Pathways to Desistance

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SUMMARY TECHNICAL REPORT

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1. Project Abstract

The Pathways to Desistance Study (the "Pathways Study") is a multi-site, collaborative research project that followed 1,354 serious juvenile offenders from adolescence to young adulthood. Interviews were done regularly with the adolescents as well as their family members and friends over a seven-year period after their involvement in court for a serious (overwhelmingly felony level) offense. The aims of the investigation were to: 1) identify initial patterns of how serious adolescent offenders stop antisocial activity, 2) describe the role of social context and developmental changes in promoting these positive changes, and 3) compare the effects of sanctions and interventions in promoting these changes. The larger goals of the study were to improve decision making by court and social service personnel and to clarify policy debate about alternatives for serious adolescent offenders.

This study grew out of the planning efforts of the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice. The study was part of a broader agenda of the Network to provide juvenile justice professionals and policy makers with empirical information that could be applied to improve practice, particularly regarding the topics of competence and culpability, risk assessment, and amenability of juvenile offenders. Network activities provided the initial forum for conceptualizing and planning this study, and collaboration with Network members and the MacArthur Foundation assisted in dissemination efforts.

This study started data collection in November, 2000 and completed the last follow-up interview in April, 2010. Investigators at the University of Pittsburgh coordinated the study, and interview data were collected under contract with investigators at Temple University (Philadelphia) and Arizona State University (Phoenix). The Office of Juvenile Justice and Delinquency Prevention (OJJDP), the National Institute of Justice (NIJ), The John D. and Catherine T. MacArthur Foundation, the Robert Wood Johnson Foundation, the William Penn Foundation, the William T. Grant Foundation, the Pennsylvania Commission on Crime and Delinquency, the Arizona Juvenile Justice Commission, and the National Institute on Drug Abuse all provided funding for data collection and analysis.

The study baseline and follow-up interviews covered six domains: (a) indicators of individual functioning (e.g., work and school status and performance, substance abuse, mental disorder, antisocial behavior), (b) psychosocial development and attitudes (e.g., impulse control, susceptibility to peer influence, perceptions of opportunity, perceptions of procedural justice, moral disengagement), (c) family context (e.g., household composition, quality of family relationships), (d) personal relationships (e.g., quality of romantic relationships and friendships, peer delinquency, contacts with caring adults), (e) community context (e.g., neighborhood conditions, personal capital, social ties, and community involvement) and (f) a monthly account of changes across multiple domains (e.g. education, money-making). The monthly data permits an examination of the nature, number, and timing of important changes in life circumstances. More detail about the Pathways study design, methods and measures can be found on the

study website at www.pathwaysstudy.pitt.edu. The Pathway study data sets are archived at the University of Michigan Interuniversity Consortium for Political and Social Research (ICPSR).

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Introduction

Debate in the juvenile justice system has focused regularly and dramatically on what to do about serious adolescent offenders. Over the past few decades, almost every state made changes to legislative statutes, endorsing public safety and retribution as explicit goals for juvenile justice as well as paving the way for easier transfer of serious adolescent offenders to adult court. Recently, some states have begun to question the wisdom of these changes. How the justice system handles serious adolescent offenders is often a flash point in these exchanges.

This debate is occurring, however, with limited data on either a) the patterns of desistance or escalation among serious adolescent offenders or b) the effects of interventions or sanctions on trajectories of offending from adolescence to adulthood. Although some studies have suggested that most offenders curtail or stop antisocial behavior in late adolescence, this research has often relied upon very small samples of serious offenders or very limited measurement of antisocial behavior patterns and developmental change during this period. In addition, little is known about the impact of various types of sanctions and interventions on outcomes other than antisocial behavior. We know very little, for example, how different sanctions affect juveniles' mental health, psychological development, or transition into adult roles.

The Pathways to Desistance study was undertaken to enrich our knowledge about the development of serious adolescent offenders, as they make their transition from adolescence into early adulthood. Beginning in 2000, the researchers on this project enrolled and followed a sample of 1,354 serious adolescent offenders from two metropolitan areas (Philadelphia, PA and Maricopa County (Phoenix), AZ). These adolescents were interviewed regularly for seven years after being found guilty of committing a serious crime. Collateral interviews with family member or peers were also conducted, and official records were gathered regarding arrest and social service involvement. The study was funded by numerous agencies in addition to the National Institute of Justice (i.e., Office of Juvenile Justice and Delinquency Prevention, John D. and Catherine T. MacArthur Foundation, William T. Grant Foundation, Robert Wood Johnson Foundation, William Penn Foundation, Centers for Disease Control, National Institute on Drug Abuse (R01DA019697), Pennsylvania Commission on Crime and Delinquency, and the Arizona Governor's Justice Commission). A working group of investigators has been involved with the study since its inception. The working group members are: Edward Mulvey, Robert Brame, Elizabeth Cauffman, Laurie Chassin, Jeffrey Fagan, George Knight, Sandra Losoya, Alex Piquero, Carol Schubert, and Laurence Steinberg. This group is currently producing academic papers and working on other dissemination activities.

