify adolescents who may currently be suffering from a mental disorder and who may need emergency (but not long-term) treatment services. More detailed and comprehensive mental health assessments are used when mental health screens identify an adolescent who likely has a mental disorder, in order to confirm the disorder's presence and assist in treatment planning.

Mental health screening of incarcerated adolescents is an important first step in the processing of juvenile offenders, because it has the potential to facilitate wise allocation of limited mental-health treatment resources available in juvenile justice facilities. Recently, a number of brief, empirically informed screening instruments have been developed, which can be employed by staff with no prior clinical training,[63] thus enhancing the ability of existing staff in correctional settings to systematically screen for high-risk adolescents. Perhaps as a result, screening procedures have become the rule rather than the exception, which represents a welcome turnaround compared to the dearth of these procedures during the last decade.[64]

[The] valid assessment of mental health issues among adolescent female offenders is difficult.

Although mental-health-screening procedures are now widely used in juvenile justice settings, valid assessment of mental health issues among adolescent female offenders is difficult. First, there is very little research regarding the validity of screening and risk-assessment instruments with female offenders,[65] therefore it is unclear whether instruments informed by research with males will perform equally well with females. Second, since the adolescent is often the sole source of information, screening and assessment procedures that rely solely on adolescent self-report run the risk of under-identifying several conditions, most notably ADHD and suicidality.[66] In fact, one study reported that among 1,829 juvenile offenders, less than half of those with recent thoughts of suicide had told anyone about their ideation.[67] Third, although many screening procedures can be implemented by staff with no prior clinical training, clinical experts will be needed throughout the assessment stage, as well as in the treatment planning phase or ambiguous cases will be missed and treatment programs will likely be ineffective.

In order to enhance the ability of mental health professionals to accurately identify the mental health needs of adolescent female offenders, information from family members (especially parents) should be elicited whenever possible, as the inclusion of parent reports may enhance the validity of diagnostic classification for disorders characterized by disruptive and overt behaviors such as those that characterize ADHD.[68] In addition, research suggests that parent reports of adolescent mental health problems may enhance the validity of assessment with

61. Grisso, *supra* note 3; American Academy of Child and Adolescent Psychiatry (AACAP), *Practice Parameter for the Assessment and Treatment of Youth in Juvenile Detention and Correctional Facilities*, 44 J. Am. Acad. Child Adolescent Psychiatry 1085 (2005).
62. AACAP, *Practice Parameter for the Assessment and Treatment of Youth in Juvenile Detention and Correctional Facilities*.
63. Thomas Grisso & Lee A. Underwood, Screening and Assessing Mental Health and Substance Use Disorders among Youth in the Juvenile Justice System: A Resource Guide for Practitioners (Off. Juv. Just. & Delinq. Prevention, U.S. Dep't. Just.) (2004).
64. Kathleen Skowyra & Joseph J. Cocozza, *Introduction*, *in* Mental Health Screening within Juvenile Justice: The Next Frontier (n.d.).
65. Candice L. Odgers et al., *Examining the Science and Practice of Violence Risk Assessment with Female Adolescents*, 29 Law And Human Behavior 7 (2005).
66. Abram et al., *supra* note 23; Susan J. Ko et al., *Contribution of Parent Report to Voice DISC-IV Diagnosis among Incarcerated Youths*, 43 J. Am. Acad. Child Adolescent Psychiatry 868 (2004); Richard D. Todd et al., *Poor Utility of the Age of Onset Criterion for DSM-IV Attention Deficit/Hyperactivity Disorder: Recommendations for DSM-V and ICD-11*, 49 J. Child Psychol. Psychiatry 942 (2008).
67. Abram et al., *supra* note 23.
68. William E. Pelham et al., *Evidence-Based Assessment of Attention Deficit Hyperactivity Disorder in Children and Adolescents*, 34 Journal Clinical & Adolescent Psychol. 449 (2005).

[M]ore than one mental disorder... complicates treatment planning.

juvenile offenders.[69] However, many parents may be unavailable or even unwilling to provide such information during assessment periods. It will also be important for juvenile justice facilities to routinely observe and continually screen adolescent offenders in their care, as some problems may not be readily apparent during initial screening,[70] and adolescents have been called "moving targets" whose symptom profiles are likely to change between assessment periods due to developmental changes.[71] Similarly, suicide risk assessment should not only be a part of procedures in juvenile justice facilities but should continue in aftercare programs, as offenders' risk for suicide remains high even after release.[72]

Treatment

Many females in juvenile justice settings present with more than one mental disorder, a fact which complicates treatment planning significantly. For this reason, it will be necessary for juvenile justice facilities to keep clinically trained staff on hand who can identify treatment need (as not all adolescents who meet criteria for disorder will need long-term or immediate treatment), identify youths in need of emergency treatment, and develop individualized treatment plans, tailored to the needs of each specific case.[73] Clinicians will need to be diverse in their training, as many of the disorders present in juvenile justice settings are treated using a variety of methods, including psychiatric medication and individual therapy.[74]

Unfortunately, many facilities do not have adequate resources or staff to meet the treatment needs in their facilities,[75] and as a result, treatment within the juvenile justice system is often lacking, especially among females.[76] In fact, research shows that only one fifth of female detainees who needed services reported receiving them.[77] Addressing this treatment need will likely require intersystem collaboration between juvenile justice and community mental health systems. Psychiatric consultation services may be purchased from community facilities to assist in the difficult task of treatment planning, as not everyone who screens positive for a mental disorder will need treatment, and determining which cases warrant treatment requires considerable time and clinical expertise.[78] However it is accomplished, it is of prime importance that strong connections exist between juvenile justice facilities and community psychiatric services so that adolescents who require both emergency and long-term services can receive them in a timely and evenly sustained manner.[79]

Community Reentry and Aftercare

Many of the adolescents sentenced to custody in a juvenile facility will eventually be released back into the community. To maintain treatment gains achieved while in custody and thus facilitate a successful community transition, it is crucial that psychiatric services are maintained through aftercare programs after adolescents leave the juvenile facility. The period of community reentry may be an optimum time to facilitate the adolescent's connection with community treatment programs that have shown success in reducing recidivism, symptoms of psychological disorder, deviant peer-group association, and family conflict.[80] The Office of Juvenile Justice and Delinquency Prevention (OJJDP) advocates a highly structured model of aftercare known as the Intensive Aftercare Program Model (IAP),[81] which relies on a central case-management system providing supervision as well as service and treatment provision. The IAP model advocates continued risk assessment; individualized treatment planning that focuses on interventions addressing the problems of adolescent offenders at family, peer, and community levels; the use of systems of rewards and sanctions such as token economies as means of promoting program adherence; and establishing links with community agencies, resources, and organizations to facilitate community service delivery.

One program, GROWTH, is an aftercare program specifically for female offenders that uses the IAP model. Preliminary results support the effectiveness of the GROWTH program: of the 34 girls involved in GROWTH during 2001, none had recidivated, 97% had not become pregnant, and all (100%) were either in school, working, or working toward a GED.[82] These results, although preliminary, suggest the value of a highly structured aftercare program in maintaining treatment gains and establishing successful community reentry for previously incarcerated female youth.

Take-Home Messages

- Nearly 75% of detained adolescent females report one or more mental disorders, which may play a role in continued problems such as recidivism and suicidality.
- The co-occurrence of ADHD and CD may help identify who is most at risk for continued offending, while conditions

69. Ko, *supra* note 66.
70. Am. Acad. Child & Adolsecent Psychiatry (AACAP), *Practice Parameter for the Assessment and Treatment of Youth in Juvenile Detention and Correctional Facilities*, 44 J. AM. ACAD. CHILD ADOLESCENT PSYCHIATRY 1085 (2005).
71. GRISSO, *supra* note 3.
72. Daniel Pratt et al., *Suicide in Recently Released Prisoners: A Population-Based Cohort Study*, 368 LANCET 119 (2006).
73. AACAP, *supra* note 70; Dixon et al., *supra* note 4.
74. John R. Weisz & Peter S. Jensen, *Efficacy and Effectiveness of Child and Adolescent Psychotherapy and Psychopharmacology*, 1 MENTAL HEALTH SERVICES RES. 125 (1999).
75. Sue Bailey, *Editorial*, 23 J. ADOLESCENCE 237 (2000); Carol Kessler, *Need for Attention to Mental Health of Young Offenders*, 359 LANCET 1956 (2002).
76. Acoca, *supra* note 8; Vermeiren et al., *supra* note 6.
77. Domalanta et al., *supra* note 4; Teplin et al., *supra* note 2.
78. AACP, *supra* note 70; GRISSO, *supra* note 3.
79. AACAP, *supra* note 70.
80. Peter Greenwood, *Prevention and Intervention Programs for Juvenile Offenders*, 18 FUTURE CHILD. 185 (2008).
81. DAVID M. ALTSCHULER & TROY L. ARMSTRONG, INTENSIVE AFTERCARE FOR HIGH-RISK JUVENILES: A COMMUNITY CARE MODEL. SUMMARY (Off. Juv. Just. & Delinq. Prevention, U.S. Dep't. Just.).
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such as depression and anxiety, combined with the past experience of trauma and abuse, may identify which females are most at risk for suicidality and self-harm.
- Identification of mental disorders among adolescent female offenders would benefit from parental informants, continued screening throughout juvenile justice involvement, and continued research aimed at identifying gender-specific markers of risk.
- Clinically trained staff will be necessary in juvenile justice facilities to assist in treatment planning, continued monitoring and risk assessment, and treatment provision.
- Continued assessment, treatment, and community support, in addition to supervision, will be necessities in aftercare programs.

These steps would not only reduce the burden of mental illness within a highly affected population, but would hopefully reduce the all-too-heavy financial burden resulting from continued offending and mental health impairment for society at large.

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Substance Dependence Disorders and Patterns of Psychiatric Comorbidity among At-Risk Teens:

Implications for Social Policy and Intervention

Ingrid Obsuth, Gillian K. Watson, & Marlene M. Moretti

Drug and alcohol use is a widespread and serious problem among pre-teens and adolescents in virtually all developed countries, and substance use disorders are among the most prevalent mental health problems in high-risk adolescents and young adults.[1] The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)[2] specifies diagnostic criteria for two levels of substance use disorders —substance abuse and substance dependence. *Substance abuse* is defined by a period of at least 12 months of continued use of a specified substance in conjunction with negative consequences such as failure to fulfill life obligations (e.g., repeated absence or poor performance at work or at school, repeated suspensions or expulsions from school, neglect of children or household), legal problems (e.g., arrests for substance-related disorderly conduct), recurrent substance use in situations in which it is hazardous (e.g., driving a car while impaired), and/or other significant social problems (e.g., physical fights, arguments with romantic partners or parents related to intoxication). *Substance dependence*, the more serious of the two diagnoses, is marked by the development of tolerance for a particular substance (i.e., addiction or needing increased amounts to experience intoxication or desired effects) and/or withdrawal symptoms when not using the substance. Additional symptoms include spending a great deal of time on activities necessary to obtain the substance and/or recover from its effects, experiencing a persistent desire for the substance, and experiencing unsuccessful attempts to cut down and/or continuing to use despite the knowledge of the harmful effects. Unlike other diagnoses in the DSM-IV-TR, substance abuse and substance dependence do not require an age cut-off, which means that youth of any age can be diagnosed with these disorders.

Over the past few decades, researchers in the U.S. and other countries have noted a steady increase in substance use by young people in the general population.[3] An even greater increase has been noted in high-risk youth[4] and youth involved with the juvenile justice system.[5] U.S. based estimates range from approximately 44-87% for the prevalence of substance use and dependence in juvenile detainees with slightly higher rates for males.[6] In Canada, according to the Ontario Student Drug Use Survey 2 from 2007,[7] use in the general population is high: 65% of youth in grades 7-12 reported lifetime use of alcohol, 30% cannabis, 4% cocaine and less than 4% other drugs, including heroin, ketamine (an anesthetic, which in high doses elicits dissociative and hallucinatory effects), and crystal methamphetamine. These numbers are likely underestimates as they do not include high-risk youth who do not attend school. High prevalence rates of substance use disorders have also been reported in youth who have been incarcerated for several months. For example, of 790 recently interviewed female and male adolescents who were incarcerated for at least nine months at the time of the interview, 80% met criteria for some type of current substance use disorder.[8]

Footnotes

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4. Patrick McCrystal, *Substance Misuse Amongst Young People in Non-school Settings: Challenges to Practitioners and Policy Makers*, 18 Child. Abuse Rev. 240 (2009).
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7. The Center for Addictions and Mental Health, Ontario Student Drug Use Survey 2 (2007), *available at* http://www.camh.net/Research/osdus.html.
8. Niranjan S. Karnik, Marie Soller, Allison Redlich, Melissa Silverman, Helena C. Kraemer, Rudy Haapanen & Hans Steiner, *Prevalence of and Gender Differences in Psychiatric Disorders Among Juvenile Delinquents Incarcerated for Nine Months*, 60 Psychiatric Services 838 (2009).

Researchers in the fields of developmental and health psychology have investigated the links between childhood familial and neighborhood experiences, and later substance use problems. They identified numerous early risk factors related to adolescent substance use, abuse, and dependence, including exposure to childhood sexual abuse,[9] childhood physical abuse,[10] residential and caregiver instability during childhood,[11] and neglectful and distant parenting.[12] Reasons for substance use initiation are complex and multifaceted; however, most studies suggest that the negative impact of adverse childhood experiences can reduce the ability to cope with stressful events and substance use may be utilized as a maladaptive strategy for coping[13] and regulating affect.[14]

The negative consequences of early drug and alcohol use can be broad and long lasting. For example, individuals with early onset and long-standing substance use problems are less likely to complete high school,[15] hold a job,[16] or maintain meaningful relationships.[17] Further, prolonged substance use is directly linked to a variety of physical and mental health problems, which may result in disability[18] and other debilitating effects in everyday functioning, such as homelessness.[19] Not surprisingly, substance use disorders often co-occur with other mental health disorders, and further increase risk for later psychopathology and general maladjustment.

Considerable evidence points to the direct link between substance use and violence.[20] There are at least three ways in which substance use contributes to aggression: 1) substance use can directly facilitate violent crimes through its pharmacological effects directly causing aggression, or through the effects on other factors such as threat perception, impulsivity, and involvement in aversive environments, which in turn may lead to aggression; 2) substance use or dependence may lead to crimes to support drug habits; and 3) substance use results in association with criminal networks and activities such as drug dealing which in turn increase risk for criminal behavior independent of substance use. Furthermore, evidence suggests that youth who are diagnosed with a substance use disorder before the age of 16 are four times more likely to be incarcerated in connection with a substance-related offense when they are adults.[21] Thus, providing prevention and early and effective intervention for substance use problems among high-risk youth has the potential to result in enormous cost savings, through reductions in the utilization of the adult mental health system, adult justice system, criminal justice system and costs associated with the victims of crime.

Considerable evidence points to the direct link between substance use and violence.

A thorough understanding of the complex mental health profiles of justice-involved youth with substance dependence problems is fundamental to developing effective interventions and to tailoring interventions to fit individual youths' profiles. For example, understanding the age of onset of drug exposure, rates of abuse and dependence, type of substances used, gender differences in the effects of exposure, and comorbidity with other mental health disorders can facilitate effective rehabilitation. The current review summarizes the mental health profiles of justice involved youth based on the findings from the Gender and Aggression Project (GAP)—Vancouver Site. To assess mental health disorders as defined by the DSM-IV (Diagnostic Statistical Manual published by the American Psychiatric Association in 1994) we administered the widely used Diagnostic Interview for Children and Adolescents (DICA-R)[22] to 141 justice-involved youth (65 females, 76

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13. Angela S. Chiong, Brenna H. Bry & Valerie L. Johnson, *Mediators Between Coping Styles and Substance Use/Intentions in Urban, High School Freshmen*, 35 Addictive Behav. 57 (2010).
14. Petra K. Staiger, Fritha Melville, Leanne Hides, Dan Lubman & Nicolas Kambouropoulos, *Can Emotion-Focused Coping Help Explain the Link Between Post-Traumatic Stress Disorder Severity and Triggers for Substance Use in Young Adults?*, 36 J. Substance Abuse Treatment 220 (2009).
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19. Alisa K. Lincoln, Sara Plachta-Elliot & Dennis Espejo, *Coming In: An Examination of People with Co-Occurring Substance Use and Serious Mental Illness Exiting Chronic Homelessness*, 79 Am. J. Orthopsychiatry 236 (2009).
20. Lennings, Copeland & Howard, *supra* note 5, at 414.
21. Eric P. Slade, Elizabeth A. Stuart, David S. Salkever, Mustafa Karakus, Kerry M. Green & Nicholas Ialongo, *Impacts of Age of Onset of Substance Use Disorders on Risk of Adult Incarceration Among Disadvantaged Urban Youth: A Propensity Score Matching Approach*, 95 Drug & Alcohol Dependence 1 (2008).
22. Wendy Reich, *Diagnostic Interview for Children and Adolescents (DICA)*, 39 J. Am. Acad. Child. & Adolescent Psychiatry 59 (2000).

[I]n our study girls and boys reported similar rates of Alcohol, Marijuana, and Street Drug Dependence...

males) between the ages of 12 and 18 years. The DICA consists of a series of questions that map onto the DSM-IV diagnostic criteria for each mental health disorder and generates both current (i.e., whether the person met criteria for the disorder within the past 12 months) and lifetime (i.e., whether the person met criteria for the disorder at any time in their life) diagnoses. The diagnoses considered in this review are: Substance Abuse (SA) and Substance Dependence (SD) with respect to Alcohol, Marijuana and Street Drugs (heroin, cocaine, speed, downers, crack, and psychedelic drugs); Conduct Disorder (CD); Attention Deficit Hyperactivity Disorder (ADHD); Major Depressive Episode (MDE); and Posttraumatic Stress Disorder (PTSD). All youth whom we interviewed were either referred to a provincial center mandated to serve youth with serious aggressive and antisocial behavior or detained in youth custody centers.

RATES OF SUBSTANCE ABUSE

Consistent with previous reports,[23] the rates of substance abuse were high in this high-risk population: 77% of youth met criteria for at least one current SA disorder (alcohol, marijuana, and/or street drugs), and 83% of youth met criteria for an SA disorder at one point in their lives. The most prevalent type of SA disorder was alcohol abuse: more than two-thirds of youth met criteria for a current (65%) or lifetime (72%) diagnosis of alcohol abuse disorder. The prevalence of marijuana abuse was also quite high: 55% of youth met criteria for current marijuana abuse, and 69% met criteria for lifetime marijuana abuse. The rate of street drug abuse was not much lower: approximately half of the youth in the study met criteria for street drug abuse currently or at one point in their life (48% and 51%, respectively).

RATES OF SUBSTANCE DEPENDENCE DISORDER

Typically, substance abuse, the less severe of the two substance-related disorders, is substantially more prevalent than substance dependence among youth in the general population.[24] In this sample, however, rates of SA disorder were only 6-12% higher than were rates of SD disorder, which are reported below. The high degree of overlap between youth who met criteria for SA and SD in the current sample is likely due to the high-risk nature of this population.

Consistent with others' reports,[25] in our study girls and boys reported similar rates of Alcohol, Marijuana, and Street Drug Dependence both *currently* (i.e., in the period 12-months before and up to the time of assessment) and in their *lifetime* (i.e., ever in their life). Of all youth, 70% met criteria for at least one SD disorder at the time of the assessment, and 74% of youth met criteria for at least one dependence disorder over their lifespan. This is an alarmingly high prevalence rate as it indicates that approximately three quarters of all youth are experiencing significant impairments in their daily lives because of an addiction to at least one type of substance. In addition, the comparable rates of current and lifetime dependence suggest that most of these youth had become dependent within the 12 months before testing, that is, during adolescence.

RATES OF SPECIFIC TYPES OF SUBSTANCE DEPENDENCE DISORDERS AND AGE OF FIRST EXPOSURE

With respect to specific substances, 57% of youth met criteria for a current Alcohol Dependence (AD) and 61% of youth met criteria for a lifetime diagnosis of AD. Females endorsed the first diagnostic (or significantly impairing) symptom of AD at an average age of 13.3 and males at 13.8 years of age. However, both females and males reported to first take a drink much earlier, at an average age of only 10.6 years. This is an extraordinarily young age for first exposure, but it appears that there may be an approximately three-year-long window of opportunity between the ages of first use and alcohol dependence for an early intervention targeting children who begin drinking at this early age.

Further, 48% of youth met criteria for current Marijuana Dependence (MD) and 57% met criteria for lifetime MD. Females endorsed the first diagnostic (or significantly impairing) symptom of MD at an average age of 12.6 and males at an average age of 13.0. However, both females and males reported to have started using marijuana at a slightly younger age (at 11.2 and 11.5 years, respectively). These results suggest that on average, children begin to use marijuana approximately one year after their first use of alcohol, but their use of marijuana escalates to dependence much more quickly; in approximately one year as compared to three years for AD.

Finally, 40% of youth met criteria for current Street Drug Dependence (SDD), and 45% met criteria for a lifetime diagnosis of SDD. Females endorsed the first diagnostic symptom of SDD at 13.2 and males at 14.1 years of age. In this case, females reported to have started using street drugs at a slightly younger age (12.9) than did males (13.6). Not surprisingly, compared to alcohol and marijuana use, youth began to use street drugs at an older age; however, they progressed to symptoms of dependence faster. Specifically, both females and males endorsed symptoms of SDD less than one year following first use. This indicates that similar to MD, the window of opportunity to prevent addiction in youth once they begin using street drugs is quite limited.

Of the 64 youth who met criteria for SDD at some time in their life, more females than males reported heroin use (52% vs. 32%, respectively) and downers (e.g., barbiturates, sleeping pills, tranquilizers, etc.; 70% vs. 48%, respectively). However, the most popular drugs, which both females and males used, were cocaine (94% of both males and females), speed (e.g. amphetamines, Dexedrine, etc.; 91% and 81%, respectively), crack (88% and 77%, respectively) and psychedelic drugs (e.g., LSD, mescaline, peyote, DMT, etc.; 74% and 73%, respectively). In terms of number of drugs tried, 27% of males and

23. McCrystal, *supra* note 4.
24. Am. Psychiatric Ass'n, *supra* note 2.
25. Abrams, Teplin, McClelland & Dulcan, *supra* note 6.

16% of females reported having tried each of these six categories of drugs, and 79% of females and 61% of males reported trying at least four of these different types of drugs over their lifespan. Thus, while the rates of street drug dependence in females and males are comparable, females tend to report experimenting with a wider variety of street drugs than males. This suggests that females may have less specific drug preferences, but instead are willing to use multiple drugs and thus are at higher risk for harmful health outcomes such as overdose, blood-borne diseases, and the short- and long-term impact of drug combinations on cognitive functioning.[26]

[Adolescent] females... are at higher risk for harmful health outcomes... and the short- and long-term impact... on cognitive functioning.

POLY-SUBSTANCE DEPENDENCE DISORDERS

With respect to dependence on multiple substances (poly-dependence), currently 23% of youth met criteria for all three SD disorders (AD, MD, and SDD) and 52% of youth met criteria for at least two of the three dependences. Specifically, 38% of youth met criteria for both current AD and current MD, 32% met criteria for both current AD and current SDD, and 29% met criteria for both current MD and current SDD. The fact that more than half of all youth met criteria for at least two dependences is extremely concerning given the increased difficulties in treating individuals with multiple SD compared to one.

