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Well-Meaning Programs Can Have Harmful Effects! Lessons From Experiments of Programs Such as Scared Straight

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Despite their importance in assessing the impact of policies, outcome evaluations—and in particular randomized experiments—are relatively rare. The rationalizations used to justify the absence of outcome evaluations include such assertions as “we know our programs are working,” “they can’t possibly harm anyone,” and “if they only help one kid they’re worth it.” Using preliminary results from a systematic review of nine randomized experiments of the Scared Straight, or prison visitation program, the authors show that a popular and well-meaning program can have harmful effects. They use these results to argue for more rigorous evaluations to test criminal justice interventions.

Many justice programs, policies, and practices are widely disseminated without pilot testing. Exacerbating this problem is that careful studies are not often done to test these interventions after they are implemented. As Fitz-Gibbon (1999) noted about education and Sherman (1984) about policing,¹ the failure to randomize does not mean the government is not experimenting; instead they are conducting uncontrolled experiments every day across a multitude of policy sectors. Though randomized experiments seem to be increasing in criminal justice and other settings (Boruch, Snyder, &

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DeMoya, 1999; Petrosino & Boruch, in press), the number of experiments relative to all the outcome studies reported is still quite small (Boruch et al., 1999). The number of outcome evaluations relative to all the programs, policies, and practices implemented in just one state jurisdiction must be very small (Petrosino, 1998).

Despite the millions of dollars of public funds that are invested, few outcome evaluations and experiments seem to be conducted. To understand the barriers to rigorous outcome evaluation, Petrosino (1998) conducted personal interviews with the research and evaluation managers employed by seven distinct agencies in a single state. Each agency had a different area of responsibility, including criminal justice, education, public health, community affairs, and drug prevention. Petrosino found that despite the thousands of programs administered by these offices, only two were subjected to outcome evaluation. None were tested using comparison groups. A randomized experiment had not been carried out on any agency program, according to interview participants, for years. When asked why this was the case, the research managers noted the objections of their bosses—the upper level management personnel—to outcome evaluations. Many were listed, but three are worth paraphrasing:

1. We know our programs work; why evaluate them?
2. We know they are not harming anyone, and see number 1 above.
3. If the program helps a single child, it's worth it. Why evaluate?

Failure to evaluate ignores a long history of admonitions about failed policies and the potential for harmful effects. Not only could ineffective programs divert money and attention from more successful interventions, they could also cause more harm than good. A program may certainly help one child but hurt two in the process. For example, Pallone (1986) writes persuasively about the occasional harmful effects of psychotherapy. Galvin (1979) notes that follow-ups over a 30-year period of participants in the Cambridge-Somerville experiment found that children initially exposed to the benevolent counseling condition did much worse on a variety of outcome measures than the no-treatment control children. Well-meaning programs can be harmful, and rigorous evaluation is often the only way to find this out and correct it. As Chalmers (1999) said, the goal of science in the public sector should be to maximize the good and minimize the harm caused by government-imposed programs, policies, and practices.

One of the more egregious examples in the history of potentially harmful justice programs is Scared Straight (Finckenauer, 1982). It is a lesson, though, that seems to be forgotten in light of a new television documentary that promises much ("Kids and Crooks," 1999) and the reinvention of the program in the United States (Finckenauer & Gavin, 1999) and worldwide (e.g., Hall,

1999).² In this article, we provide a brief summary of Scared Straight, describe an ongoing project to systematically review randomized experiments testing the effect of these programs, and present some preliminary findings. We also present one major lesson. Scared Straight, at least from the data presented here, is likely a harmful program that more often than not leads to increased crime and delinquency in our communities. We conclude that rigorous evaluations are needed to identify harmful interventions.

SCARED STRAIGHT

In the 1970s, a group of inmates serving life sentences at a New Jersey prison conducted the Juvenile Awareness Program to deter at-risk or delinquent children from a future life of crime. The program, known as Scared Straight, brought youths to Rahway State Prison to participate in a realistic and confrontational rap session run by prisoners serving life sentences. As the inmates led the rap sessions, they graphically depicted prison life, including stories of rape and murder (Finckenauer, 1982). Deterrence is the theory behind the program; troubled youths would refrain from lawbreaking because they would not want to follow the same path as the inmates and end up in adult prison. The New Jersey Scared Straight program is the most famous of juvenile delinquency prevention programs involving visits to prisons by delinquents. The name *Scared Straight* is also now used generically to describe all prison aversion programs, including those that involve tours or orientation sessions without formal contact with inmates. Nearly all of the earlier programs involved a confrontational presentation by prison inmates. Lundman (1993) reports, however, that the program is now designed to be more educational and less confrontational.