This document is a final report for the National Institute of Justice. It contains a brief overview of the rationale and the status of the Pathways to Desistance study. It also contains three draft chapters from a book under contract with Oxford University Press on current study findings. The prospectus for the book can be found in Appendix A. These chapters cover the

outcomes for the Pathways adolescents, the services and interventions provided to these adolescents, and work to date on legal interventions and perceptions of deterrence. A summary of the major findings from these chapters, a brief discussion of the policy and/or practice implications from these findings, and some directions for future research are also presented in this overview.

Statement of the problem

Over the last few decades, longitudinal studies on adolescent crime and disorder have produced much useful information (Liberman, 2008). They have, for example, provided a clearer picture of the course of particular behavioral patterns over different periods of development. Because these studies provide information on change within individuals over time, they have yielded more empirically sound findings about the strength of certain factors in promoting the onset or maintenance of antisocial or disordered behavior (e.g., the role of parental supervision in the onset in antisocial behavior and peer influence in the maintenance of offending; Patterson & Stouthamer-Loeber, 1984). Finally, they have produced information about patterns of behavior or offending over the course of development that might distinguish certain subtypes of disordered adolescents (e.g., early onset, chronic versus adolescent-limited antisocial children; see Moffitt, 1993, 1997).

This map of the development of antisocial and disordered behavior has been helpful for juvenile justice and child welfare professionals in recent efforts to formulate informed policy approaches. First, these findings help with targeting at-risk children. Knowing which children are likely to have continuing problems allows for more focused screening and identification for program participation. Second, these studies provide useful leads about the appropriate focus to take in preventive interventions. Identification of the risk factors that precede the onset of certain problem behaviors provides valuable information about where to concentrate programming efforts with children of different ages (e.g., curtailing early drug or alcohol use as a method for reducing involvement in delinquency; Van Kammen, Loeber, & Stouthamer-Loeber, 1991). Finally, these studies have focused the argument for early intervention by demonstrating that it is difficult to alter a child's trajectory once "launched." This line of research has increased the efficiency, effectiveness, and attractiveness of prevention efforts.

Existing longitudinal research has not been particularly useful, however, in providing clear guidance about what should be done with adolescents who are in the juvenile justice system. As a rule, longitudinal studies of antisocial behavior have followed cohorts of children and adolescents sampled from schools or communities, often overrepresenting those from high risk schools or communities to provide an adequate split between subjects who will and will not display problem behaviors. Even with oversampling, however, this approach still usually gives researchers only a small number of adolescents who end up penetrating the juvenile justice system very deeply. As a result, there is often little to be said conclusively about the effects of involvement with the courts or court-related services. In addition, even if there are sufficient numbers of adolescents who are involved with juvenile justice in a given sample, these studies rarely have detailed measures of the type, intensity, or duration of interventions or sanctions that adolescent offenders experience. The main emphasis on identifying risk markers, as well as the

inherent difficulties with measuring the dimensions of court involvement, usually leaves these experiences ignored.

In the absence of longitudinal information, juvenile justice professionals have instead relied upon comparative studies of interventions and sanctions to determine the best course to take for policy or individual decision making regarding treatment recommendations. Evidence is sketchy, however, regarding the relative influences of interventions, sanctions, and developmental events on the outcomes for serious adolescent offenders. Meta-analyses of intervention studies have identified certain aspects of programming that appear to produce better results (see Lipsey, 2009), but the variability in the types of interventions reviewed and the necessarily broad characterization of programming in these overviews provides only limited guidance for program and policy debates about serious adolescent offenders. As Sherman et al. (1997) bluntly stated in a lengthy recent review of what works in juvenile justice,

> Few studies of intervention deal exclusively with the most serious or most violent juvenile offenders so, at this point, little can be said about the effectiveness of programs for these offenders (p. 9-45).

Programs and policies for the more serious adolescent offenders come and go regularly, but these changes seem to be driven more by fads than solid findings. Unfortunately, the greatest problems for the juvenile justice system seem to arise from the very adolescents about whom the least is known.

It is particularly important to know how serious adolescent offenders reduce or stop criminal offending (Laub & Boonstoppel, 2012). This information is critical for the juvenile justice system to have as it attempts to resolve the difficult tension of redirecting adolescent offenders while ensuring public safety. Knowing how serious adolescent offenders move from criminal involvement to being productive citizens would provide a road map for the court's efforts. Development of empirically sound theory regarding how serious juvenile offenders make a successful adjustment into early adulthood is the first step in accomplishing this task of expanding the court's impact (Mulvey, et al., 2004).

