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Formal System Processing of Juveniles: Effects on Delinquency



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What leads to the best outcomes for juveniles?

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Introduction

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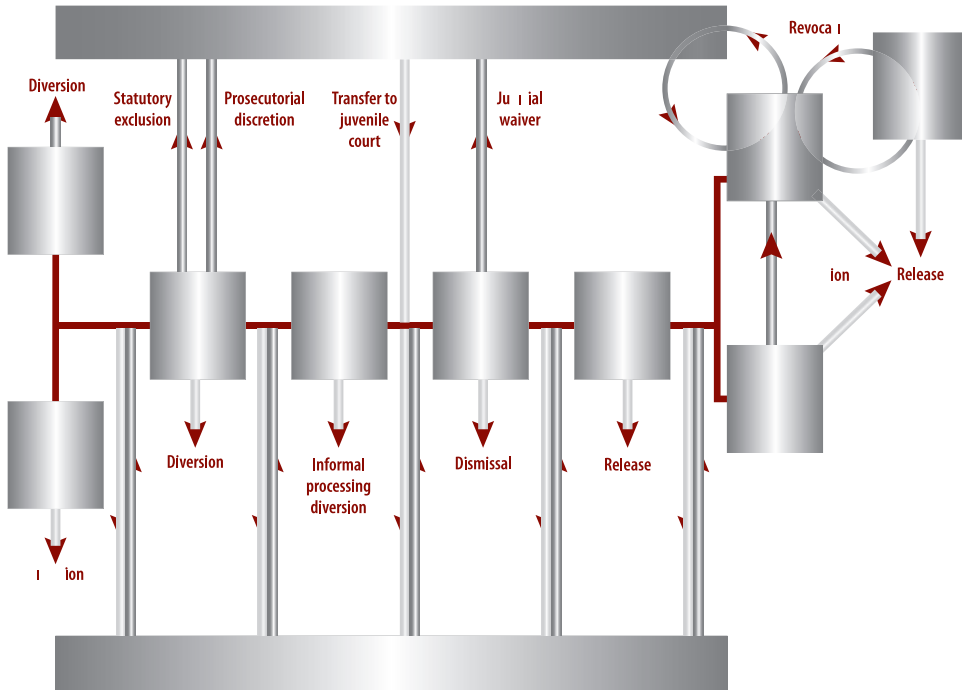
Justice practitioners have tremendous discretion on how to handle less serious juvenile offenders—those who commit offenses that are of moderate or low severity such as small property crimes or disorderly person violations. Police officers, district attorneys, juvenile court intake officers, juvenile and family court judges, and other officials can decide whether the youth should be moved formally through the juvenile justice system, or diverted out to a special program (diversion with services) or to receive nothing (diversion without services). Figure 1 illustrates this process.

A juvenile picked up by the police or referred by other sources, if not diverted out, will move formally through the system. This would ultimately lead to an adjudication in which the youth's guilt or innocence would be determined; if guilty, the youth would then face a disposition or sentencing. However, at any point the youth can also be diverted out the system to counseling or services, or released altogether.

An important policy question is: What leads to the best outcomes for juveniles? The question on how to handle such offenders is not a trivial one. For example, in 2009 nearly two million juveniles were arrested by police (Puzzanchera and Adams 2011), but most of these juveniles were arrested for minor crimes.

There is some debate over how less serious juvenile offenders should be handled. Given the juvenile justice system's dual goal of protecting public safety while rehabilitating youth offenders, it is not surprising that a strong argument for traditional processing can be made. For example, some officials believe low-level offenses are a gateway to more serious offending and should be dealt with intensively to prevent the juvenile from becoming a repeat offender. Some officials believe official system processing and subsequent handling by the juvenile court will deter or scare low-level offenders from future misconduct. Some officials also believe that the primary role of the juvenile (or sometimes family) court is to rehabilitate the child, and, therefore, they believe offenders can be better linked to treatment and services via the court system. In two studies that tracked youths appearing in juvenile court in Pennsylvania (Brown et al. 1987; Brown et al. 1989), juvenile offenders who were adjudicated earlier rather than later were less likely to be convicted of an adult offense.

