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Incarcerated Girls’ Physical Health: Can the Juvenile Justice System Help to Reduce Long-Term Health Costs?

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Summer J. Robins, Candice L. Odgers, & Michael A. Russell

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, 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. 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. 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. For example, in the case of Jimmy Doe et al. v. Cook County 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. 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. 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. 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...
versus boys are more likely to report mental health (e.g., anxiety disorders, depression, ADHD) and substance use disorders, 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). 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 multi-method 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 versus boys are more likely to report mental health (e.g., anxiety disorders, depression, ADHD) and substance use disorders, 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). 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 multi-method 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.

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

<table>
<thead>
<tr>
<th>General Health in Adolescence</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>31.2</td>
</tr>
<tr>
<td>Overweight or obese</td>
<td>57.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIV Risk Behaviors in Adolescence</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple (3+) sexual partners</td>
<td>61.6</td>
</tr>
<tr>
<td>No condom use during sex</td>
<td>23.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rates of STD Infections</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested positive for an STD or STI in adolescence*</td>
<td>57.4</td>
</tr>
<tr>
<td>Contracted a new STD since release from study</td>
<td>6.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Injury Risk and Injuries in Adolescence</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury risk behaviors</td>
<td>72.3</td>
</tr>
<tr>
<td>Physical injury **</td>
<td>60.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Injuries, Hospitalizations, and Self-Harm in Young Adulthood</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury risk behaviors in young adulthood</td>
<td>43.2</td>
</tr>
<tr>
<td>Hospitalized for an accident or injury since release</td>
<td>25.3</td>
</tr>
<tr>
<td>Hospitalized for an illness since release</td>
<td>21.6</td>
</tr>
<tr>
<td>Self harm-behaviors since release</td>
<td>27.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Victimization Across the Lifespan</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood victimization</td>
<td>91.1</td>
</tr>
<tr>
<td>Adolescent victimization</td>
<td>92.1</td>
</tr>
<tr>
<td>Young adulthood victimization</td>
<td>79.8</td>
</tr>
<tr>
<td>Experienced lifetime victimization</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* 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.
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. 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. 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.

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. 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 and is troubling given that programs for an accident that predisposes an individual to a condition that foreshadows a wide range of adverse cardiovascular outcomes and other chronic illnesses.

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’ ANTSOCIAL 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. 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.

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—a pathway characterized by high-risk social and familial environments and the presence of early neurodevelopmental risks among children. A recent report from the Dune din 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. These findings are important, as individuals on the life-course-persistent pathway are most likely to end up within the juvenile justice system.

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. 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. 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.

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. 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. 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, 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.

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. 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 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.

SUGGESTIONS FOR RESTORING THE HEALTH STATUS 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-
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. 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. 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. 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. Such treatment plans should be supervised by clinical professionals or highly trained faculty. Ideally, such professionals would include cross-disciplinary teams capable of assessing the broad range of mental, sexual, and physical problems these girls might face. 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. 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. 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. 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. Therefore, disseminating accurate knowledge about health risk behaviors may encourage these girls to make healthier life decisions.

Girls in the juvenile justice system should also be afforded 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. 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. 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 healthcare 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

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30. Crosby et al., supra note 14; Dixon et al., supra note 9.
32. Dixon et al., supra note 9.
33. ZAHN ET AL, supra note 1.
36. Pajer et al., supra note 18.
37. ZAHN ET AL, supra note 1.
40. ZAHN ET AL, supra note 1.
41. Pajer et al., supra note 18.
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.

Summer Robins received her undergraduate degree in Psychology from Duke University where she acquired research experience related to early substance use at the Transdisciplinary Prevention Research Center. She is currently the lab coordinator for the University of California, Irvine’s Adaptation, Development, & Positive Transitions (ADAPT) research laboratory.

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’ 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. Odgers, Department of Psychology and Social Behavior, University of California Irvine, 4312 Social and Behavioral Sciences Gateway, Irvine, CA 92697, email: codgers@uci.edu.

Michael A. Russell received his M.A. in Psychology in Education from Columbia University, and is currently pursuing a Ph.D. in Psychology and Social Behavior at the University of California, Irvine. His research interests include mental health problems among adolescent offenders, the influences of mental health problems and peer groups on early substance use initiation, and quantitative methods.