Statement of hypothesis or rationale for the research

The information generated from the Pathways study will be useful for both improving juvenile justice practice and focusing policy debate. It will provide a significant addition to the sparse empirical basis needed to construct useful risk assessment approaches for juvenile justice practitioners and judges. These professionals currently have very limited guidance about how to assess the potential utility of different intervention and sanction options. In addition, demonstration of heterogeneity in serious adolescent offenders and of the varying impacts of different interventions and sanctions will refine debate regarding the potential value of individualized approaches in juvenile justice. The overall purpose of this study is to document and understand the desistance processes of adolescent offenders. The study will:

- identify distinct initial pathways out of juvenile justice system involvement and the characteristics of the adolescents who progress along each of these pathways
- describe the role of key social contextual and developmental changes in promoting desistance or continuation of antisocial behavior

- compare the effects of sanctions and selected interventions in altering progression along the pathways out of juvenile justice system involvement

In short, the Pathways study attempts to provide a rich picture of how serious adolescent offenders change in late adolescence, and the factors that influence these patterns of change.

Methods

The Pathways study methods are documented in detail in Schubert, et. al. (2004). Additional information about the study can be found at www.pathwaysstudy.pitt.edu. In this section of the report, we summarize the study methods for recruitment and data collection and provide an overview of the success of the study in locating and interview participants over the course of the seven-year follow-up period.

Recruitment

Data collection for the Pathways study occurred in two sites: Philadelphia County, PA and Maricopa County (Phoenix) AZ. Two sites were chosen rather than relying on a single locale in order to avoid reflecting idiosyncratic practices that would limit the generalizability of the study findings. These sites were selected following an extensive review of the juvenile justice system in six locations which included a review of existing and pending legislation regarding juvenile processing, face-to-face interviews with key administrators and potential collaborators, and visits to detention and long-term secure facilities in each location. In the end, Philadelphia and Phoenix were selected because they offered (a) high enough rates of serious crime committed by juveniles to ensure the enrollment of a large enough sample (based on statistical power analyses) within a reasonable time frame (determined by budgetary considerations); (b) a diverse racial/ethnic mix of potential participants (Philadelphia's offender population is mainly African American, whereas Phoenix's is predominantly Hispanic and White); (c) a sizable enough number of female serious offenders to examine gender differences in patterns of development and desistance from crime; (d) a contrast in the way the systems operate (Phoenix has a sparse treatment system, and Philadelphia has a more extensive one); (e) political support for the study and cooperation from the practitioners in the juvenile and criminal justice systems; and (f) the presence of experienced research collaborators to oversee data collection on-site.

Within each site, the Pathways study sought to recruit a sample of adolescent offenders with sufficiently serious charges and histories to be relevant for policy discussions, but with enough heterogeneity to examine the relative impact of interventions, sanctions, and life changes. With this goal in mind, we recruited 1,354 adjudicated adolescents who were between the ages of 14 and 17 years at the time of their committing offense from the juvenile and adult court system in each locale. The youth were selected for potential enrollment after a review of the court files in each locale revealed that they had been adjudicated delinquent or found guilty of a serious offense. Eligible crimes included all felony offenses with the exception of a few less serious property crimes, as well as misdemeanor weapons offenses and misdemeanor sexual assault. Because drug law violations represent such a significant proportion of the offenses committed by this age group, and because boys account for the vast majority of those cases, we were concerned about compromising the heterogeneity of the sample if we did not limit the

number of study participants who were drug offenders. Therefore, we capped the proportion of male juveniles with drug offenses to 15% of the sample at each site. All female juveniles meeting the age and adjudicated crime requirements and all youths whose cases were being considered for trial in the adult system were eligible for enrollment, even if the charged crime was a drug offense. The enrollment of the sample began in late 2000 and was completed in March, 2003.

Interview Schedule

After informed consent was obtained from the juvenile and their parent/guardian, youths who agreed to participate in the study completed a baseline interview. For youths in the juvenile system, the baseline interview was conducted within 75 days of their adjudication hearing. For youths in the adult system, the baseline interview was conducted within 90 days of either (a) the decertification hearing in Philadelphia (a hearing at which it is determined if the case will remain in adult court or if it will be sent back to juvenile court) or (b) the adult arraignment hearing in Phoenix (the point in the Arizona adult system at which charges have been formally presented and the defendant has the opportunity to enter a plea of guilty or not guilty to the charges). There was no waive-back provision to the juvenile system under Arizona law during the recruitment period.

Study participants completed two types of interviews after their baseline interview: "time-point" interviews and "release" interviews. In addition, information about the study participant was also obtained for two other sources: collateral informants and official records. Each of these are described below.

Time-point interviews

The time-point interview assessed status and change across multiple domains such as individual functioning, psychosocial development and attitudes, family and community context, and relationships. In addition, a portion of this interview used a life calendar approach (Caspi et al., 1996; Horney, Osgood, & Marshall, 1995) to capture the nature, number, and timing of important changes in the life circumstances of these youth, one of the major goals of the study. On average, these interviews took 2 hours to complete, and participants were paid for their participation.