Figure 1. Case Flow Diagram



Source: Snyder and Sickmund 1995

On the other hand, there are those who argue for a minimalist position—that the low-level offender should be handled in as non-intrusive a manner as possible. Researchers have warned of a possible labeling effect that may come from official processing of juveniles (see Schur 1973). For example, a petition that results in an official determination of the child as “delinquent” can lead to significant others around the child beginning to treat him or her differently. Such a juvenile may receive increased police scrutiny and end up getting rearrested more often than juveniles who are not under the same surveillance. The same actions that resulted in police turning a blind eye to misconduct may now result in an arrest. Labeling is theorized to have other potential impacts, including economic or educational losses and marginalization by significant others such as family and friends.

There are other theories, apart from labeling, that could explain why further processing in the juvenile system may increase crime. For example, such processing could further expose youth to more deviant peers, resulting in a harmful effect (see Dishion et al. 1999).

A further consideration for policymakers is that release or diversion options may be cheaper than juvenile court processing, so even a net gain of zero (i.e., no crime impact whatsoever) favors the release/diversion group in a cost-benefit analysis. Finally, there is concern over whether formal handling of youth occurs more frequently among minority youth from lower-income neighborhoods, leading to their disproportionate representation in the juvenile justice system.

For less serious juvenile offenders, the question is whether it is better to process the child through the juvenile justice system or to divert the child out of the system. To find out whether a policy alternative works, the scientific evidence surrounding this question must be examined, including prior experimental evaluations of the outcomes of this decision and whether they support handling juvenile offenders formally or informally.

“...all included studies compared the effects of formally moving a youth along the juvenile justice system to diverting the youth altogether.”

Summary of Systematic
Review Methods

Summary of Systematic Review Methods

To be included in this review, studies had to use a randomized experimental design because only randomized experiments control both the known and unknown factors that can influence outcomes (besides the intervention under investigation). Another criterion was that the participants in the study had to be juveniles who were ages 17 or younger. Moreover, to provide the fairest test of the effects of formally moving through the system, the juveniles could not yet have been officially adjudicated (i.e., found guilty) for their current offense.

Although the language used in each study differed (e.g., comparing “traditional processing” or “system processing” to diversion), all included studies compared the effects of formally moving a youth along the juvenile justice system to diverting the youth altogether.

The review included studies published or available up through 2008. To be as comprehensive as possible, relevant studies available in languages other than English were obtained and translated whenever possible. And each study had to provide data on at least one outcome of delinquency.

A variety of search methods (e.g., electronic searches and contacting colleagues) were used to find studies, which included both published documents like journal articles and unpublished documents like dissertations.

Researchers used a preliminary instrument to capture data on each study. These data were then used to summarize the effects of juvenile system processing compared to the diversion condition. They were also used to examine how these effects change depending on the characteristics of the study or the intervention (see Appendix on page 26). The main impacts of formal system processing were reported for four different crime outcomes:

1. *Prevalence*: What percentage of each group failed or succeeded?
2. *Incidence*: What was the average number of offenses or other incidents per group?
3. *Severity*: What was the average severity of offenses committed by each group? Or what percentage of persons in each group later reoffended by committing violent crimes?
4. *Self-report*: What was the impact on self-reported offenses by processed youth (rather than officially measured outcomes such as police arrest)?



The studies included 7,304 juveniles across
29 experiments reported over a 35-year period.

