

Impacting Re-Arrest Rates Among Youth Sentenced in Adult Court: An Epidemiological Examination of the Juvenile Sentencing Advocacy Project

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Examines the impact of a program aimed at reducing re-offending among juveniles transferred to adult court in Miami-Dade County, Florida. Initiated in 1998, the Juvenile Sentencing Advocacy Project (JSAP) worked to increase the degree to which defense lawyers, prosecutors, judges, and police officers considered the developmental status of youth charged with crimes, as well as the contextual basis for their behavior and their potential for rehabilitation. Through such activities, the goal was to increase the use of juvenile sanctions, rather than traditional adult sentences. Based on previous research, it was predicted that increased use of juvenile sanctions would be associated with fewer youth re-offending. This article examines 162 youth who were transferred to and sentenced in adult court during 1999. Re-offense patterns were monitored through June 2001. Analyses using epidemiological measures of effect found that the use of juvenile sanctions significantly increased following implementation of JSAP and that youth receiving adult probation or boot camp were 1.74 to 2.29 times more likely to re-offend than were youth receiving juvenile sanctions. The increased use of juvenile sanctions following implementation of JSAP corresponded to an 11.2% to 15.3% decrease in the number of youth one would have anticipated would re-offend had previous patterns of sentencing continued.

Youth in the criminal justice system are increasingly being transferred from juvenile court to adult court (Steinberg & Cauffman, 2001). This trend is evi-

dent not only for numbers of youth being transferred but also younger youth involving less serious crimes. Once in the adult system, a youth can either receive adult sanctions (e.g., jail or prison), or the youth may receive juvenile sanctions more typically administered through a juvenile court. Reflecting a view that adults are less amenable to change than are children, adult sanctions typically provide minimal treatment opportunities. Even less restrictive adult sanctions, such as parole, generally provide less direct, structured service components than are often available in juvenile sanctions. Consequently, with the increasing number of youth being transferred, the number of youth in the justice system receiving adult sanctions and not receiving adequate intervention services is growing.

Although much of this trend reflects changing punitive attitudes by the public and policymakers, the pattern and its ultimate effect on society is not without controversy. From a legal standpoint, developmental researchers have raised concern regarding the age at

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Information regarding the JSAP program and other innovative strategies being used by the Miami-Dade County Public Defender's Office should contact Carlos Martinez at 305-545-1903 or cmartinez@pdmiami.com or Tami Gray at 305-545-1663. Both can also be reached at the Miami Dade County Public Defender's Office, 1320 N.W. 14th Street, Miami, FL 33125.

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which youth are able to fully appreciate and understand both their rights in the legal system and the implications and consequences of actions at a trial (Grisso, 1997). This is further complicated by limited research that suggests that simply trying a youth as an adult may be inherently prejudicial to a jury, severely restricting the possibility of obtaining a fair trial (Levine, Williams, Sixt, & Valenti, 2001). In addition, from a clinical perspective, the limited research on factors that may enhance or mitigate a youth's potential for positive change, such as maturity and amenability to treatment (Steinberg & Cauffman, 2001), combined with an absence of well-documented instruments for accurately assessing future dangerousness (Salekin, Rogers, & Ustad, 2001), makes an accurate identification of which youth are best served in juvenile court impossible. Consequently, there is little scientifically validated basis for determining at what age youth should be transferred to adult court. Finally, there is evidence that transferred youth are at greater risk of re-offending than youth receiving juvenile sanctions (Winner & Lanza-Kaduce, 1997), bringing into question the overall efficacy of transferring youth to adult court. Although some may be willing to overlook the previous concerns if the result was lower rates of recidivism, the absence of evidence supporting its effectiveness in reducing future crime makes the growing trend of transfers to adult court particularly disturbing.

Given such concerns, there has been a call by some clinical child and developmental psychologists for all parties in the justice system to reconsider the increasing tendency for youth to be transferred to adult court (Whaley & Koenen, 2001). Individual variations in developmental patterns make it impossible to apply a single, unbending rule when making decisions regarding transfers. Rather, youth need to be considered on a case-by-case basis, with proper consideration of their developmental status, the contextual basis for their behavior, or their potential for rehabilitation (Steinberg & Cauffman, 2001). Unfortunately, accurate knowledge and attention to child development is not always available in the court system.

Reflecting such views, in late 1998, the Miami-Dade County Public Defender's Office began the Juvenile Sentencing Advocacy Project (JSAP). JSAP was designed to impact the goals and attitudes of the entire justice system. Specifically, the objective was to increase the degree to which defense lawyers, prosecutors, judges, and police officers considered the developmental status of youth charged with crimes, as well as the contextual basis for their behavior and their potential for rehabilitation. To accomplish this, JSAP incorporated a variety of activities aimed at (a) enhancing assessments and evaluations; (b) preparing and presenting mitigation reports; and (c) educating defense lawyers, social workers, judges, prosecutors, police, and other concerned individuals regarding the im-

portance of considering developmental factors when sentencing youth or making sentencing recommendations. It was believed that such a shift in focus would result in not only an increase in juvenile sanctions, but also lower recidivism rates among those youth who receive juvenile sanctions.