Time-point interviews were completed at 6-month intervals for the first three years of the study and annually thereafter through 7 years. The extended interval between interviews in the last four years was the result of budgetary constraints. It should be noted, however, that although the official time point interview was conducted annually in the later waves, we did continue to collect information with participants via a brief telephone call at the six-month point between annual time-point interviews. This contact (termed a "mini interview" for study purposes) elicited information regarding life events (e.g. school, work) and court interventions/sanctions that were experienced in the prior six-month period, and this information was used as a reference to aid recall at the annual time-point interview. The date for each of the time-point interviews was calculated based on the date of the baseline interview, ensuring approximately equal measurement periods for all participants. These equal measurement periods simplify the

statistical analyses required to assess developmental processes, life situation changes, and their relations to changes in behavior.

A window of opportunity to complete each time-point interview opened at six weeks prior to the follow-up interview target date and closed at eight weeks after the target date. If an interview was not completed within eight weeks of the target date, that particular time-point interview was considered "missed," and no further attempts are made to interview that individual until the next time-point interview. Unless the participant explicitly withdrew from the study or died, we continued to attempt to contact a research participant for future interviews even after one or more of the previous time-point interviews was missed. Our success at obtaining interviews is further discussed below under "retention."

Release interviews

The second type of interview completed by research participants after their baseline was a "release interview." The purpose of the release interview was to obtain the youth's perceptions regarding various aspects of a recent residential experience and institutional environment (e.g., accounts of program operations and services provided, ratings regarding the participant's feelings of his or her safety in the facility). The release interview contained 165 items in total and took approximately one hour to complete. Participants were paid to complete this interview.

The window of opportunity for obtaining a release interview opened 30 days before the research participant was scheduled to be released and closed 30 days after he or she had left the facility for residence in the community. The restricted time period within which to conduct a release interview reduced the likelihood that intervening events and experiences would skew the participants' recall of the stay. This interview was conducted in a separate session apart from the time-point interview to minimize the burden on research participants and to ensure adequate attention to institutional ratings.

Obtaining a release interview required the recognition that a residential stay had occurred and information about the anticipated or actual release date. Knowledge of a residential stay was obtained from multiple sources: (a) information obtained in the course of trying to locate a subject for a time-point interview, (b) information provided during a time-point interview, as reported on a revised version of the Child and Adolescent Services Assessment (Ascher, Farmer, Burns, & Angold, 1996), and/or (c) a check, done regularly, of the Department of Corrections websites and parole hearing schedules and calls to local jails. Because the interviewer may have become aware that a residential stay had occurred only after the participant was released, it was not always possible to schedule a release interview within the required window surrounding the release date. Thus, we do not have a release interview for every residential stay experienced by a Pathways study participant. Reviewing available data regarding the number of reported institutional stays in our sample, we estimate that we obtained a release interview for approximately 20% of the total number of residential stays experienced by our study participants.

Collateral interviews

At the time of the baseline interview, and at annual intervals for the first three years of the study, additional information was obtained from individuals nominated by participants as someone who "knew them (the participant) well." These individuals were called "collateral informants" for study purposes. At the baseline interview, the ideal collateral informant was an adult and at subsequent points the collateral informant was ideally a peer. This shift from an adult collateral at the baseline to a peer informant for subsequent interviews was motivated by our desire to capture information about the ongoing behavior of the participant, rather than historical information. Previous work has found that peers are better able than a parent to report on deviant activity (Chassin, Pitts, & Delucia, 1999; Smith, McCarthy, & Goldman, 1995). The window of opportunity to complete a collateral interview was parallel to that of the time-point interviews. Our success in obtaining collateral interview data is reported below under "retention".

A collateral informant was available for 89% (1,204/1,354) of the youth baseline interviews. In 95% of these cases, an adult provided the information while the remaining 5% were other individuals such as a sibling, cousin or friend. The vast majority (80%) of the adult informants were a parent (biological or adoptive). Across the three collateral follow-up interviews, a peer informant was available for an average of 74% of the completed interviews. For the remaining interviews, the collateral informant was typically a parent.

Official Record data

In addition to the self-report information obtained through the interviews noted above, the Pathways study also routinely collected information regarding the study participants from official record sources. These sources included court treatment records, FBI arrest records, child welfare histories, and state Medicaid services records.

Interview battery

The battery of measures used in the interviews was developed initially through joint funding from the National Institute of Justice (NIJ grant # 99-IJ-CX-0053) and the MacArthur Network on Adolescent Development and Juvenile Justice. A multidisciplinary working group reviewed the literature regarding theoretical constructs relevant to the process of desistance and consulted with numerous experts to identify the most appropriate measures for the identified constructs. Pilot studies testing the psychometric qualities of several instruments were also conducted to determine their appropriateness for use with inner-city minority adolescents and young adults. A list of measures included in the follow-up interview is available in the study codebook located at www.pathwaysstudy.pitt.edu.