The television documentary on the New Jersey program, titled "Scared Straight!," which won several television and film awards, aired in 1979. It was claimed in the program that 80% of the more than 8,000 juveniles who had been exposed to the program remained law-abiding (Shapiro, 1978). Following the airing of the program, more than 30 states and several foreign countries created, mandated, or legislated similar types of programs in their jurisdictions (Finckenauer, 1980). Corrigan (1979) summarized the reasons for the program's popularity: its "get tough" deterrent approach, its simplicity, its low cost, and its constructive use of prisoners. Media attention and the fit between program and ideological climate also propelled its popularity (Cavender, 1984; Finckenauer, 1982; Heeren & Shicor, 1984). The rapid diffusion of the program led to careful examination and cautions about Scared Straight, issued by such luminaries as the American Justice Institute

(Berkman & Pearson, 1980), the National Center on Institutions and Alternatives (1979), the National Advisory Committee for Juvenile Justice and Delinquency Prevention (1980), and the House Committee on Education and Labor (*Oversight on Scared Straight*, 1979).

As Finckenauer noted (1980, 1982), Scared Straight fits into the usual pattern of the search for simple cures for difficult social problems such as juvenile delinquency. Governments seek a panacea, adopt an intervention for a short time, and when it fails to live up to expectations, the search for another easy cure begins (West, 1981). Two decades later, Finckenauer concluded that the panacea phenomenon was more complicated (Finckenauer & Gavin, 1999). In its first iteration, the implication was that the ostensibly failed panacea would be discarded and rejected. In the newer thesis, this is not necessarily so. Some failed panaceas will survive in spite of the evidence against them. Finckenauer and Gavin's (1999) newer take on the panacea phenomenon seems particularly accurate with Scared Straight. Despite the intensity with which jurisdictions adopted the program, evaluation research, including several randomized experiments, found the program was not effective in reducing crime (e.g., Finckenauer, 1982; Lewis, 1983; Yarborough, 1979).

Nearly every broad synthesis of the crime prevention literature that has included programs such as Scared Straight usually categorizes them with other types of deterrence-oriented programs (e.g., shock probation). Almost universally, these reviewers report no crime reduction effect for Scared Straight and other deterrence-oriented programs (e.g., Lipsey, 1992). In 1997, University of Maryland researchers completed a report for Congress on the evidence for various crime prevention strategies. Although they found evaluation evidence lacking for many areas of intervention, the researchers had no problem listing Scared Straight as one of the programs that "doesn't work" (Sherman et al., 1997). Though the program continued in use worldwide, the enthusiasm that initially greeted interventions such as Scared Straight has waned since the early 1980s.

In 1999, however, the television program "Scared Straight: 20 Years Later," hosted by noted actor Danny Glover, aired in the United States ("Kids and Crooks," 1999). The program followed up on the 17 delinquent children who were the subject of the original documentary and claimed that only 1 became a career criminal. News coverage of the new show proclaimed the program's success. For example, *USA Today* concluded, "The erstwhile delinquents, now in their 30s, testify that the prison encounter deterred them from a life of crime" ("Kids and Crooks," 1999, p. 4D). Indeed, one prison guard is quoted in the film as saying that only 92 of the 500 kids she sent into the program committed new offenses ("Kids and Crooks," 1999). The program's producer, Arnold Shapiro, is also quoted: "You don't know how many people

have come up to me and said, 'I was juvenile delinquent and when I saw this, I stopped, I changed' " (Eicher, 1999, p. F-05).

Most citizens, unaware of studies questioning such programs, believe the program makes intuitive sense (after all, what kid wants to end up in prison?) and is effective. Given the program and its coverage, it was only natural that policy makers would ask whether the program should be part of a government-supported portfolio of delinquency prevention programs. In keeping with the panacea phenomenon, a new generation of legislators looking for more punitive solutions to crime despite falling crime rates—including the rate of juvenile crime (Zimring, 1999)—continue to be interested in reviving programs such as Scared Straight in their jurisdictions (Finckenauer & Gavin, 1999). This also seems to be the case outside of the United States. For example, Australia's Day in Prison Program appeared to have been initiated due to political pressures rather than consideration of the potential for the program (O'Malley, Coventry, & Walters, 1993). From Germany, there are reports of a popular program similar to Scared Straight recently implemented for young offenders with ties to organized hate groups such as the Neo-Nazis, with plans to expand nationwide (Hall, 1999).