As this suggests, JSAP involved structural, procedural, and conceptual changes within the justice system. In that sense, it differs from traditional interventions in that the targets of the intervention were the adults working with youth, rather than the youth themselves. In essence, rather than directly provide services, the objective of JSAP was to change institutional patterns so that they provide more opportunity for services and positive change in youth. Although the activities and initiatives that constituted the JSAP program are summarized in the following, more detailed information can be obtained by contacting Carlos Martinez of the Miami-Dade County Public Defender's Office (see contact information).

Methods

Key Features of the JSAP Program

As detailed in the following, the JSAP program included staff training within the Public Defender's Office, hosting both a local conference on special education issues and a large conference on youth in the juvenile justice system, conducting on-site visits to local juvenile programs, preparation of detailed sentencing plans, and various training and educational programs and activities for professionals interacting with youth.

Staff training. A total of 51 staff training sessions, typically lasting 1½ hr, occurred over a 13-month period. Training sessions covered a range of topics relevant to youth in the court system, including adolescent behavioral, emotional, and cognitive development; educational rights; service availability; and the latest information on treatment effectiveness. Participants were social workers and attorney representatives from the Public Defender's Office. These training sessions translated into 355 person-hours of training.

Special education conference/workshops. The Public Defender's Office hosted a local working conference on issues related to youth with identified special education exceptionalities. Attendees included child advocates, attorneys, social workers, and others over a 2-day period. The conference resulted in 295 person-hours of training for local professionals over 2 days.

Site-visits to area programs. Staff from the Public Defenders Office visited 13 different programs across south Florida serving youth in the justice system. Site-visits resulted in a total of 312 person-hours of assessment for social workers and attorneys in the Public Defenders Office as to the availability, nature, and present state of services for youth in the justice system.

National conference. As part of JSAP, the Miami-Dade County Public Defender's Office also hosted a 2-day national conference featuring local and national policymakers, researchers, advocates, and experts presenting on a wide range of topics, including sentencing procedures, adolescent development, research on the role of community and familial risk factors, special education issues, and an update on the latest treatments and interventions. A total of 257 people registered for this 2-day event, and attendees included lawyers (45.1%), corrections/juvenile justice representatives (22.2%), social workers/service providers (16%), and representatives from the courts and police department (7.4%). Although not presented here, an evaluation found that following attendance to this conference, attendees reported an increase in attitudes and beliefs reflecting a greater hesitancy to support adult sanctions and greater knowledge of the needs and rights of youth in the court system (Mason, 2000).

Sentencing plans. As part of JSAP, the Miami-Dade County Public Defender's Office also began to incorporate detailed sentencing plans for transferred youth. The objective of the sentencing plans was to clearly articulate to judges the information gathered by social workers, attorneys, psychologists, and others. Sentencing plans were designed to include a detailed description of what had been learned through developmental and psychological assessments, the services that were needed by the child, the agencies that offered such services, and the potential impact and benefit of such services for the youth, the family, and the broader community.

Other JSAP activities. Finally, JSAP included a range of additional educational and training activities that do not directly correspond to one of the previous categories. This included organized meetings and training on a new developmental assessment, meetings with various community leaders on violence prevention, training on family therapy techniques, instruction on school system procedures and issues, and formal training on special education rights and responsibilities. These activities often involved social workers and attorneys from the Public Defender's Office, defense attorneys, and representatives from the courts, the Department of Juvenile Justice, Miami-Dade County

Public Schools, and other agencies. This resulted in a total of 619 person-hours of additional training.

Participants

Analyses specifically examined 162 youth who were transferred to adult court and who entered pleas during 1999. This included all youth ages 12 to 18 whose cases had been managed by the Miami-Dade County Public Defender's Office. Given that several of the key variables required access to case files, it was necessary that participants were limited to those represented by the Miami-Dade County Public Defender's Office. This corresponds to approximately 70% to 75% of all transferred youth during 1999. Of the 25% to 30% of cases not represented by the Public Defender's Office, the majority were cases transferred out of the Public Defender's Office to private attorneys due to potential conflicts of interest. Typically, this was the result of several youth being charged with the same crime. In such situations, one youth would be represented by the Public Defender's Office, whereas the remaining youth would have their cases represented by outside attorneys. The process of determining which youth would be represented by the Public Defender's Office was largely random, with the exception being that youth who had previously been represented by a public defender were automatically assigned to the Public Defender's Office. Consequently, this resulted in a modest bias in which the sample used in this study was more likely to include youth with previous criminal histories.

Of these 162 youth, 93% were male, 69.6% were African American, 30.4% were White and/or Hispanic (the existing database system did not differentiate the two), and 28.7% were identified as having a special education exceptionality. The mean age of youth in this sample was 17 years, 1 month at the time a plea was entered, with 10.8% under the age of 16 years. Sixteen of these 162 youth represented cases that were dismissed, cases were sent back to juvenile court, or cases in which the youth had died. These cases were not included in analyses.