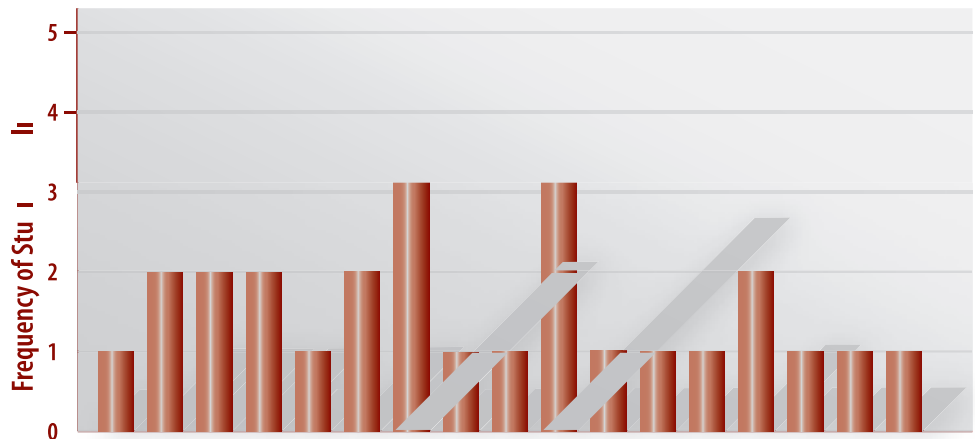
Descriptive Findings

Descriptive Findings

Twenty-nine experimental studies published between 1973 and 2008 (see Figure 2) were included in this review (for a list of included studies, see page 20). Approximately 75 percent of the included studies were published or reported before 1990, likely reflecting the early interest in diversion as an alternative to the juvenile justice system process during the 1970s and 1980s and the amount of funding made available at that time for implementing randomized experiments to test these diversionary innovations.

The studies included 7,304 juveniles across 29 experiments reported over a 35-year period. An important characteristic of the studies is the type of control group. Half of the studies (51.7 percent) compared processing to diversion with services, which included such interventions as family counseling, restorative justice conferencing, and education programs. The other studies (48.3 percent) assigned juveniles to diversion without services or programs, such as counsel and release, or release directly to parents.

Figure 2. Year Experiment was Published



Source: Petrosino et al. 2010

[Diversion groups represent] an approximate 5 to 6 percent increase in delinquency prevalence for processed youth in the studies.