Interview Location and methods

Interviewers made a concerted effort to complete interviews with research participants in a location where the adolescent was comfortable. Most of these interviews were conducted in the adolescent's home or, for those participants in institutional placement, in a private room within the facility, unless there were concerns about the interviewer's safety. Table 1 contains a summary of the location in which time-point interviews were conducted for all study waves.

Table 1.1: Interview location across study waves

Wave	Percent of interviews done at each location					
	Participant's home	Residential Placement	Someone else's home	Telephone	Study Office	Public Place
Baseline	43	52	1	0	1	3
1	46	48	1	<1	1	3
2	53	37	2	2	3	3
3	55	32	3	3	3	4
4	54	30	4	4	4	4
5	57	28	3	4	4	4
6	55	28	4	4	5	4
7	50	29	4	5	8	4
8	43	28	3	8	13	5
9	42	29	3	6	13	6
10	39	30	3	8	15	5

All interview information was collected using a computer-assisted format, with all measures and skip patterns programmed into an interview package. Trained research interviewers read interview questions aloud. To encourage honesty, attempts were made to conduct the interview out of the hearing range of other individuals. If other individuals were within hearing distance, respondents were given the option to enter their responses on a key pad. Participants were also informed of the confidentially protections provided to the study by a Department of Justice statute governing this type of funded research.

Participants were paid on a graduated payment scale, designed to encourage continued participation. Payment began at $50 per interview and was capped at $150 according to the following schedule:

- Baseline interview: $50;
- 6-month interview: $65;
- 12-month interview: $75;
- 18-month interview: $100;
- 24-month interview: $115;
- 30-month interview: $130;
- 36, 48, 60, 72, 84 and 96-month: $150
- Release interview: $50

In addition, payment was provided for completing five very brief ("mini") interviews at 42-months, 54-months, 66-months, 78-months and 90-months. For those brief interviews, payment was made in the form of a gift certificate valued at $10. If the youth was incarcerated at the time, the $10 payment was made in a form that was acceptable to the institution.

Retention

At the time of enrollment, our study participation rate, defined as the number of participants enrolled divided by the number attempted for enrollment, was 67%. Our refusal rate, defined as the number of adolescents or parents who would not take part in the study divided by the number we approached, was 20%. These figures compare quite favorably with those from other studies of high-risk populations.

Following enrollment, we assessed retention rates in two ways. The first method, our time-point retention rate, measured the success in completing a particular interview wave. Ther second method for characterizing retention, our cumulative retention rate, reflects the completeness of the data. This figure reflects the proportion of possible interviews we have completed for an individual across all time points.

Throughout the course of the study, we had considerable success at finding and interviewing subjects. At the point when data collection ended (in April, 2010), there were 14,604 adolescent subject interviews, 4,521 collateral interviews, and 1,158 release interviews completed. Forty-eight subjects (3.5%) died in the course of the seven-year follow-up period (29 from Philadelphia and 19 from Phoenix) and 46 (3.2%) dropped out of the study of their own accord (38 from Philadelphia and 8 from Phoenix). We completed interviews for approximately 92% of the 1,354 enrolled cases at each of the first six follow-up points (through the 36-month follow-up). When the schedule shifted to yearly interviews, we completed interviews for 87% of participants (average retention rate from the 48-month interview point through the 84-month interview point). We have collateral interviews for 89% of the research participants (all 1,354 in the sample) at baseline, and approximately 90% of the cases with adolescent interviews at each annual follow-up period have a collateral interviews at that point (meaning about 80% of the total sample have collateral information at these annual follow-up points). As noted earlier, collateral interviews were discontinued following the 36-month interview. Table 1.2 provides a detailed picture of the number of interviews and the completion percentage for each time point. Table 1.3 provides the cumulative retention rate.

Table 1.2: Pathways to Desistance study: Final retention rates

Time Point	Number of Interviews Completed	Retention Rate (% of 1,354)
6-month	1,262	93%
12-month	1,261	93%
12-month collateral	1,127	83% of full sample; 89% of the subjects who completed a 12-month interview also have a completed collateral interview
18-month	1,230	91%
24-month	1,230	91%
24-month collateral	1,119	83% of the full sample, 91% of the subjects who completed a 24-month interview also have a completed collateral

		interview
30-month	1,232	91%
36-month	1,238	91%
36-month collateral	1,146	85% of the full sample, 93% of the subjects who completed a 36-month interview also have a completed collateral interview
48-month	1,211	89%
60-month	1,207	89%
72-month	1,178	87%
84-month	1,134	84%

Table 1.3: Pathways to Desistance study: Final cumulative retention rates (% of 1,354)

84-month point	Full data (6, 12, 18, 24, 30, 36, 48, 60, 72 and 84)	63%
	9 interviews	16.5%
	8 interviews	7%
	7 interviews	4%
	6 interviews	3%
	5 interviews	2%
	4 interviews	<1%
	3 interviews	<1%
	2 interviews	<1%
	1 interview	<1%
	0 interviews	1%

Current activities

Since the end of data collection, members of the study working group have been devoting their time to data analysis and dissemination activities. These activities fall into three broad areas.