Methodology

Youth outcomes were determined through a comprehensive and extensive review of both paper and electronic client files contained at the Miami-Dade County Public Defender's Office. In addition, electronic court records for both the Criminal Justice Information System and the Public Defender's internal database system were examined. Records were reviewed under the close supervision of a lawyer from the Public Defender's Office.

First, all youth with a 1999 plea date were identified. Files for these youth were then reviewed to assess

information regarding their initial sentence and key demographic factors (age, sex, race, special education placement, and so on). Various sources were then examined to determine whether the youth violated his or her initial sentence prior to June 30, 2001. Judicial consequences resulting from violations were then identified. This information was recorded on paper data forms, which were then entered into a Microsoft Access database for analyses.

Epidemiological Analytic Approach

Although the immediate goals of the JSAP program were to increase the number of juvenile sanctions among youth transferred to adult court and to reduce the number of new cases among these youth, the ultimate objective was to provide empirical data that would be relevant and meaningful to policymakers in a position to influence the justice system. Prior to conducting the evaluation, policymakers and professionals in the justice system had emphasized a desire to not only assess the impact of the program on individual youth, but, more important, to assess the impact on the overall rates of re-offending in this population. Traditional regression/analysis of variance models assess effect sizes in terms of mean differences and variance accounted for. Although these are useful in examining the degree to which a predictor variable influences the level of a behavior for an individual, they do not translate into the effect it has on changes in community rates of behaviors. Consequently, the evaluation incorporated a developmental epidemiological methodology and orientation (Scott, Mason, & Chapman, 1999). Epidemiological measures of effect can differentiate between the degree to which a factor influences an individual person and the degree to which it influences community rates of disorders (see Tu, this issue).

Results

First, preliminary analyses were conducted to determine whether JSAP resulted in an increase in the use of juvenile sanctions. Preliminary analyses also examined the implications of technical violations by youth. Technical violations do not result in a new case being filed but rather involve a sufficient violation of the youth's sentencing agreement that the initial sentence is replaced by one that is more severe. These analyses were followed by the primary analyses that examined the impact of juvenile sanctions on both individuals and overall rates of re-offending in this population. Finally, a series of follow-up analyses were performed testing factors that may influence these results. For example, these analyses considered whether a youth's previous criminal history or nature of his or her charge

influenced sentencing decisions in a way that youth most likely to re-offend were given adult sanctions.

Preliminary Analyses

Overall impact on sentencing. A premise of the JSAP program was that it would lead to an increase in the use of juvenile sanctions. Preliminary analyses examined change in sentencing following implementation of the JSAP program. These results indicated a dramatic increase in the number of youth receiving juvenile sanctions. Counter to both the patterns observed over previous years and to national trends, the rates of juvenile sanctions for youth transferred to adult court increased by 3.5 times following the initiation of JSAP.

Inclusion of technical violations. Additional preliminary analyses were conducted to assess the extent and consequences of technical violations by youth. As noted previously, although technical violations do not necessarily reflect a new offense, they do reflect the youth not following a court order and result in an increased or more severe sentence being imposed. Consequently, it was necessary to determine whether technical violations would be considered as a re-offense, or whether instances of technical violations would be ignored. To do this, a set of analyses examined all youth who received only technical violations for their initial sentence. Consequences for these technical violations were tabulated and are presented in Figure 1.

A total of 21 youth had technical violations but no new case during the study period. Of these youth, one third were ultimately sentenced to jail, 29% were then sentenced to boot camp, and nearly 10% then sentenced to prison. Given the serious consequences associated with technical violations, both for the youth involved and for the justice system, a decision was made to run all primary analyses twice—once including technical violations as a re-offense and a second time limiting re-offenses to new cases.

Outcome Analyses: Violation Patterns Based on Initial Sentence

Given the evidence that the JSAP program resulted in a significant increase in the use of juvenile sanctions, two sets of analyses were performed examining re-offense rates among youth receiving juvenile sanctions, relative to the re-offense rates among youth receiving adult sentences. The first set of analyses included technical violations as a re-offense; the second set ignored technical violations and only considered new cases as violations.