Meta-Analysis:
Main Effects

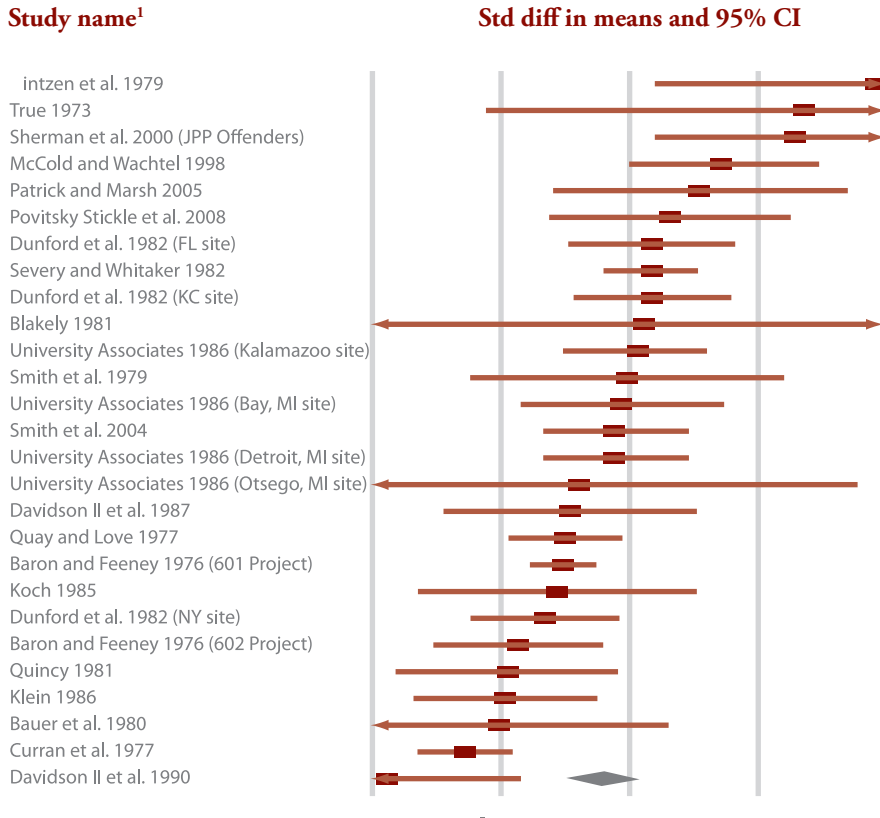
Meta-Analysis: Main Effects

To summarize the results of the 29 experiments statistically, meta-analysis was used. To conduct a meta-analysis, the difference between the two groups in the study, such as processing versus diversion, had to be converted to a common metric (Lipsey and Wilson 2001; Boruch and Petrosino 2004). This common metric is called an effect size.

There are many kinds of effect sizes, and a common one—Cohen's d (i.e., the standardized difference in means)—was used in this review. An effect size of zero means there was absolutely no difference in delinquency between processing and diversion. A positive effect size (above zero) indicates that processing reduced delinquency compared to diversion. Conversely, a negative effect size indicates that processing had a backfire effect and actually increased delinquency compared to diversion.

A series of meta-analyses were conducted. Figure 3, known as a forest plot, provides a visual summary of the effects reported by the 27 studies that included at least one outcome of delinquency prevalence (i.e., the percentage of each group that was delinquent). It indicates the effect of moving a youth formally through the system on delinquency, compared to diverted youth, on the first measurement or follow-up period.

Figure 3. System Processing Effects on Delinquency Prevalence at First Follow-Up



Source: Petrosino et al. 2010

Figure 3 shows that, overall, system processing was associated with an average increase in delinquency prevalence. The overall effect size across the studies is $-.11$. In technical terms, this means that the diversion groups performed about $.11$ standard deviation units better than the processing group on delinquency prevalence. In other words, it represents an approximate 5 to 6 percent increase in delinquency prevalence for processed youth in the studies.

¹ Some citations include multiple studies that took place in different places or different projects. For these, additional details have been provided to help distinguish the place or project.

This result is consistent through all of the meta-analyses conducted on the 29 studies. Table 1 summarizes all of these main effects. In these statistical analyses, no attempt was made to look at different types of studies. Instead, the main effect—i.e., average effect size across all of the studies—was reported. In every instance, processing was associated with increasing delinquency, regardless of how it was measured (i.e., prevalence, incidence, severity, and self-report). Note that sometimes there were multiple follow-up measurements for prevalence outcomes. Thus, the effect size for the longest follow-up period was also reported.

Table 1. Summary of Effects on Delinquency Outcomes

	Prevalence (N=27)	Incidence (N=7)	Severity (N=9)	Self-report (N=5)
First effect	-.11 (CI -.22, .02)	-.23 (CI -.41, -.06)	-.14 (CI -.33, .05)	-.15 (CI -.40, .10)
Longest effect	-.15 (CI -.265, -.035)			

“...the youth were diverted from the system to receive services, such as counseling...”

Meta-Analysis:
Moderator Analysis

Meta-Analysis: Moderator Analysis

Moderator analysis refers to breaking down the main effects into smaller subgroups based on characteristics (see the Appendix on page 26) of the program or the study. Table 2 presents an important moderator for analysis and shows that the effect size differed for the two types of diversionary experiences to which processing was being compared. Caution must be exercised in interpreting these results due to the small number of studies in some of the analyses.