With respect to poly-dependence over the lifespan, 33% of youth met criteria for all three SD disorders and 57% of youth met criteria for at least two of the three dependences. Specifically, 45% of youth met criteria for both a lifetime diagnosis of AD and MD, 37% met criteria for both AD and SDD, and 40% met criteria for both MD and SDD.

In summary, it appears that early drug exposure and multiple SD disorders are relatively common among justice-involved youth, both females and males. Early substance use, abuse, and dependence are unquestionably related to increased rates of juvenile offending. As mentioned previously, this could be because of crimes committed under the influence of substances, altercations surrounding drug dealing, or crimes committed to get substances on which they are dependent. A variety of factors are associated with early substance use, including parental substance use or various forms of child maltreatment.[27] Many youth with early substance use problems have multiple stressors in their lives that lead them to use substances as a way of coping.[28]

COMORBIDITY OF SUBSTANCE DEPENDENCE DISORDERS WITH OTHER MENTAL DISORDERS

Not surprisingly, substance use disorders often occur in conjunction with other mental health conditions. In the next section of this paper we summarize the comorbid mental health disorders experienced by justice-involved youth with diagnosable SD: Major Depressive Episodes (MDE), Conduct Disorder (CD), Attention Deficit Hyperactivity Disorder (ADHD), and Posttraumatic Stress Disorder (PTSD). Two sets of prevalence rates for comorbidity are presented. First, we present comorbidity with *current* diagnosable SD based on the 72% of females and 67% of males in our sample who met criteria for a current SD at the time they were assessed. Next we present the prevalence rates for comorbidity with *lifetime* diagnosable SD based on the sample of 77% of females and 71% of males in our sample who meet criteria for at least one SD (alcohol dependence, marijuana dependence, and/or street drug dependence) at any point in their life.

With respect to comorbidity of mental health disorders among youth with *current* SD, we examined the co-occurrence of CD, ADHD, and MDE. A significant proportion of youth with a current SD had at least one additional disorder (88%) and 48% had at least two additional disorders. No gender differences were noted in the proportion of females and males who were diagnosed with up to two additional disorders; however, significantly more females (23%) than males (8%) met criteria for all four diagnoses: that is, SD in conjunction with CD, ADHD, and MDE. Examination of the comorbidity of SD with each of the other individual disorders further elucidates this gender difference. Specifically, no gender differences were observed in the rates of comorbidity between SD and CD (81% of youth) and comorbidity between SD and ADHD (47% of youth). However, twice as many females were diagnosed with both SD and MDE (32%) than were males (16%). This finding has significant implications for treatment of these justice-involved adolescent girls because youth with comorbid internalizing and externalizing disorders have worse outcomes and often require more comprehensive treatments than youth with only externalizing disorders.[29]

An investigation of the lifetime mental health problems of youth with SD elucidated a range of complex needs and vulnerabilities these youth have experienced throughout their lives thus far. Of the youth who met criteria of a SD at some point in their lifetime, nearly all (96%) also met criteria for *at least one* other mental health disorder, and three quarters (75%) also met criteria for *at least two* other lifetime mental health disorders. No gender difference emerged in these rates. However, consistent with results for comorbidity of current disorders, significantly more females (55%) than males (22%) had been diagnosed with *three or more* disorders in addition to SD over their lifespan.

26. Stephen E. Lankenau & Michael C. Clatts, *Patterns of Polydrug Use Among Ketamine Injectors in New York City*, 40 SUBSTANCE USE & MISUSE (SPECIAL ISSUE) 1381 (2005).
27. Jennifer A. Bailey, Karl G. Hill, Sabrina Oesterle & J. David Hawkins, *Parenting Practices and Problem Behavior Across Three Generations: Monitoring, Harsh Discipline, and Drug Use in the Intergenerational Transmission of Externalizing Behavior*, 45 DEVELOPMENTAL PSYCHOL. 1214 (2009).
28. Chiong, Bry & Johnson, *supra* note 13.
29. R. Jeffrey Goldsmith, *Overview of Psychiatric Comorbidity: Practical and Theoretical Considerations*, 22 PSYCHIATRIC CLINICS N. AM. 331 (1999).

Our findings also highlight the young age at which youth first use substances.

To better understand why females with SD are diagnosed with a greater number of co-occuring disorders than males over their lifespan, we examined the comorbidity of each of the individual disorders. This examination revealed that comparable rates of SD-diagnosed females (84%) and males (91%) also met criteria for conduct disorder. Similarly, there were no gender differences between females (70%) and males (76%) who met criteria for a lifetime diagnosis of SD and also ADHD. However, significantly more females (40%) than males (13%) met criteria for SD and PTSD. Similarly, significantly more females (48%) than males (26%) met criteria for SD and MDE. This is particularly important as depression is associated with suicidal thoughts and behaviors and thus can present a life-threatening condition. Further, PTSD is linked to difficulties controlling impulsive behavior when distressed,[30] which has a potential to contribute to the perpetuation of aggressive and delinquent behavior. While substance use in these youth may be an attempt to escape overwhelming and distressing thoughts and feelings, it likely only exacerbates these difficulties. A more thorough understanding of the interaction between these youths' different mental health problems and the links between them will result in better informed and targeted treatment and rehabilitation programs.

IMPLICATIONS FOR POLICY AND INTERVENTION

Information generated from our research in conjunction with findings from other studies point to important gender differences in SD and cormorbid mental health disorders among justice-involved females and males. Extremely high comorbidity rates of a variety of mental health disorders with current or lifetime SD was evident in both females and males. However, compared to males, the mental health profiles of females are further complicated by increased rates of internalizing disorders, specifically MDEs and PTSD. The combination of externalizing and internalizing problems in justice-involved females represents a particularly complex picture of treatment needs. Internalizing disorders, such as depression- and trauma-related conditions, often go undetected in this population because of the justice systems' focus on antisocial and delinquent behavior.[31] Our failure to detect problems such as depression and trauma can prolong the course of severe mental health problems, including the potential for self-harm, and compromise the degree to which youth are responsive to rehabilitation. This is particularly likely in high-risk populations as research suggests that those youth who exhibit emotional problems are at the greatest risk for other serious problems, including continuing substance use[32] and persistent offending behaviors.[33] Therefore, it is imperative that screening protocols that fully assess a broad range of mental health disorders be implemented for all high-risk youth but in particular for justice-involved young females. Assessment results should be used to tailor intervention within correctional setting and recommendations for community monitoring.

Our findings also highlight the young age at which youth first use substances (approximately age 10 for alcohol, age 11 for marijuana and age 12-13 for street drugs in both males and females). SD soon follows, between one year (for marijuana and street drugs) to three years (for alcohol) later. The gap between the age at first use and onset of severe difficulties related to substance abuse highlights the need for prevention, early identification, and effective intervention with these youth. Intervening with youth at the time of first use may slow or stop the progression to SD as well as other comorbid mental health problems and accompanying difficulties, including antisocial and delinquent behavior. Additionally, given the high rates of polysubstance use and abuse in high-risk youth and young adults, early identification and treatment at first use of any substance may prevent youth from escalating to use multiple substances which makes treatment much more difficult.

CONCLUSION

Our results are consistent with reports from the U.S., and suggest that SD is extremely common among high-risk and incarcerated youth. Substance problems begin at an early age in these children, during the pre-adolescent and early adolescent periods, and escalate to dependencies within the one-to-three-year period. This is particularly concerning as adolescence is a sensitive developmental period marked by rapid neurological development,[34] and substance use during this period can significantly impair cognitive development[35] and consequently impair social and emotional functioning. Therefore the provision of targeted early substance use programs should be considered a priority. Such measures are essential in reducing the likelihood of dependence and consequent effects to the brain and related cognitive functioning. Furthermore, treatment during this critical period could prevent youth from disengaging from the education system and

30. Marina A. Bornovalova, Paige Ouimette, Aaron V. Crawford & Roy Levy, *Testing Gender Effects on the Mechanisms Explaining the Association Between Post-Traumatic Stress Symptoms and Substance Use Frequency*, 34 ADDICTIVE BEHAVS. 685 (2009).
31. Leonard A. Doerfler, Daniel F. Connor, Adam M. Volungis & Peter F. Toscano Jr., *Panic Disorder in Clinically Referred Children and Adolescents*, 38 CHILD PSYCHIATRY & HUM. DEV. 57 (2007).
32. Elizabeth J. D'Amico, Phyllis L. Ellickson, Rebecca L. Collins, Steven Martino & David J. Klein, *Processes Linking Adolescent Problems to Substance Use Problems in Late Young Adulthood*, 66 J. STUD. ON ALCOHOL 766 (2005).
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34. Sarah-Jayne Blakemore & Suparna Choudhury, *Development of the Adolescent Brain: Implications for Executive Function and Social Cognition,* 47 J. CHILD PSYCHOL. & PSYCHIATRY 296 (2006).
35. R. Andrew Chambers, Jane R. Taylor & Marc N. Potenza, *Developmental Neurocisity of Motivation in Adolescence: A Critical Period of Addiction Vulnerability*, 160 AM. J. PSYCHIATRY 1041 (2003).

drifting toward antisocial activity. The high rates of comorbid mental health disorders in youth with SD disorders highlight their complex needs. Comprehensive diagnostic assessment tools are required to fully determine the individual mental health needs of each youth and to tailor interventions accordingly. Timely identification and treatment of youth with substance use disorders is essential not only for ensuring their mental and physical health but also in preventing and reducing recidivism.

Take-Home Messages

- The rates of substance abuse and substance dependence are extremely high in this high-risk population of females and males.
- The age at which youth first start to use substances is alarmingly early and revealed no gender differences (on average 10.6 years for alcohol use, 11.3 years for marijuana use, and 13.25 for street drugs use).
- The time gap between first use and dependence is short and calls for timely and effective interventions to prevent escalation of substance use and associated problems.
- Comorbidity between different types of substance abuse and substance dependency is high in females and males. Timely interventions at the time of first use of first substance may prevent exposure and addiction to additional substances.
- Comorbidity between substance dependence with other mental health disorders is high. Females are at particular risk for comorbid disorders of depression and trauma (PTSD).
- Full diagnostic screening is required to assess the complex individual mental health needs of justice-involved girls and to tailor interventions accordingly.

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Incarcerated Girls' Physical Health:

Can the Juvenile Justice System Help to Reduce Long-Term Health Costs?

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Adolescent girls comprise nearly a third of juvenile arrests, and rates of incarceration among adolescent females have been rising rapidly. Yet, young women continue to be a neglected population in juvenile justice research and service delivery. While there has been an increased focus on addressing the unique mental health needs of girls in the juvenile justice system,[1] very little attention has been paid to the *medical and physical health* challenges that these young women face. The failure to prioritize and understand the physical health needs of female juvenile offenders is important as the Department of Juvenile Justice has a moral and legal obligation to provide for the medical needs of adolescents in their care.[2] Organizations such as Physicians for Human Rights have also become invested in this issue, citing the need to monitor the *health crisis* that is occurring within the walls of U.S. Detention Centers as large numbers of already marginalized and under-serviced adolescents enter these contexts. In particular, this advocacy group has emphasized the need to develop gender-specific practices to protect the endangered health and human rights of female adolescents in custody.[3] Unfortunately, responses to this health crisis have been thwarted by the historical neglect of girls as a relevant population in juvenile justice research. As a result, we are just beginning to piece together basic descriptive information documenting the scope of medical and physical health problems among these young women.

HOW HAS THE JUVENILE JUSTICE SYSTEM RESPONDED TO THIS HEALTH CRISIS?

Despite their legal obligations, many juvenile justice institutions have failed to meet the health needs of detained youth. This type of neglect has resulted in a number of court cases waged against juvenile justice facilities over the past 30 years.[4] For example, in the case of *Jimmy Doe et al. v. Cook County*[5] the American Civil Liberties Union launched a federal lawsuit against Chicago's infamous Cook County Detention Center challenging the facility's insufficient mental and physical health care, excessive punishment and violence, overcrowding, ineffective management, understaffing, and poor sanitation and nutrition services.[6] Similarly in 2004, a class-action suit was waged against the California Youth Authority (CYA), where allegations included: failure to ensure safety of the wards, failure to provide adequate mental health and medical care, using excessive force and violence with wards, unsanitary housing conditions, inadequate nourishment, and insufficient staffing.[7] These two examples illustrate that, despite decades of concern over the physical health needs of detained youth, the juvenile justice system is still a long way from fulfilling its legal and moral obligations to the youth in its care.

WHAT DOES EMERGING RESEARCH TELL US ABOUT THE HEALTH OF GIRLS IN THE JUVENILE JUSTICE SYSTEM?

Over the last decade, researchers, policy-makers and clinicians alike have begun to look more closely at the gender-specific needs of girls in correctional settings. For example, in 2004 the Office of Juvenile Justice and Delinquency Prevention organized the Girls Study Group, a research-based foundation created in response to the upsurge in girls' arrests across the 1990s. Understanding that pathways into and away from delinquency may differ for boys versus girls, the Girls Study Group aims to develop strategies and programs that will prevent girls' engagement in delinquency.[8] Researchers have also begun to look more closely at gender-specific health needs of detained girls, with evidence converging on the fact that detained girls

Footnotes

1. Margaret A. Zahn et al., U.S. Dept. of Just., The Girls Study Group—Charting the Way to Delinquency Prevention for Girls 1 (2008), http://www.ncjrs.gov/pdffiles1/ojjdp/223434.pdf.
2. Thomas Grisso, Double Jeopardy: Adolescent Offenders with Mental Disorders (2004); United Nations Rules for the Protection of Juveniles Deprived of their Liberty, G.A. Res. 45/113, U.N. Doc. A/RES/45/113/ (Dec. 14, 1990), *available at* http://www.un.org/documents/ga/res/45/a45r113.htm.
3. Physicians for Human Rights, Fact Sheet: Unique Needs of Girls in the Juvenile Justice System (2008), *available at* http://physiciansforhumanrights.org/juvenile-justice/factsheets/girls.pdf.
4. Cecilia Kline, *Juveniles in Detention: A Universal Trend of Child Rights Violations*, 25 Child. Legal Rts. J. 45 (2005).
5. *Doe v. Cook County*, No. 99 C 3945, 1999 WL 1069244 (N.D. Ill. Nov. 22, 1999).
6. Press Release, American Civil Liberties Union, ACLU and Cook County Agree on Plan to Improve Chronic Conditions at IL Juvenile Detention Center (Oct. 2, 2002), *available at* http://www.aclu.org/prisoners-rights/aclu-and-cook-county-agree-plan-improve-chronic-conditions-il-juvenile-detention-ce.
7. Amended Complaint for Injunctive and Declaratory Relief, *Margaret Farrell v. Jerry L. Harper*, No. RG03079344 (Cal. Sept. 23, 2003), *available at* http://www.prisonlaw.com/pdfs/CYAamcomp.pdf.
8. Zahn et al., *supra* note 1.

TABLE 1: PHYSICAL HEALTH STATUS OF INCARCERATED GIRLS DURING ADOLESCENCE AND YOUNG ADULTHOOD (N=141)

	PREVALENCE
GENERAL HEALTH IN ADOLESCENCE	
Asthma	31.2
Overweight or obese	57.4
HIV RISK BEHAVIORS IN ADOLESCENCE	
Multiple (3+) sexual partners	61.6
No condom use during sex	23.1
RATES OF STD INFECTIONS	
Tested positive for an STD or STI in adolescence*	57.4
Contracted a new STD since release from study	6.9
INJURY RISK AND INJURIES IN ADOLESCENCE	
Injury risk behaviors	72.3
Physical injury **	60.8
INJURIES, HOSPITALIZATIONS, AND SELF-HARM IN YOUNG ADULTHOOD	
Injury risk behaviors in young adulthood	43.2
Hospitalized for an accident or injury since release	25.3
Hospitalized for an illness since release	21.6
Self harm-behaviors since release	27.5
VICTIMIZATION ACROSS THE LIFESPAN	
Childhood victimization	91.1
Adolescent victimization	92.1
Young adulthood victimization	79.8
Experienced lifetime victimization	100.0

* Sexually transmitted diseases included having one or more of the following diagnoses: chlamydia, gonorrhea, pelvic inflammatory disease, trichomonas, vaginosis, pediculosis, and monilia.

** Physical injury was composed of variables: fracture, self-injury, head injury, unconsciousness, blunt trauma, stab wound, or gunshot wound. Any individual reporting one or more of these injuries was considered to have experienced physical trauma.

versus boys are more likely to report mental health (e.g., anxiety disorders, depression, ADHD) and substance use disorders;[9] and experience a disproportionate amount of physical (e.g., abuse, chronic health problems, sexual assault) and sexual health problems (e.g., sexually transmitted disease and engagement in high-risk sexual behaviors).[10]

Our research team has addressed this issue by assessing the physical health of a population of girls sentenced to custody in a large U.S. state via medical examinations and in-person clinical assessments in both adolescence and young adulthood. As described in the introductory chapter of this special issue, the *Gender and Aggression Project—Virginia Site* recruited an entire population of females sentenced to custody during a 14-month period (93% of all admissions). With respect to studying physical health, this study was novel in that it applied a multimethod approach that integrated self-reported, physician-gathered and biomarker data and is derived from one of the largest longitudinal samples of incarcerated girls that have been intensively assessed to date. Selected results from this study are displayed in Table 1 and illustrate two main findings.

First, and perhaps most remarkably, a review of the prevalence rates of physical health problems during adolescence

9. Jane Timmons-Mitchell et al., *Comparing the Mental Health Needs of Female and Male Incarcerated Juvenile Delinquents*, 15 BEHAV. SCI. & L. 195 (1997); Angela Dixon et al., *Psychopathology in Female Juvenile Offenders*, 45 J. CHILD. PSYCHOL. & PSYCHIATRY 1150 (2004).

10. Leslie Acoca, *Outside/Inside: The Violation of American Girls at Home, on the Streets, and in the Juvenile Justice System*, 44 CRIME & DELINQUENCY 561 (1998); PHYSICIANS FOR HUMAN RIGHTS, *supra* note 3; Michelle Staples-Horne, *Addressing the Specific Health Care Needs of Female Adolescents*, CORRECTIONS TODAY, Oct. 1, 2007.

reveals that physical injuries, obesity, and sexually transmitted diseases were the norm, with close to 50% or more of the population meeting criteria for each of these health problems. Even at this early age, these young women were experiencing a number of serious medical problems. For example, medical histories documented that one in three of these young women were suffering from asthma, as compared to the 12.5% of adolescent girls in the United States who report current asthma, and 20.3% of high-school age students who report lifetime asthma.[11] Asthma is a chronic and costly health problem, especially for children growing up in the types of deprived neighborhood contexts from which the girls in our studies originated.[12] In addition, over 50% of the females were classified as overweight or obese based on their body mass index (BMI)—a condition that foreshadows a wide range of adverse cardiovascular outcomes and other chronic illnesses.[13]

With respect to HIV risk and sexual health, approximately 60% of girls reported having three or more sexual partners while nearly a quarter reported not using condoms. More than half of the girls (57.4%) either tested positive for a sexually transmitted disease (STD) or sexually transmitted infection (STI) at the time of their physical exam or self-reported previously testing positive for an STD, while an additional 6.9% reported contracting an STD since release from the study. These findings are consistent with prior research documenting the increased prevalence of HIV risk behaviors and sexually transmitted disease (STD) diagnoses among this population.[14] Finally, 72.3% of the girls engaged in risk behaviors such as car accidents, driving while drunk or high, carrying a gun, etc., during adolescence and, not surprisingly, rates of physical injury in adolescence were high; 60.8% of the girls reported experiencing a serious physical injury (e.g., fracture, head injury, gunshot wound). This finding coincides with prior research that has documented a high rate of physical injuries among this population[15] and is troubling given that programming and treatment options for improving the health of young women in the juvenile justice system are sorely lacking.[16]

The second main finding illustrated in Table 1 is the fact that health problems experienced by these young women also persisted into young adulthood; 40% continued to engage in health risk behaviors, and close to 30% reported engaging in self-harm behavior. Hospitalization rates during young adulthood provide further evidence of the ongoing health risk, with a quarter of the sample being *hospitalized* for an accident injury and a fifth of the sample being hospitalized for illness since their release from custody. These statistics are especially alarming when one considers that this group should be enjoying one of the healthiest stages of their lives, yet they are carrying a tremendous health burden, which is likely to increase with age.

WHAT ARE POSSIBLE EXPLANATIONS FOR THE LINK BETWEEN GIRLS' ANTISOCIAL BEHAVIOR AND THEIR POOR PHYSICAL HEALTH?

The demonstration of an association between antisocial behavior and physical health is not new. Rather, high rates of comorbid medical and behavioral problems have been reported since the first juvenile court was formed in the U.S. at the turn of the 19th century.[17] However, emerging research suggests that antisocial behavior and aggression may be a particularly important risk factor for poor physical health among girls. For example, Pajer and colleagues have demonstrated that girls with conduct disorder (versus controls), self-report poorer overall health, more discomfort, more health risk behaviors as young adults, and an earlier onset of adult reproductive problems, even when controlling for demographic factors and pre-existing health history.[18]

Population-based evidence suggests that the link between antisocial behavior and poor physical health is strongest for females following the life-course persistent-pathway of antisocial behavior[19]—a pathway characterized by high-risk social and familial environments and the presence of early neurodevelopmental risks among children. A recent report from the Dunedin Multidisciplinary Health and Development Study, a 32-year longitudinal study of a birth cohort of 1,000 New Zealanders, revealed a small group of females (7.5% of the cohort) who followed an early onset and persistent pathway of antisocial behavior. At age 32, women on this pathway were experiencing the highest rates of mental and *physical* health problems and were more likely than the average female in the cohort to have contracted Type 2 Herpes, smoke, be dependent on nicotine, and exhibit signs of chronic bronchitis, gum disease, and decayed tooth surfaces.[20] These findings are important, as individuals on the life-course-persistent pathway are most likely to end up within the juvenile justice system.

11. Danice K. Eaton et al., *Youth Risk Behavior Surveillance—United States, 2007*, 57 MORBIDITY & MORTALITY WKLY. REP. SURVEILLANCE SUMMARIES 1 (June 6, 2008), *available at* http://www.cdc.gov/mmwr/pdf/ss/ss5704.pdf.
12. Edith Chen et al., *Socioeconomic Differences in Children's Health: How and Why Do These Relationships Change with Age*, 128 PSYCHOL. BULL. 295 (2002).
13. Ram Weiss et al., *Obesity and the Metabolic Syndrome in Children and Adolescents*, 350 NEW ENG. J. MED. 2362 (2004).
14. Staples-Horne, *supra* note 10; Patricia A. Kelly et al., *Risk Behaviors and the Prevalence of Chlamydia in a Juvenile Detention Facility*, 39 CLINICAL PEDIATRICS 521 (2000); Richard Crosby et al., *Health Risk Factors Among Detained Adolescent Females*, 27 AM. J. PREVENTIVE MED. 404 (2004).
15. Acoca, *supra* note 10.
16. Alison E. Hipwell & Rolf Loeber, *Do We Know Which Interventions Are Effective for Disruptive and Delinquent Girls?*, 9 CLINICAL CHILD. & FAM. PSYCHOL. REV. 221 (2006); NAT'L MENTAL HEALTH ASS'N, FACTSHEET: MENTAL HEALTH AND ADOLESCENT GIRLS IN THE JUSTICE SYSTEM (2003).
17. STEVEN L. SCHLOSSMAN, TRANSFORMING JUVENILE JUSTICE: REFORM IDEALS AND INSTITUTIONAL REALITIES 1825-1920 (2005).
18. Kathleen A. Pajer et al., *Female Conduct Disorder: Health Status in Young Adulthood*, 40 J. ADOLESCENT HEALTH 84 (2007).
19. Terrie E. Moffitt, *Adolescence-limited and Life-course-persistent Antisocial Behavior: A Developmental Taxonomy*, 100 PSYCHOL. REV. 674 (1993).
20. Candice L. Odgers et al., *Female and Male Antisocial Trajectories: From Childhood Origins to Adult Outcomes*, 20 DEV. & PSYCHOPATHOLOGY 673 (2008).

