U.S. Department of Justice
Office of Justice Programs
Office of Juvenile Justice and Delinquency Prevention

OJJDP
Working for Youth Justice and Safety
JUVENILE JUSTICE BULLETIN

June 2014

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Pathways to Desistance

How and why do many serious adolescent offenders stop offending while others continue to commit crimes? This series of bulletins presents findings from the Pathways to Desistance study, a multidisciplinary investigation that attempts to answer this question.

Investigators interviewed 1,354 young offenders from Philadelphia and Phoenix for 7 years after their convictions to learn what factors (e.g., individual maturation, life changes, and involvement with the criminal justice system) lead youth who have committed serious offenses to persist in or desist from offending.

As a result of these interviews and a review of official records, researchers have collected the most comprehensive dataset available about serious adolescent offenders and their lives in late adolescence and early adulthood.

These data provide an unprecedented look at how young people mature out of offending and what the justice system can do to promote positive changes in the lives of these youth.

Behavioral Health Problems, Treatment, and Outcomes in Serious Youthful Offenders

Carol A. Schubert and Edward P. Mulvey

Highlights

The Pathways to Desistance study followed more than 1,300 serious youthful offenders for 7 years after their court involvement. In this bulletin, the authors investigate the overlap between behavioral health problems and the risk of future offending and the delivery of mental health services to young offenders in institutions and after release. Selected findings are as follows:

- Adolescent offenders with behavioral health problems other than substance abuse were at no greater risk of rearrest or engaging in antisocial activities than young offenders without these problems.
- Study participants with substance use disorders had more negative outcomes and fewer positive outcomes. Substance use disorders, unlike other types of behavioral health problems examined, made the effects of some risk markers for offending even more powerful.
- A substantial percentage of youth with diagnosable mental health and substance use problems did not receive services in residential settings. Even fewer youth with these problems reported receiving community-based services.
- More frequent aftercare services significantly reduced the odds of an arrest or return to an institution during the 6-month aftercare period. Each added month of services reduced the odds for these outcomes by 12 percent.

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This bulletin summarizes findings from three sets of analyses of data from the Pathways to Desistance study[1] (see "About the Pathways to Desistance Study"on page 4). These analyses addressed (1) the overlap of behavioral health problems and offending behavior among participating youth, (2) the match between their disorders and the care they received in juvenile justice settings, and (3) the continuation of care that study participants received in the community upon their release from an institutional setting. Taken together, these results suggest the need to modify expectations about reducing criminal offending by offering mental health services in juvenile justice. They also point to potential opportunities for system improvement.

The bulletin first presents background information on the greater prevalence of behavioral health problems among serious juvenile offenders compared with the general juvenile population; the increased risk of troublesome life outcomes, including arrest and court involvement, among youth diagnosed with behavioral health and substance use problems; the interplay among shared risk factors for behavioral health problems and offending in this age group; and the potential benefits of mental health treatment for youthful offenders.

Next, the bulletin presents the methodology used in the Pathways to Desistance study to assess behavioral health problems, criminogenic risk, and selected negative and positive outcomes, including rearrest, antisocial activity, and gainful activity. It also presents analyses involving subgroups of study participants that assess (1) the overlap between behavioral health problems and risk of future criminal offending and the role of behavioral health problems in such offending, (2) the delivery of mental health and substance use treatment services in custodial settings, and (3) the continuance of those services in community-based and aftercare settings. Finally, the bulletin discusses the implications of the study findings for juvenile system policy and practice and concludes with recommendations for directing mental health and substance use treatment services more effectively to reduce the risk of future offending.

Mental Health Diagnosis and Treatment in the Juvenile Justice System

In recent years, the juvenile justice system has moved from a prevailing view of young offenders as "superpredators" to a more sympathetic and, arguably, realistic view of these youth as troubled young persons (Grisso, 2007). As part of this reorientation, policymakers and practitioners have made considerable efforts to identify and address the needs of the youth in their care more adequately. These efforts have included a number of strategies, such as systematic screening to identify youth needs with instruments like the *Youth Level of Service/Case Management Inventory* (Hoge and Andrews, 2002) and *The Massachusetts Youth Screening Instrument* (Grisso and Barnum, 2001), structured decisionmaking to determine detention admission (e.g., the Annie E. Casey Foundation's Juvenile Detention Alternatives Initiative), implementation of best practices for service provision (Greenwood, 2008), and promotion of broad system-level performance indicators (Loughran, Godfrey, and Mengers, 2010; Lipsey, 2009). Many of these efforts have focused on youthful offenders with behavioral health needs because these youth are usually viewed as having addressable disorders that the juvenile justice system might miss and as being particularly vulnerable to potential negative effects from involvement with that system.

Prevalence of Behavioral Health Disorders Among Juvenile Offenders

Juvenile offenders with behavioral health needs merit closer attention than they presently receive. Researchers have firmly established that juvenile offender populations have disproportionately higher rates of diagnosable behavioral health disorders compared with the general young population. Exact prevalence rates differ, depending on the measurement method used, but estimates suggest that 50 to 70 percent of juvenile offenders have a diagnosable behavioral health disorder (Colins et al., 2010; Fazel, Doll, and Långström, 2008; Teplin et al., 2002; Kazdin, 2000), whereas only about 9 to 13 percent of youth in the general population are thought to meet the criteria for a diagnosable disorder (Wasserman, Ko, and McReynolds, 2004). Furthermore, many youth in the juvenile justice system have more than one disorder. A study of juvenile detainees in Chicago showed that nearly 30 percent of females and more than 20 percent of males with substance use disorders also had a mental health disorder (Otto et al., 1992). These general patterns are also found among young offenders in the adult system. Findings from Bureau of Justice Statistics surveys indicate that at least two-thirds of younger inmates (age 24 or younger) in the adult system had a behavioral health problem (James and Glaze, 2006). Additionally, rates of substance use disorders were highest among inmates with mental health problems; approximately 70 percent of inmates with a mental health problem also had a substance use disorder (U.S. Department of Health and Human Services, 1999).