Analyses including technical violations. Analyses first examined the relation between specific sentences and re-offense patterns. These analyses focused

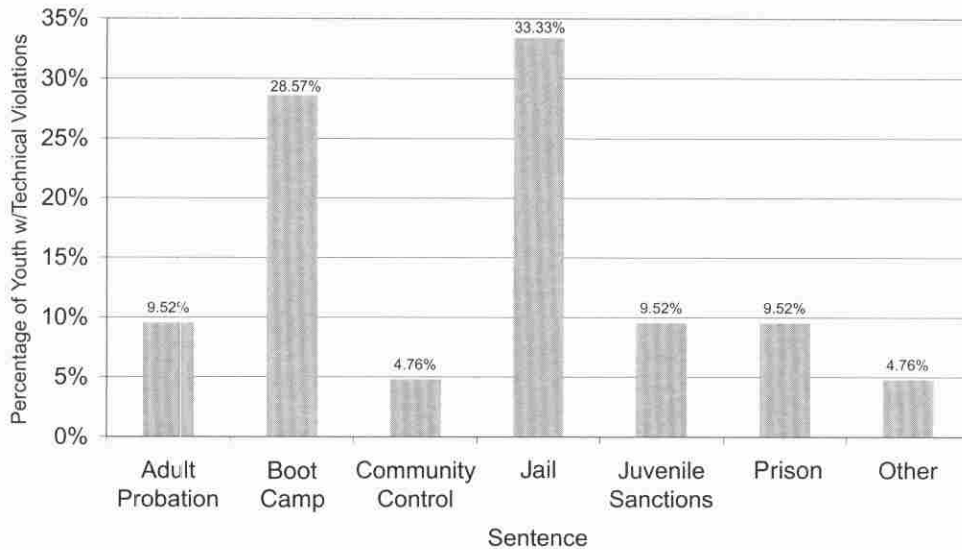


Figure 1. Judicial consequences of technical violations.

on three particular sentences: juvenile sanctions plus two specific adult sanctions: adult probation and boot camp. The number of youth receiving other adult sentences was either too small to analyze on a sentence-by-sentence basis, or as with youth sentenced to prison, there had been inadequate opportunity for re-offending. As presented in Figure 2, dramatic differences in re-offense rates were found.

As shown in Figure 2, re-offense rates (when including technical violations) among youth receiving juvenile sanctions were dramatically different than those receiving either boot camp or adult probation, $\chi^2(2, N = 116) = 30.72, p < .001$. Among youth receiving juvenile sanctions, 39.4% had either a technical violation or a new case during the study period. In contrast, 89.2% of youth receiving adult probation had either a technical violation or a new case, as did 92.3% of youth sentenced to boot camp. In other words, the risk ratio specifically associated with adult probation was equal to 2.26 (CI₉₅ = 1.65, 3.12), indicating that youth receiving adult probation were 2.26 times more likely to re-offend than were youth receiving juvenile sanctions. Similarly, the risk ratio specifically associated with boot camp was 2.34 (CI₉₅ = 1.67, 3.29). The risk ratio for both adult probation and boot camp combined, relative to juvenile sanctions, was 2.29 (CI₉₅ = 1.67, 3.125). In fact, if youth receiving juvenile sanctions were compared to *all* youth receiving any type of adult sanctions—including those in jail and in prison—the risk ratio was 1.81 (CI₉₅ = 1.30, 2.52), indicating that youth receiving adult sanctions were 81% more likely to have a technical violation or a new case than were youth receiving juvenile sanctions. Note that this is a conservative estimate as it includes youth in jail or prison that have little opportunity to re-offend.

Three different measures of community-level effect were also calculated, each answering a slightly different question. Calculations illustrating the conceptual differences between the three are presented in Table 1. All adult sanctions were included in these analyses. The first measure of community-level effect, the attributable fraction, examined the relation between sanction type (adult vs. juvenile) and re-offense (re-offend vs. did not re-offend). This resulted in an attributable fraction of .307 (CI₉₅ = .147, .467), indicating that 30.7% of the cases of re-offending youth were related to sentence type. This indicates that if youth receiving adult sanctions re-offended at the same, lower rate observed among youth receiving juvenile sanctions, then the number of youth re-offending would decrease by 30.7% (see Tu, this issue).

As illustrated in Table 1, the attributable fraction is calculated by comparing the current rate of re-offending to the rate that would have been observed had the probability of re-offending among youth with adult sanctions been equal to the probability of re-offending among youth with juvenile sanctions. Mathematically, it indicates how much lower the overall rate would be if the rate of re-offending among youth with adult sanctions were equal to the lower rate observed among youth with juvenile sanctions. From a prevention or intervention perspective, it indicates the maximum effect that might be obtained by targeting youth with adult sanctions.

Alternatively, one could calculate how much lower the current rate of re-offending is when compared to the rate that would have been observed had the probability of re-offending among youth with juvenile sanctions been equal to the higher rate observed among youth with adult sanctions. Theoretically, it compares the current rate to what the rate would have been ob-