DOES EARLY EXPOSURE TO VIOLENCE HELP TO EXPLAIN WHY GIRLS IN THE JUSTICE SYSTEM ARE IN SUCH POOR PHYSICAL HEALTH?

Exposure to early stressors is known to influence children's health and development.[21] Indeed, research has consistently demonstrated that children who exhibit severe and persistent antisocial behavior (typical of children who end up in the juvenile justice system) are characterized by high levels of family adversity, parental conflict, and an increased risk of childhood maltreatment.[22] Repetti and colleagues describe how these types of "risky families" may "get under the skin" and compromise present and future health. Risky families are characterized by conflict and aggression and by relationships that are cold, unsupportive, and neglectful. Exposure to this type of early family environment is hypothesized to create vulnerabilities in children or interact with genetically based predispositions to disrupt psychosocial functioning and influence child health.[23]

This risky families model seems especially relevant to understanding the health of adolescent girls within the juvenile justice system given their pervasive history of experiencing and witnessing violence in family contexts. Past research has consistently demonstrated that girls in the juvenile justice system experience higher rates of maltreatment and abuse when compared to both females in the community, as well as males in the juvenile justice system.[24] Our findings from the Gender and Aggression Project support the assumption that adolescent girls who come into conflict with the juvenile justice system are embedded in some of the *riskiest* familial contexts. That is, over 90% of girls had experienced at least one of the following types of maltreatment during childhood: sexual abuse, physical abuse, or witnessing domestic violence. Moreover, our findings indicate that 100% of girls within the sample reported victimization in either childhood, adolescence, or adulthood (see Table 1).

The high rates of violence exposure among girls with a developmental history of antisocial behavior is concerning given that females tend to internalize external stressors and symptoms, which themselves are linked to health risk behaviors.[25] Thus, a history of maltreatment is believed to increase the risk for morbidity and mortality among these young women by: (1) directly causing physical injuries as the result of exposure to violence, (2) elevating the risk of disease via the biological embedding of early life experiences, (3) increasing the risk of depression, anxiety and other disorders linked to health risk behaviors,[26] and (4) promoting gender-specific pathways into the juvenile justice system, where young women end up in the system after running from neglectful and abusive home environments.[27]

An examination of the life-histories of the incarcerated girls from the Gender and Aggression Project (GAP) demonstrated that early experiences of childhood maltreatment predicted poor physical health during both adolescence and young adulthood.[28] Although exposure to maltreatment in childhood was virtually universal, increased *severity* of maltreatment predicted injury and injury risk in adolescence. Severity of childhood maltreatment also predicted self-harm, HIV risk behaviors, physical symptoms, and hospitalizations in young adulthood. These findings are somewhat surprising in that, even among this relatively homogenous sample of marginalized and violence-exposed females, there was evidence of a dose-response relationship between maltreatment severity and poor health. In other words, results indicated that although virtually all of the females in the GAP sample experienced victimization from childhood to adolescence, the *severity* of childhood victimization predicted poor health in both adolescence and young adulthood.

RECOMMENDATIONS FOR IMPROVING GIRLS' HEALTH IN THE JUVENILE JUSTICE SYSTEM

The juvenile court was created in the 19th century with the intent to provide rehabilitative and caring supervision for children. However, over the past 20 years, the rehabilitative nature of the juvenile justice system has been replaced by punitive measures that neglect to focus on the adolescent offender as a whole, and instead focus solely on the adolescent's offense. Arguably, the shift in focus from the adolescent to the offense does not provide a framework that is conducive to responding to the numerous health problems and severity of victimization that girls in the juvenile justice system experience. As a result, observers have argued that the justice system should prioritize the promotion of a nurturing environment that permits the health statuses of girls entering custody to be restored.[29]

SUGGESTIONS FOR RESTORING THE HEALTH STATUSES OF DETAINED GIRLS

The research and data on girls' health reviewed in this paper reinforces the call to action issued by *Physicians for Human Rights* to improve screening, diagnosis, and treatment of med-

21. Megan Gunnar & Karina Quevedo, *The Neurobiology of Stress and Development*, 58 ANN. REV. PSYCHOL. 145 (2007).
22. Terrie E. Moffitt, *Life-course-persistent and Adolescent-limited Antisocial Behavior*, *in* DEVELOPMENTAL PSYCHOPATHOLOGY: RISK, DISORDER, AND ADAPTATION (D. Cicchetti & D. J. Cohen eds., 2006).
23. Rena L. Repetti et al., *Risky Families: Family Social Environments and the Mental and Physical Health of Offspring*, 128 PSYCHOL. BULL. 330 (2002).
24. Candice L. Odgers & Marlene M. Moretti, *Aggressive and Antisocial Girls: Research Update and Challenges*, 1 INT'L J. FORENSIC MENTAL HEALTH 103 (2002); Dixon et al., *supra* note 9.
25. Mary Magee Quinn et al., *Girls with Mental Health Needs in the Juvenile Justice System: Challenges and Inequities Confronting a Vulnerable Population*, 13 EXCEPTIONALITY 125 (2005).
26. Staples-Horne, *supra* note 10.
27. Acoca, *supra* note 10; MEDA CHESNEY-LIND & RANDALL G. SHELDEN, GIRLS, DELINQUENCY, AND JUVENILE JUSTICE (2004); MEDA CHESNEY-LIND & LISA PASKO, THE FEMALE OFFENDER: GIRLS, WOMEN, AND CRIME (2004); Ira Sommers & Deborah R. Baskin, *Factors Related to Female Adolescent Initiation into Violent Crime*, 24 YOUTH & SOC'Y 468 (1994).
28. Candice L. Odgers et al., *Morbidity and Mortality Risk Among the Forgotten Few: Why Are Girls in the Justice System in such Poor Health?* L. & HUM. BEHAV. (forthcoming).
29. ZAHN ET AL., *supra* note 1.

ical and health issues within the juvenile justice system. The health risks that these young women face are not unidimensional, but rather encompass a wide range of mental, sexual, and physical health conditions. Thus, it is imperative that efforts to reform health care in this area include broad enough screenings to detect the numerous health risk conditions that pose a threat to this population's health as well as screenings that are sensitive enough to accurately identify specific medical conditions.[30] Recommended assessments include (but should not be limited to) screenings for mental health, dental health, allergic conditions, drug use, disease, need for medication or treatment, immunization history, vision and hearing, scoliosis, physical and sexual abuse, and witnessing violence, and should also include breast and gynecological examinations.[31] Although the National Commission on Correctional Health Care recommends assessing health care needs for incarcerated adolescents at time of intake into juvenile correctional facilities, many facilities fail to immediately screen girls for mental and physical health disorders. Instead, services are often only provided "as-needed"; a protocol that, based on our findings, would result in a number of unrecognized and untreated health problems.

Upon entering custody, an individualized treatment regimen should be developed following initial screening.[32] After comprehensively screening for the host of emotional, sexual, and physical problems each girl might face, qualified faculty members should prioritize the girl's specific needs and establish an individualized regimen that will most effectively tackle each issue. Clinicians should also be sure to consider each girl's culture and past experiences when developing these treatment plans.[33] Such treatment plans should be supervised by clinical professionals or highly trained faculty.[34] Ideally, such professionals would include cross-disciplinary teams capable of assessing the broad range of mental, sexual, and physical problems these girls might face.[35] Relying on untrained faculty could have harmful consequences. For example, allowing non-mental-health faculty (such as guards or detention staff) to administer medication could result in administering the wrong dosage, ignoring negative side effects of medication, and overdoses. [36] Moreover, nonclinical staff may confound disorder-related behaviors with those indicating disciplinary problems.

Simply assessing girls for physical and sexual health problems is not enough—girls must also be educated with accurate and timely information that informs them of the consequences of the health risk behaviors they engage in.[37] In one descriptive study by Douglas and Plugge, both facility professionals and resident girls expressed concerns that sexual health care, including education informing healthy sexual practices and sexual relationships, was lacking from the facility.[38] Another study found that although the study site reported teaching AIDS education to its residents, survey responses regarding female detainees' beliefs about AIDS determined that a significant portion of girls held false beliefs about contraction of the virus.[39] Therefore, disseminating accurate knowledge about health risk behaviors may encourage these girls to make healthier life decisions.[40]

Girls in the juvenile justice system should also be afforded with the opportunity to participate in recreational activities. As found in our study, the majority of girls in custody are overweight or obese. Therefore, providing opportunities to participate in sports and other physical activities could improve physical health status. Further, special attention must be given to the release of girls from custody back into their communities. Current policies allow for the abrupt cessation of medication, which could lead to discontinuation syndromes or relapse.[41] For example, adverse somatic and psychological symptoms can occur for individuals discontinuing the use of Selective Serotonin Reuptake Inhibitors (SSRIs) often prescribed to treat mood, anxiety, eating, and impulse-control disorders.[42] Therefore, strategies that will grant these girls access to their medications and health services may help to reduce recidivism and the chance that these same females will be reintroduced to the juvenile or adult justice system in the future. Results from our prospective longitudinal study reinforce the need for juvenile detention centers housing female adolescents to develop strategies to effectively monitor the health and health care needs of girls as they transition back into the community. This type of re-entry focus is important given the high rates of physical health problems and lack of access to routine health care among this population. In this sense, access to preventative medical care and treatment has the potential to be a *benefit* of spending time within a state-run facility during adolescence.

Overview of suggestions to restore the health status of detained girls

- Comprehensive and sensitive screenings at intake to detect physical, sexual, and mental health problems
- Individualized treatments for girls that prioritize specific needs of each girl
- Treatment supervised by clinical professionals or highly trained faculty for each girl entering custody to help tackle

30. Crosby et al., *supra* note 14; Dixon et al., *supra* note 9.
31. Staples-Horne, *supra* note 10.
32. Dixon et al., *supra* note 9.
33. Zahn et al., *supra* note 1.
34. Dixon et al., *supra* 9; Kathleen A. Pajer et al., *Psychiatric and Medical Health Care Policies in Juvenile Detention Facilities*, 46 J. Am. Acad. Child. & Adolescent Psychiatry 1660 (2007).
35. Lauren C. Drerup et al., *Patterns of Behavioral Health Conditions Among Adolescents in a Juvenile Justice System*, 39 Prof. Psychol.: Res. & Prac. 122 (2008); Staples-Horne, *supra* 10.
36. Pajer et al., *supra* note 18.
37. Zahn et al., *supra* note 1.
38. Nicola Douglas & Emma Plugge, *The Health Needs of Imprisoned Female Juvenile Offenders: The Views of the Young Women Prisoners and Youth Justice Professionals*, 4 Int'l J. Prisoner Health 66 (2008).
39. Robert E. Morris et al., *Health Risk Behavioral Survey from 39 Juvenile Correctional Facilities in the United States*, 17 J. Adolescent Health 334 (1995).
40. Zahn et al., *supra* note 1.
41. Pajer et al., *supra* note 18.
42. Lut Tamam & Nurgul Ozpoyraz, *Selective Serotonin Reuptake Inhibitor Discontinuation Syndrome: A Review,* 19 Advances Therapy 17 (2002).

the physical, sexual, and mental health problems girls entering custody face
- Education regarding health risk behaviors and their consequences
- Recreational activities that promote physical health and building healthy relationships
- Access to health services upon release from custody to reduce recidivism

Ideally, effective reform within the juvenile justice system will provide a window of opportunity to reduce the future health burden among this population by delivering services that may have otherwise not been received. In the meantime, the health crisis among adolescent girls in the justice system continues, with evidence that severity of childhood maltreatment continues to signal poor health during the transition to young adulthood and back into the community.

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Predicting and Preventing Aggression and Violence Risk in High-Risk Girls:

Lessons Learned and Cautionary Tales from the Gender and Aggression Project

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Youth violence is a serious public health concern when viewed in light of the costs incurred by the medical, social service, and criminal justice systems. Since the late 1980s, there has been a steady increase in violent crimes committed by youth in both Canada and the U.S.[1] Although more recent rates of youth violence are decreasing,[2] they have remained significantly above the averages recorded in the early to mid-1980s. Rates of official violent offending among adolescent girls in particular have been increasing at faster rates compared to boys,[3] and self-report data shows that the gap between girls and boys' rate of engagement in violence is closing.[4]

In light of these trends, assessing and reducing violence risk among youth are high-priority objectives. Increasing knowledge surrounding the precursors of youth violence represents an essential step in this regard, as well as in the development of research-based prevention and intervention approaches. Several large-scale, longitudinal research studies have responded to this need, identifying numerous risk factors at the individual, family, school, peer, and community levels that predict future violence and criminality.[5] Accurately assessing and identifying those youth who are likely to commit future violence also has implications for many decisions made within the juvenile justice system (e.g., decisions regarding waiver to adult court, sentencing, and release).

Significant advances in adult violence risk assessment have paved the way for the development of similar tools with adolescents. However, the vast majority of existing risk assessment schemes for use with adolescents do not factor in gender relevant information; that is, the assumption in most measures is that the factors contributing to violence operate in a similar manner across males and females. As members of our research team have noted, however, this assumption has not been empirically tested via prospective studies including sufficient numbers of female participants.[6] Given that most risk assessment measures include variables based on their predictive ability in all-male samples, it is possible that qualitatively different risk factors are required to predict violence among females, or that similar risk factors exist, which carry differential significance in male and female samples. The next section of this review outlines some of the key challenges involved in assessing violence risk in girls, and the caveats of extending our current knowledge base—based largely on males—to young females.

CHALLENGES OF VIOLENCE RISK ASSESSMENT IN GIRLS

There are several reasons why a specialized focus is required for girls in the study of aggression and why "gender-tailored" tools may be required to optimize violence prediction. A growing body of literature suggests that the risk factors, causal mechanisms, and manifestation of violence in girls may differ substantially from models that have been designed for boys.[7] With respect to the expression of aggression, it is well known that physical forms of violence are much less common among girls versus boys, while social and relational forms of aggression (e.g., spreading rumors, gossip) are more equally visible among girls and boys.[8] Further, research shows that female aggression is more likely to ensue in the context of romantic or

Footnotes

1. Rebecca Kong, Can. Centre for Just. Stat., Canadian Crime Statistics 1996, Catalogue No. 85-002-XPE, Vol. 17, No. 8, at 11 (1997); Howard N. Snyder, Melissa Sickmund, & Eileen Poe-Yamagata, Off. of Juvenile Just. & Delinquency Prevention, Juvenile Offender and Victims: 1996 Update on Violence 14 (1996).
2. Howard N. Snyder, Off. of Juvenile Just. & Delinquency Prevention, Juvenile Arrests 2001, Juvenile Justice Bulletin 1 (2003).
3. Charles Puzzanchera, Anne L. Stahl, Terrence A. Finnegan, Nancy Tierney & Howard N. Snyder, Off. of Juvenile Just. & Delinquency Prevention, Juvenile Court Statistics 1998 12 (2003); Josee Savoie, Can. Centre for Just. Stat., Youth Violent Crime, Catalogue No. 85-002-XPE, Vol. 19, No. 13, at 4 (1999).
4. Kathleen Maguire & Ann L. Pastore, Sourcebook of Criminal Justice Statistics 1998 (1999); U.S. Dep't of Health & Hum. Services, Youth Violence: A Report of the Surgeon General (2001).
5. David P. Farrington et al., *Criminal Careers up to Age 50 and Life Success up to Age 48: New Findings from the Cambridge Study in Delinquent Development,* 299 Gr. Brit. Home Off. Res. Dev. & Stat. Dictorate 1, 4-5 (2006); Todd I. Herrenkohl, Eugene Maguin, Karl G. Hill, J. David Hawkins, Robert D. Abbott & Richard F. Catalano, *Developmental Risk Factors for Youth Violence*, 26 J. Adolescent Health 176, 178 (2000); Rolf Loeber, David P. Farrington, Magda Stouthamer-Loeber & Welmoet B. Van Kammen, Antisocial Behavior and Mental Health Problems: Explanatory Factors in Childhood and Adolescence (1998).
6. Candice L. Odgers, Marlene M. Moretti & N. Dickon Reppucci, *Examining the Science and Practice of Violence Risk Assessment with Female Adolescents*, 29 Law & Hum. Behav. 7, 11, 13 (2005).
7. *Id.* at 9-10, 16.
8. Marion K. Underwood, Social Aggression Among Girls (2003).

family relationships[9] and that the victims of girls' violence are more likely to be an acquaintance, friend, or partner compared to boys.[10]

The picture of violence among adolescent females is further complicated by the possibility that the developmental course of aggression differs for males and females. Researchers typically make the distinction between two types of antisocial behavior pathways. The first pathway is characterized by early involvement in antisocial behavior that persists ("life-course persistent"), while the second pathway is restricted to youth who tend to get in trouble only in adolescence ("adolescence-limited"). Although researchers such as Terrie Moffitt have argued that the classic distinction between these two pathways is equally applicable to males and females,[11] some have doubted whether the early onset category applies to females. Instead, it has been suggested that a "delayed onset" pattern in girls is equivalent to the early onset pattern shown in boys, since these girls show comparable severity to early onset boys in terms of negative prognosis and stability of problem behaviors.[12] More recent research has identified an early onset group of girls who show a range of negative outcomes into late adolescence and adulthood (e.g., early pregnancy, welfare assistance, psychological and physical aggression);[13] nevertheless, it is still found that most girls do not begin engaging in aggressive and antisocial behaviors until adolescence. Thus, the debate continues regarding whether early onset conduct problems are stronger predictors of future violence in males as compared to females, and the impact this would have on assessing risk in females (since many instruments rely on early markers of behavior problems given their predictive ability in all-male samples).

Although it is unlikely that well-established risk factors for violence in boys have no relevance for girls, recent research points to the existence of unique risk factors associated with female aggression (e.g., trauma, victimization, and dysfunctional relationships)[14] as well as differences in the strength of traditionally male predictors when applied to high-risk females (e.g., incarcerated girls).[15] Unfortunately, very few studies have included an adequate number of girls in their samples, and even fewer have conducted the statistical analyses necessary to determine whether the same variables possess comparable predictive capacity across gender. This limitation will necessarily affect the validity of existing risk assessment tools with adolescent females, given their reliance on risk factors that have demonstrated utility in all-male samples.

[W]e have investigated the role of personality pathology and victimization in sustaining girls' aggression and violence.

Our research team has been working toward addressing whether existing violence risk assessment tools are equally applicable to girls and whether there are risk factors specific to the needs of high-risk females. In particular, we have investigated the role of personality pathology and victimization in sustaining girls' aggression and violence. In addition to assessing the utility of female-specific domains of risk, several aspects of our methodological approach have allowed us to address important gaps in the literature pertaining to female violence: (1) Definitions have been expanded to include covert and relational acts of aggression alongside overtly physical acts of violence, (2) The context of aggression has been expanded to include acts perpetrated towards family members and romantic partners, and (3) The types of victimization experiences that many high-risk females encounter have been specified and distinguished from one another (e.g., maternal versus paternal maltreatment, physical versus psychological abuse).

PERSONALITY PATHOLOGY AND VIOLENCE: ANTISOCIAL PERSONALITY DISORDER AND PSYCHOPATHY

Among adults, the relation between specific forms of personality pathology and aggression is well documented. Personality disorders (PDs) are defined as inflexible and pervasive behavioral patterns that cause significant interpersonal and social difficulties.[16] Specifically, the symptoms and consequences of most PDs involve disruptions in key relationships due to maladaptive styles of interacting with others. In particular, antisocial, narcissistic, histrionic, and borderline PDs, referred to collectively as Cluster B PDs, are most often implicated in aggression and violence. This is perhaps unsurprising, given that the defining symptoms of these PDs include problems with regulating negative emotions, experiencing heightened levels of anger and irritability, behaving impulsively, and lacking empathy.[17]

Antisocial Personality Disorder (APD) is defined broadly as

9. Margaret Shaw & Sheryl Dubois, Correctional Service of Canada, Understanding Violence by Women: A Review of the Literature, Federally Sentenced Women Program Report No. 23 (1995); Murray A. Straus & Ignacio L. Ramirez, *Gender Symmetry in Prevalence, Severity, and Chronicity of Physical Aggression Against Dating Partners by University Students in Mexico and USA*, 33 Aggressive Behav. 281, 284-287 (2007).
10. John Archer, *Sex Differences in Aggression Between Heterosexual Partners: A Meta-Analytic Review*, 126 Psychol. Bull. 651, 664 (2000).
11. Terrie E. Moffitt, *Adolescence-limited and Life-course-persistent Antisocial Behavior: A Developmental Taxonomy*, 100 Psychol. Rev. 674, 675 (1993).
12 Persephanie Silverthorn & Paul J. Frick, *Developmental Pathways to Antisocial Behavior: The Delayed-Onset Pathway in Girls*, 11 Dev. & Psychopathology 101, 114-116 (1999).
13. Nathalie Fontaine et al., *Girls' Hyperactivity and Physical Aggression during Childhood and Adjustment Problems in Early Adulthood: A 15-year Longitudinal Study*, 65 Archives Gen. Psychiatry 320, 323-325 (2008).
14. Emily J. Salisbury & Patricia Van Voorhis, *Gendered Pathways: A Quantitative Investigation of Women Probationers' Paths to Incarceration*, 36 Crim. Just. & Behav. 541, 554-559 (2009).
15. Candice L. Odgers, N. Dickon Reppucci & Marlene M. Moretti, *Nipping Psychopathy in the Bud: An Examination of the Convergent, Predictive, and Theoretical Utility of the PCL-YV Among Adolescent Girls*, 23 Behav. Sci. & L. 743, 747-748 (2005).
16. Am.Psychiatric Ass'n, Diagnostic and Statistical Manual of Mental Disorders (4th ed. 2000).
17. *Id.* at 701-717.