Analysis and writing

The study working group members, their post-doctoral fellows, and graduate students have produced 67 published or in press papers to date (see Appendix B for a list of these publications). There are additional data analytic projects currently underway. In addition, the working group members have produced a series of seven OJJDP Bulletins reporting Pathways study findings (not counted in the above figure of published papers). To date, three of these bulletins have been published and distributed, and the remaining four bulletins are under internal review at OJJDP. In addition, the study has produced two Issue Briefs in collaboration with our funding partners at the MacArthur Foundation. Over the next year, we have plans to produce five additional Issue Briefs and fifteen short summaries of policy-relevant papers in conjunction with the MacArthur Foundation.

Presentations

We have maintained our commitment to disseminating information about the Pathways study to audiences of practitioners, policy makers, and academics in an effort to promote visibility and potential collaborations. Semi-annual progress reports have documented the number of presentations within each reporting period. Over the past two years, we have averaged at least one presentation per month to various audiences and have several scheduled for the coming months as well. We have presented at national academic meetings as well as national and state meetings of practitioners (e.g., National Juvenile Defenders Association Annual Meeting, Pennsylvania Judges Leadership Conference). We have also briefed the United States Attorney General and presented findings to the Federal Juvenile Justice Coordinating Council.

Archiving the study data

The Pathways study data are currently being archived by the National Addiction and HIV Data Archive Program, Inter-University Consortium for Political and Social Research (NAHDAP/ICPSR) at the University of Michigan. To date, the subject and collateral baseline and follow-up measures data sets have been made available for public access through NAHDAP/ICPSR. In addition, the release interview data and the official record reports of arrests/petitions prior to and after study enrollment have been made available through restricted access. Summary variables from the remaining official record data and the life-event calendar data collected from research participants will be released for restricted use in December, 2013.

We have also begun the process of introducing the field to the data for use by researchers outside of the working group. To date we have conducted workshops about the data at the annual meeting of both the American Psychology-Law Society and American Society for Criminology. We also conducted a webinar for approximately 220 individuals through ICPSR and we plan to hold a summer workshop at the University of Michigan in 2014.

Summary of selected findings to date

The attached draft chapters provide a detailed description of analyses and results generated to date on three topics: life outcomes of the Pathways adolescents, treatments/interventions provided to these adolescents, and the effects of attitudes about social and legal processes on continued offending. There are some specific results regarding each of these topics that should be highlighted as well as some general themes that emerge from the whole of the information provided. We will present some of the general findings below.

One of the first set of findings (covered in draft chapter 3) relates to the complexity and difficulties in the lives of these adolescents. Data on the life situations of these adolescents at the end of the follow-up period (when they are about age 23) indicates that they are faced with considerable challenges as they negotiate early adulthood. About half have children by this age and the age at becoming a parent is younger than the general population. Yet only about half of these young people are employed at least part time. Less than 2/3 have their high school diploma

or GED. They are operating as young adults with marked limitations on their earning power and their likelihood of establishing successful, conventional lifestyles.

It is also useful to note, though, that their criminal involvement has decreased considerably. This does not mean that they quit crime. On the contrary, 74% of the sample is re-arrested for a new charge over the follow-up period. The pattern of offending is what is interesting, however. Whether one looks at arrests or self reported offending, the level of offending decreased for this group overall. There appears to be slightly less than 10% of the sample who continue to offend at a relatively high level, whether measured using arrest or self report. At the same time there are about twice that proportion who drop off steadily in their offending.

Desistance does occur. These adolescents move from more frequent and varied crimes to committing crimes less often and of a less serious nature. Not all of these offenders with reduced rates of arrests quit offending (some self reported continued offending), but the general pattern observed in the sample was a reduction in both self reported offending and arrests. Moreover, it is not the result of simply being locked up. Because this study was able to collect information about the time spent in an institution or in the community, we were able to see how the rate of offending (accounting for time in an institution) changed over time. It dropped off for the majority of these offenders.

Considering both life changes and offending changes, it is important to note that there is considerable variability in this sample of offenders. When analyses are done to try to find distinct groups that differ on "sets" of outcomes or patterns of offending over time, several groups emerged. There are a number of adolescents who are living independently and spending little time in institutional care at age 23. Similarly, there are distinct groups of adolescents who continue offending at a high rate and those who engage in very little antisocial behavior.

The solutions did not have to come out this way; the whole sample could have been indistinguishable on their sets of outcomes or followed a single trajectory of change over time in offending. However, identifiable subgroups emerged. Although these adolescents had done a comparatively serious offense, these adolescents were not were on the same road to a dismal future. Moreover, the type of offense on the study index petition (e.g., a serious offense against person or a property offense) bore no association to the offending group where the adolescent landed.