Increased Risk of Adverse Outcomes Among Youth With Mental Health and Substance Use Problems

Evidence also shows that youth with behavioral health problems are more likely to have troublesome life outcomes, including court involvement. Vander Stoep and colleagues have demonstrated that youth diagnosed with a psychiatric disorder have higher arrest rates than undiagnosed youth in the general population (Vander Stoep et al., 2000; Evens and Vander Stoep, 1997). Other researchers have shown that the presence of co-occurring disorders increases the chances of criminal involvement in emerging adulthood (Connell and Dishion, 2006; Loeber, Farrington, Stouthamer-Loeber, Moffitt, and Caspi, 1998) and that both the presence and number of comorbid disorders within a sample of substance-abusing and delinquent youth predicted subsequent negative outcomes, including arrest (Copeland et al., 2007). Substance use disorders and externalizing disorders[2] appear to be particularly problematic for a range of outcomes, including increased high school dropout rates, lack of family cohesion, and general delinquency (Chassin, Flora, and King, 2004; Huizinga and Jakob-Chien, 1998; Hawkins, Catalano, and Miller, 1992; Randall et al., 1999).

Disentangling Shared Risk Factors for Mental Health Problems and Offending

Determining the relationship between mental health problems and offending is complicated. Although these two problems often go hand in hand, it is not clear that one causes the other. Many youth who offend do not have a mental health problem, and many youth who have a mental health problem do not offend (Grisso, 2007; Huizinga et al., 2000; Masten et al., 2004).

This co-occurrence of problems may be a byproduct of shared risk. Many of the risk factors for the development of mental disorders and offending behavior are the same, and any particular risk factor may produce more than one distinct effect (Lyman, 1998; Loeber, 1990). For example, a chaotic home environment might increase the chances of a child developing a mental health problem or engaging in criminal activity, but this risk factor in and of itself does not guarantee one outcome or the other. Youth exposed to a number of risk factors may be at elevated risk of developing mental health problems, engaging in offending behavior, or both.

A range of risk factors for the development of mental health problems and offending behavior have been identified. In general, these risk factors have the following characteristics:

- They cross multiple, similar domains—for example, neglectful parenting and association with antisocial peers are risks for both offending and behavioral health disorders (Dishion and Patterson, 2006; U.S. Public Health Service, 2000; Goldweber, Broidy, and Cauffman, 2009).
- They co-occur—it is rare for only one risk factor to be present—and the operation of a second risk factor often increases the impact of the first (Holmes, Slaughter, and Kashani, 2001; U.S. Public Health Service, 2000).
- They are rarely one-directional—the risk factor influences the behavior as much as the outcome dampens or exacerbates the risk factor (Van Kammen and Loeber, 1994; Anthony and Forman, 2003).

Moreover, youth's possible responses to exposure to risk factors can vary considerably. The level of risk that a risk factor presents can be dynamic, changing with age and context (Huizinga and Jakob-Chien, 1998). The presence of certain risk factors does not guarantee a uniform response because individual factors, such as resilience, can alter a young person's course (Cicchetti, 2006; Luthar, 2003). Finally, youth in the juvenile justice system often

ABOUT THE PATHWAYS TO DESISTANCE STUDY

The Pathways to Desistance study is a multidisciplinary, multisite longitudinal investigation of how serious juvenile offenders make the transition from adolescence to adulthood. It follows 1,354 young offenders from Philadelphia County, PA, and Maricopa County, AZ (metropolitan Phoenix), for 7 years after their court involvement. This study has collected the most comprehensive dataset currently available about serious adolescent offenders and their lives in late adolescence and early adulthood. It looks at the factors that lead youth who have committed serious offenses to persist in or desist from offending. Among the aims of the study are to:

- Identify initial patterns of how serious adolescent offenders stop antisocial activity.
- Describe the role of social context and developmental changes in promoting these positive changes.
- Compare the effects of sanctions and interventions in promoting these changes.

Characteristics of Study Participants

Enrollment took place between November 2000 and March 2003, and the research team concluded data collection in 2010. In general, participating youth were at least 14 years old and younger than 18 years old at the time of their study index petition; 8 youth were 13 years old, and 16 youth were older than age 18 but younger than age 19 at the time of their index petition. The youth in the sample were adjudicated delinquent or found guilty of a serious (overwhelmingly felony-level) violent crime, property offense, or drug offense at their current court appearance. Although felony drug offenses are among the eligible charges, the study limited the proportion of male drug offenders to no more than 15 percent; this limit ensures a heterogeneous sample of serious offenders. Because investigators wanted to include a large enough sample of female offenders—a group neglected in previous research—this limit did not apply to female drug offenders. In addition, youth whose cases were considered for trial in the adult criminal justice system were enrolled regardless of the offense committed.

At the time of enrollment, participants were an average of 16.2 years old. The sample is 84 percent male and 80 percent minority (41 percent black, 34 percent Hispanic, and 5 percent American Indian/other). For approximately one-quarter (25.5 percent) of study participants, the study index petition was their first petition to court. Of the remaining participants (those with a petition before the study index petition), 69 percent had 2 or more prior petitions; the average was 3 in Maricopa County and 2.8 in Philadelphia County (exclusive of the study index offense). At both sites, more than 40 percent of the adolescents enrolled were adjudicated of felony crimes against persons (i.e., murder, robbery, aggravated assault, sex offenses, and kidnapping). At the time of the baseline interview for the study, 50 percent of these adolescents were in an institutional setting (usually a residential treatment center); during the 7 years after study enrollment, 87 percent of the sample spent some time in an institutional setting.