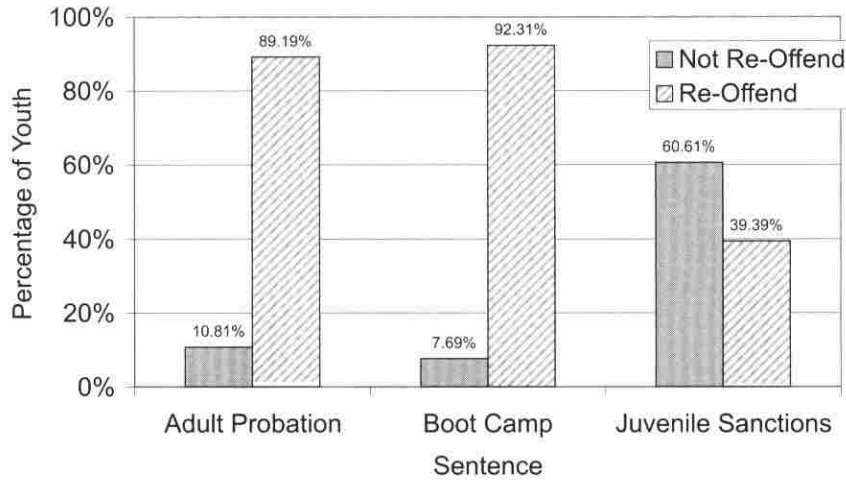


Figure 2. Violation rates by sentence—including technical violations.

Table 1. Calculations for Three Measures of Community Effect

Observed Frequencies	Re-Offend	Not	Total	p
Adult Sanctions	57	23	80	0.71
Juvenile Sanctions	26	40	66	0.39
	83	63	146	

Attributable Fraction	Re-Offend	Not	Total	p
Adult Sanctions	31.52	48.48	80.00	0.39
Juvenile Sanctions	26.00	40.00	66.00	0.39
	57.52	88.48	146	

$$AF = \frac{(83 - 57.52)}{83} = .307$$

Protective Fraction	Re-Offend	Not	Total	p
Adult Sanctions	57.00	23.00	80.00	0.71
Juvenile Sanctions	47.025	18.975	66.00	0.71
	104.03	41.98	146	

$$PF = \frac{(104.03 - 83)}{104.03} = .202$$

Intervention Fraction	Re-Offend	Not	Total	p
Adult Sanctions	90.59	36.55	127.14	0.71
Juvenile Sanctions	7.43	11.43	18.86	0.39
	98.02	47.98	146	

$$IF = \frac{(98.02 - 83)}{98.02} = .153$$

served had all youth receiving juvenile sanctions been given adult sanctions and re-offended at the same rate as other youth receiving adult sanctions. We refer to this as the *protective fraction*. From a prevention or intervention perspective, the protective fraction indicates the potential maximum effect that a positive or protective factor may have had in terms of reducing overall rates of some negative outcome. The protective fraction is generally of limited practical value, unless the factor associated with the lower rates of the outcome is itself under question. In this case, at the time this study

was completed, the Florida State Legislature was considering eliminating juvenile sanctions as an option for transferred youth. Hence, from a policy perspective, it was relevant to determine the potential positive impact juvenile sanctions may have been having on re-offense rates. As reflected in Table 1, the protective fraction was equal to .202, suggesting that the current re-offense rate is 20.2% lower than what would have been expected had youth receiving juvenile sanctions re-offended at the same higher rate as other youth. In essence, this is the maximum effect of juvenile sanctions on re-offending rates.

However, neither of these measures of effect assesses the community level impact of the JSAP program. Specifically, part of the lower re-offense rate captured in the protective fraction is due to youth that would have received juvenile sanctions regardless of whether JSAP had been implemented. That is, although the use of juvenile sanctions dramatically increased following JSAP, there exists an unknown baseline level of youth who would have received juvenile sanctions even if JSAP had not been implemented. Consequently, a final measure of effect, referred to here as the *intervention fraction*, was estimated that compared current levels of re-offending to what would have occurred assuming a baseline percentage of youth—equal to what was observed in the previous year—received juvenile sanctions. In other words, the intervention fraction estimates how much lower is the current re-offense rate, relative to an estimate of what that rate would have been had (a) no increase in the use of juvenile sanctions occurred and (b) current re-offense rates among those youth receiving juvenile sanctions and adult sanctions remained unchanged. As illustrated in Table 1, the intervention fraction for this data was .153, suggesting that, due to the increase in the number of youth receiving juvenile sanctions, the current re-offense rate is 15.3% lower than what would have been expected had the percentage of youth receive-

ing juvenile sanctions remained unchanged. In essence, this is the maximum impact of the intervention (JSAP) on re-offense rates due to the increase in juvenile sanctions.

Although these associations reflect maximal effects, it should be noted again that they were calculated using all youth receiving adult sanctions. This includes youth in jail or prison with little if any opportunity to re-offend. Consequently, the re-offense rate for youth receiving adult sanctions was suppressed.

Excluding technical violations. If these same analyses are repeated excluding technical violations, a similar, although less dramatic, pattern is observed. It should be noted that, in this analysis, a youth who is initially sentenced to adult probation but who goes on to receive a technical violation and is subsequently sentenced to prison would be considered a probation “success story,” as he or she did not have a new case.