We would argue that this variability matters for designing interventions and policies. Although these were all serious offenders, they did not have the same set of needs, likely outcomes of living situations, or patterns of future offending. Knowing what offense they had committed, however, told us nothing about what the future held for these adolescents. Therefore, assuming that all serious offenders need the same intervention or that they are all destined to continue offending because of their current charge is mistaken assumptions. As a result, policies that treat adolescent offenders in a uniform way because of their presenting offense are bound to be inefficient and ultimately ineffective.

Analyses done so far have identified at least two factors that appear related to later patterns of offending and outcomes. The first is substance use. This group of offenders has a very high rate of substance use at the time of their involvement with the court and a substantial proportion of these adolescents (almost 40%) had a diagnosable substance use disorder at disposition. Also, levels of substance use are associated strongly with offending over the follow-up period. Finally, substance use treatment, even the generic sorts offered in the juvenile justice system, appears to have an effect on reducing offending. There seems to be a great deal to gain from identifying and treating substance use in serious offenders. We know that the problem is prevalent, we know that more substance use is associated with more offending, and we know that something can be done about it.

Second, intrapsychic change appears to be associated with less offending. Several different analyses identified shifts in attitudes about offending and the legal system as well as gains in psychosocial maturity as markers of shifts in offending. More growth in measures indicating more acceptance of responsibility or increased temperance were associated with lowered offending. These findings provide support for the development of methods to accelerate maturity of thinking as possible interventions. They also provide a field observation that supports findings about the potential effectiveness of cognitive behavioral therapies or other methods that might promote more future oriented thinking patterns.

Other findings about perceptions of deterrence (covered in Chapter 5) also underscore the importance of considering the effects of possible attitudinal changes on offending. The Pathways study collected repeated measures about perceptions of the possible risks and rewards connected with crime, providing the only data available about how these perceptions might change over time and be related to offending. Analyses so far have shown that serious adolescent offenders are responsive to the threat or risk of sanctions; their offending is tied to their perceptions of how certain they are of being arrested. In addition, the relationship of deterrence to offending is not linear for all offenders and it is not a consistent process across all crime types. Adolescents who see little risk from involvement in crime did not change their level of offending when the perceived risk of getting caught increased (when they were arrested). Within this group of offenders, there was no evidence of any certainty effect; increases in sanction risk were not associated with a reduction in offending. In contrast, for those who thought the risk of getting caught was very high (>90%), the rate of decline in the likelihood of offending increased dramatically with changes in risk. These data provide evidence that serious adolescent offenders with a mid-level concern for the risk of getting caught do respond to getting caught by changing their ideas about the chances of getting caught and not offending.

As in adult offenders, the power of deterrence in serious adolescent offenders appears to rest in the perceptions of the certainty, not the severity, of the punishment for criminal involvement. The implications for court and probation practice are clear. Sanctions can work if these offenders know that they will happen, but their severity will do little to change behavior.

Findings regarding treatment interventions also provide some information about how services are provided and how they might reduce offending. Some of the most striking findings

are those that provide a descriptive picture of the types of services provided to these adolescents. There are two general conclusions from these analyses.

First, the system relies heavily on institutional care. About 87% of these adolescents spend some time in an institution during the follow up period, and the average number of juvenile institutional stays is 2.4 and the average number of adult institutional stays is 4.9. Moreover,, the amount of time spent in these facilities is not trivial. On average, these offenders spend about 42% of their time between enrollment in the study and age 18 and about 30% of their adult years in institutional care. This stands in stark contrast to the prevalence of the sample receiving any community-based services; 56% of the sample receive some sort of community-based services during the seven year follow-up period and these services only occur onces every seven weeks. Importantly, it does not seem to matter whether there is a high need for these types of services; levels of received community-based services are not distinguished by the presence of a diagnosable mental health or substance use disorder; the levels are similar for those with and without these problems. Seeing these patterns of services makes it clear that re-entry into the community is a recurrent event for many of these adolescents and the reintegration process is likely to have an pronounced impact on long term adjustment. Yet the services to support this process do not appear to be there in any abundance.

It has to be noted that this study cannot determine whether the observed low rate of community-based services is because the juvenile justice system is failing to link these youth to services upon release from institutions or whether the low rate is the result of the failure of the youth to comply with treatment recommendations. Engaging adolescents in services is a difficult task and whether the juvenile justice system and its service providers are well designed and equipped to do this is an open question. Whatever the dynamic might be, however, the net result is that these high-need youth are not receiving community-based services.

The study has produced other findings about effects connected with particular aspects of institutional care that seem to matter in terms of community adjustment. In one set of analyses, investigators found that longer stays in a juvenile facility (beyond six months) did not reduce a juvenile's chances of re-arrest. Youth matched on background characteristics who served differing amounts of time in a facility had essentially the same re-arrest rates. Keeping youth for longer periods of time within the range of 3 to 12 months did not provide a benefit in terms of reducing arrest after the youth leaves. It is important to note that rate of re-arrest is not the only possible benefit of an institutional stay (e.g., youth might get vocational skills or substance use treatment), but this finding does call into question what public safety benefit is being gained from longer juvenile institutional stays. Shortening stays and investing in community-based services might be possible with little cost in terms of increased offending.