Interview Methodology

Immediately after enrollment, researchers conducted a structured 4-hour baseline interview (in two sessions) with each adolescent. This interview included a thorough assessment of the adolescent's self-reported social background, developmental history, psychological functioning, psychosocial maturity, attitudes about illegal behavior, intelligence, school achievement and engagement, work experience, mental health, current and previous substance use and abuse, family and peer relationships, use of social services, and antisocial behavior.

After the baseline interview, researchers interviewed study participants every 6 months for the first 3 years and annually thereafter. At each followup interview, researchers gathered information on the adolescent's self-reported behavior and experiences during the previous 6-month or 1-year reporting period, including any illegal activity, drug or alcohol use, and involvement with treatment or other services. Youth's self-reports about illegal activities included information about the range, the number, and other circumstances of those activities (e.g., whether or not others took part). In addition, the followup interviews collected a wide range of information about changes in life situations (e.g., living arrangements, employment), developmental factors (e.g., likelihood of thinking about and planning for the future, relationships with parents), and functional capacities (e.g., mental health symptoms).

Researchers also asked participants to report monthly about certain variables (e.g., school attendance, work performance, and involvement in interventions and sanctions) to maximize the amount of information obtained and to detect activity cycles shorter than the reporting period.

In addition to the interviews of study participants, for the first 3 years of the study, researchers annually interviewed a family member or friend about the study participant to validate the participants' responses. Each year, researchers also reviewed official records (local juvenile and adult court records and FBI nationwide arrest records) for each adolescent.

Investigators have now completed the last (84-month) set of followup interviews, and the research team is analyzing interview data. The study maintained the adolescents' participation throughout the project: At each followup interview point, researchers found and interviewed approximately 90 percent of the enrolled sample. Researchers have completed more than 21,000 interviews in all.

have a constellation of difficulties, of which a behavioral health disorder may be just one (Dishion and Patterson, 2006; Goldweber, Broidy, and Cauffman, 2009; Huizinga et al., 2000).

Because of these complications, it seems reasonable to examine the extent to which the risk factors related to criminal involvement are also related to the presence of mental health problems and to see which factors are related to later criminal offending. The analyses presented in this bulletin shed some light on this question—one that has implications for juvenile justice policy and practice.

Potential Benefits of Mental Health Services for Youthful Offenders

The overlap between behavioral health disorders and juvenile justice system involvement has led many policymakers and practitioners to investigate the possible benefits of providing mental health treatment for youth in the juvenile and adult justice systems. In general, the expectation is that providing appropriate mental health services should, in a large proportion of cases, stabilize the individual, reduce his or her involvement in antisocial behaviors, and thus reduce his or her chance of being rearrested. For example, a National Conference of State Legislatures report states that "comprehensive responses to court-involved juveniles with mental health needs can help … to produce healthier young people who are less likely to act out and commit crimes" (Hammond, 2007). The Bazelon Center for Mental Health Law and the American Correctional Association also asserted that youth would stay out of jail if they received the mental health treatment they need (Carty, Weedon, and Burley, 2004).

Although the changes in practice discussed above are important for ensuring that at-risk youth receive appropriate mental health services, the extent to which juvenile offenders who receive such services would reduce their offending has not been determined. The research is limited on whether and how mental health treatment relates to later offending or to the positive adjustment of youthful offenders.

Assessment of Mental Health Problems, Criminogenic Risk, and Life Outcomes for Pathways Study Participants

The Pathways to Desistance study examined the relationship between mental health problems and criminal offending as well as life outcomes for the serious offenders who took part in the study. Researchers assessed individuals enrolled in the study for a range of mental health problems and for risk markers related to continued offending, including demographic, family history, peer, legal, psychological, psychosocial maturity, and adjustment measures. In addition, regular interviews and official records provided data about outcomes over a 7-year period that extended into early adulthood. These ingredients presented an opportunity to explore the relationships among mental health problems, criminogenic risk, and life outcomes more comprehensively than is usually possible.

The Pathways data can address four issues: (1) whether youthful offenders with mental health problems differ from other serious offenders in their general risk for reoffending, (2) how the life outcomes for these individuals compare with those of other serious offenders, (3) what life factors or personal characteristics are related to better or worse outcomes, and (4) whether these life factors or personal characteristics differ for those with a mental health problem. To answer these questions, the researchers analyzed interview data from a group of Pathways participants to determine the prevalence of mental health diagnoses, criminogenic risk, and negative and positive outcomes related to these factors (Schubert, Mulvey, and Glasheen, 2011).

Assessing Mental Health Problems Among Pathways Study Participants

The researchers assessed all 1,354 Pathways study participants for the presence of certain mental health problems using several assessment tools. They used—

- Eight modules from the Composite International Diagnostic Interview (CIDI) (World Health Organization, 1990) to determine the lifetime presence of major depression, dysthymia, mania, alcohol abuse and dependence, drug abuse and dependence, and posttraumatic stress disorder. The CIDI is a comprehensive, fully structured clinical assessment of psychiatric disorders.

- The Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds and Richmond, 1985) to identify youth with high anxiety symptoms. A total anxiety score was computed on the basis of 28 items across 3 subscales (physiological anxiety, worry/oversensitivity, and social concerns/concentration). For the purpose of these analyses, scores at or greater than one standard deviation from the sample mean were taken as indicators of high anxiety. Although not a diagnostic tool, the RCMAS has empirical support for its validity as a measure of anxiety in youth of the same age and ethnic composition as the Pathways sample (Reynolds, 1980; Varela and Biggs, 2006; Lee et al., 1988).