[C]oncerns have been raised with respect to the validity and clinical utility of the psychopathy construct in females...

a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 (before which there must be a diagnosis of Conduct Disorder). APD has been studied primarily in the context of its association with aggressive, violent, and criminal behaviors among men. It is well known, for example, that individuals with APD are grossly overrepresented within incarcerated populations.[18] Although the prevalence of the disorder in the general population is estimated at 3%, individuals with APD commit the vast majority of violent and property crimes.[19] Several researchers have further suggested that the combination of antisocial and borderline traits is a particularly salient marker of violence, as these individuals are characterized by high levels of emotional dysregulation (particularly poor anger control), irritability, and impulsiveness.[20]

A substantial share of the literature on PDs and violence has focused on psychopathy—a personality syndrome sharing many features of APD such as impulsivity and a lack of remorse, but further characterized by specific interpersonal and affective deficits such as egocentricity and callousness. This research has been conducted primarily with adult male offenders and has found that psychopathy is a robust indicator of risk for violence in this population.[21] In particular, individuals scoring highly on validated measures of psychopathy (e.g., Hare Psychopathy Checklist; PCL-R)[22] are more likely to commit acts of instrumental aggression, reoffend violently, and reoffend in a shorter period of time. In adult females, although the existing body of research is not large, recent reviews have offered preliminary evidence that the PCL-R can identify women at risk for antisocial behavior, poor treatment outcomes, and violent offending in a manner comparable to men.[23] For example, Richards, Casey, and Lucente[24] found that in comparison to a combination of other variables, psychopathic traits (particularly the interpersonal and affective features) were the best predictors of reoffending for incarcerated female substance abusers released to the community. Importantly, however, despite showing modest associations with *prior* violence and criminality (i.e., "post" diction), others have failed to replicate this association when the task is to predict *future* violence and criminality in women.[25] As will be elaborated upon below, among younger females, research findings are mixed and suggest that psychopathy is *not* a useful predictor of violence and delinquency, particularly once other gender-relevant risk factors are accounted for (e.g., victimization).[26]

In light of these findings, concerns have been raised with respect to the validity and clinical utility of the psychopathy construct in females, and whether it has the potential to inform decision making with respect to risk for violence and reoffending as it does for males. At the heart of these concerns is the possibility that psychopathic traits manifest differently across gender, and that the cardinal features of the syndrome are qualitatively different for males and females.[27] If this is in fact the case, our current measurement tools for assessing psychopathy—tools such as the PCL-R, and its recently developed youth version, the Psychopathy Checklist, Youth Version (PCL:YV)[28]—will be significantly compromised in their ability to capture the construct in females given their development in all-male samples. Currently, the PCL-R and PCL:YV are assumed to function equivalently across gender;[29] specifically, the major dimensions underpinning psychopathy (i.e., the interpersonal, affective, and behavioral features) are assumed to manifest similarly and contribute equally to the overall syndrome in both males and females. This assumption seems suspect in light of documented gender differences in the prevalence of other PDs, and the assertion that gender plays a significant role in the expression and identification of personality pathology.[30]

18. Stephen D. Hart & Robert D. Hare, *Psychopathy: Assessment and Association with Criminal Conduct*, *in* HANDBOOK OF ANTISOCIAL BEHAVIOR 22, 24 (David M. Stoff, James Breiling & Jack D. Maser eds., 1997).
19. Lee N. Robins, Jayson Tipp & Thomas Przybeck, *Antisocial Personality*, in PSYCHIATRIC DISORDERS IN AMERICA: THE EPIDEMIOLOGICAL CATCHMENT AREA STUDY 258 (Lee N. Robins & Darrel A. Regier eds, 1991).
20. Richard C. Howard, Nick Huband, Connor Duggan & Aisling Mannion, *Exploring the Link Between Personality Disorders and Criminality in a Community Sample*, 22 J. PERSONALITY DISORDERS 589, 590, 595 (2008).
21. Kevin S. Douglas, Gina M. Vincent & John F. Edens, *Risk for Criminal Recidivism: The Role of Psychopathy*, *in* HANDBOOK OF PSYCHOPATHY 533, 534 (Christopher J. Patrick ed., 2006).
22. ROBERT D. HARE, HARE PSYCHOPATHY CHECKLIST, REVISED (PCL-R) (2003).
23. Rebecca L. Jackson & Henry J. Richards, *Psychopathy in Women: A Valid Construct with Clear Implications*, *in* THE PSYCHOPATH: THEORY, RESEARCH, AND PRACTICE 389, 391 (Hugues Herve & John C. Yuille eds., 2007); Edelyn Verona & Jennifer Vitale, *Psychopathy in Women: Assessment, Manifestations, and Etiology*, *in* HANDBOOK OF PSYCHOPATHY 415, 420-422 (Christopher J. Patrick ed., 2006).
24. Henry J. Richards, Jay O. Casey & Stephen W. Lucente, *Psychopathy and Treatment Response in Incarcerated Female Substance Abusers*, 30 CRIM. JUST. & BEHAV. 251 (2003).
25. Randall T. Salekin, Richard Rogers, Karen L. Ustad & Kenneth W. Sewell, *Psychopathy and Recidivism among Female Inmates*, 22 LAW & HUM. BEHAV. 109, 118-123 (1998).
26. Odgers, Reppucci & Moretti, *supra* note 15, at 754.
27. Elham Forouzan & David J. Cooke, *Figuring out la Femme Fatale: Conceptual and Assessment Issues Concerning Psychopathy in Females*, 23 BEHAV. SCI. & L. 765, 767-773 (2005).
28. ADELLE E. FORTH, DAVID S. COOKE & ROBERT D. HARE, HARE PSYCHOPATHY CHECKLIST: YOUTH VERSION (PCL:YV) (2003).
29. *Id.*; HARE, *supra* note 22.
30. Eric B. Elbogen, Angela L. Williams, Doyoung Kim, Alan J. Tomkins & Mario J. Scalora, *Gender and Perceptions of Dangerousness in Civil Psychiatric Patients*, 6 LEGAL & CRIM. PSYCHOL. 215, 222-224 (2001); Jennifer Skeem et al., *Gender and Risk Assessment Accuracy: Underestimating Women's Violence Potential*, 29 LAW & HUM. BEHAV. 173, 175, 183 (2005).

GENDER-SPECIFIC DOMAINS OF RISK AND THE IMPORTANCE OF THE RELATIONAL CONTEXT IN FEMALE AGGRESSION

In assessing the potential of psychopathy research to inform the study of female aggression, it is important to consider other domains of risk that have been highlighted as relevant for women and girls. This is especially true given the above-noted limitations surrounding the psychopathy construct in females. There is evidence that incorporating relationships into models of girls' aggression is important. For example, social bonds to others are believed to be of greater importance for females, causing disruptions in key relationships to have a more negative impact on females than males.[31] This idea is further exemplified in research on attachment styles in high-risk youth, suggesting that aggression among young females is tied to these girls' attempts to maintain relationships.[32] The emphasis that females place on sustaining relationships also introduces a greater risk for criminality when their partners engage in illegal and delinquent behaviors.[33]

Within the larger developmental and clinical literature there is also a large body of empirical evidence that links child maltreatment to violence,[34] and a growing body of work linking maltreatment experiences and violence within the context of close relationships.[35] The model of female aggression described above emphasizes the need to understand the role of prior relationships—particularly those in which girls experienced trauma or abuse—to understand their aggression. Indeed, research on gender differences in socialization suggests that experiences of maltreatment and rejection within close relationships has a greater impact on the psychological development and emotional functioning of girls than that of boys.[36]

The link between victimization and aggression among adolescent females has been a central focus of our research team. Odgers, Reppucci, and Moretti demonstrated that experiences of victimization (i.e., psychological abuse, child physical abuse, and exposure to domestic violence) were strongly associated with both overt and relational forms of aggression, as well as future offending, among a sample of incarcerated girls.[37] Of central importance, these investigators compared the relative value of psychopathy and victimization in predicting these outcomes. Results indicated that while a specific component of psychopathy (deficient emotionality) was modestly related to aggression, this effect was negated once victimization experiences were entered into the models. Further, psychopathy scores were *not* predictive of future offending, whereas victimization experiences significantly increased the odds of reoffending. This research confirms the salience of victimization experiences in explaining female aggression and underscores the need to directly compare the utility of traditionally "male" (e.g., psychopathy) versus "female" (e.g., dysfunctional relationships, maltreatment) risk factors—a task that most prior studies in the field have failed to carry out.

The link between victimization and aggression among adolescent females has been a central focus of our research team.

MALTREATMENT, PERSONALITY PATHOLOGY, AND VIOLENCE

Maltreatment experiences therefore appear to be associated with future aggression and violence; however, they have also been linked to the development of personality pathology. Among females, a large body of literature links Borderline Personality Disorder (BPD) to prior abuse exposure,[38] and some experts in the field view childhood maltreatment as playing a causal role in the development of BPD.[39] Given that specific forms of personality pathology are linked to aggression and violence, and that symptoms of BPD are more prevalent in women as compared to men, an important question is whether emerging symptoms of BPD can explain the association between abuse and aggression in girls. Our research group has investigated this question, finding that prior experiences of

31. Carol Gilligan & Grant Wiggins, *The Origins of Morality in Early Childhood Relationships, in* MAPPING THE MORAL DOMAIN: A CONTRIBUTION OF WOMEN'S THINKING TO PSYCHOLOGICAL THEORY AND EDUCATION 111 (Carol Gilligan, Janie V. Ward, Jill M. Taylor & Betty Bardige eds., 1988); Marlene M. Moretti & Ingrid Obsuth, *Attachment and Aggression: From Paradox to Principles of Intervention to Reduce Risk of Violence in Teens*, in UNDERSTANDING GIRLS' PROBLEM BEHAVIOUR: HOW GIRLS' DELINQUENCY DEVELOPS IN THE CONTEXT OF MATURITY AND HEALTH, CO-OCCURRING PROBLEMS, AND RELATIONSHIPS 187 (Margaret Kerr et al., eds., 2011).
32. Marlene M. Moretti, Kimberley S. DaSilva & Roy Holland, *Aggression from an Attachment Perspective: Gender Issues and Therapeutic Implications, in* GIRLS AND AGGRESSION: CONTRIBUTING FACTORS AND INTERVENTION PRINCIPLES 41 (Marlene M. Moretti, Candice L. Odgers & Margaret A. Jackson eds., 2004).
33. Sibylle Artz, *Where Have all the School Girls Gone? Violent Girls in the School Yard,* 27 CHILD & YOUTH CARE F. 77 (1998).
34. David M. Fergusson & Michael T. Lynskey, *Physical Punishment/Maltreatment During Childhood and Adjustment in Young Adulthood,* 21 CHILD ABUSE & NEGLECT 617, 624, 626 (1997); Cathy S. Widom & Helene White, *Problem Behaviours in Abused and Neglected Children Grown Up: Prevalence and Co-occurrence of Substance Abuse, Crime and Violence,* 7 CRIM. BEHAV. & MENTAL HEALTH 287, 298 (1997).
35. Christine Wekerle & David Wolfe, *Child Maltreatment, in* CHILD PSYCHOPATHOLOGY 632 (Eric J. Mash & Russell A. Barkley eds., 2d ed. 2003); David A. Wolfe, Christine Wekerle, Deborah Reitzel-Jaffe, & Lorrie Lefebvre, *Factors Associated with Abusive Relationships among Maltreated and Nonmaltreated Youth,* 10 DEV. & PSYCHOPATHOLOGY 61, 61-65 (1998).
36. Marlene M. Moretti, Roy Holland & Sue McKay, *Self-other Representations and Relational and Overt Aggression in Adolescent Girls and Boys,* 19 BEHAV. SCI. & L. 109, 117 (2001).
37. *Supra* note 15, at 754.
38. Fred A. Rogosch & Dante Cicchetti, *Child Maltreatment, Attention Networks, and Potential Precursors to Borderline Personality Disorder,* 17 DEV. & PSYCHOPATHOLOGY 1071, 1080 (2005); Stephen A. Wonderlich et al., *Sexual Trauma and Personality: Developmental Vulnerability and Additive Effects,* 15 J. PERSONALITY DISORDERS 496, 501 (2001).
39. MARSHA M. LINEHAN, COGNITIVE–BEHAVIORAL TREATMENT OF BORDERLINE PERSONALITY DISORDER (1993).

Some researchers have further posited that Borderline Personality Disorder represents the "female version" of Antisocial Personality Disorder.

childhood physical abuse predicted future violent offending. Importantly, however, abuse was no longer a significant predictor once BPD was taken into consideration.[40] This important finding suggests that girls' aggression may be partially explained by early abuse exposure, which in turn interferes with identify formation, emotion regulation, and the formation of stable, healthy relationships (i.e., key symptoms of BPD). By adolescence, it appears that these symptoms carry the lion's share of predictive weight in terms of forecasting violence. Taken together, our findings suggest that with respect to personality pathology, psychopathy is not a relevant risk factor for violence in girls [41] whereas BPD may be of particular relevance for girls.

Why may symptoms of BPD constitute significant indicators of female aggression? In light of the uniquely interpersonal nature of female aggression, the role of personality malfunction, defined by problematic patterns of relating to others, likely holds particular relevance in explaining these behaviors. Further, of all the PDs appearing in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV),[42] arguably, BPD is the one that is most exclusively focused on interpersonal dysfunction and disruptions in relationships. Clinically, it has been observed that the behavioral and affective symptoms of BPD (i.e., suicidal gestures, substance abuse, unstable mood, and intense anger) occur chiefly in the context of relational stress.[43]

Some researchers have further posited that BPD represents the "female version" of APD, and that these two disorders reflect gender-specific variants of a common underlying etiology.[44] Symptoms of BPD and Histrionic PD (HPD) have also been conceptualized as female-specific expressions of psychopathy.[45] Implied in these views is that BPD relates to violence in females in much the same way that APD and psychopathy predict violence in males. Theoretically, however, psychopathy and BPD imply two very different etiological models of aggression. Specifically, the linkage between psychopathy and aggression has been attributed, in large part, to fundamental deficits that psychopathic individuals are believed to have with respect to relating and caring for others (shallow affect, lack of empathy, and a callous and unemotional style), which, in turn, removes psychological barriers to engaging in violence.[46] In contrast, a causal model for violence involving BPD focuses on the role of emotional overreactivity, extreme interpersonal sensitivity, and dysfunctional relationships, variables that are largely antithetical to models of psychopathy which focus on the role of emotional underarousal and social detachment in sustaining aggressive behaviors. As noted earlier, given the salience of relationships in girls' aggression and violence, causal models that incorporate features of extreme interpersonal sensitivity and relational dysfunction are likely to be of greater value for explaining these behaviors among females.

WHAT IS THE VALUE OF ASSESSING PDS IN ADOLESCENT POPULATIONS?

Researchers are increasingly questioning whether features of personality pathology can offer the same lens into understanding and predicting violence among adolescents as they do in adults. Indeed, emerging evidence that psychopathic and Cluster B PD traits are linked to violence in adolescents highlight the utility of assessing personality pathology early in development. For example, the early identification of psychopathic traits in children is viewed as a worthwhile research endeavor with important implications for public safety and protection.[47] At the same time, it is important to acknowledge the potential stigma and negative consequences associated with applying PDs to youth. Experts in the field of personality and developmental psychopathology argue that it is not appropriate to assess PDs in adolescents as they are still in the process of development, whereas a PD diagnosis implies a persistent pathology that is resistant to change. It is possible that seemingly maladaptive features of personality represent developmentally normative—and transient—fluctuations in an adolescent's still malleable personality. On the other hand, it is unlikely that features of PDs emerge *de novo* in adulthood. Thus, we must be mindful of the consequences of diagnosing PDs in adolescents, but at the same time, recognize the value in doing so, namely, the ability to identify the etiological mechanisms that contribute to the development of the disorder and develop effective interventions.

Within the juvenile justice setting, the practice of assessing psychopathic traits in adolescents has garnered particular concern due to the potential negative consequences that accompany such a diagnosis. The presence of psychopathic characteristics in adolescents may influence decisions regarding transfer

40. Mandi L. Burnette & N. Dickon Reppucci, *Childhood Abuse and Aggression in Girls: The Contribution of Borderline Personality Disorder,* 21 DEV. & PSYCHOPATHOLOGY 309, 313 (2009).
41. Odgers, Reppucci & Moretti, *supra* note 15, at 754.
42. AM. PSYCHIATRIC ASS'N., *supra* note 16.
43. LINEHAN, *supra* note 39.
44. Theodore P. Beauchaine, Daniel N. Klein, Sheila E. Crowell, Christina Derbidge & Lisa Gatze-Kopp, *Multifinality in the Development of Personality Disorders: A Biology x Sex x Environment Interaction Model of Antisocial and Borderline Traits,* 21 DEV. & PSYCHOPATHOLOGY 735, 736 (2009); Joel Paris, *Antisocial and Borderline Personality Disorders: Two Separate Diagnoses or Two Aspects of the Same Psychopathology?* 38 COMPREHENSIVE PSYCHIATRY 237, 239 (1997).
45. Ellison M. Cale & Scott O. Lilienfeld, *Histrionic Personality Disorder and Antisocial Personality Disorder: Sex-Differentiated Manifestations of Psychopathy?* 16 J. PERSONALITY DISORDERS 52, 53 (2002).
46. Robert D. Hare & Stephen D. Hart, *Psychopathy, Mental Disorder, and Crime, in* MENTAL DISORDER AND CRIME 104 (Sheilagh Hodgins ed., 1993); Paul A. Miller & Nancy Eisenberg, *The Relation of Empathy to Aggression and Externalizing/Antisocial Behavior*, 3 PSYCHOL. BULL. 324, 339-341 (1988).
47. Randall T. Salekin, *Psychopathy and Therapeutic Pessimism: Clinical Lore or Clinical Reality?*, 22 CLINICAL PSYCHOL. REV. 79, 80 (2002).

to adult court, the severity of sentences, and perceptions of "treatability."[48] Our review of the existing literature and findings from our research team suggest that the PCL:YV should not be used to make clinical (e.g., suitability for treatment) or legal (e.g., transfer to adult court) decisions with youth. To date, there is insufficient evidence that measures of juvenile psychopathy are tapping the same construct as are their corresponding adult instruments, namely, a stable personality disorder that does not dissipate over time.[49] Rather, existing measures of psychopathic traits in children and adolescents may contain items that reflect normative fluctuations in emotional, psychosocial, and behavioral development, and consequently are *age-inappropriate* markers for psychopathy in youth.[50]

Furthermore, although the field may be moving toward demonstrating the value of psychopathy in adolescent males, there are too few studies examining psychopathy's ability to predict violence and criminality in adolescent females. Of particular concern are recent findings that psychopathy does not predict recidivism in girls.[51] Specifically, research from our team has demonstrated that the PCL:YV can predict concurrent (i.e., *present*) overt and relational aggression among high-risk male and female youth.[52] However, when the task is to predict *future* violence—and when other gender-relevant risk factors are entered into the equation (e.g., victimization)—the PCL:YV shows no predictive value.[53] Results from a recent study[54] also failed to find any predictive relationship between the PCL:YV and recidivism (violent or nonviolent) in a sample of female juvenile offenders over a lengthy follow-up period (an average of three years). Similarly, results from a recent large-scale review found very limited value of the PCL:YV for predicting recidivism in girls.[55] Taken together, these studies do not support the use of the PCL:YV as an indicator of risk among adolescent females.

In contrast to psychopathy, the extension of BPD downwards to adolescent females may hold greater promise in terms of prediction, clinical utility, and informing treatment efforts for aggression and other high-risk behaviors. Of course, caution is still warranted in applying the diagnosis of BPD to girls, as it can carry negative implications with regards to the symptoms of the disorder and its treatability. However, a growing body of research demonstrates the utility of BPD in younger samples, and girls in particular, for understanding aggression and other problematic behaviors such as substance use and high-risk sexual activities. As noted above, research carried out by our team[56] and others[57] shows that features of BPD are related to prior experiences of victimization, and together, these variables appear particularly salient in causal models of female aggression. Perhaps of greatest value, however, is the potential for etiological models of BPD to inform treatment efforts with aggressive girls. In contrast to models of psychopathy, which tend to imply biologically based causes of the disorder and relative resistance to intervention, there are empirically validated treatment models for BPD that have succeeded in reducing symptoms of BPD (e.g., self-injury and suicidal behaviors, substance abuse),[58] as well as aggression specifically.[59]

[Psychological tests] of juvenile psychopathy are [not necessarily] tapping the same construct as are their corresponding adult [tests].

Thus, the finding that features of BPD are associated with aggression in girls has clear implications for gender-specific treatment planning. The extension of empirically validated treatments for BPD such as Dialectical Behavior Therapy (DBT)[60] may hold great promise for incarcerated girls. DBT is

48. Stephanie R. Penney & Marlene M. Moretti, *The Transfer of Juveniles to Adult Court in Canada and the United States: Confused Agendas and Compromised Assessment Procedures,* 4 INT'L J. FORENSIC MENTAL HEALTH 19, 31-32 (2005); Ivan Zinger & Adelle E. Forth, *Psychopathy and Canadian Criminal Proceedings: The Potential for Human Rights Abuses,* 40 CAN. J. CRIMINOLOGY 237, 242 (1998).
49. Gina M. Vincent & Stephen D. Hart, *Psychopathy in Childhood and Adolescence: Implications for the Assessment and Management of Multi-Problem Youths, in* MULTI-PROBLEM VIOLENT YOUTH: A FOUNDATION FOR COMPARATIVE RESEARCH ON NEEDS, INTERVENTIONS, AND OUTCOMES 150 (Raymond R. Corrado, Ronald Roesch, Stephen D. Hart & Jozef K. Gierowski eds., 2002).
50. John F. Edens, Jennifer L. Skeem, Keith R. Cruise & Elizabeth Cauffman, *Assessment of "Juvenile Psychopathy" and its Association with Violence: A Critical Review,* 19 BEHAV. SCI. & L. 53, 57-59 (2001).
51. Odgers, Reppucci & Moretti, *supra* note 15, at 754.
52. Stephanie R. Penney & Marlene M. Moretti, *The Relation of Psychopathy to Concurrent Aggression and Antisocial Behavior in High-Risk Adolescent Girls and Boys,* 25 BEHAV. SCI. & L. 21, 32, 35 (2007).
53. Odgers, Reppucci & Moretti, *supra* note 15, at 754.
54. Gina M. Vincent, Candice L. Odgers, Amanda V. McCormick & Raymond R. Corrado, *The PCL:YV and Recidivism in Male and Female Juveniles: A Follow-up into Young Adulthood,* 31 INT 'L J.L. & PSYCHIATRY 287, 292-294 (2008).
55. John F. Edens, Justin S. Campbell & John M. Weir, *Youth Psychopathy and Criminal Recidivism: A Meta-Analysis of the Psychopathy Checklist Measures*, 31 LAW & HUM. BEHAV. 53, 66 (2007).
56. Burnette & Reppucci, *supra* note 40, at 313; Mandi L. Burnette, Susan C. South & N. Dickon Reppucci, *Cluster B Personality Pathology in Incarcerated Girls: Structure, Comorbidity, and Aggression,* 21 J. PERSONALITY DISORDERS 262, 269 (2007).
57. Beauchaine, Klein, Crowell, Derbidge & Gatze-Kopp, *supra* note 44, at 736.
58. Melanie S. Harned, Alexander L. Chapman, Elizabeth T. Dexter-Mazza, Angela Murray, Katherine A. Comtois & Marsha M. Linehan, *Treating Co-Occurring Axis I Disorders in Recurrently Suicidal Women with Borderline Personality Disorder: A 2-year Randomized Trial of Dialectical Behavior Therapy Versus Community Treatment by Experts,* 76 J. CONSULTING & CLINICAL PSYCHOL. 1068, 1071-74 (2008).
59. Marsha M. Linehan, Joshua D. McDavid, Milton Z. Brown, Jennifer H. R. Sayrs & Robert J. Gallop, *Olanzapine plus Dialectical Behavior Therapy for Women with High Irritability Who Meet Criteria for Borderline Personality Disorder: A Double-Blind, Placebo-Controlled Pilot Study*, 69 J. CLINICAL PSYCHIATRY 999, 1003 (2008).
60. LINEHAN, *supra* note 39.