As before, analyses first examined the relation between specific sentences and re-offense patterns. These analyses focused on the same three sentences: juvenile sanctions, adult probation, and boot camp. As shown in Figure 3, when ignoring technical violations, re-offending was lower, although youth receiving juvenile sanctions continued to have lower rates than those receiving either boot camp or adult probation, $\chi^2(2, N = 116) = 7.115, p < .05$. Among youth receiving juvenile sanctions, 33.3% had a new case during the study period. In contrast, 56.8% of youth receiving adult probation had a new case, as did 61.5% of youth sentenced to boot camp. In other words, the risk ratio specifically associated with adult probation was equal to 1.70 (CI₉₅ = 1.09, 2.65), indicating that youth receiving adult probation were 70% more likely to have a new case than were youth receiving juvenile sanctions. Similarly, the risk ratio specifically associated with boot camp was 1.85 (CI₉₅ = 1.07, 3.20). The risk ratio for both adult probation and boot camp combined, relative to juvenile

sanctions, was 1.74 (CI₉₅ = 1.15, 2.63). The risk ratio for all adult sanctions—including jail and prison—was 1.50 (CI₉₅ = 1.00, 2.25).

Three different measures of community-level effect were then calculated. The traditional attributable fraction was equal to .215 (CI₉₅ = .01, .42), indicating that 21.5% of the instances of re-offending with a new case were related to sentence type. The estimate for the protective fraction was .151, indicating that the re-offense rate involving new cases was 15.1% lower than what would have been expected had youth receiving juvenile sanctions re-offended at the same higher rate as other youth. When we take into account previous sentencing patterns, the intervention fraction was .112, suggesting that due to the increase in the number of youth receiving juvenile sanctions, the re-offense rate involving new cases was 11.2% lower than what would have been expected had the percentage of youth receiving juvenile sanctions remained unchanged.

Factors That May Influence Sentencing, Re-Offending, or Both

Although the previous analyses suggest that youth receiving juvenile sanctions are at considerably lower risk for re-offending relative to youth receiving adult sentences, several alternative explanations and confounding factors should be considered. However, as described in the following, none of these alternative explanations appear adequate to explain this effect.

Nature of charge. First, one possible explanation for this difference is that youth receiving adult sentences, such as adult probation, may have been identified as more serious cases that were more likely to re-offend regardless of the sentence given. A visual screening of initial charges and sentences did suggest that the nature of the charge might be related to the sentence a youth received. As all initial charges were felo-

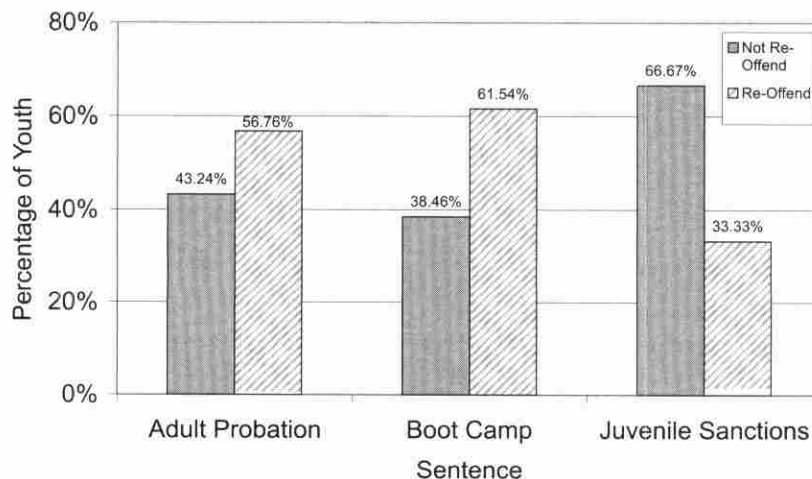


Figure 3. Violation rates by sentence—excluding technical violations.

nies, charges were grouped into nine broad categories for this analysis: Assault, serious violent crime, battery, burglary, drug-related, robbery, theft, other, undeterminable. A logistic regression was then performed in which the effect of juvenile sanctions on re-offenses was tested after controlling for initial charges. A dichotomous variable was created indicating whether a youth received juvenile sanctions, and a similar dichotomous variable was created indicating whether a youth re-offended during the study period. This analysis found that initial charges were not related to re-offending, $\chi^2(8, N = 144) = 12.606, p > .10$, when excluding technical violations; $\chi^2(8, N = 144) = 12.559, p > .10$ when including technical violations.

Prior history. Second, it could be hypothesized that an increased propensity to re-offend may have been evidenced by a prior criminal history. Consequently, a prior criminal history may have played a role in influencing judges to impose adult sentences on those youth who were more likely to re-offend. Therefore, additional analyses were performed to determine whether a youth's prior history (no record, misdemeanor record, felony record) was related to the sentence given. No difference was found whether analyses examined all possible sentences, $\chi^2(14, N = 155) = 13.445, p > .10$, or the more frequent sentences, $\chi^2(4, N = 113) = 1.246, p > .10$.

Age. A pair of logistic regression analyses was conducted to determine whether age in years, rounded to two decimal places, was related to re-offending. No age effect was found, whether technical violations were included, $\chi^2(1, N = 145) = 1.634, p > .10$, or excluded, $\chi^2(1, N = 145) = 2.662, p > .10$.