- The Disruptive Behavior Disorders scale (Pelham et al., 1992) to assess attention deficit hyperactivity disorder (ADHD) at baseline. Unlike previous assessments, which relied on youth self-reports, the researchers

based the assessment of ADHD symptoms on parent/guardian reports, a more valid indicator in this context.

The Pathways study did not assess for the presence of conduct disorder because the researchers expected that a substantial majority of the sample would meet the criteria (see Copeland et al., 2007; Eppright et al., 1993, with 90 percent of its juvenile offender sample diagnosed with conduct disorder). Multiple studies have demonstrated that conduct disorder is often a precursor to, or coexists with, criminal behavior (Farrington, 1999; Loeber, Farrington, Stouthamer-Loeber, and Van Kammen, 1998); and conduct disorder often co-occurs with mood disorders, which are more often the primary diagnosis in juvenile offender samples (McManus et al., 1984).

Assessing Criminogenic Risk for Future Offending

The Pathways study incorporated numerous baseline measures with demonstrated relationships to criminal offending in youth. From these measures, the researchers selected 121 possible variables related to continued offending; they represented a variety of domains, including demographics, family history, peers, legal, psychological, psychosocial maturity, and adjustment measures. The researchers used a data reduction technique called principal components analysis (Jolliffe, 2002) to reduce the 121 baseline variables to a set of 6 summary scores, each representing a distinct broad risk marker related to the risk of future offending. The six risk markers were (1) negative peer influence, (2) antisocial attitudes, (3) antisocial history, (4) psychosocial maturity, (5) perceived severity of court sanctions, and (6) parent criminality/substance use.

Assessing Outcomes for Pathways Study Participants

Researchers used interview data and official records to determine how these individuals fared over the 7 years after enrollment in the study. Three indicators of community adjustment—two negative and one positive—were considered for their relationship to the presence of mental health problems:

- **Rearrest.** Arrest prior to the age of 18 was based on official records of a petition to juvenile court recorded in each county. Arrest after the age of 18 was based on a combination of the county court record information and FBI arrest records. Probation violations were not counted as rearrests because they do not necessarily represent a new criminal act. A rearrest rate was calculated by dividing the number of petitions/arrests by the number of eligible months in the recall period. An eligible month was defined as a month in which the youth spent no less than 3 weeks in the community; the sample had an average of 50 eligible months during which the outcomes were measured.

- **Antisocial activity.** A modified version of the Self-Report of Offending (Elliot, 1990; Huizinga, Esbensen, and Weihar, 1991) scale was used at each interview to measure the youth's involvement in any of 22 antisocial and illegal activities (the most serious acts commonly found on self-report scales). The participant indicated whether he or she was involved in each activity and the month in which the activity occurred. The proportion of months during which the youth reported antisocial acts was used as an indicator of level of involvement in antisocial activity (calculated as the number of months with two or more self-reported antisocial activities divided by the number of eligible months in the recall period).

- **Gainful activity.** Participants were considered "gainfully active" for a month if they attended school or worked during that time. Attending school in a month was defined as being enrolled in any type of school and not absent more than 5 days during the month. Being employed in a month was defined as working at least 21 hours per week for at least 2 weeks during the month. A proportion score represented the number of months the youth attended school or was employed divided by the number of eligible months in the recall period.

"More than half of the subsample included in these analyses met the criteria for at least one assessed mental health disorder."

The proportion scores were converted into three equal groups: low, medium, and high proportion of time gainfully active.

Analysis of Pathways Study Data Regarding the Effect of Mental Health Disorders and the Delivery of Mental Health Services

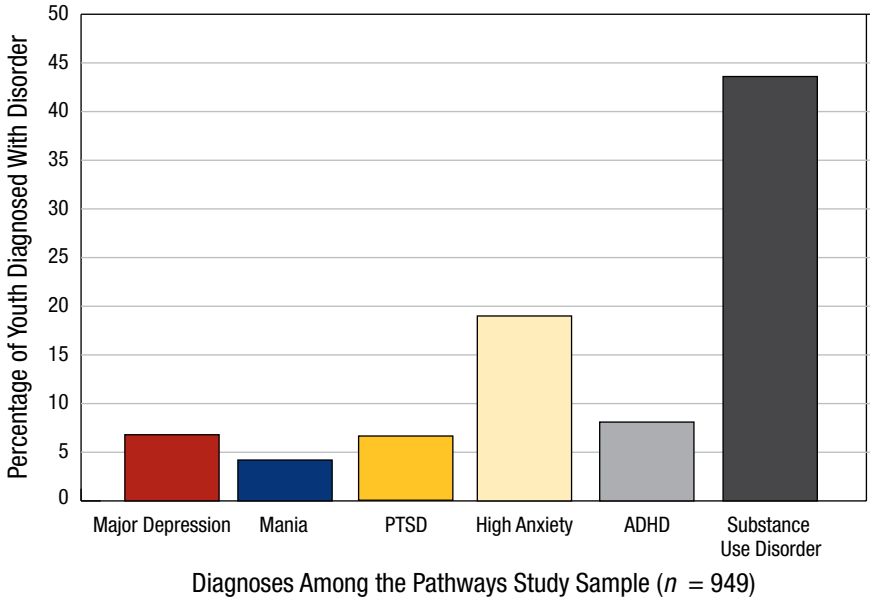
The researchers then conducted three sets of analyses on the Pathways study data. The first set of analyses tried to determine the overlap between mental health problems and the risk of future offending and the contribution of mental health problems to negative outcomes (rearrest and antisocial activity). The second and third sets of analyses looked at the delivery of mental health services to study participants with identified mental health problems during institutional placement and after their release.