[T]he malleability of adolescent personality presents an ideal argument for targeting empirically based interventions such as [Dialectical Behavioral Therapy]....

a comprehensive cognitive-behavioral treatment with considerable evidence for its efficacy in treating BPD in adults.[61] Recently, there has been a surge of research extending the application of DBT to adolescents, with studies demonstrating the efficacy of DBT in reducing behaviors such as substance abuse, binging and purging, and self-injurious behaviors among youth manifesting BPD traits.[62] Several recommendations have been offered for successful treatment of BPD in youth, including pharmacological therapy aimed at reducing impulsivity and mood swings and psychotherapeutic techniques to lower anxiety about relationships with others and encourage appropriate expression of feelings.[63] The latter goals are central within the DBT therapeutic framework.

Overall, interventions aimed at reducing BPD symptoms will likely be a useful addition to current treatment programs for aggressive and violent girls. Further, the malleability of adolescent personality presents an ideal argument for targeting empirically based interventions such as DBT at girls who are beginning to demonstrate BPD symptoms, in the hopes of avoiding further solidification into adult personality pathology. Because the treatment of girls' aggression requires interventions aimed at emotion regulation and addressing barriers to healthy relationships, DBT appears particularly well-suited to such a task.

SUMMARY OF RESEARCH FINDINGS AND IMPLICATIONS FOR THE TREATMENT OF AGGRESSIVE GIRLS

The points below highlight the findings from our research team regarding the role of personality pathology and victimization in girls' aggression.

1. Cluster B personality disorder traits are linked to overt and physically aggressive behaviors. In particular, BPD traits are associated with violence.
2. Experiences of victimization by maternal figures (i.e., psychological abuse, child physical abuse, and exposure to domestic violence) are associated with aggression and recidivism. Specifically, psychological abuse is associated with physical aggression whereas exposure to domestic violence is associated with physical and relational aggression.
3. Childhood physical abuse was associated with the emergence of BPD traits. Furthermore, the relationship between childhood physical abuse and violence disappeared once the influence of BPD was taken into consideration. These findings suggest BPD traits are important targets for intervention once these girls reach adolescence.
4. Although psychopathic traits are modestly related to aggression, this relationship no longer exists once victimization experiences are accounted for.
5. Psychopathic traits are not predictive of violent or nonviolent recidivism whereas victimization experiences do increase the risk of recidivism, suggesting that tools to assess psychopathy in adolescence will be of limited use in predicting future offending.

Findings from our research thus support the idea that there are gender-specific domains of risk and that unique variables may be playing a role in initiating and sustaining girls' aggression and violence, such as victimization and borderline personality pathology. In contrast, risk markers such as psychopathic traits appear to hold less relevance for girls. Considering the limited evidence for the predictive ability of psychopathy in women, as well as the conceptual uncertainties surrounding the measurement and expression of psychopathy in females, it may be the case that the utility of psychopathy is largely confined to males. Also of note is the fact that the proposed mechanisms linking victimization and BPD to aggression are largely antithetical to explanatory models of aggression involving psychopathy and other traditionally male markers of risk. This suggests males and females may traverse distinct developmental trajectories toward aggression, with each trajectory encompassing diverse etiological mechanisms (e.g., emotional under- versus over-reactivity).

With regards to treatment, the position taken by our research team is that personality pathology in youth should be considered as an emerging style of relating to others that is problematic, but at the same time amenable to change and applicable to intervention planning. Based on our findings, interventions that reduce exposure to victimization, build healthy relationships, and reduce oversensitivity and over-reactivity to interpersonal stress appear to hold the most value for girls exhibiting high levels of aggression and violence.

61. See Thomas R. Lynch, William T. Trost, Nicholas Salsman & Marsha M. Linehan, *Dialectical Behavior Therapy for Borderline Personality Disorder,* 3 ANN. REV. CLINICAL PSYCHOL. 181, 187-95 (2007) (review of the Dialectical Behavior Therapy literature).
62. ALEC L. MILLER, JILL H. RATHUS & MARSHA M. LINEHAN, DIALECTICAL BEHAVIOR THERAPY WITH SUICIDAL ADOLESCENTS (2008).
63. Jeffrey J. Haugaard, *Recognizing and Treating Uncommon Behavioral and Emotional Disorders in Children and Adolescents who have been Severely Maltreated: Borderline Personality Disorder,* 9 CHILD MALTREATMENT 139, 143-44 (2004).

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Social-Cognitive Processes Related to Risk for Aggression in Adolescents

Tania Bartolo, Maya Peled, & Marlene M. Moretti

The relationship between childhood maltreatment and the development of aggression and delinquency is well established,[1] with a large proportion of those experiencing physical abuse in childhood showing increased rates of aggression during childhood and involvement in violent crime during adolescence, which persists into adulthood.[2] Despite the well established relationship between child maltreatment and the emergence of aggressive and violent behaviors in children and youth, the mechanisms underlying this effect are not well understood. In part this reflects the focus of research over the past several decades on documenting specific forms of maltreatment, timing of maltreatment, and specific emotional and behavioral outcomes in children and youth. Understanding the social-cognitive processes that underlie aggressive behavior is critical in designing prevention and risk reduction programs.

In this paper we summarize findings from the Gender and Aggression Project (GAP) on two social-cognitive processes that are central to the development of aggressive and violent behavior: rejection sensitivity and anger rumination. Each risk factor will be defined in detail, previous research will be briefly summarized, and key findings from our research will be presented. The relevance of these constructs to the judicial system is also discussed with special reference to how understanding social-cognitive processes that underlie aggression can assist in guiding sentencing and rehabilitation decisions. Gaps in the current research are noted as well as areas for future research.

REJECTION SENSITIVITY AND RUMINATION

WHAT IS REJECTION SENSITIVITY?

Rejection sensitivity (RS) is the disposition to defensively expect, readily perceive, and overreact to perceived rejection by others.[3] The RS model proposes that severe and prolonged rejection in early childhood leads to the development of expectations of rejection from others. When even minimal cues of rejection are encountered in individuals high in RS they activate what has been referred to as a "defensive motivational system."[4] In this state of threat, such individuals will interpret ambiguous or even slightly negative information as highly rejecting. This bias to expect and perceive rejection results in a range of maladaptive behaviors, which negatively affect the individual's interpersonal functioning. Perceived rejection has been found to result in two different (but not mutually exclusive) responses—anxiety and anger. It has been proposed that angry expectations of rejection result in externalizing behaviors such as aggression, hostility, and delinquent acts in response to mild or ambiguous threat. Anxious expectations of rejection, in contrast, result in internalizing symptoms such as depression and social withdrawal.[5] Of most interest to our current discussion, however, is the association between RS and aggressive and delinquent behavior. Previous research has shown that individuals high in RS respond to rejection with increased aggression,[6] hostile thoughts and actions[7] as well as violence against romantic partners.[8] What is most problematic is that while those high in RS use these behaviors as a means to protect against or avoid possible rejection,[9] they instead elicit and exacerbate

Footnotes

1. Kenneth A. Dodge, Gregory S. Petit & John E. Bates, *How the Experience of Early Physical Abuse Leads Children to Become Chronically Aggressive*, *in* DEVELOPMENTAL PERSPECTIVES IN TRAUMA: THEORY, RESEARCH, AND INTERVENTION: ROCHESTER SYMPOSIUM ON DEVELOPMENTAL PSYCHOLOGY 263-288 (Dante Cicchetti & Sheree L. Toth eds., 1997); Carolyn Smith & Terence P. Thornberry, *The Relationship Between Childhood Maltreatment and Adolescent Involvement in Delinquency*, 33 CRIMINOLOGY 451 (1995); Cathy S. Widom, *Does Violence Beget Violence? A Critical Examination of the Literature*, 106 PSYCHOL. BULL. 3 (1989); Cathy S. Widom, *Child Victims: Searching for Opportunities to Break the Cycle of Violence*, 7 APPLIED & PREVENTATIVE PSYCHOL. 225 (1998).
2. Ariana E. Wall & Richard P. Barth, *Aggressive and Delinquent Behavior of Maltreated Adolescents: Risk Factors and Gender Differences*, 8 STRESS, TRAUMA, & CRISIS 1 (2005).
3. Geraldine Downey, Scott Feldman & Ozlem Ayduk, *Rejection Sensitivity and Male Violence in Romantic Relationships*, 7 PERS. RELATIONSHIPS 45 (2000).
4. Geraldine Downey, Vivian Mougios, Ozlem Ayduk, Bonita E. London & Yuichi Shoda, *Rejection Sensitivity and the Defensive Motivational System*, 15 PSYCHOL. SCI. 668 (2004).
5. Bonita London, Geraldine Downey, Cheryl Bonica & Iris Paltin, *Social Causes and Consequences of Rejection Sensitivity*, 17 J. RES. ON ADOLESCENCE 481 (2007).
6. Ozlem Ayduk, Anett Gyurak & Anna Luerssen, *Individual Differences in the Rejection-Aggression Link in the Hot Sauce Paradigm: The Case of Rejection Sensitivity*, 44 J. EXPERIMENTAL SOC. PSYCHOL. 775 (2008).
7. Ozlem Ayduk, Geraldine Downey, Alessandra Testa, Ying Yen & Yuichi Shoda, *Does Rejection Elicit Hostility in Rejection Sensitive Women?* 17 SOC. COGNITION 245 (1999).
8. Downey, Feldman & Ayduk, *supra* note 3.
9. Valerie Purdie & Geraldine Downey, *Rejection Sensitivity and Adolescent Girls' Vulnerability to Relationship-Centered Difficulties*, 5 CHILD MALTREATMENT 338 (2000).

interpersonal rejection. Hence, what they fear and wish to avoid is intensified through their maladaptive beliefs and consequent aggressive actions. This creates a vicious cycle as beliefs of rejection are reinforced once the hostile and aggressive actions elicit actual rejection.[10] This in turn affirms and deepens their maladaptive beliefs and thereby limits opportunities for change. In sum, the cognitive-behavior-interpersonal sequence becomes entrenched and reflexive, making attempts to break free from the cycle extremely difficult.

WHAT IS RUMINATION?

Rumination is a maladaptive cognitive process involving repetitive thoughts that are intrusive and aversive. Sadness rumination, or thinking repeatedly about one's feelings of sadness, has been studied extensively and has been found to intensify symptoms of depression.[11] Anger rumination refers to thinking repeatedly about one's angry feelings and is associated with increased anger as well as increased overt and relational aggression.[12] This increased anger is fueled by persistent thoughts about past events that made the individual angry as well as by repeated thoughts of revenge against the perceived perpetrator.[13] Individuals who engage in anger rumination are more likely than others to retaliate aggressively after being provoked,[14] and may even direct their aggression toward innocent targets.[15] Anger rumination can therefore be a risk factor for acting aggressively and can contribute to young people's engagement in violent criminal behavior. Rumination on anger might influence developmental pathways by "locking in" dysfunctional patterns of thoughts, feelings, and behaviors. For example, such individuals may find it difficult to focus on other, likely more adaptive thoughts as they become absorbed in their angry feelings. As a result, adolescents who engage in high levels of anger rumination may be at heightened risk for chronically poor adjustment, including violence and aggression. Therefore, studying rumination in adolescence offers an opportunity to better understand how cognitions and emotions unfold developmentally and how they may contribute to health risk or criminal behaviors.

WHY ARE SOME YOUTH PRONE TO REJECTION SENSITIVITY?

[R]epeated rejection and neglect from those closest to the child are especially detrimental early in life as they shape the ways in which children understand and approach future relationships.

Numerous studies show that child maltreatment places children and youth at risk for rejection sensitivity. This is consistent with the original theoretical conceptualization of RS as stemming from early childhood maltreatment and neglect from primary caregivers.[16] According to this view, repeated rejection and neglect from those closest to the child are especially detrimental early in life as they shape the ways in which children understand and approach future relationships. These early relationships with caregivers form what is referred to as an "internal working model," which directs how information is encoded and interpreted and how individuals interact within their environment.[17] When caregivers are consistent and respond to the needs of their child in a positive and supportive way the child develops a secure model of relationships. Such a child comes to expect acceptance and support from others. When caregivers respond to their child's needs with rejection or neglect, the child instead develops an insecure model for subsequent relationships. These children become highly sensitive to interpersonal rejection and often develop exaggerated and maladaptive interpersonal strategies.[18] For example, they may attempt to force and coerce others into meeting their needs through aggressive acts and respond strongly to even the mildest evidence of rejection. Alternatively, they may threaten to harm themselves to capture and control the attention of others. Studies have confirmed that parental emotional neglect[19] and exposure to family violence[20] during childhood increase defensive expectations of rejection in youth and young adults.

10. Geraldine Downey, Lauren Irwin, Melissa Ramsay & Ozlem Ayduk, *Rejection Sensitivity and Girls' Aggression*, *in* GIRLS AND AGGRESSION: CONTRIBUTING FACTORS AND INTERVENTION PRINCIPLES 7 (Marlene M. Moretti, Candice L. Odgers & Margaret A. Jackson eds., 2004).
11. Jannay Morrow & Susan Nolen-Hoeksema, *Effects of Responses to Depression on the Remediation of Depressive Affect*, 58 J. PERSONALITY & SOC. PSYCHOL. 519 (1990).
12. Overt aggression refers to direct behaviors intended to hurt others, including insults, threats, and physical abuse. Relational aggression refers to indirect, socially based behaviors intended to harm others, such as spreading rumors or ostracizing individuals from social groups. *See* Brad J. Bushman, Angelica M. Bonacci, William C. Pedersen, Eduardo A. Vasquez & Norman Miller, *Chewing on It Can Chew You Up: Effects of Rumination on Triggered Displaced Aggression*, 88 J. PERSONALITY & SOC. PSYCHOL. 969 (2005); Denis G. Sukhodolsky, Arthur Golub & Erin N. Cromwell, *Development and Validation of the Anger Rumination Scale*, 31 PERSONALITY & INDIVIDUAL DIFFERENCES 689 (2001).
13. Bushman, Bonacci, Pedersen, Vasquez & Miller, *supra* note 12.
14. Katrina Collins & Robert Bell, *Personality and Aggression: The Dissipation-Rumination Scale*, 22 PERSONALITY & INDIVIDUAL DIFFERENCES 751 (1997); Gian V. Caprara, *Indicators of Aggression: The Dissipation-Rumination Scale*, 7 PERSONALITY & INDIVIDUAL DIFFERENCES 763 (1986).
15. Bushman, Bonacci, Pedersen, Vasquez & Miller, *supra* note 12.
16. Scott I. Feldman & Geraldine Downey, *Rejection Sensitivity as a Mediator of the Impact of Childhood Exposure to Family Violence on Adult Attachment Behavior*, 6 DEV. & PSYCHOPATHOLOGY 231 (1994).
17. JOHN BOWLBY, ATTACHMENT AND LOSS: VOLUME 1: ATTACHMENT (1969).
18. Geraldine Downey & Scott I. Feldman, *Implications of Rejection Sensitivity for Intimate Relationships*, 70 J. PERSONALITY & SOC. PSYCHOL. 1327 (1996).
19. Geraldine Downey, Hala Khouri & Scott I. Feldman, *Early Interpersonal Trauma and Adult Adjustment: The Mediational Role of Rejection Sensitivity*, *in* ROCHESTER SYMPOSIUM ON DEVELOPMENTAL PSYCHOPATHOLOGY, VOLUME VIII: THE EFFECTS OF TRAUMA ON THE DEVELOPMENTAL PROCESS 85 (Dante Cicchetti & Sheree L. Toth eds., 1997).
20. Feldman & Downey, *supra* note 16.

Like rejection sensitivity, retrospective research on sadness rumination suggests emotional maltreatment in childhood is a risk factor.

Rejection in the form of harsh parenting practices *predicts* increases in expectations of rejection in school-aged children over time.[21] These defensive expectations in turn promote incorrect perceptions of rejection in ambiguous situations, and result in maladaptive reactions such as aggressive behavior. In sum, children who experience maltreatment are more prone to RS because maltreatment increases RS—a defensive encoding and maladaptive interpretation of interpersonal information. Once established, RS gives rise to a range of problematic interpersonal behavior, including aggression and violence, which in turn precipitate precisely what is most feared—rejection and abandonment.

WHY ARE SOME YOUTH PRONE TO RUMINATION?

Less research is available on the causes of rumination. Some studies have examined possible developmental antecedents of sadness rumination but none have focused on precursors to anger rumination. Like rejection sensitivity, retrospective research on sadness rumination suggests emotional maltreatment in childhood is a risk factor. Individuals who engage in high compared to low levels of sadness rumination report experiencing greater parental emotional abuse or rejection (low levels of emotional warmth and acceptance) and greater parental criticism and blame about stressful life events.[22] Children who experience emotional abuse or neglect often develop negative views of themselves and others, and come to believe that sharing their feelings with others is unacceptable, unsafe, or an ineffective way of regulating their emotions. Over time these children may develop a tendency to ruminate rather than turn to others for comfort and assistance in dealing constructively with their frustrations. Not only is there a link between emotional maltreatment in childhood and later rumination, but sadness rumination has also been found to be the mechanism or mediator through which emotional maltreatment leads to depression.[23] Similar associations have been found between sexual abuse and sadness rumination in relation to depression.[24]

The development of anger rumination, and its role in predicting maladaptive conditions, is likely similar to that of sadness rumination. Specifically, childhood emotional and sexual abuse could serve as a "breeding ground"[25] for the development of both anger rumination and sadness rumination, and in turn be risk factors for adolescent aggression and depression. Other forms of child maltreatment may play a central role, such as childhood physical abuse or neglect, which have been found to be risk factors for later aggression and delinquency.[26] Research is needed on the antecedents of anger rumination and its role in predicting violence and aggression in adolescence. In sum, children exposed to maltreatment are more prone to rumination, which in turn increases risk for depression and aggression. Prospective longitudinal studies that follow individuals from childhood would help to elucidate the roots of anger rumination and its impact on the persistence of problems during adolescence and beyond.

FINDINGS FROM THE GENDER AND AGGRESSION PROJECT

WAS REJECTION SENSITIVITY RELATED TO AGGRESSION AMONG HIGH-RISK ADOLESCENT GIRLS AND BOYS?

Rejection sensitivity in high-risk youth has been examined in several Gender and Aggression Project studies, both within the Virginia and Vancouver sites. The relationship between angry expectations of rejection and interpersonal aggression in a sample of incarcerated girls was the focus of one such investigation at the Virginia site. These angry expectations were found to significantly predict physical aggression toward both friends and romantic partners. Victimization in the form of maternal psychological abuse was also found to predict interpersonal aggression in this sample, supporting previous research showing an association between maltreatment and subsequent aggressive behavior. Most importantly, however, angry expectations of rejection were found to predict an additional 10% of the variation in the girls' interpersonal aggression after controlling for three forms of victimization (maternal physical abuse, maternal psychological abuse, and exposure to maternal domestic abuse). Angry expectations of rejection were also found to partially mediate the relationship between victimization (in the form of witnessing maternal domestic abuse) and interpersonal aggres-

21. Purdie & Downey, *supra* note 9.
22. Lauren B. Alloy, Lyn Y. Abramson, Nancy A. Tashman, Dena S. Berrebbi, Michael E. Hogan, Wayne G. Whitehouse, Alisa G. Crossfield & Antonia Morocco, *Developmental Origins of Cognitive Vulnerability to Depression: Parenting, Cognitive, and Inferential Feedback Styles of the Parents of Individuals at High and Low Cognitive Risk for Depression*, 25 COGNITIVE THERAPY & RES. 397 (2001); Judy Garber & Cynthia Flynn, *Predictors of Depressive Cognitions in Young Adolescents*, 25 COGNITIVE THERAPY & RES. 353 (2001); Filip Raes & Dirk Hermans, *On the Mediating Role of Subtypes of Rumination in the Relationship Between Childhood Emotional Abuse and Depressed Mood: Brooding Versus Reflection*, 25 DEPRESSION & ANXIETY 1067 (2008).
23. Raes & Hermans, *supra* note 22.
24. Michael Conway, Morris Mendelson, Constantina Giannopoulos, Patricia A.R. Csank & Susan L. Holm, *Childhood and Adult Sexual Abuse, Rumination on Sadness, and Dysphoria*, 28 CHILD ABUSE & NEGLECT 393 (2004).
25. Alloy, Abramson, Tashman, Berrebbi, Hogan, Whitehouse, Crossfield & Morocco, *supra* note 22.
26. Jonathan B. Kotch, Terri Lewis, Jon M. Hussey, Diana English, Richard Thompson, Alan J. Litrownik, Desmond K. Runyan, Shrikant I. Bangdiwala, Benyamin Margolis & Howard Dubowitz, *Importance of Early Neglect for Childhood Aggression*, 121 PEDIATRICS 725 (2008); Magda Stouthamer-Loeber, Rolf Loeber, D. Lynn Homish & Evelyn Wei, *Maltreatment of Boys and the Development of Disruptive and Delinquent Behavior*, 13 DEV. & PSYCHOPATHOLOGY 941 (2001).

sion.[27] These findings clearly indicate that angry expectations of rejection are an important mechanism in the expression of aggression in high-risk females. In addition, they provide support for the role of maltreatment in the development of RS.

Furthermore, angry expectations of rejection were associated with higher rates of offenses as well as several forms of self-reported aggression (including overt, relational, reactive,[28] and instrumental aggression). What is most interesting is that this association between angry expectations and aggressive behavior was still found two years later after females were released and living in the community.[29] This therefore suggests that the association between angry expectations of rejection and aggression not only is significant but remains quite stable in high-risk girls. Moreover, the influence of these angry expectations on aggression appears to be maintained across contexts (in this case, while incarcerated and in a community setting).

Results from the Virginia site also indicate that RS may be related to the broader spectrum of mental health issues among justice-involved girls. Both anxious and angry expectations of rejection were found to be concurrently associated with higher levels of self-reported anxiety as well as a higher likelihood of the presence of generalized anxiety disorder and/or major depression at 16 years of age.[30] These anxious and angry expectations of rejection remained associated with higher levels of self-reported anxiety even after the girls had been living in the community for a period of over a year. This suggests that RS serves as an important social-cognitive mechanism in the development and maintenance of both internalizing and externalizing behaviors across contexts.[31] In addition to its association with anxiety and depression, angry expectations of rejection at age 17 were also found to predict increases in borderline personality[32] traits at age 19 in this sample,[33] even after controlling for initial levels of symptoms at age 17.

Previous research has shown that aggressive and/or delinquent adolescent females are at risk for a number of poor health outcomes later in life,[34] and RS may serve to further exacerbate this susceptibility. As such, the potential impact of RS on health outcomes was investigated in this group of incarcerated females.[35] In agreement with previous research, aggression in adolescence was found to predict higher levels of mental health impairment, physical health risk, and personal victimization at age 19. More importantly, however, angry expectations of rejection were found to moderate the association between aggression in mid-adolescence and later health outcomes, with a stronger association found between adolescent aggression and poorer health outcomes in females high in angry expectations. These findings suggest that the presence of high levels of RS in high-risk girls may signal a poor prognosis not only for their interpersonal functioning but for their mental and physical health as well. It may be the case that the deficits in interpersonal functioning associated with high levels of RS result in maladaptive relationships and inadequate social support, which creates a heightened sensitivity to mental health issues. RS, therefore, does more than predict and maintain problem behavior; it also serves to negatively impact the health and quality of life of these young women.