Other analyses support the idea that planning for and providing community-based service during re-entry matters. Greater intensity of community-based services (more frequent contact) reduced the chance of a re-arrest or return to an institutional setting in the six month aftercare period. This effect was seen for youth across different levels of risk and with different demographic characteristics. Each additional month of services reduced the odds of re-arrest by 12 percent. In addition, more intense probation supervision over the six-month aftercare period increased the chances of positive activities in the community. Again across different levels of

risk and different demographic characteristics, more frequent contact with the probation officer increased the odds that the youth would be "gainfully active" (working or going to school) during the six-month aftercare period. The influence of contacts with the probation officer had an effect even when statistical controls were introduced for the amount of support the youth had from other caring adults, peers and parents.

These analyses are more convincing when they are considered in light of another set of analyses using a separate data set of over 1,000 interviews that looked at the adolescents' perceptions of the facility they were just leaving. In these analyses, investigators found that some particular aspects of the institutional environment had significant effects on later community adjustment, even after controlling for characteristics of the adolescent likely to predict later criminal involvement. In particular, adolescents who reported having a primary counselor and receiving information about re-entry plans had lower rates of being arrested or returning to an institution after release.

The above findings provide a picture of who the adolescents are who commit serious offenses as juveniles and the tough challenges they face in their transition to early adulthood. As mentioned earlier, analyses of the Pathways data are ongoing, and it is expected that access to the data by other investigators will produce another generation of findings. At this point, it seems clear that there is relevant variability in this group of adolescents and evidence that they will respond to reasonable interventions and sanctions. The challenge for researchers, practitioners, and policy makers is to enrich this picture and apply it to the development of targeted approaches to this group of challenging young people.

References

Ascher, B.H., Farmer, E.M.Z., Burns, B.J., Angold, A. (1996). The Child and Adolescent Services Assessment (CASA): Description and psychometrics. *Journal of Emotional & Behavioral Disorders, 4(1),* 12-20.

Caspi, A., Moffitt, T., Thornton, A., Freedman, D., Amell, J., & Harrington, H. (1996). The life history calendar: A research and clinical assessment method for collecting retrospective event-history data. *International Journal of Methods in Psychiatric Research, 6(2),* 101−114.

Chassin, L., Pitts, S., and DeLucia, C. (1999). Consequences of adolescent substance use and parent alcoholism for developmental outcomes in the transition from adolescence to young adulthood. *Development and Psychopathology, 11*, 915–932.

Horney, J. Osgood, D. W., & Marshall, I. H. (1995). Criminal careers in the short term: Intraindividual variability in crime and its relation to local life. *American Sociological Review, 60*, 655-673.

Laub, J. H., & Boonstoppel, S. L. (2012). Understanding desistance from juvenile offending: Challenges and opportunities. In B. Feld & D. Bishop (Eds.), *The Handbook of juvenile crime and juvenile justice (pp. 373–394).* New York: Oxford University Press.

Liberman, A. (Ed.) (2008). *The long view of crime: A synthesis of longitudinal research.* New York: Springer.

Lipsey, M.W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and Offenders, 4,* 124–147.

Moffitt, T. (1993). Adolescence limited and life course persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 4,* 671-701.

Moffitt, T. (1997). Neuropsychology, antisocial behavior, and neighborhood context. In J. McCord, (Ed.), *Violence and childhood in the inner city. (Pp. 116-170),* Cambridge, MA: Cambridge University Press.

Mulvey, E. P., Steinberg, L., Fagan, J., Cauffman, E., Piquero, A. R., Chassin, L., et al. (2004). Theory and research on desistance from antisocial activity among serious adolescent offenders. *Youth Violence and Juvenile Justice, 2(3),* 213–236.

Patterson, G. R., & Stouthamer-Loeber, M. (1984). The correlation of family management practices and delinquency. *Child Development, 55,* 1299-1307.

Schubert, C. A., Mulvey, E. P., Steinberg, L., Cauffman, E., Losoya, S. H., Hecker, T., et al. (2004). Operational lessons from the Pathways to Desistance project. *Youth Violence and Juvenile Justice, 2(3),* 237–255.

Smith, G. T., McCarthy, D. M., & Goldman, M. S. (1995). Self-reported drinking and alcohol-related problems among adolescents: Dimensionality and validity over 24 Months. *Journal of Studies on Alcohol, 56,* 383-394.

Sherman, L., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P., & Bushway, S. (1997). *Preventing crime: What works, what doesn't, what's promising. Report to the United States Congress*. Washington, DC: U.S. Department of Justice.

Van Kammen, W., Loeber, R., & Stouthamer-Loeber, M. (1991). Substance use and its relationship to antisocial and delinquent behavior in young boys. *Journal of Youth and Adolescence, 20,* 399-414.