Characteristics of the Subsample Analyzed

A subsample of 949 youth (797 males and 152 females) from the Pathways study was used for the series of data analyses summarized below. These were youth for whom the researchers had complete mental health assessments and sufficient time to observe outcomes.[3] This subset of Pathways youth was primarily male (84 percent) and minority (43 percent African American, 31 percent Hispanic, 22 percent white, and 4 percent other). Of these youth, 56 percent were from Philadelphia and 44 percent were from Phoenix. The mean age at baseline was 16 years old. On average, these youth had three petitions to court prior to the baseline interview and were 15 years old at the time of their first petition. Regarding the subsample's index offenses (i.e., the serious offense that qualified them for the study), 37 percent were violent crimes against another person (e.g., robbery or assault), 28 percent were property crimes (e.g., burglary), 18 percent were drug-related offenses, 9 percent were weapons offenses, 4 percent were sex crimes, and 4 percent were other types of crimes (e.g., conspiracy, intimidation of a witness).

More than half of the subsample included in these analyses (62.4 percent) met the criteria for at least one of the assessed mental health disorders. Of those with at least one mental health disorder, 39 percent met the threshold for more than one disorder. The figure below shows the prevalence rates in this sample for the mental health problems assessed.

Prevalence of Selected Disorders Within the Pathways Sample



Note: 37.6% of the 949 did not meet the criteria for any of the disorders tested. Percentages do not add up to 100% because an individual can meet criteria for more than one disorder.

PTSD = posttraumatic stress disorder; ADHD = attention deficit hyperactivity disorder.

"State-run juvenile corrections facilities were more likely than contracted residential facilities to provide appropriate, individualized services."

Effects of Mental Health Problems on the Risk of Future Offending

Using the information gained in the assessments, the researchers set out to determine whether mental health problems have any unique influence on outcomes beyond the six criminogenic risk markers. In other words, when taking into account an individual's set of risk factors related to the likelihood of future offending, does the presence of a mental health problem contribute any additional risk of reoffending? The researchers also tested whether the identified risk factors for reoffending operated differently between those youth with and those without mental health problems to determine whether mental health problems moderated the relationship between criminogenic risk markers and outcomes. Certain risk factors (e.g., peer influences) might be more or less powerful when they are present alongside a mental health problem.

Some important findings emerged from these analyses (presented in detail in Schubert, Mulvey, and Glasheen, 2011). First, when looking solely at the relationship between mental health problems and outcomes without considering any criminogenic risk factors, mental health problems (affective disorder, ADHD, or anxiety disorder) were not significantly associated with the rearrest, antisocial activity, or gainful activity outcomes. Youth with mental health problems not related to substance abuse had the same type of outcomes as the study participants without these disorders.

Second, criminogenic risk factors were related to some disorders. Study participants with affective, substance use, and anxiety disorders had high levels of risk for reoffending; those with ADHD had the lowest levels of risk related to future offending. After controlling for demographic variables and risk factors, however, study participants with the tested mental health problems were at no greater risk for rearrest or engaging in antisocial activities than the young offenders without these problems.

The presence of a substance use disorder, however, does affect outcomes. Study participants with substance use disorders, compared with those without such disorders, had higher rates of rearrest, more self-reported antisocial activity, and less time spent in gainful activity. Also, some risk markers had stronger effects on outcomes in those with substance use disorders compared with those without (i.e., the effect of a risk marker was even stronger in those with a substance use disorder).

These findings indicate that criminogenic risk factors are appreciably higher in groups of youthful offenders with certain mental health problems (affective disorders, substance use disorders, and anxiety disorders), but these mental health problems are not highly related to either positive or negative outcomes. In other words, the risk factors have equivalent effects on outcomes in both those with and without the tested mental health problems. The only clear exception to this observation is that substance use is associated with poorer outcomes, making the effect of risk factors on outcomes significantly worse.

Pathways study findings also offer some insight into the regularities of service delivery for youth with identified disorders in both custodial and community-based settings.

Delivery of Mental Health Services to Serious Youthful Offenders in Custodial Settings

In contrast to the adult criminal justice system, the juvenile justice system strongly believes in providing services to reduce the likelihood of reoffending. Theoretically, this would be done with interventions meant to reduce risk or address needs related to an individual's likelihood of continued antisocial behavior. It has not been determined, however, that the services offenders receive in the juvenile justice system align with the needs identified in assessments.

Using a subsample of 868 youth in the Pathways study who were followed for 2 years after their enrollment,[4] the researchers examined the extent to which specific risks/needs were related to types of services provided. Specifically, the researchers asked the following:

- Were youth with mood/anxiety problems more likely to receive mental health services (defined as individual sessions with a psychologist or treatment on a mental health unit)?

- Were youth with substance use problems more likely to receive drug and alcohol treatment services?

The researchers concentrated on these two types of problems because of their importance as a focus for intervention (Grisso, 2004) and because the data would enable them to discern whether and when appropriate services were provided. For this set of analyses, the researchers used the assessment tools described earlier to identify youth with significant mood/anxiety and substance use problems. In addition to simply determining whether the youth with these problems received any appropriate services, the researchers also examined whether those services were more or less likely to be offered in different institutional settings. They looked at four types of institutional settings (state-run juvenile corrections facilities, contracted residential settings, detention centers, and jails/prisons) across the Philadelphia and Phoenix data collection sites. They used the youth's self-reports to determine whether they had received certain types of treatment.