Final logistic regression. A final logistic regression was performed in which the effect of juvenile sanctions was tested after controlling for race, initial charge, and age. Race was a dichotomous variable indicating whether a youth was Black (African American, Caribbean Black) or White (including Hispanic). Charges, age, sanction type, and re-offending were coded in the same manner as before. These analyses found race to be unrelated to re-offending whether technical violations were considered a re-offense, $\chi^2(1, N = 141) = 0.039, p > .10$, or whether re-offenses only included new cases, $\chi^2(1, N = 141) = 2.113, p > .10$. After controlling for race, initial charges were also unrelated to re-offending, $\chi^2(8, N = 141) = 12.252, p > .10$, including technical violations, $\chi^2(8, N = 141) = 12.021, p > .10$, excluding technical violations. After controlling for race and initial charges, age did have a significant relation with re-offending. This was true whether technical violations were considered a re-offense, $\chi^2(1, N = 141) = 4.862, p < .05$, or whether re-offending was limited to new cases, $\chi^2(1, N = 141) =$

4.300, $p < .05$. Specifically, after statistically controlling for race and initial charge, an increase in age of 1 year was associated with a 42% to 44% reduction in the odds that a youth would re-offend. In other words, older youth were at lower odds of re-offending. Closer examination of the data suggested that this was at least partly due to older youth receiving sentences, such as prison, that resulted in their being in custody for a longer period of time, thus decreasing the opportunity for a re-offense.

Finally, after controlling for all of these effects, juvenile sanctions continued to have a significant relation with re-offending whether technical violations were considered a re-offense, $\chi^2(1, N = 141) = 16.247, p < .001$, or whether re-offenses were limited to new cases, $\chi^2(1, N = 141) = 4.473, p < .05$. Specifically, even after controlling for race, initial charges, and age, the odds that a youth who received adult sanctions would have a new case was 2.26 times that of a youth who received juvenile sanctions. When technical violations were included as a re-offense, the odds of re-offending among youth receiving adult sanctions was 4.90 times that of youth receiving juvenile sanctions. Together, these results further support the validity of the dramatic differences noted in Figures 2 and 3.

Discussion

The Miami-Dade County Public Defender's Office initiated JSAP with the goal of reducing re-offense rates by increasing the use of juvenile sanctions among youth transferred to adult court. The belief underlying the JSAP program was that youth who received juvenile sanctions would be less likely to re-offend than youth receiving adult sentences. As reported here, JSAP was highly effective in this task. First, following implementation of the program, the proportion of youth receiving juvenile sanctions more than tripled. More important, youth who received juvenile sanctions were significantly less likely to re-offend than were youth who received adult sanctions. Follow-up analyses examining a variety of potential confounds did not find viable alternative explanations for the dramatic differences observed. For example, even after controlling for race, initial charges, and age, those receiving juvenile sanctions were at significantly lower risk of re-offending than were youth given adult sanctions. Although a variety of analyses were performed to examine potential subtle differences or limitations in the results, in balance, the overall findings are surprisingly simple and robust.

The results have important implications for both basic research and applied interventions. In terms of basic research, the results document the higher rates of re-offending among transferred youth receiving adult

sanctions. Specifically, transferred youth receiving either adult probation or boot camp were 2.29 times more likely to re-offend with either a new case or a technical violation than were youth receiving juvenile sanctions. Furthermore, although the increased rates of re-offending among youth receiving adult sanctions is consistent with the findings of other studies, this study is unique in estimating the relation between adult sanctions and community-wide rates of re-offending among transferred youth. Specifically, as reflected in the attributable fraction, 31% of cases in which a youth re-offended were related to their receiving adult sanctions. It should be noted that this large association was observed after an intervention that increased the number of transferred youth receiving juvenile sanctions—a phenomenon that should have reduced the attributable fraction. This suggests that youth receiving adult sanctions warrant continued attention and intervention.

From a policy perspective, at the time this project was completed, the Florida State Legislature was considering eliminating juvenile sanctions as an option for youth transferred to adult court. Consequently, policymakers were particularly interested in estimating the potential reduction in re-offending that may be associated with juvenile sanctions. The protective fraction suggested that the number of youth re-offending was 20% lower than what would be expected if all youth re-offended at the same high rate observed among youth receiving adult sanctions.

In terms of applied intervention, the results suggest that, through education and training, it may be possible to positively impact system-wide sentencing practices for youth transferred to adult court. Following implementation of the JSAP program, the percentage of youth receiving juvenile sanctions increased by three and a half times. The intervention fraction suggests that, given the lower rates of re-offending observed among youth with juvenile sanctions, this increase corresponds to a 15% reduction in the number of youth re-offending with either a new case or a technical violation. In other words, based on the re-offense patterns observed here, the number of youth re-offending is 15% lower than what would have been expected had the percentage of youth receiving juvenile sanctions remained at their lower, pre-JSAP levels.