[A]ngry expectations of rejection were associated with higher rates of offenses as well as several forms of self-reported aggression...

Findings from the Gender and Aggression Project clearly implicate RS in the development and maintenance of aggression and adverse health outcomes in high-risk girls. The question that remains, however, is whether RS increases risk similarly among high-risk girls *and* boys. As aggression in females is more often found to be directed to those closest to them,[36] which is not always the case in males, one would predict that RS (which adversely affects interpersonal functioning) would affect girls' outcomes to a greater extent than boys'. Several studies conducted at the Vancouver site focused on determining whether such sex-specific differences in behaviors associated with RS were present in high-risk

27. Emily G. Marston, Preeti Chauhan & N. Dickon Reppucci, Investigating the Impact of Rejection Sensitivity in a Sample of Incarcerated Girls, Poster Presented at the Annual Meeting of the American Psychology-Law Society, St. Petersburg, FL (March 2006).
28. Reactive aggression refers to aggression that occurs as an angry defensive response to provocation from others. Instrumental aggression (also referred to as proactive aggression) is aggression that occurs deliberately and in anticipation of self-serving outcomes. *See* Todd D. Little, Christopher C. Henrich, Stephanie M. Jones & Patricia H. Hawley, *Disentangling the "Whys" from the "Whats" of Aggressive Behavior*, 27 INT'L J. BEHAV. DEV. 122 (2003).
29. Emily G. Marston, Rejection Sensitivity in Normative and High Risk Adolescent Girls: Associations with Internalizing and Externalizing Problems (May, 2007) (unpublished Master's thesis, University of Virginia) (on file with authors).
30. Marston, *supra* note 29.
31. *Id.*
32. Borderline personality symptoms involve instability in interpersonal relationships, unstable mood, impulsivity, and recurrent self-harm behaviors. *See* PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (4th ed. 2000).
33. Emily G. Marston, Mandi L. Burnette & N. Dickon Reppucci, Borderline Traits, Rejection Sensitivity and Interpersonal Aggression in Highly Aggressive Females, Talk Presented at the Biennial Meeting of the Society for Research in Child Development, Denver, CO (April 2009).
34. Anna M. Bardone, Terrie E. Moffitt, Avshalom Caspi, Nigel Dickson, Warren R. Stanton & Phil A. Silva, *Adult Physical Health Outcomes of Adolescent Girls with Conduct Disorder, Depression, and Anxiety*, 37 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 594 (1998).
35. Emily G. Marston, Candic Odgers, N. Dickon Reppucci & Marlene M. Moretti, Health Outcomes for High Risk Girls Transitioning to Adulthood, Talk Presented at the Annual Meeting of the American Psychology-Law Society, San Antonio, TX (March 2009).
36. Downey, Irwin, Ramsay & Ayduk, *supra* note 10.

Anger rumination (controlling for sadness rumination) was uniquely related to anger, relational aggression and overt aggression.

adolescents. Consistent with findings from the Virginia site, angry expectations of rejection were found to be related to both overt and relational aggression in females; this finding, however, did not emerge for males, as neither angry nor anxious expectations of rejection were predictive of either form of aggression.[37]

Sex-specific relationships were also observed in these adolescents when examining the role of both angry and anxious expectations of rejection in the association between childhood maltreatment and later aggressive behavior. Maltreatment (maternal and paternal) was found to predict both overt and relational aggression in males, but a similar association was not present in females. With regards to the role of RS, sex-specific interactions between levels of RS and a history of maltreatment were also found in this sample. In girls, those with high levels of anxious expectations of rejection who reported a history of maltreatment were found to have increased levels of both overt and relational aggression compared to girls with lower levels of anxious expectations.[38] This interaction between anxious expectations of rejection and a history of maltreatment was not found to be predictive of either form of aggression in boys. Among these males, those high in angry expectations of rejection with a history of maltreatment were found to engage in higher levels of relational aggression than those low in angry expectations. Angry expectations of rejection and a history of maltreatment did not predict either form of aggression in girls.

Gender differences were also found to play a role in the relationship between attachment and aggression.[39] Girls but not boys with high levels of RS displayed higher levels of anxiety about attachment relationships. High-risk boys, on the other hand, displayed higher levels of avoidance of attachment relationships and this avoidance was related to aggression directed toward their romantic partners. Most importantly, angry expectations of rejection were found to play a role in the association between anxiety about attachment relationships and aggressive behavior specifically in these high-risk girls. High levels of angry expectations in girls who had attachment anxiety significantly predicted higher levels of aggression toward romantic partners. This finding is consistent with previous research on the role of RS in adolescent girls,[40] suggesting that girls who have anxious attachment styles in their relationships with others respond aggressively when they feel threatened with rejection.

In sum, findings from both the Virginia and Vancouver GAP sites, in combination with previous research, confirm the role of RS in aggression among high-risk girls. Evidence for the role of RS in aggression among high-risk boys was less robust yet still present. Other studies provide stronger evidence that RS is important among males; for example, RS was found to be related to intimate partner violence in males specifically.[41] Thus, it is important to recognize that RS influences high-risk girls and boys but these effects appear to be somewhat different. Further research on sex differences in RS is required, especially within high-risk groups.

WAS RUMINATION RELATED TO AGGRESSION AMONG HIGH-RISK ADOLESCENT GIRLS AND BOYS?

Rumination among high-risk youth was also investigated as part of the GAP (Vancouver site).[42] Anger rumination (controlling for sadness rumination) was uniquely related to anger, relational aggression, and overt aggression. These results are consistent with previous research on adults demonstrating a link between anger rumination and anger,[43] and anger rumination and aggression.[44] Our results confirm that anger rumination operates similarly in adolescents and adults and is specifically and distinctly (i.e., controlling for and separate from sadness rumination) related to overt and relational forms of aggression.

Not only did anger rumination predict both relational and overt aggression, but this association was independent of anger. In other words, the cognitive act of repeatedly think-

37. Tania Bartolo, Ruth Coupland & Marlene M. Moretti, Examining the Relationship Between Rejection Sensitivity and Psychopathy in At-Risk Male and Female Adolescents, poster presented at the Banff XLI International Conference on Behavioural Science, Psychopathic Traits in Youth: Research and Practice, Banff, AB (March 2009).
38. Tania Bartolo & Marlene M. Moretti, Examining the Relationship Between Childhood Maltreatment and Adolescent Aggression: The Role of Rejection Sensitivity, *in* Childhood Maltreatment: Associations with Personality, Interpersonal and Behaviour Problems in Justice-Involved Adolescent Girls, paper presented as part of Symposium, Childhood Maltreatment: Associations with Personality, Interpersonal and Behavior Problems in Justice-Involved Adolescent Girls, American Psychology-Law Society Annual Conference, Vancouver, BC (March 2010).
39. Ingrid Obsuth, Marlene M. Moretti & Andree Steiger, The Role of Rejection Sensitivity in the Relations Between Attachment and Aggression in High Risk Boys and Girls, talk presented at the Biennial Meeting of the Society for Research in Child Development, Denver, CO (April 2009).
40. Downey, Irwin, Ramsay & Ayduk, *supra* note 10.
41. Downey, Feldman & Ayduk, *supra* note 3.
42. Maya Peled & Marlene M. Moretti, *Rumination on Anger and Sadness in Adolescence: Fueling of Fury and Deepening of Despair*, 36 J. Clinical Child & Adolescent Psychol. 66 (2007).
43. Brad J. Bushman, *Does Venting Anger Feed or Extinguish the Flame? Catharsis, Rumination, Distraction, Anger, and Aggressive Responding*, 28 Personality & Soc. Psychol. Bull. 724 (2002); Cheryl L. Rusting & Susan Nolen-Hoeksema, *Regulating Responses to Anger: Effects of Rumination and Distraction on Angry Mood*, 74 J. Personality & Soc. Psychol. 790 (1998).
44. Jon P. Maxwell, *Anger Rumination: An Antecedent of Athlete Aggression?* 5 Psychol. Sport & Exercise 279 (2004); Maya Peled & Marlene M. Moretti, *Ruminating on Rumination: Are Rumination on Anger and Sadness Differentially Related to Aggression and Depressed Mood?* 32 J. Psychopathology & Behav. Assessment 108 (2009).

ing about one's angry thoughts has a direct relation with aggression, independent of whether one *feels* angry. This is important because it suggests that interventions must focus not only on reducing and controlling feelings of anger (the emotional component) but also on identifying and exiting rumination cycles (i.e., the cognitive component). Mindfulness-based cognitive therapy (MBCT)[45] has shown promising results in reducing sadness rumination and depressive relapses, and it might be useful to evaluate whether this approach could help to decrease anger rumination, anger, and aggression.

We also found that sadness rumination (controlling for anger rumination) uniquely predicted depression, which replicated previous research on rumination and depression in adolescence[46] and confirmed previous findings in the adult literature on the unique relation between sadness rumination (and not anger rumination) and depressive symptoms. Interestingly, our results showed that among youth with the same levels of anger rumination, those with higher levels of sadness rumination appear *less* at risk of acting aggressively. In this sense, the presence of depressive rumination may be a buffer against aggressive acting out.

Important differences between girls and boys emerged in our study. First, the at-risk adolescent girls reported more anger rumination compared to boys, a finding that is different from studies with adults where levels have been generally comparable.[47] It is not clear if our findings reflect differences in clinical versus normative samples, or whether they are due to development shifts whereby anger rumination is particularly elevated during adolescence for girls compared to boys. Future studies assessing clinical and normative adolescent samples will be valuable for determining the comparability of results in these two populations. Similar research with clinical adult populations with defining features of anger and aggression, such as adults in forensic facilities, would be useful for determining whether women in these settings demonstrate higher levels of anger rumination compared to men.

SOCIAL-COGNITIVE RISK AND THE JUSTICE SYSTEM

We have presented an array of findings that demonstrate how dysfunctional interpersonal expectations and the inability to inhibit repetitive dysfunctional thought patterns increase risk for aggressive behavior and various types of psychopathology both concurrently and prospectively. We have also shown that child maltreatment places children at risk for developing these interpersonal expectations. Girls seem particularly sensitive to the effects of dysfunctional interpersonal beliefs and expectations and, compared to boys, these processes are more likely to increase their aggressiveness within relationships.

Social-cognitive processes generally operate automatically and without awareness. These processes are unintended and often extraordinarily difficult to inhibit.

It is critical to recognize that social-cognitive processes generally operate automatically and without awareness. These processes are unintended and often extraordinarily difficult to inhibit. Thus, for example, girls who quickly perceive and react to interpersonal threat with aggression, and who are unable to stop ruminating on such events, are not doing so with purpose or intention. Such experiences are typically deeply distressing and compromise the ability of individuals to cope with other day-to-day demands. This is likely particularly problematic during adolescence as the capacity for planning, anticipation of outcomes, and inhibition is less well developed than in adulthood.[48]

How does this relate to the juvenile judicial system? First, the question of intention is critical in determining sentencing. One might argue, as others have,[49] that adolescence is a period of reduced responsibility by virtue of neuro-psychological immaturity. This immaturity is most likely more pronounced among girls who have experienced maltreatment and have developed a sensitivity and tendency to react strongly and aggressively to interpersonal threat. Even though they may fully understand that their actions are wrong their competence in translating this into behavioral control likely falls short. Such factors should be taken into consideration in reaching conclusions about their intent and their capacity to have acted otherwise.

Adolescence is a period of change and rapid development. As adolescents move toward adulthood their capacity to be aware of and inhibit their emotional reactions to interpersonal stress increases, as does their ability to regulate thought processes and behavior. We also know that beliefs and expectations about interpersonal relationships are greatly influenced by experience. Downey and others[50] have described this as a dynamic process, whereby positive interpersonal experiences alter expectations and reactions to interpersonal

45. Patricia C. Broderick, *Mindfulness and Coping with Dysphoric Mood: Contrasts with Rumination and Distraction*, 29 COGNITIVE THERAPY & RES. 501 (2005); S. Helen Ma & John D. Teasdale, *Mindfulness-Based Cognitive Therapy for Depression: Replication and Exploration of Differential Relapse Prevention Effects*, 72 J. CONSULTING & CLINICAL PSYCHOL. 31 (2004).
46. Rebecca J. Park, Ian M. Goodyear & John D. Teasdale, *Effects of Induced Rumination and Distraction on Mood and Overgeneral Autobiographical Memory in Adolescent Major Depressive Disorder and Controls*, 45 J. CHILD PSYCHOL. & PSYCHIATRY 996 (2004); Jennifer S. Silk, Laurence Steinberg & Amanda S. Morris, *Adolescents' Emotion Regulation in Daily Life: Links to Depressive Symptoms and Problem Behavior*, 74 CHILD DEV. 1869 (2003).
47. Sukhodolsky, Golub & Cromwell, *supra* note 12.
48. Marlene Moretti & Maya Peled, *Adolescent-Parent Attachment: Bonds that Support Healthy Development*, 9 PAEDIATRICS & CHILD HEALTH 551 (2004); Peled & Moretti, *supra* note 42.
49. Laurence Steinberg & Elizabeth S. Scott, *Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty*, 58 AM. PSYCHOL. 1009 (2003).
50. Downey, Irwin, Ramsay & Ayduk, *supra* note 10.

situations. As a result, intervention can be extremely productive in reducing risk especially if treatment focuses on how girls perceive and react to their experiences with others. Building self-regulatory and social skills will also help girls who are at risk for aggressive behavior to approach relationships with less anxiety and anger, and to respond more positively to new social opportunities. Likewise, effective treatment for rumination, such as cognitive behavior therapy, can assist them in breaking free of maladaptive thinking and in reducing distress, thereby lowering their risk for aggression.

Our findings and those of others clearly have relevance for sentencing and treatment recommendations. Assessment of these risk factors can play a significant role in informing the courts and those involved in treatment delivery.

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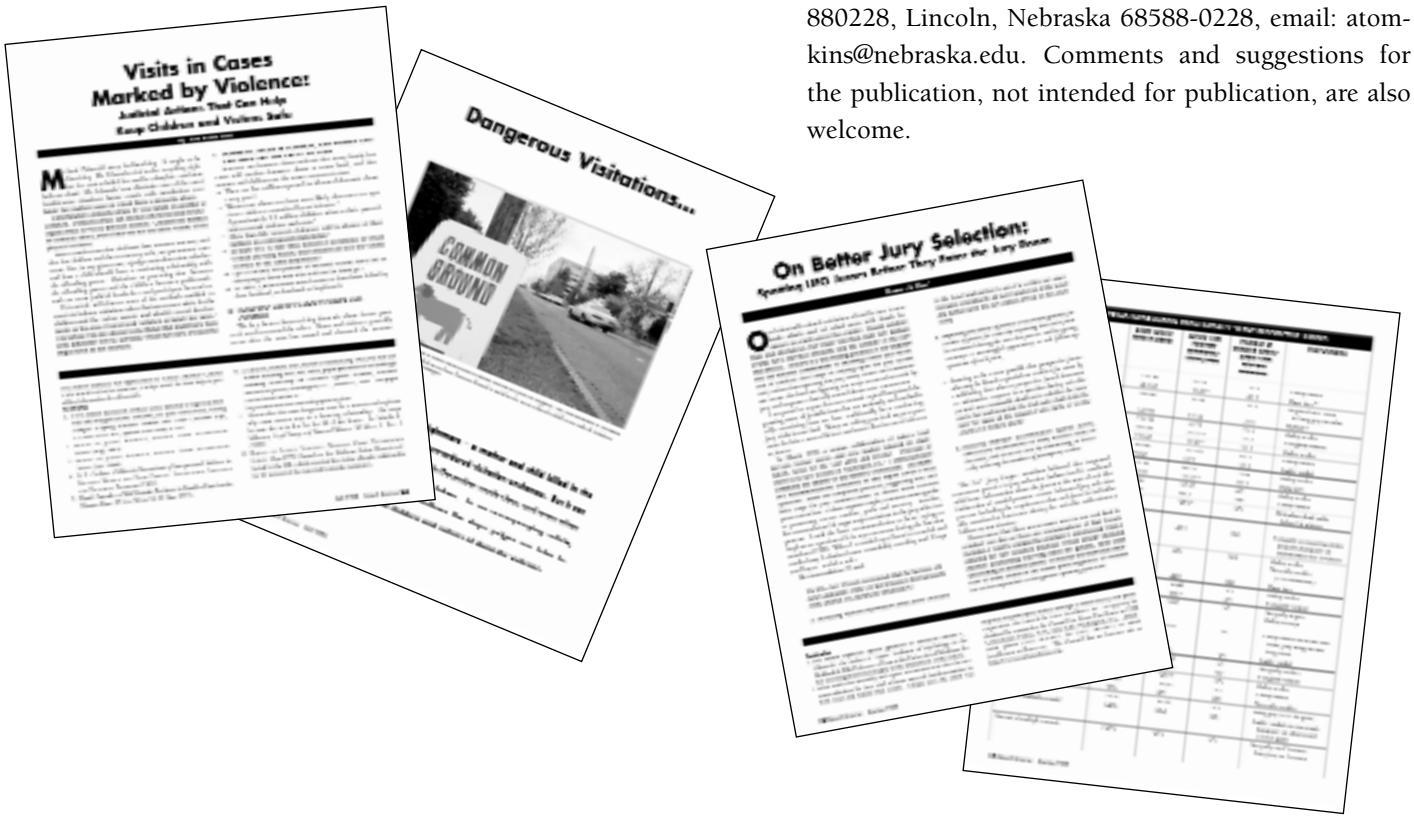

Romantic Relationships Matter for Girls' Criminal Trajectories:

Recommendations for Juvenile Justice

Barbara A. Oudekerk & N. Dickon Reppucci

Ideally, contact with the juvenile justice system provides high-risk girls with an opportunity to receive intervention services, which will instigate their desistance from crime and promote competence in important adult developmental tasks, such as work, marriage, and parenting. Emerging research provides strong evidence that romantic relationships play an important and complex role in girls' criminal trajectories,[1] and interventions designed with a clear understanding of the associations between relationship outcomes, partner characteristics, and offending will be the most likely to reduce criminal activity and promote self-sufficiency in adulthood.

Indeed, involvement in delinquency and/or crime in adolescence is a consistent and robust predictor of negative outcomes —including victimization and violence—within girls' future romantic relationships.[2] This is not too surprising, given that most youth begin to form partnerships with only the training they have acquired through prior interpersonal relationships, and many girls who resort to crime possess long histories of conflict and aggression within the context of peer and family relationships.[3] In turn, poor-quality partnerships are known to have negative and long-term effects on girls' health, general functioning, and, of foremost importance to juvenile justice professionals, criminal trajectories.[4]

Until recently, romantic partners' effects on antisocial behavior received little attention, probably because the focus has largely been on male juvenile offenders, and male peers were assumed to have a stronger influence than romantic partners on boys' antisocial behavior.[5] However, relationships are very important to girls' sense of self and well-being,[6] and existing research has demonstrated a consistent pattern of findings, which illustrate that romantic relationships play an important role in whether girls will offend in adolescence and adulthood. This article provides a summary of empirical research on the associations between romantic relationship characteristics and involvement in antisocial behavior. In addition, we present findings from the Gender and Aggression Project—Virginia Site[7] to illustrate the level of violence within romantic relationships among *incarcerated* girls, theoretically the most at-risk girls in the juvenile justice system.

WHY SHOULD JUVENILE JUSTICE PROFESSIONALS BE CONCERNED ABOUT THE QUALITY OF ROMANTIC RELATIONSHIPS AMONG GIRLS WHO OFFEND IN ADOLESCENCE?

Motive (1): Romantic partners can influence whether girls who offended in adolescence will recidivate or desist from crime in adulthood. Adolescents who commit crimes are likely to form romantic relationships with partners who are involved in or who encourage antisocial behavior, a phenomenon referred to as "assortative mating."[8] Boys *and* girls with a history of antisocial behavior are equally likely to engage in assortative mating; this is important because involvement with an antisocial partner in adulthood is a significant risk factor for continued involvement in criminal behavior (i.e., recidivism) among young adult men *and* women,[9] even after accounting for friends' antisocial behaviors.[10] However, among women,

Footnotes

1. Terrie. E. Moffitt et al., Sex Differences in Antisocial Behaviour: Conduct Disorder, Delinquency, and Violence in the Dunedin Longitudinal Study (Sidney Crown & Alan Lee eds., 2001).
2. Lynn Magdol et al., *Developmental Antecedents of Partner Abuse: A Prospective-Longitudinal Study*, 107 J. Abnormal Psychol. 375 (1998); Johanne Vezina & Martine Hebert, *Risk Factors for Victimization in Romantic Relationships of Young Women: A Review of Empirical Studies and Implications for Prevention*, 8 Trauma, Violence, & Abuse 33 (2007).
3. Candice L. Odgers & Marlene. M. Moretti, *Aggressive and Antisocial Girls: Research Update and Challenges*, 1 Int'l J. Forensic Mental Health 103 (2002).
4. Moffitt et al., *supra* note 1; Diann. M. Ackard et al., *Long-Term Impact of Adolescent Dating Violence on the Behavioral and Psychological Health of Male and Female Youth*, 151 J. Pediatrics 476 (2007); Victoria L. Banyard & Charlotte Cross, *Consequences of Teen Dating Violence: Understanding Intervening Variables in Ecological Context*, 14 Violence Against Women 998 (2008); Timothy A. Roberts et al., *Longitudinal Effect of Intimate Partner Abuse on High-Risk Behavior Among Adolescents*, 157 Archives Pediatrics & Adolescent Med. 875 (2003).
5. Dana L. Haynie et al., *Adolescent Romantic Relationships and Delinquency Involvement*, 43 Criminology 177 (2005).
6. Mark W. Baldwin et al., *Cued Activation of Relational Schemas: Self-Evaluation and Gender Effects*, 35 Can. J. Behav. Sci. 153 (2003); Susan E. Cross & Laura Madson, *Models of the Self: Self-Construals and Gender,* 122 Psychol. Bull. 5 (1997); Odgers & Moretti, *supra* note 3, at 103.
7. Candice Odgers, Marlene M. Moretti & N. Dickon Reppucci, *A Review of Findings from the Gender and Aggression Project: Informing Juvenile Justice Policy and Practice through Gender Sensitive Research* (this issue).
8. Moffitt et al., *supra* note 1; David Quinton et al., *Partners, Peers, and Pathways: Assortative Pairing and Continuities in Conduct Disorder*, 5 Dev. & Psychopathology 763 (1993).
9. Moffitt et al., *supra* note 1.
10. Ronald L. Simons et al., *A Test of Life-Course Explanations for Stability and Change in Antisocial Behavior from Adolescence to Young Adulthood*, 40 Criminology 401 (2002).

dating *prosocial* or *non-criminal* partners in adulthood appears to be a protective factor against the risk for adulthood offending. That is, among girls who offended in adolescence, those who date antisocial partners in adulthood are at an increased risk for persisting in criminal activity whereas those who date prosocial partners are more likely to desist from a life of crime.[11] In contrast, men who offended in adolescence are more likely to offend in adulthood, even if they date prosocial partners in adulthood.[12] Thus, it seems that finding a "good" partner may be one of the factors that pull young women away from a life of crime.