Some of the findings were in line with previous work in this area, but others were unexpected (results are presented in detail in Mulvey, Schubert, and Chung, 2007).

- The amount of services provided to youthful offenders with diagnosable problems differed considerably across institutional settings, with jails/prisons providing the fewest services and contracted residential settings with a mental health emphasis providing the most.

- A substantial percentage of youth with diagnosable problems did not receive services for those problems. Depending on the setting, 7 to 59 percent of youth with a mood/anxiety problem did not receive mental health services, and 11 to 56 percent of adolescents with substance use disorders did not receive drug and alcohol treatment services. The youth's gender or ethnicity did not influence these patterns, and the patterns did not differ by site (i.e., Philadelphia versus Phoenix).

- Even though many youth with diagnosable disorders did not receive services, those with a disorder were generally more likely to receive services than those youth without the disorder (again, depending on the setting). For example, youth with a mood/anxiety disorder were four times more likely (adjusted for background characteristics related to service receipt) to receive mental health services in state-run juvenile correctional facilities (Youth Development Centers in Pennsylvania and the Arizona Department of Juvenile Corrections) than those without a mood/anxiety problem. Youth with a substance use problem were four to five times more likely to receive drug and alcohol services in state-run facilities than those who did not have a substance use problem. Jails/prisons provided fewer services overall than other residential placements, but youth in jail or prison with a substance use disorder were twice as likely to get drug and alcohol services as those without a substance use disorder. Thus, the use of screening tools, although imperfect, helps institutional staff identify and direct services toward individuals in need.

Two other findings emerged. First, state-run juvenile corrections facilities were more likely to provide appropriate, individualized services to those with an identified problem than were contracted residential facilities. Second, across all setting types, youth were more likely to receive drug and alcohol services the longer they were in the facility. This observation is likely the result of the operational realities related to moving a newly admitted client from the intake stage (during which initial evaluations by the facility personnel may be occurring) to full participation in services. Providing adequate time in the setting for service delivery is important to accommodate these operational realities and to permit adequate time in treatment to promote stable behavioral change (Day and Howells, 2002; Gendreau and Goggin, 1996; National Institute on Drug Abuse, 2006).

These findings indicate that some youth with serious problems are being identified and treated in most settings, but still only to a limited extent. Youth with identified

needs are receiving targeted service at higher rates than their counterparts, particularly if their stay is long enough to allow the service to be initiated. Still, approximately one-half of these youth with identifiable disorders did not receive appropriate services. There appears to be a substantial missed opportunity to provide appropriate services for youth in need in these settings.

Delivery of Mental Health Services to Serious Youthful Offenders in the Community

Youth making the transition from residential placements back to the community need a variety of supportive services. These individuals are often high-risk offenders who, as noted earlier, face multiple problems of adjustment in the community. Awareness of the challenges that these youthful offenders face has led to the development of aftercare program models that include frequent and coordinated supervision and involvement with community-based services before and after juvenile offenders are released from residential settings (Altschuler and Armstrong, 1994; Bullis, Yovanoff, and Havel, 2004).

Using a sample of 413 youth participating in the Pathways study,[5] the researchers looked at how community-based services and court supervision affect multiple indicators of adjustment in the first 6 months in the community following release from a juvenile residential setting (Chung, Schubert, and Mulvey, 2007). Some relevant points regarding community-based treatment emerged from this investigation:

- Only 35 percent of these youth reported participating in community-based services during the 6 months immediately following release. This means that substantially more than one-half of youth who returned to the community from institutional care had no aftercare services during this critical adjustment period.
- After controlling for demographic and risk characteristics, greater intensity of aftercare services (more frequent contact) significantly reduced the odds of an arrest or return to an institutional setting during the 6-month aftercare period. Each additional month of services reduced the odds of these outcomes by 12 percent during the 6-month aftercare period.

These findings indicate that providing services during the aftercare period has a positive impact, even after controlling for level of risk; however, the great majority of youth returning home from an institutional stay do not receive these services.

Based on these findings, the researchers investigated the prevalence of community-based services beyond the 6-month aftercare period. They identified the subset of study participants who met criteria for a mental health problem (i.e., ADHD, high anxiety, posttraumatic stress disorder, major depression, dysthymia, or mania) in the year prior to the baseline interview (31 percent of the full study sample) and examined how many of them indicated that they had received community-based treatment for a mental health problem during the 7-year period following study enrollment (i.e., through their mid-20s). An individual was coded as receiving community-based services if he or she acknowledged participation in any of the following: sessions with a psychologist, counselor, or social worker; a mental health treatment group; or a partial treatment or day hospitalization program.

These analyses showed a low rate of participation in community-based services. Only 34 percent of these youth participated in the defined community-based treatments, even when examined over the 7-year followup period. Among the group who received at least one community-based service, individuals reported participating in that service on about 2 days out of every 100 days they spent in the community. The researchers found a similar low prevalence (30 percent) and intensity for involvement with community-based substance use services over the 7-year period among study participants who met criteria for a substance use disorder at baseline.