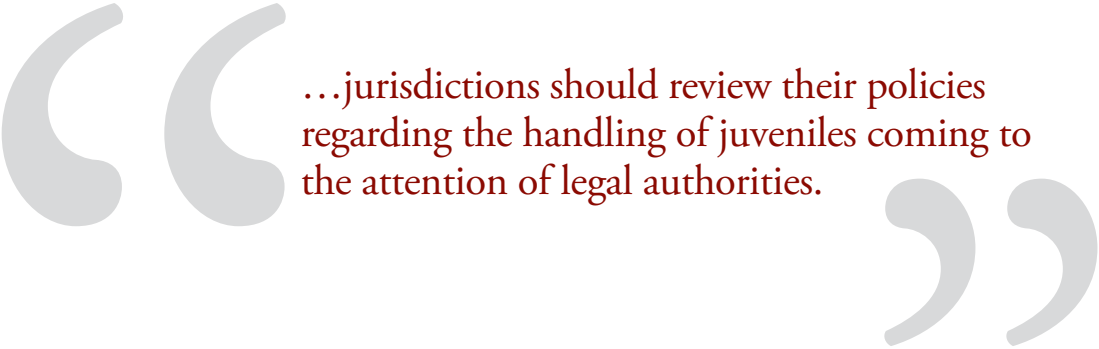
The first type of diversion involves juveniles who were diverted from the system and received no services. In the table, this is called “doing nothing.” In the second type, the youth were diverted from the system to receive services, such as counseling or another intervention, and this is called “doing something.”

As Table 2 indicates, processing seems to have had no crime control effect whether compared to diversion (“doing nothing”) or to diversion with services (“doing something”). In fact, the effect sizes are negative in direction, indicating that processing increases delinquency relative to the diversion conditions. For example, when processing is compared to “doing nothing,” the effect size for prevalence is slightly negative ($-.04$). This effect size is still negative and substantially larger for incidence outcomes ($-.36$). A slightly positive but nearly negligible impact is reported for severity outcomes ($.02$).

However, when system processing is compared to “doing something,” the effect size is consistently negative and larger across all three delinquency outcomes (i.e., prevalence, incidence, and severity). The effect sizes range from $-.16$ to $-.33$.

Table 2. Effects of Processing Compared to Two Different Diversion Groups at First Follow-Up

Type of Control Group	Crime Control Results (N = number of studies)
Processing versus “doing nothing,” i.e., counsel and release	Prevalence: (14) $-.04$ Incidence: (3) $-.36$ Severity: (6) $.02$
Processing versus “doing something,” i.e., diversion program/service	Prevalence: (15) $-.16$ Incidence: (4) $-.18$ Severity: (3) $-.33$



...jurisdictions should review their policies regarding the handling of juveniles coming to the attention of legal authorities.

Conclusion

Conclusion

This review, which examined the results of 29 randomized controlled trials, finds no evidence that formally moving juveniles through the juvenile justice system has a crime control effect. In fact, all analyses showed an average main effect that was negative: i.e., processing increased delinquency. This was consistent not only across measures of prevalence, incidence, severity, and self-report but also regardless of whether looking at the first or longest time interval the crime measure was reported. A moderating analysis examining the type of diversionary alternative indicated that processing was not as effective as “doing nothing” (i.e., diversion without services) and was even more negative when diversion was coupled with some type of service or intervention (i.e., diversion with services).

Given the overall negative results for processing across these studies and outcome measures, jurisdictions should review their policies regarding the handling of juveniles coming to the attention of legal authorities. Any reasonable cost-benefit analysis has to take into account not only the lack of a crime control effect for processing but also that it is the more expensive way to deal with youth in nearly all instances except when compared to a very intensive diversionary alternative.

For example, jurisdictions should examine if a larger percentage of less serious juvenile delinquent cases can be diverted. Such policies should be evaluated after they are implemented to determine if these variations did reduce juvenile justice costs and, more important, whether they resulted in no greater risk to public safety.

These experiments compared formal processing to diversion, with or without services. The data from these studies do not support any policy of expanding diversion programs to juveniles that would not have been officially processed under any circumstances. Such expansion, referred to as “net-widening,” would expand the reach of the juvenile justice system to youth for which the processing versus diversion decision is irrelevant because their offenses were so minor that they would not be formally processed.

List of Included Studies

List of Included Studies

Note: Some citations include multiple studies that took place in different places or different projects.