Motive (2): Negative experiences within early romantic relationships often precede delinquency. Research consistently suggests that adolescent girls who become involved in "risky" partnerships are at increased odds for engaging in risk-taking behaviors, including drinking, illegal drug use, and other forms of delinquency.[13] Much of this evidence stems from analysis of survey data from the Longitudinal Study of Adolescent Health (Add Health) collected from a nationally representative sample of adolescent boys and girls ranging in age from 11 to 21 years old.[14] The first survey ("Wave 1") was administered when adolescents were, on average, about 16 years old, and follow-up interviews ("Wave 2") were conducted about one year later. Within Wave 1, researchers found girls who were in partnerships with "bad boys" were more likely to engage in offending behavior. That is, partners' delinquency was significantly related to higher levels of involvement in minor and serious delinquency, even after controlling for peer delinquency, romantic relationship characteristics (e.g., duration of romantic relationship), and socio-demographic characteristics (e.g., family structure, parent education).[15]

Additional research conducted on the Add Health data set has revealed two relationship characteristics associated with initiation into delinquency. First, victimization within the context of romantic relationships was associated with increased nonviolent delinquency, including running away, destruction of property, and theft, among girls (but not boys).[16] Compared to non-abused girls, girls who experienced physical and/or emotional abuse within romantic relationships between Waves 1 and 2 also reported increased levels of nonviolent delinquency during this time. This association held even after controlling for socio-demographic characteristics (e.g., sex, age, ethnicity, family composition, parental education), relationship characteristics (e.g., abuse prior to the first interview, number of sexual partners between the first and second interview), and baseline reports of antisocial behavior, violence, substance use, suicidal behavior, and depression. However, receiving partner violence was not significantly related to increased *violent* offending, such as fighting and/or using a weapon.[17]

Next, much research has documented that adolescent girls who date older partners are at increased risk for negative sexual experiences,[18] and social scientists have stressed the importance of exploring the impact of partner age differences on other developmental outcomes in order to inform policymakers' decisions around age of consent, statutory rape, and child abuse laws.[19] Analyses conducted with a subset of girls enrolled in Add Health provided evidence that dating older partners, defined as at least one year older, was a risk factor for involvement in general (i.e., nonviolent and/or violent) delinquency. After accounting for common causes of adolescent problem behaviors (e.g., poor attachments, risk-taking peers, poor psychological well-being), girls who began dating an older partner between Waves 1 and 2 reported significantly more involvement in delinquency in Wave 2 than girls who did not begin dating an older partner.[20]

Together, these findings demonstrate that negative experiences in early adolescent romantic relationships (i.e., experiencing violence, dating antisocial partners, and/or dating older partners) are important to girls' initiation into crime and delinquency. Thus, many girls who come into contact with the juvenile justice system have already experienced negative and likely harmful relationships with romantic partners, which might place them at increased risk for failure in adulthood partnerships.

The research reviewed to this point has focused mainly on girls within school and other normative settings. To date, very few studies have examined the effects of partner characteristics among girls who are deeply involved in the juvenile justice system. In one study, Cauffman, Farruggia, and Goldweber[21] found that seriously offending girls (i.e., girls who had com-

11. MOFFITT ET AL., *supra* note 1; Quinton et al., *supra* note 8, at 763; Simons et al., *supra* note 10, at 401.
12. MOFFITT ET AL., *supra* note 1; Simons et al., *supra* note 10, at 401.
13. Elizabeth Cauffman et al., *Bad Boys or Poor Parents: Relations to Female Juvenile Delinquency*, 18 J. RES. ON ADOLESCENCE 699 (2008); Haynie et al., *supra* note 5, at 177; Amy M. Young & Hannah d'Arcy, *Older Boyfriends of Adolescent Girls: The Cause or a Sign of the Problem?* 36 J. ADOLESCENT HEALTH 410 (2005).
14. PETER S. BEARMAN ET AL., THE NATIONAL LONGITUDINAL STUDY OF ADOLESCENT HEALTH: STUDY DESIGN (1997), http://www.cpc.unc.edu/projects/addhealth/design.
15. Haynie et al., *supra* note 5, at 177.
16. Roberts et al., *supra* note 4, at 875.
17. *Id.*
18. Joyce Abma et al., *Young Women's Degree of Control Over First Intercourse: An Exploratory Analysis*, 30 FAM. PLAN. PERSP. 12 (1998); Elm Begley et al., *Older Partners and STD Prevalence among Pregnant African American Teens*, 30 SEXUALLY TRANSMITTED DISEASES 211 (2003); Jennifer Manlove et al., *Young Teenagers and Older Sexual Partners: Correlates and Consequences for Males and Females*, 38 PERSP. ON SEXUAL & REPROD. HEALTH 197 (2006); Barbara V. Marin et al., *Older Boyfriends and Girlfriends Increase Risk of Sexual Initiation in Young Adolescents*, 27 J. ADOLESCENT HEALTH 409 (2000).
19. Denise A. Hines & David Finkelhor, *Statutory Sex Crime Relationships between Juveniles and Adults: A Review of Social Scientific Research*, 12 AGGRESSION & VIOLENT BEHAV. 300 (2007); Harold Leitenberg & Heidi Saltzman, *College Women who had Sexual Intercourse When They Were Underage Minors (13–15): Age of Their Male Partners, Relation to Current Adjustment, and Statutory Rape Implications*, 15 SEXUAL ABUSE: J. RES. & TREATMENT 135 (2003).
20. Young & d'Arcy, *supra* note 13, at 410.
21. Cauffman et al., *supra* note 13.

mitted a felony offense) dated partners who were on average two to three years older than them, but these age differences did not seem to predict an increased rate of delinquency. Instead, the key factor related to girls' involvement in delinquent behavior was whether their partners encouraged their delinquency.

Motive (3): Promoting healthy romantic relationships might reduce intergenerational transmission of risk for offending and violence. Girls who are involved in delinquency are more likely than prosocial girls to date antisocial partners and experience conflict and violence within their romantic relationships.[22] Girls who commit crimes are also more likely to bear children in adolescence[23] and, unfortunately, are more likely to engage in violence against their children.[24] In turn, children born to high-risk, teenage mothers are at greater risk for unstable employment, academic failure, early childbearing, and, most importantly, violent offending.[25] Furthermore, research consistently demonstrates that children who witness parental violence (compared to those who do not) are more likely to become involved in violent romantic relationships when they grow older.[26] Therefore, interventions that promote the formation of healthy partnerships among women who offended in adolescence might decrease intergenerational transmission of partner violence and offending.

WHAT IS THE QUALITY OF ROMANTIC RELATIONSHIPS AMONG INCARCERATED GIRLS?

Findings from the Gender and Aggression Project—Virginia Site[27] allowed us to construct profiles of the amount of violence and degree of partner age differences present in the romantic relationships of incarcerated girls (see Table 1 for a summary). In Wave 1, girls (mean age between 16 and 17 years) were asked to rate whether they had engaged in or experienced five physical abuse items within six months before incarceration: (1) pushed, grabbed, or shoved in an argument, (2) threw something toward, (3) slapped, (4) kicked, bit, or hit with a fist, and (5) hit with an object. Over half (56.1%) the girls had experienced at least one of these abusive acts within romantic relationships, and 14.4% had experienced all five types of physical abuse. Over two-thirds (68.2%) reported perpetrating one form of violence against their romantic partner, and 24.2% had perpetrated all five types of abuse against their partner. Overall, 72% of girls reported encountering violence, either as a victim or perpetrator, in their romantic relationships.

Furthermore, many girls were victims of statutory rape (i.e., carnal knowledge of a child/adolescent under Virginia law), meaning they reported dating *significantly* older romantic partners in early/mid-adolescent relationships. Participants were asked to report the largest age difference between them and one of their older romantic partners before incarceration. Only a subset (n = 81) of girls completed these questions, but on average, they reported dating partners who were 6.87 years older than them. The median age difference was 5 years older, and partners ranged from 0 to 30 years older. One-third (33.6%) of the girls had dated a partner who was 8 or more years older than them. The prevalence of older partners in this incarcerated sample of girls is more extreme than in samples of non-incarcerated seriously offending girls,[28] suggesting that

TABLE 1: RISKY ROMANTIC RELATIONSHIP CHARACTERISTICS AMONG INCARCERATED GIRLS

RELATIONSHIP CHARACTERISTICS	%
VICTIMIZATION BY ROMANTIC PARTNER	
Pushed, grabbed, or shoved	45.5
Thrown something at	36.6
Slapped	37.1
Kicked, bit, or hit with a fist	32.8
Hit with an object	22.7
% Endorsed at least 1 form of violence	56.1
% Endorsed all 5 forms of violence	14.4
VIOLENCE TOWARD ROMANTIC PARTNER	
Pushed, grabbed, or shoved	56.5
Thrown something at	46.2
Slapped	50.0
Kicked, bit, or hit with a fist	41.7
Hit with an object	34.1
% Endorsed at least 1 form of violence	68.2
% Endorsed all 5 forms of violence	24.2
OVERALL RELATIONSHIP VIOLENCE	
Violence Toward or From Partner	72.0
PARTNER AGE DIFFERENCES	
1 - 3 years age difference	30.9
4 - 7 years age difference	35.5
8+ years age difference	33.6

Notes. These data were collected from 141 incarcerated girls who were enrolled in Wave 1 of the Gender and Aggression Project—Virginia Site.

22. MOFFITT ET AL., *supra* note 1.
23. *Id.*
24. Candice L. Odgers et al., *Female and Male Antisocial Trajectories: From Childhood Origins to Adult Outcomes*, 20 DEV. & PSYCHOPATHOLOGY 673 (2008).
25. Sara Jaffee et al., *Why Are Children Born to Teen Mothers at Risk for Adverse Outcomes in Young Adulthood? Results from a 20-Year Longitudinal Study*, 13 DEV. & PSYCHOPATHOLOGY 377 (2001).
26. Miriam K. Ehrensaft et al., *Intergenerational Transmission of Partner Violence: A 20-Year Prospective Study*, 71 J. CONSULTING & CLINICAL PSYCHOL. 741 (2003).
27. Odgers, Moretti & Reppucci, *supra* note 3.
28. Cauffman et. al., *supra* note 13, at 699.

incarcerated girls may be experiencing some of the *riskiest* romantic relationship contexts.

WHAT TYPES OF RELATIONSHIPS DO GIRLS BECOME INVOLVED IN AFTER LEAVING A JUVENILE CORRECTIONAL FACILITY?

Table 2 summarizes risky relationship characteristics among girls who participated in Wave 2 of the Gender and Aggression Project and demonstrates two main findings. First, girls were still experiencing high rates of relationship violence in late adolescence (Wave 2; mean age about 19 years), after being released from the correctional center. Just under half (41.4%) the girls had experienced at least one form of physical victimization from their romantic partners, and 56.6% had perpetrated violence against their romantic partners. About 60% of girls encountered romantic relationship violence as a victim or perpetrator. Importantly, even when perpetration and victimization rates are equal within relationships, there is evidence that women victims are more likely than men victims to experience physical injury and diminished mental health and well-being.[29]

Second, and consistent with past research,[30] this sample of incarcerated girls were significantly likely to form romantic relationships with antisocial partners. A vast number of girls, 81.6%, dated a partner who engaged in at least one form of antisocial behavior, and 76.3% of girls' romantic partners had engaged in *violent* behavior. Importantly, it is difficult to determine whether girls choose "bad boys" as romantic partners or whether other factors (e.g., limited choice of potential partners) predispose or render youth vulnerable to involvement with antisocial partners.

Surprisingly, even though many girls reported dating antisocial boyfriends and experiencing violence and victimization within their relationships, 75% of girls felt strongly that their partners cared for and supported them.[31] More research is needed to better understand the nature of positive experiences within abusive romantic relationships. On one hand, girls who are satisfied with their partners might be less inclined to discuss their partners' abusive and antisocial behaviors with authorities and may be less willing to participate in relationship-focused interventions. Alternatively, if it is the case that these relationships contain genuine strengths, then it will be important to identify these types of "relationship assets," even among the highest-risk relationships, and leverage positive aspects of relationships to encourage desistance from crime.

DO CHARACTERISTICS OF INCARCERATED GIRLS' ROMANTIC RELATIONSHIPS MATTER FOR DESISTANCE FROM CRIME?

In Wave 2 of the Gender and Aggression Project, girls were asked to report if they had ever engaged in (a) 6 violent re-

TABLE 2: RISKY ROMANTIC RELATIONSHIP CHARACTERISTICS FOR GIRLS AFTER RELEASE FROM INCARCERATION

RELATIONSHIP CHARACTERISTICS	%
RELATIONSHIP VIOLENCE	
VICTIMIZATION BY ROMANTIC PARTNER	
Pushed, grabbed, or shoved	36.4
Kicked, bit, or hit with a fist	16.2
Hit with an object	12.1
% Endorsed at least 1 form of violence	41.4
% Endorsed all 3 forms of violence	7.1
VIOLENCE TOWARD ROMANTIC PARTNER	
Pushed, grabbed, or shoved	51.5
Kicked, bit, or hit with a fist	27.3
Hit with an object	23.2
% Endorsed at least 1 form of violence	56.6
% Endorsed all 3 forms of violence	19.2
OVERALL RELATIONSHIP VIOLENCE	
Violence Toward or From Partner	59.6
PARTNERS' ANTISOCIAL BEHAVIOR	
NONVIOLENT BEHAVIOR	
Purposefully destroyed or damaged property	38.1
Sold drugs	45.9
VIOLENT BEHAVIOR	
Carried a knife or a gun	43.3
Hit or threatened someone	64.6
Been in a physical fight	64.9
Been hurt in a physical fight	39.6
% OF PARTNERS WHO ENGAGED IN:	
at least 1 antisocial behavior	81.6
at least 1 nonviolent behavior	56.1
at least 1 violent behavior	76.3

Notes. These data were collected from 102 girls who participated in W-2 of the Gender and Aggression Project—Virginia Site.

29. Barbara J. Morse, *Beyond the Conflict Tactics Scale: Assessing Gender Differences in Partner Violence*, 10 VIOLENCE & VICTIMS 251 (1995).
30. *See, e.g.*, Simons et al., *supra* note 10, at 401.
31. In late adolescence, participants also completed a 10-item measure assessing their perceptions of validation and caring within romantic relationships (Friendship Quality Questionnaire; Parker & Asher, 1993). Scores could potentially range between 1 and 5, with higher scores representing perceptions of more caring and validation in relationships, and 75% of girls received mean scores between 4 and 5.

offenses: carrying a knife or gun, robbery, using a weapon in a fight, fist fighting, attacking someone with the idea of seriously hurting or killing them, or shooting at someone, and (b) 6 nonviolent re-offenses: driving while drunk or high, selling pot, selling hard drugs, theft, stealing a vehicle, or prostitution. Only 30.4% reported involvement in nonviolent recidivism, but over half, 58.8%, reported that they engaged in at least one violent re-offense.

We tested whether risky relationship characteristics in Wave 1 (i.e., victimization by partner and violence toward partner in mid-adolescence)[32] and Wave 2 (i.e., victimization by partner, violence toward partner, partner's violent behavior, and partner's nonviolent delinquency in late adolescence) predicted self-reported violent and nonviolent offending in Wave 2.[33] Findings revealed that 71% of the girls who were being physically victimized by their partners in late adolescence reported engaging in delinquent offending during that same time. In contrast, only 22% of girls who did not experience partner violence engaged in nonviolent offending during late adolescence.

Early victimization experiences and partners' violent offending were strong predictors of girls' *violent* recidivism. Girls who experienced violence in mid-adolescence were 10.82 times more likely than girls who were not victimized to commit a violent offense in late adolescence. Furthermore, girls whose partners were engaging in violent offending in late adolescence were 5.32 times more likely to commit a violent re-offense, compared to girls with partners who were not involved in violent antisocial behavior. In sum, our data supports past research[34] and provides further evidence that girls who have negative experiences in early romantic relationships are at increased odds for continuing to engage in violent antisocial behavior as they mature.

RECOMMENDATIONS FOR PROMOTING HEALTHY ROMANTIC RELATIONSHIPS AND ENCOURAGING DESISTANCE FROM CRIME AMONG ADOLESCENT GIRLS INVOLVED IN DELINQUENCY

Provide routine screenings upon entry into the juvenile justice system to assess the quality of girls' experiences in past romantic relationships and girls' risk for subsequent engagement in negative and harmful romantic relationships. Screenings will likely provide the most accurate assessments if they are conducted by professionals who recognize and understand adolescents' developmental competencies and limitations.

Provide treatment and educational services that focus on forming healthy interpersonal relationships, specifically emphasizing healthy romantic relationships.

Connect juvenile-justice-involved youth to programs, organizations, and/or institutions (e.g., schools, stable employment, volunteer programs) wherein they will be likely to meet prosocial partners.

THE FINAL MESSAGE FOR JUVENILE JUSTICE PROFESSIONALS

Although research on romantic relationships is just beginning to burgeon, the emerging findings consistently suggest that girls who engage in antisocial behavior are at risk for forming romantic relationships with antisocial partners, and even though many girls report satisfaction with their partners, the majority of these relationships are characterized by high rates of violence. In turn, girls who become involved in negative and harmful partnerships are more likely to continue offending, whereas girls who form relationships with prosocial partners are more likely to desist from crime. Thus, juvenile justice interventions that promote the formation of healthy romantic relationships may contribute to the reduction of recidivism and encourage positive outcomes in adulthood.

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32. Partner age differences were not examined because 22.5% of the data were missing.
33. Logistic regressions were conducted in SPSS. For predicting violent recidivism, model $\chi^2 = 27.71$, $p < .001$, Nagelkerke $R^2 = .35$. For predicting nonviolent recidivism, model $\chi^2 = 7.623$, $p = ns$, Nagelkerke $R^2 = .11$.
34. *See, e.g.*, Moffit et al., *supra* note 1.

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The newsletter of the American Judges Association, *Benchmark*, has been moved from print to electronic publication. If we have your email address on file, we will send *Benchmark* to you each time it is published. *Benchmark* is the official newsletter of the AJA, and it contains notice of AJA activities, elections, awards, and events. This move will help us make sure that you get timely notice of AJA information, and it will also help us in keeping AJA dues as low as possible. You will continue to receive *Court Review* in the mail.

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Translating Research into Intervention:

Lessons Learned and New Directions

Marlene M. Moretti, Margaret Jackson, & Ingrid Obsuth

The identification of etiological factors, risk profiles, and developmental trajectories that explain antisocial, aggressive, and violent behavior is essential to developing effective evidence-based programs that prevent and reduce such behavior in children and youth. What are the key findings from the Gender and Aggression research program that are relevant to the development and delivery of preventative and remedial interventions?

Almost invariably, justice-involved girls have been exposed to multiple forms of maltreatment and neglect. Not surprisingly, these experiences place them in a poor position to navigate the demands of adolescence and adulthood.

Girls involved in the justice system suffer from a wide range of mental health problems, many of which have emerged early in their lives. The vast majority are diagnosed with conduct disorder, and comorbidity with other disorders is exceedingly high.

Compared to justice-involved boys, girls are more likely to have experienced trauma, often linked to sexual abuse and other forms of maltreatment, and suffer from post-traumatic stress disorder.

Substance abuse and substance dependence disorders are often present in justice-involved girls. Age at first exposure falls in the pre- to early adolescent period and dependence develops quickly, within one to three years depending on the substance.

Interpersonal and social-cognitive vulnerabilities are common among justice-involved girls. These vulnerabilities are linked to early exposure to maltreatment. As a result, many girls express vigilance to possible interpersonal rejection and react with hostility and aggression. Justice-involved girls are insecurely attached in their relationships and struggle with high levels of anxiety about acceptance and rejection from others.

Not surprisingly, justice-involved girls are vulnerable to becoming involved with older, criminally involved males and are at risk of violence within intimate relationships.

Justice-involved girls are embedded in complex social-cultural contexts as a function of race, ethnicity, economic status, and neighborhood characteristics. Some of the diverse factors that coalesce to form these social-cultural contexts place these girls at risk; others buffer them from adversity. All are important to recognize and address in tailoring interventions to support healthy development.

How do these findings inform intervention? Below we discuss implications from these findings for intervention and policy recommendations.

I. PREVENT CHILD MALTREATMENT AND FAMILY VIOLENCE AND INTERVENE EARLY

First and foremost, the findings presented here and elsewhere[1] underscore the importance of prevention and early intervention. Specifically, these results and numerous other studies highlight the harmful and long-lasting effects of child maltreatment in the form of child abuse (physical, emotional, and sexual) and neglect. The message from this work is clear and simple: *Preventing child abuse and neglect must be a priority if we intend to reduce the frequency of child behavior problems and serious teen antisocial and delinquent behavior*. The frequency and impact of trauma as a result of maltreatment in the lives of justice-involved girls warrants special attention. While their male counterparts also experience traumatic events, the nature, timing, and effect of maltreatment and trauma on girls requires further examination and consideration in terms of treatment implications.

Although child characteristics, such as impulsivity and oppositionality, may play a role in triggering some forms of maltreatment, this does not discount the importance of focusing on preventing child maltreatment. On the contrary, it amplifies the importance of such measures, particularly for vulnerable children and their families. There is much to be gained from targeted early interventions for children at risk for developing behavior problems. But how early is early? Services can be provided to parents who show elevated risk factors *before the birth* of their child, or they can be provided to children and families at the first sign of significant behavior problems, usually in early childhood. Evaluation of services provided in either of these periods has produced highly impressive long-term positive effects. For example, a recent review of 14 such programs for ***children*** under the age of 5 revealed effects equivalent to approximately a 30% reduction in rates of maltreatment.[2]

Perhaps the best known of such programs is the Nurse Home Visitation[3] program, which provides home visits to

Footnotes

1. Meyer D. Glantz, James C. Anthony, Patricia A. Berglund, Louisa Degenhardt, Lisa Dierker, Amanda Kalaydjian, Kathleen R. Merikangas, Ayelet M. Ruscio, Joel Swendsen & Ronald C. Kessler, *Mental Disorders as Risk Factors for Later Substance Dependence: Estimates of Optimal Prevention and Treatment Benefits*, 39 PSYCHOL. MED. 1365 (2009).
2. Arthur J. Reynolds, Lindsay C. Mathieson & James W. Topitzes, *Do Early Childhood Interventions Prevent Child Maltreatment? A Review of Research*, 14 CHILD MALTREATMENT 182 (2009).
3. David L. Olds, *The Nurse-Family Partnership: An Evidence-Based Preventive Intervention*, 27 INFANT MENTAL HEALTH J. 5 (2006).

young unmarried teens *during their first pregnancy and up to the first two years* of the child's life. On average, each mother receives approximately nine visits in which they are provided with parenting education and assistance in accessing other social supports (e.g., maternal education opportunities). A fifteen-year follow-up evaluation revealed that the children of mothers who participated in this program had accrued significantly fewer arrests, convictions, and parole violations compared to the children of mothers who did not take part in this program.[4]

Similarly impressive results were found in the Perry Preschool program[5] in which high-risk parents (living in poverty; low education) are provided with weekly home visits and group meetings while their children receive $2\frac{1}{2}$-hour-long preschool classes over 30 weeks. A 37-year follow-up assessment revealed that children, who along with their parents participated in this program, were significantly less likely to be involved in criminal activity, had achieved higher levels of education, and were earning more in their occupations.