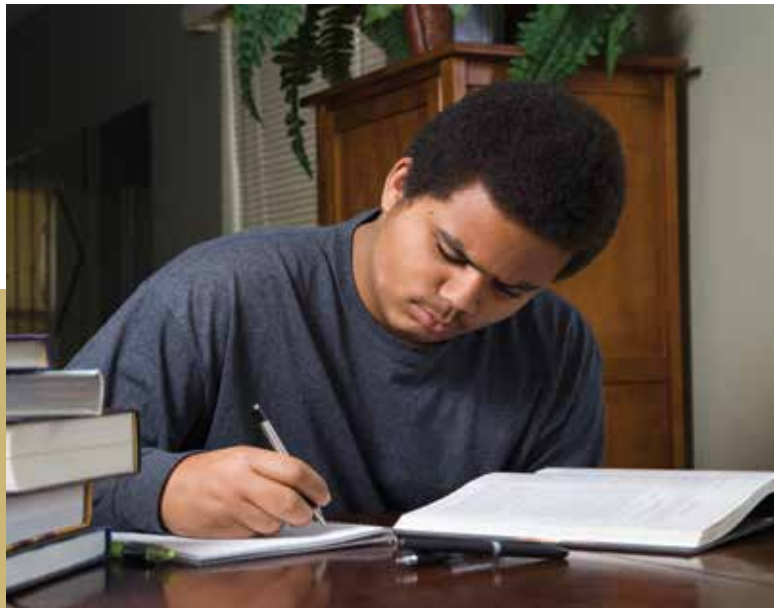
Implications for Juvenile Justice Policy and Practice

Although the Pathways study findings regarding the relationships between mental health problems and criminal

"More frequent aftercare services significantly reduced the odds of an arrest or return to an institutional setting during the 6-month aftercare period."

offending are not definitive, they suggest significant advances in understanding these relationships. They highlight the connection between substance use disorders and outcomes. The presence of a substance use disorder increases the likelihood of continued offending in serious youthful offenders beyond what one might expect from knowing only the general risk markers connected with an individual. This is consistent with a growing body of research demonstrating that substance use and offending often go hand in hand for both juvenile and adult offenders (Clingempeel, Britt, and Henggeler, 2008; Elbogen and Johnson, 2009; Steadman et al., 1998; Teplin, Abram, and McClelland, 1994). At the same time, the findings indicate that the link between the presence of a behavioral health problem and later outcomes might not be as strong as was initially thought. These findings highlight the need to exercise caution regarding expectations that treating mental health problems will reduce recidivism (although it should be clear that the Pathways analyses did not test the effect of treatment in general or the impact of varying levels of quality of treatment). Rather, they support the current dual focus of the juvenile justice system's programming—addressing both criminogenic risk and mental health problems. Finally, this work highlights the need to further expand what is understood of the role of mental health problems (other than substance use) on outcomes and how treatment may or may not moderate or mediate these relationships. In particular, it is important to differentiate between criminogenic risk and mental health symptoms at a more refined level than the Pathways study information would permit. As noted earlier, a complicated relationship and overlap exists between criminogenic risk and mental health problems. For example, low impulse control could be both a criminogenic risk factor and part of a cluster of symptoms related to ADHD. This would make it difficult for the Pathways study analyses to find an independent effect of mental health disorders beyond the risk factor. Until these issues are sorted out, this work should not be interpreted as a definitive statement about the role of mental health symptoms or the utility of treating mental health problems. These analyses represent the initial step in empirically testing these relationships.

These findings do not imply that the recent system-level policy and practical focus on identifying juvenile offenders with mental health problems and providing evidence-based treatments is misguided. Indeed, a strong ethical case can be made for securing mental health care for these youth; they are in the care of the state and, as guardian, the state should do whatever one would do for one's own children. The high prevalence of mental health problems in juvenile offender samples suggests a clearly addressable impediment to the future health and adjustment of these youth. Conversely, a legitimate argument can be made that the juvenile justice system is not charged with optimizing development for youth in its care nor is it equipped to do so (Grisso, 2007). The strongest argument to refute this perspective—that the state is not obligated to ensure mental health care for serious juvenile offenders—would be a clear demonstration that mental health problems greatly increase the risk of future offending and that treatment significantly reduces that risk. However, the current findings do not support such a direct argument because some mental health problems (e.g., substance use disorders) are related to recidivism and others (e.g., depression) do not seem to be, and because the impact of treatment was not tested. Based on what is understood about these relationships, it appears that although public safety concerns may provide a strong justification for the delivery of mental health treatment services to young offenders, they may provide an insufficient argument for the juvenile justice system being the main provider of those services. Rather, the most potent rationale for providing these services within the juvenile justice system may be the ethical obligation to offer targeted care that addresses the identified needs of youth in the system and the continued responsibility to assess the system's ongoing practices in the provision of care.



The recent systemwide efforts to screen youth more carefully to identify their areas of risk/need and provide evidence-based treatments represent a tremendous advance in providing targeted care for juvenile offenders in the system. By identifying a subgroup of youth for diversion, this work has led to a reduction in the need for the juvenile justice system to provide mental health services to seriously disordered youth who have a low risk for continued offending. For youth at a greater risk for continued offending, however, these efforts may not pay off unless they are coupled with equal improvements in translating the results of the screening into individualized care and expanding the use of mental health and substance use treatment services beyond the walls of juvenile justice facilities.

Conclusion

These analyses only scratch the surface of how mental disorders relate to offending among serious youthful offenders and how services might be provided to offenders with behavioral health problems. They raise additional questions that should be addressed. So far, two messages seem clear from this work on the Pathways to Desistance study:

- Serious juvenile offenders in the justice system have a constellation of problems, and focusing treatment on mental health problems alone is probably not going to greatly reduce future offending. Treating substance use problems, addressing criminogenic risk factors, and providing specialized mental health care are all likely to be necessary to reduce future offending significantly.
- Developing an integrated system of care should be a focus of juvenile justice reform. Based on the alarmingly low levels of involvement with appropriate services seen in the lives of serious youthful offenders, it is clear that much remains to be done in implementing community-based care.