- Baron, R., and F. Feeney. 1976. *Juvenile Diversion through Family Counseling*. Washington, D.C.: National Institute of Law Enforcement and Criminal Justice. *(Two studies are included in this report.)*
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- Smith, E.P., A.M. Wolf, D.M. Cantillon, O. Thomas, and W.S. Davidson. 2004. "The Adolescent Diversion Project: 25 Years of Research on an Ecological Model of Intervention." *Journal of Offender Rehabilitation* 27 (2/3): 29–48.
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Appendix

²Some citations include multiple studies that took place in different places or different projects. For these, additional details have been provided to help distinguish the place or project.

Appendix: Characteristics of Included Studies

Citation ²	System Processing Treatment	Treatment Group N	Control Group
Baron and Feeney 1976 (601 Offenses Project)	Processing	612	Family counseling
Baron and Feeney 1976 (602 Offenses Project)	Processing	105	Family counseling
Bauer et al. 1980	Intake	33	Diversion program
Blakely 1981	Intake	15	Diversion program (university staff)
Curran et al. 1977	Intake	288	Diversion program
Davidson et al. 1987	Processing	60	Placebo
Davidson et al. 1990	Processing	27	Three diversion programs
Dunford et al. 1982 (Florida site)	Processing	222	Release
Dunford et al. 1982 (Kansas City site)	Processing	111	Release
Dunford et al. 1982 (New York site)	Processing	158	Release
Emshoff and Blakely 1983	Processing	26	Two diversion programs
Hintzen et al. 1979	Hearing	65	Release
Klein 1986	Processing	81	Counsel and release
Koch 1985	Processing	78	Release
McCold and Wachtel 1998	Adjudication	103	Restorative justice
Patrick and Marsh 2005	Magistrate court	83	Education group
Stickle et al. 2008	Processing	85	Teen court
Quay and Love 1977	Processing	132	Diversion program (university staff)
Quincy 1981	Processing	31	Diversion program
Severy and Whitaker 1982	Processing	377	Release
Sherman et al. 2000 (Juvenile Personal Property Offenders)	Court	62	Restorative justice
Sherman et al. 2000 (Juvenile Property and Shoplifting Offenders)	Court	114	Restorative justice
Smith et al. 1979	Petition	26	Counsel and release
Smith et al. 2004	Processing	124	Counsel and release
True 1973	Cite to probation	6	Two diversion programs
University Associates 1986 (Bay, Michigan site)	Processing	71	Release
University Associates 1986 (Detroit, Michigan site)	Processing	124	Release
University Associates 1986 (Kalamazoo, Michigan site)	Processing	149	Release
University Associates 1986 (Otsego, Michigan site)	Processing	15	Release

Control N	Mean Age	% Males	% White	Level of Prior Offending	Current Offense Type
977	—	—	—	Unknown	Mostly status
111	—	—	—	Moderate	Mixed
99	14	83	74	High	Mixed
11	14	85	70	Unknown	Mixed
306	15	58	72	Low	Mostly status
300	14	83	74	High	Mixed
102	14	84	70	High	Mixed
220	—	—	—	None	Mixed
100	—	—	—	High	Mixed
194	—	—	—	High	Mixed
47	15	66	66	Unknown	Mixed
62	15	90	19	None	Mostly property
82	—	—	—	High	Mixed
86	15	57	74	Low	Mixed
189	15	69	35	Low	Mixed
68	15	55	91	None	Mostly drug
83	15	71	64	Low	Mixed
436	16	73	71	Moderate	Mostly status
59	—	—	—	Unknown	—
475	15	88	33	Low	Mostly property
73	16	56	—	Unknown	Mostly property
124	16	84	—	Moderate	Mostly property
29	15	93	65	High	Mixed
134	14	84	9	Unknown	Mostly property
8	14	100	—	High	Mostly property
76	14	86	87	Low	Mostly property
135	14	34	10	Low	Mostly property
174	14	59	75	Low	Mostly property
13	15	76	100	Low	Mostly property



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