Results such as these provide promising and convincing clinical outcomes and underscore our moral and ethical obligation to provide early intervention services to children and families, particularly those at highest risk. Despite these compelling findings, programs of this nature are rarely funded. Arguments highlighting the economic advantages of targeted early interventions may be more convincing and successful in eliciting support. While the cost of service provision varied widely between programs, invariably these programs have been shown to save the government and tax payers millions of dollars. For example, the estimated rate of return for every dollar spent in the Perry Preschool program was between $6.87 and $16.14.[6] Even if we cared little about the social well-being of high-risk families and their children, the substantial economic benefits and cost savings alone should compel us to take action and invest in targeted interventions.

It is important to note that the clinical- and cost-effectiveness of these programs has not been considered specifically for girls versus boys. In this regard, it would be interesting to examine the potential of prenatal and early intervention in reducing the rate of maltreatment particularly for girls and examine the subsequent mental health and social benefits.

Moving beyond early childhood, several programs have demonstrated efficacy for reducing problem behavior. Almost universally, these programs target various aspects of parenting and the parent-child relationship.[7] Parent Management Training,[8] for example, is designed to reduce aggressiveness in children by teaching parents specific strategies to become more effective in promoting prosocial behavior in their children. This is achieved through step-by-step instruction about the use of reinforcement principles (rewards for prosocial behavior and negative consequences for aggressive behaviors), negotiation of rules, and behavior contracting. The efficacy of parent management training has been extensively evaluated demonstrating consistent and lasting post-treatment reductions in child aggressiveness and noncompliance.[9]

[Research r]esults such as these... underscore our moral and ethical obligation to provide early intervention services to children and families...

The Fast Track program[10] also targets parenting skills and delivers a range of services to families of children in grades 1 to 10 living in high-risk neighborhoods plagued with crime and poverty. Families receive parental support and parenting training, educational support through child tutoring, child mentoring, and social skills training. At nine years post-treatment children at the highest level of risk whose families received this intervention were significantly less likely to be diagnosed with conduct disorder than similar children from families which did not receive this treatment. Based on the number of averted conduct disorder cases achieved through attendance in the Fast Track program, it was estimated to save $3,481,433 for the entire sample included in the study, or $752,103 for each youth at the highest level of risk.[11] Again, few studies have examined gender differences in the effectiveness of these interventions, and of those which have, the majority fail to find significantly different effects for girls versus boys.[12]

4. David L. Olds, Charles R. Henderson Jr., Robert Cole, John Eckenrode, Harriet Kitzman, Dennis Luckey, Lisa Pettitt, Kimberly Sidora, Pamela Morris & Jane Powers, *Long-Term Effects of Nurse Home Visitation on Children's Criminal and Antisocial Behavior: 15-Year Follow-Up of a Randomized Controlled Trial*, 280 J. Am. Med. Ass'n 1238 (1998).
5. Milagros Nores, Clive R. Belfield, W. Steven Barnett & Lawrence Schweinhart, *Updating the Economic Impacts of the High/Scope Perry Preschool Program*, 27 Educ. Evaluation & Pol'y Analysis 245 (2005).
6. *Id.*
7. A sizable proportion of youth with severe behavior problems and those involved with the justice system reside outside their biological or adoptive parents' homes for temporary or extended periods of time. The program discussed in this paper can be used with alternate caregivers, such as foster parents, in such situations.
8. Alan E. Kazdin, Karen Esveldt-Dawson, Nancy H. French & Alan S. Unis, *Effects of Parent Management Training and Problem-Solving Skills Training Combined in the Treatment of Antisocial Child Behavior*, 26 J. Am. Acad. Child & Adolescent Psychiatry 416 (1987).
9. Alan E. Kazdin, Parent Management Training: Treatment for Oppositional, Aggressive, and Antisocial Behavior in Children and Adolescents (2005).
10. Conduct Problems Prevention Research Group, *Fast Track Randomized Controlled Trial to Prevent Externalizing Psychiatric Disorders: Findings from Grades 3 to 9*, 46 J. Am. Acad. Child & Adolescent Psychiatry 1250 (2007).
11. Conduct Problems Prevention Research Group, *Can a Costly Intervention Be Cost-Effective?* 63 Archives Gen. Psychiatry 1284 (2006).
12. Girls Study Group: Understanding and Responding to Girls' Delinquency (2008), http://girlsstudygroup.rti.org.

Research over the past two decades clearly highlights the profound importance of parent-teen relationships in determining a host of mental health and social-functioning outcomes.

II. ADDRESS SYSTEMIC ISSUES AND SOCIAL PROBLEMS AND TAILOR PROGRAMS TO NEEDS

Programs that integrate multiple treatment components, such as Multisystemic Therapy (MST),[13] tailor treatment plans to the needs of each family and include parent, teen and family intervention. Typical treatment components include family therapy, cognitive behavioral therapy for teens, and parenting training for parents. Several trials have supported the efficacy of MST compared to individual outpatient counseling or community treatment as usual in reducing recidivism and improving the quality of family relationships.[14] Additional research suggests that comparable effects can be achieved through typical community wraparound support.[15] It is clear that systemic issues such as family functioning, school, and community support have a strong impact on teen functioning. Providing broad-based support to each of these networks is critical to the health of families and teens. Tailoring intervention programs to the specific needs of families and teens makes good sense, particularly for youth with multiple mental health problems. In this regard, it is important to note that the broader range of mental health problems experienced by justice-involved girls versus boys warrants gender-sensitive programming. Girls in particular may require full-spectrum screening programs that assess both externalizing (e.g., conduct disorder, ADHD) and internalizing (e.g., depression, anxiety, PTSD) disorders, as well as substance use disorders. Developmental sequencing of disorders can be informative in shaping intervention for girls. For example, girls who develop substance use problems secondary to trauma and PTSD may require a different approach to treatment than girls who develop substance use problems in conjunction with conduct disorder and ADHD. Clearly research examining gender issues in the effectiveness of treatment approaches for girls versus boys is a priority and should precede the development of gendered services.

III. SUPPORT THE CAREGIVER-TEEN RELATIONSHIP TO FACILITATE HEALTHY DEVELOPMENT

Parenting and parent-child relationships continue to be critical in determining healthy development even as children move into adolescence and develop relationships outside of their families, including peer and romantic relationships. This is contrary to the common assumption that adolescence is a period of disengagement from parents and that parents have little effect on the well-being of their teens. Research over the past two decades clearly highlights the profound importance of parent-teen relationships in determining a host of mental health and social-functioning outcomes. Moreover, neurodevelopmental research findings suggest that the period between puberty and mid-adolescence is marked by rapid neurological growth and pruning, which increases sensitivity for the development of psychopathology. Healthy parent-teen relationships buffer development during this period and have been shown to exert protective effects for mental health and engagement in risk-taking behavior.

Our research findings emphasize the developmental importance of parent-child relationships as a precursor for healthy teen relationships. Recall that justice-involved girls commonly report a history of child maltreatment and these experiences set the foundations of their expectations about social relationships. They typically lack security in their relationships with their caregivers and are highly anxious about attachment. Not surprisingly, their interpersonal beliefs are marked by sensitivity and vigilance to rejection. At the same time, they are anxious to be accepted and may place themselves in risky contexts that lead to violence exposure and insidious socialization into a deviant lifestyle. Supporting the attachment relationship between adolescent girls and their parents (or alternative caregivers) can be effective in enhancing the mental and social well-being of girls. Attachment-focused interventions for adolescents are beginning to emerge. Attachment-Based Family Therapy[16] and Multiple-Family Group Intervention[17] show promising results.

In our work with high-risk teens, we have developed a brief manualized intervention (Connect Parent Group)[18] designed to support secure attachment in the relationships of caregivers[19] and high-risk teens. This program bears many similarities to other parenting programs, such as encouraging collaborative rather than coercive parenting strategies in monitoring, setting limits and responding rather than react-

13. Ashli J. Sheidow & Mark S. Woodford, *Multisystemic Therapy: An Empirically Supported, Home-Based Family Therapy Approach*, 11 FAM. J. 257 (2003).
14. Alan Carr, *Contributions to the Study of Violence and Trauma: Multisystemic Therapy, Exposure Therapy, Attachment Styles, and Therapy Process Research*, 20 J. INTERPERSONAL VIOLENCE 426 (2005).
15. Knut Sundell, Kjell Hansson, Cecilia A. Löfholm, Tina Olsson, Lars-Henry Gustle & Christina Kadesjö, *The Transportability of Multisystemic Therapy to Sweden: Short-Term Results from a Randomized Trial of Conduct-Disordered Youths*, 22 J. FAM. PSYCHOL. (SPECIAL ISSUE) 550 (2008).
16. Guy S. Diamond, Brendali F. Reiss, Gary M. Diamond, Lynne Siqueland & Lisa Isaacs, *Attachment-Based Family Therapy for Depressed Adolescents: A Treatment Development Study*, 41 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 1190 (2002).
17. Margaret K. Keiley, *The Development and Implementation of an Affect Regulation and Attachment Intervention for Incarcerated Adolescents and their Parents*, 10 FAM. J. 177 (2002).
18. MARLENE M. MORETTI, KARLA BRABER, & INGRID OBSUTH, CONNECT: AN ATTACHMENT FOCUSED TREATMENT GROUP FOR PARENTS AND CAREGIVERS – A PRINCIPLE BASED MANUAL (2009).
19. The Connect program has been used with biological, adoptive or foster parents, grandparents or relatives, or professional caregivers, who are involved in the continuing care of the teen.

ing to teen problem behavior. In addition, *parent-teen attachment* is foremost in the theoretical rationale, structure, and content of the program. Program leaders introduce parents to a series of parent-teen problems through role plays and reflection exercises, helping them to understand challenges of adolescent development and behavior problems through a relational lens. Each session is organized around a central principle that helps parents step back from conflict and use empathy and other relationship skills to support their teen's healthy autonomy while setting appropriate limits.

In a recent study,[20] we found that parents reported significant increases in perceived parenting satisfaction and efficacy as well as reductions in their adolescents' aggression, antisocial behavior, and other mental health problems following completion of Connect as compared to following a waitlist control period. These effects were sustained and additional reductions in conduct problems, depression, and anxiety were noted at the twelve-month follow-up. Following its initial implementation and evaluation, the program was transported to 17 communities serving 309 parents through standardized training and supervision of group leaders. Program evaluation results showed significant pre- to post-treatment reductions in teen externalizing and internalizing problems; enhanced social functioning; and improvements in affect regulation. Parents also reported significant increases in parenting satisfaction and perceived efficacy as well as reductions in their perceived sense of caregiver burden. Importantly, no differences were found in the effectiveness of this program for girls versus boys. However, similar effects across gender do not preclude gender differences in the underlying processes of change. That is, family and parent interventions may produce improvements for girls through relationship processes that are somewhat different than for boys. For example, girls may benefit from parents stepping forward and inviting more connection and engagement, while boys may benefit from parents setting limits and providing clear guidance in their movement toward independence. Such differences are merely speculative and require further investigation.

More generally, research on interventions targeting parent-teen relationships illustrates the importance of addressing parent-teen relationships and the broad and positive effects of attachment-based programs. Strengthening parent-teen relationships (or alternate caregiver-teen relationships) is an essential component of effective treatment programming and offers a unique vehicle to ensure continued parental support and guidance for teens as they move toward adulthood.

IV. TAILOR PROGRAMS TO ENSURE CULTURAL SENSITIVITY AND TREATMENT ACCESSIBILITY

Social inequality in the United States has exerted profound negative effects on the well-being of African-Americans and members of other minority cultural and racial groups.

Social inequality in the United States has exerted profound negative effects on the well-being of African-Americans and members of other minority cultural and racial groups. The intersection of social and gender inequality, combined with the effects of growing up in poverty, gives rise to even more profound challenges for minority, particularly African-American, girls in the U.S. Similar social, economic, and gender dynamics are at play in the lives of Aboriginal girls in Canada. Thus it is not a surprise to find that African-American girls are more likely to be arrested, convicted, and incarcerated than are girls of European descent.[21] Similarly, Aboriginal girls are overrepresented in the Canadian youth justice system.

In recent years, researchers have been increasingly interested and successful in disaggregating specific risk factors underlying race and have demonstrated their differential effects on delinquency and violence in African-Americans versus Caucasians.[22] Growing up in poor neighborhoods and communities frequently exposes children and teens to multiple forms of violence and deprives them of fundamental building blocks necessary for social and psychological health. Family structure suffers in such contexts and, in turn, the base of healthy parent-child relationships and parental care is eroded. Such conditions are more likely to prevail in the lives of African-American and Aboriginal Canadian children and youth. For girls, the odds against their healthy development are even greater due to their experiences of gender discrimination in terms of expectations and opportunities for educational and vocational development, sexual abuse and exploitation, and gender-based violence.

Although some treatment programs address certain fundamental risk factors, such as exposure to family and neighborhood violence, most programs continue to focus solely on individual and family risk factors, ignoring the strong influence of social context. Social context matters on several fronts. Socially embedded risk factors, such as neighborhood violence and lack of educational and vocational resources, are often insurmountable through individual effort alone. Removing oneself or escaping from risky contexts might be one solution, but not when a child's source of support and family connection is part of the social context they need to escape. Social context

20. Marlene M. Moretti & Ingrid Obsuth, *Effectiveness of an Attachment Focused Manualized Intervention for Parents of Teens at Risk for Aggressive Behaviour: The Connect Program*, 32 J. ADOLESCENTS (SPECIAL ISSUE) 1347 (2009).
21. Shari Miller-Johnson, Bertrina L. Moore, Marion K. Underwood & John D. Coie, *African-American Girls and Physical Aggression: Does Stability of Childhood Aggression Predict Later Negative Outcomes?*, *in* THE DEVELOPMENT AND TREATMENT OF GIRLHOOD AGGRESSION 75 (Debra J. Pepler, Kirsten C. Madsen, Christopher Webster & Kathryn S. Levene eds., 2005).
22. Marino A. Bruce, *Contextual Complexity and Violent Delinquency among Black and White Males*, 35 J. BLACK STUD. 65 (2004).

[T]o ensure healthy adolescent development, it is important to prevent child maltreatment and family violence through early intervention.

can present formidable barriers to treatment accessibility. Programs may not be available or easily accessible, and those that are may not be tailored to the unique racial and social context needs and challenges.

The complex challenges faced by justice-involved girls, particularly African-American girls in the U.S. and Aboriginal girls in Canada who face racial and social inequality, may warrant tailored programs that address their unique needs. Engaging these girls in treatment may only be possible through relationship building and a collaborative approach to identifying their individual and contextual treatment needs and barriers. Such an approach was developed to work with inner-city Aboriginal girls in Canada with considerable success. At the basis of this intervention (Girlz Group)[23] was the recognition that individuals construct their life stories from their experiences with their family members, with their peer social networks, in their community, and in school.[24] In collaboration with established Aboriginal support workers who were familiar with the girls, their families, and their neighborhoods, a strategy was developed to invite girls to join as collaborators in understanding violence in their communities. Girls were offered food and a small honorarium for their participation. The majority of these girls were involved in the justice system and most struggled with mental health problems, such as depression, posttraumatic stress disorder, and substance abuse and dependence. Experiences of family violence, out-of-home placement, and teen parenthood were common. Girlz Group provided a safe, accessible, and culturally appropriate environment for young Aboriginal girls to meet, work, and share ideas to effect and promote positive change in their lives and community.

Activities included focus groups on problem issues; specific projects, such as the production of two videos reflecting their experiences, struggles, strengths, and visions for the future; and presentations of their voice in the community at conferences and workshops.

At the wrap-up focus group two years later, all of the girls were either back in school, had a job, or expressed the intent to return to school, and only one had committed a further offense.

Clearly there are many common elements of treatment that are beneficial to girls and boys from different cultural backgrounds; however, racial and ethnic differences call for culturally sensitive approaches to providing support. Through engagement with communities and youth, tailored programs can be developed that contain standard components with proven efficacy within a culturally sensitive treatment structure. Addressing unique treatment barriers is essential. For example, some girls may resist change because it threatens their connection with their social networks, however problematic they may be. Such issues must be addressed in an ongoing manner to help girls derive the maximum treatment benefits possible.

In summary, to ensure healthy adolescent development, it is important to prevent child maltreatment and family violence through early intervention. For interventions to be effective, it is crucial to view children and teens as embedded within unique sociocultural contexts with varying levels of risk and protection. Hence, it is critical to assess the individual needs of each teen and their barriers to treatment. Wrap-around programs that address systemic issues and enhance the relationships of teens with their parents, alternate caregivers, and other social supports are effective. Such approaches combined with interventions tailored to the unique mental health, emotional, and social needs of each teen have shown to be most effective in supporting healthy development, particularly with high-risk and delinquent youth.

REALIGNING JUVENILE JUSTICE POLICY WITH RESEARCH: THE CASE OF JUSTICE-INVOLVED GIRLS

Since the early 1990s, changes in the U.S. state laws have systematically erased the distinction between juvenile and adult criminal justice. In the face of rising youth violence, more and more states introduced harsher penalties that allow children to be incarcerated for lesser crimes, considered as adults for sentencing, and held in adult facilities. These steps have progressed despite growing documentation of neurological, cognitive, and social-emotional immaturity in adolescence with direct relevance to their competence from a legal perspective. Research documenting the deleterious impact of incarceration on youth, including higher recidivism rates, has also failed to halt the movement toward increasing sanctions for youth.

The research summarized in this special issue underscores the need to reconsider juvenile justice policy. In particular, the findings highlight the deep and broad mental health and social challenges facing justice-involved girls. The question of competence due to immaturity is certainly relevant to this population; however, the relationship of significant mental health problems to youth offending seems equally pressing. The typical developmental path of a girl involved in the justice system is marked by maltreatment, including neglect, physical and sexual abuse, social marginalization, economic deprivation, and educational disadvantage. In turn, mental health problems emerge, including conduct disorder, posttraumatic stress disorder, depression, and substance use disorders.

Although no one would dispute the case for a justice system that ensures fairness and accountability for criminal behavior, what is needed is a system that acknowledges the precursors to juvenile delinquency and the need for adequate assessment and rehabilitation. Such changes have been the focus of the Models of Change Network of the MacArthur Foundation (www.mod-

23. Janice Haley, The Voices of Marginalized Girls: Understanding their Needs as a First Step in Reducing Violence and Victimization (July 2005) (unpublished report on file with the authors).

24. Carol D. Lee & Peter Smagorinsky, Vygotskian Perspective on Literacy Research: Constructing Meaning Through Collaborative Inquiry (2000).

elsofchange.net), which has been instrumental in advancing research, translating research into practice, documenting change, and disseminating information about initiatives.

In the case of justice-involved girls, change in the juvenile justice system translates to a system that is sensitive to the breadth of their mental health needs and social welfare; a system that provides adequate assessment; relevant, effective and accessible treatment; and reliable links to community support following release. Some may say this is an idealistic and costly solution to girls involved in the juvenile justice system, but the costs of the current system of harsh penalties and inadequate programming are far greater for the individual and society at large, both now and in the future.

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The Resource Page

JUVENILE-JUSTICE WEBSITES

National Council of Juvenile and Family Court Judges
http://www.ncjfcj.org/

The National Council of Juvenile and Family Court Judges has an excellent website that can lead you to publications on just about any aspect of juvenile- or family-court interest. Click on the "Publications" tab to go to the group's own publications, including ones on improving practice in the issuance of protection orders, how to best foster child safety in custody cases, and how to improve court practices in juvenile-delinquency cases.

From the main publications page, you can click on a link to all of the publications of the National Center for Juvenile Justice, which number in the hundreds. Also on the main publications page, you can choose topics like juvenile delinquency, family violence, domestic relations, and substance abuse to find links to key resources in those areas.

National Center for State Courts Resource Guides
http://www.ncsc.org/information-and-resources/browse-topics-a-z.aspx

One part of the National Center for State Courts' website is a set of resource guides organized by topic. Separate guides are available for family courts, juvenile justice and delinquency, adoption/termination of parental rights, dependency, court improvement, and gender fairness. Each topic has links to web-accessible publications of interest that National Center staff have reviewed and found useful. For example, the topic Juvenile Justice and Delinquency, more than 80 separate studies or reports are listed with a brief description and a link to the underlying material. You can quickly find something of interest on almost any juvenile-justice topic.

The Future of Children Website
http://www.princeton.edu/futureofchildren/

This website is run by the Woodrow Wilson School of Public and International Affairs at Princeton University and the Brookings Institution. The site provides notice of new social-science research about children and youth with the goal of making such information easily available to—and useful for—policy makers and practitioners alike. It's a good source for keeping up with developments as they occur as well as finding overview reports that put new developments into context.

NEW BOOKS

LAWRENCE M. SOLAN, THE LANGUAGE OF STATUTES: LAWS AND THEIR INTERPRETATION, The University of Chicago Press, 2010. 281 pp. $45.

Brooklyn Law School Professor Lawrence M. Solan has produced a new, highly readable review of the current debates in statutory interpretation, combined with the insights of a scholar trained in both law and linguistics. Anyone who wants to think critically about how one goes about interpreting a statute will find value in this book.

Solan's overarching conclusion is that when all is considered, the system works pretty well. Judges of all stripes concede that the legislature should be in charge of determining the law when it passes a statute, so judges must be mindful of the primacy of legislators. Most of the time, Solan concludes, they are: people usually understand their legal obligations well enough, and judges usually will agree on the law's application.

But though the hard cases that result in 5-to-4 United States Supreme Court cases on statutory interpretation are rare, he also explains, linguistically and psychologically, why it's practically impossible to avoid hard cases with indeterminate results at the margins. In his discussion, he reviews key cases and everyday examples—like a sign on subway cars in New York that clearly shows that you can't ride in between cars but doesn't indicate that you can't move between cars when the train is stopped. Yet that had also been outlawed and thousands of citations issued. In such cases, Solan argues that the proper question is, "Given a law that appears to be quite specific, are there values that might override fidelity to the language of a statute when the law's substance was miscommunicated?" In the subway-car example, he concludes that concepts of fair notice override the plain-language legal rule, though he also recognizes that others might rule differently.

In separate chapters, he discusses the difference between ordinary meaning and dictionary definitions, the challenges in determining legislative intent, values implicit in statutory interpretation (like stability and responsiveness to changed circumstances), and how the responsibility for statutory interpretation may be shared by the three branches of government. He also devotes a chapter to jurors as statutory interpreters, convincingly demonstrating that a jury instruction parroting a complicated criminal statute is quite unlikely to be understood.

He concludes with recommendations for judges, legislators, and the executive branch. For judges, he urges frank discussion in hard cases of the values at stake and the considerations that are driving the outcome, not merely dictionary definitions or canons of construction. By doing so, he concludes that judges actually constrain themselves: "When judges are forced to defend the consequences of their decisions overtly, it can only serve to reduce the range of arguments that are deemed legitimate, thus making the exercise of judicial discretion less of a problem—not more of one."

The book is a worthy successor to his 1993 work, *The Language of Judges* (Univ. of Chicago Press, 209 pp., $22.50), which provides a great introduction to the value of linguistic analysis in statutory interpretation, including detailed discussion on how well judges act as linguists.