Methodologically, two new variations of an attributable fraction were introduced in this study: the protective fraction and the intervention fraction. Measures of community-level effects are generally used in basic research to guide future policy by targeting interventions to those areas where the largest impact on a community may be felt. Analyses reported here extended this work to estimate the community-level impact of a successful intervention. Specifically, results suggested that based on current rates of re-offending, by increasing the use of juvenile sanctions the number of youth who re-offended was 11.2% to 15.3% lower than what would

have been expected had patterns of sentencing remained unchanged. Clearly, more work needs to be done in developing methodological strategies for assessing community-level effects in both applied clinical and developmental research.

Finally, from a clinical and policy perspective, the measures of effect reported here are generally more meaningful than traditional measures of effect obtained through regression or analyses of variance. For example, reporting that youth who receive either adult probation or boot camp are 2.29 times more likely to re-offend than are youth who receive juvenile sanctions is in many ways inherently more salient than discussing percentage of variance in re-offenses. Furthermore, community-level measures of effect, such as those reported in this article, are not available in regression/analysis of variance models. These measures of effect become increasingly valuable when one's goal is to inform or influence policy toward children.

Given the nature of this project, there are several unavoidable limitations to the findings. For example, random assignment of youth to either adult or juvenile sanctions would be both impractical and unethical. Furthermore, given that the project was a population-level intervention (i.e., the goal was to impact the entire justice system), a comparable control group would be impossible. Without a control or comparison group and random assignment, it is impossible to know whether youth given juvenile sanctions would have shown similar low rates of re-offending even if they were given adult sanctions. Two points are relative to this concern. First, although youth were not randomly assigned to either adult or juvenile sanctions, a somewhat random component was involved in the sentencing process. Specifically, assignment of a youth to a specific judge was largely a random process, and there was considerable individual variation among judges as to the likelihood of whether they would administer adult sanctions. Some judges administered adult sanctions to nearly all transferred youth appearing in their court, whereas others nearly always administered juvenile sanctions. Nevertheless, a replication in a different judicial system in a different county is necessary to truly evaluate the impact of the program.

Second, although it is possible the youth receiving juvenile sanctions would have re-offended at a lower rate even if given adult sanctions, the dramatic increase in the number of these "lower risk" youth receiving juvenile sanctions, rather than adult sanctions, is nevertheless a programmatic success. To whatever degree this occurred, it suggests that through education and training, JSAP helped the justice system become more efficient at administering less restrictive, less stigmatizing, and less costly sentences on those youth who are in fact at lower risk for re-offending. That alone represents a step forward for both youth and the justice system.

Similarly, without a randomly assigned control group, it is impossible to know whether the increase in the number of youth being administered juvenile sanctions would have occurred regardless of the JSAP program. Although it is possible that this increase would have occurred without JSAP, such a dramatic purely spontaneous change would have ran counter to both national and local trends over the past decade. Consequently, it is unlikely that either of these two factors played a decisive role in the results reported here.

An additional limitation is the inability to narrowly examine exactly what aspects JSAP and what components in the juvenile sanctions administered to youth were most influential in the findings reported here. Certainly, to at least some degree, the effects reported are likely a product of services youth may have received either directly or indirectly through juvenile sanctions, such as mental health counseling, diversion services, educational testing and referral, and an opportunity to remain in their home and in their school. The degree to which individual components are related to lower re-offense rates would be valuable; however, such data is currently unavailable. Similarly, information from judges, prosecutors, and others as to what specific components of JSAP had the greatest impact upon their decision making would also be valuable; however, due to technical and legal constraints, such information is unavailable.

Also, although this study examined possible alternative variables that may influence these findings, the study likely did not have sufficient power to detect small effect sizes. Given the magnitude of the effects and the degree of statistical control applied to the analyses, it is unlikely that these alternative variables fully explain the observed findings. Nevertheless, it further emphasizes the need for replication in a different population.

Finally, the limited follow-up period provides only a restricted opportunity for re-offending. Rates of re-offense would certainly be higher with additional follow-up time. Ideally, a more extended follow-up period combined with a larger sample size would enable one to examine re-offense rates for youth by type of initial sentence across different age ranges.

In conclusion, the results presented here suggest that through education and training, it is possible to influence the judicial system in a manner that increases the use of juvenile sanctions among youth transferred

to adult court. Furthermore, it was found that this increase in juvenile sanctions was associated with a significant decrease in re-offending among youth. If there is a downside to these findings, it is seen in the consequences for those youth who violate their initial sentences. Of those youth who violated their initial sentence with either a new case or a technical violation, approximately 54.1% were ultimately sentenced to jail and 18.0% were ultimately sentenced to prison. It should be noted that these high rates are based solely on data during the limited time frame of this study. With additional time, these rates would likely increase. Consequently, it is imperative that the sentencing process considers efforts to minimize future re-offenses. These findings clearly point out that arbitrary use of sentences other than juvenile sanctions has a negative impact on children by increasing their risk for re-offending, on the justice system by increasing the demand of potentially preventable cases, and on society as a whole by increasing crime rates.

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