The development of a better system should build on current screening and diversion efforts. A system that expands the use of structured risk and needs assessments and connects the assessment results with services could ensure that more services, and more appropriate services, are provided. Risk and needs identification can explicitly guide the types and intensity of treatment that the court and service providers deliver, as long as the court provides the infrastructure and motivation to do so. Translating information about youth into provision of a range of appropriate services in the community is the next challenge.

The Pathways study findings so far suggest that there is room for improvement in this regard, current systemwide efforts notwithstanding. Ensuring that screening and assessment results are used to individualize treatment for youth in residential care and connect youth with appropriate community care seems possible. Right now, though, it is still apparently an aspiration rather than a reality.

The potential benefit of these efforts seems clear. In one study, youth for whom a low proportion of identified criminogenic needs was matched with therapeutic services reoffended at a higher rate and significantly earlier than youth for whom a greater proportion of needs was matched with services (Vieira, Skilling, and Peterson-Badali, 2009).

Additionally, a small but rapidly growing number of studies is showing that substance use treatment can produce statistically significant reductions in substance use among juvenile offenders (and in samples in which most but not all of the participants are juvenile offenders; e.g., Dennis et al., 2005; Hser et al., 2001; Randall and Cunningham, 2003). For example, looking at a small subset of the Pathways participants, Chassin and colleagues (2009) found evidence that substance use treatment in juvenile justice settings produced significant decreases in substance use 6 and 12 months later, and interventions with family involvement produced statistically significant reductions in nondrug offending.

Intervention with serious youthful offenders makes sense, and the challenge is to get the right mix of services to the right youth. As the Pathways study indicates, this challenge can only be met successfully if juvenile justice professionals make greater use of structured risk and needs assessments to direct young offenders with mental health needs to services, evaluate criminogenic risk factors and mental health needs of young offenders, provide treatment for substance use disorders, and integrate residential treatment services more closely with community-based aftercare. Much work remains to be done.

Endnotes

1. OJJDP is sponsoring the Pathways to Desistance study (project number 2007–MU–FX–0002) in partnership with the National Institute of Justice (project number 2008–IJ–CX–0023), the John D. and Catherine T. MacArthur Foundation, the William T. Grant Foundation, the Robert Wood Johnson Foundation, the William Penn Foundation, the National Institute on Drug Abuse (grant number R01DA019697), the Centers for Disease Control and Prevention, the Pennsylvania Commission on Crime and Delinquency, and the Arizona State Governor's Justice Commission. Investigators for this study are Edward P. Mulvey, Ph.D. (University of Pittsburgh), Robert Brame, Ph.D. (University of North Carolina–Charlotte), Elizabeth Cauffman, Ph.D. (University of California–Irvine), Laurie Chassin, Ph.D. (Arizona State University), Sonia Cota-Robles, Ph.D. (Temple University), Jeffrey Fagan, Ph.D. (Columbia University), George Knight, Ph.D. (Arizona State University), Sandra Losoya, Ph.D. (Arizona State University), Alex Piquero, Ph.D. (Florida State University), Carol A. Schubert, M.P.H. (University of Pittsburgh), and Laurence Steinberg, Ph.D. (Temple University). More details about the study can be found in a previous OJJDP

fact sheet (Mulvey, 2011) and at the study Web site (www.pathwaysstudy.pitt.edu), which includes a list of publications from the study.

2. Externalizing disorders are those that manifest themselves in children's outward behavior problems and reflect the child acting negatively on his or her external environment (Liu, 2004). These disorders are marked by disruptive, hyperactive, and aggressive behavior (Hinshaw, 1987); they include attention-deficit/hyperactivity disorder, conduct disorder, oppositional-defiant disorder, and antisocial personality disorder (Liu, 2004).

3. Pathways study enrollees whose cases were transferred to adult court (n = 244), who had an incomplete diagnostic interview (n = 48), were missing more than 1.5 years of followup data (n = 112), or did not spend at least 3 weeks out of 1 month in the community during the followup period (n = 1) were excluded from the study sample (Schubert, Mulvey, and Glasheen, 2011).

4. The analysis of the delivery of mental health and substance use treatment services in custodial settings studied the service histories of a subset of the full sample following the completion of the 24-month followup interview. A partial sample was used because early versions of the followup interview questionnaire lacked the detailed questions regarding service provision upon which this analysis is based. The 868 participants included in this analysis are drawn equally from both sites (425, or 49 percent, from Philadelphia County, and 443, or 51 percent, from Maricopa County). Because this analysis focuses on service patterns over 2 years, it includes youth processed in either the juvenile or adult systems as well as those sent to institutional care and those placed on probation as a result of the study index petition. Twenty-four percent of the participants included in this analysis (n = 211) were processed in the adult court system; the vast majority of these (n = 170) were from Maricopa County. Of those youth processed in the juvenile court system, a little more than one-half (51 percent) were given probation as the result of the study index petition and the remaining 49 percent were sent to placement (Mulvey, Schubert, and Chung, 2007).

5. For the analysis of the provision of community-based mental health services, the researchers studied the population of youth released from custody facilities following a juvenile court commitment, regardless of the type of facility (youth processed in adult court were excluded from the analysis). During the enrollment phase of the Pathways study, 547 offenders were processed in the juvenile system and sent to institutional placements as a result of the offense that led to their enrollment. The analysis was limited to 413 of these youth who had at least 6 months of reentry data available following release from their initial court placements; the release date could not be determined for 74 cases, and less than 6 months of postrelease data were available for 60 cases (Chung, Schubert, and Mulvey, 2007). For demographic and offense data regarding this subsample and more details regarding the analytic strategy, see Chung, Schubert, and Mulvey (2007).

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Acknowledgments

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This bulletin was prepared under grant number 2007–MU–FX–0002 from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), U.S. Department of Justice.

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NCJ 242440