Given the renewed interest in programs such as Scared Straight, it seemed sensible to undertake a systematic review of the randomized experimental evidence on the program. Although some Scared Straight program evaluations were included in prior reviews (e.g., Lipsey, 1992; Sherman et al., 1997), no previous attempt to systematically and exclusively review Scared Straight evaluations has been reported.

During 1999, the first two authors initiated a trial run of a systematic review for the newly initiated Campbell Collaboration, an internationally based group that will prepare, maintain, and make accessible systematic reviews of research on the effects of social and educational interventions (see its Web site at <http://campbell.gse.upenn.edu>). They are using the existing infrastructure provided by the Cochrane Collaboration, an international organization that focuses on reviews in health care (see its Web site at <http://www.cochrane.org>). This is being done to get estimates on costs and the time required for Cochrane-type reviews in the social sector, and to see how well the Cochrane software and editorial process handled reviews conducted in fields such as criminal justice. Given the charge for that project, a systematic review of the Scared Straight experiments seemed to be a natural fit. We report on our preliminary findings, cautioning that our results here have not yet gone through the Cochrane Collaboration's rigorous editorial process.

A SYSTEMATIC REVIEW OF SCARED STRAIGHT EXPERIMENTS

Systematic reviews use explicit and well-established methods in synthesizing the results of separate but similar studies (Chalmers & Altman, 1995). Meta-analysis or quantitative methods are often used in systematic reviews but are by no means appropriate in all circumstances. Systematic reviewing methods are designed to reduce the potential biases that can affect conclusions in the synthesis of findings from multiple evaluations. For example, by collecting unpublished studies, reviewers can reduce the possibility that published studies in peer-review journals are more likely to report statistically significant effects. Systematic reviews are usually reported in the same detail as primary research studies, often including sections on background, methods, and results. In short, a science of reviewing has established that such reviews are themselves important pieces of research that need to follow the same rules of conduct and reporting as original studies. In keeping with the recommendations from the reviewing methods literature, we report below on each stage of our review. Our objective from the outset was to systematically review high-quality evidence on the effects of Scared Straight and similar programs.

Study Eligibility Criteria

There is evidence-based literature indicating that the results from randomized experiments can differ, sometimes dramatically, from findings obtained by nonrandomized methods (e.g., Boruch et al., 1999; Chalmers & Altman, 1995). Because of this evidence, we included only randomized experiments in this review. We made no exclusion on the basis of how well implemented the randomization was, but will examine the influence of breakdowns of random assignment on the results in our future analyses. We excluded all non-randomized or quasi-experimental evaluations.³

We required that the program's focus be on juvenile participants. We included studies that also exposed young adults along with juveniles to the intervention (e.g., ages 14 to 20). The program had to be delivered at a reformatory or prison. Programs involving classroom or other public visits by offenders or ex-offenders, such as Oklahoma's Speak-Outs Program, were not considered (Holley & Brewster, 1996). Programs using other methods for delivery, such as the creation of videos and their mailing to schools, were also excluded. We found no randomized experiments that tested these programs, however. The program could include either confrontational or educational

presentations by the offenders, tours of the facility (Michigan Department of Corrections, 1967), or orientation and counseling (Vreeland, 1981). We did not require confrontational activity on the part of the inmates, though this is the most visible component in the Scared Straight television documentaries. Other eligibility criteria included (a) the study report had to include a clear statement of random assignment of juveniles to experimental or control conditions, (b) the study had to include at least one measure of crime in the community, and (c) the study document had to be published or available through 1999. We imposed no English-language restriction but did not find any abstracts to potentially eligible studies in languages other than English.

Search for Eligible Studies

Randomized experiments were identified from a larger review of randomized trials in crime reduction conducted by the first author (Petrosino, 1997). Petrosino used the following methods to find more than 300 randomized experiments (and analyze 150):

1. Handsearch (i.e., visually scanning the contents) of 29 leading criminology and other journals;
2. Checking the *Registry of Randomized Experiments in Criminal Sanctions* (Weisburd, Sherman, & Petrosino, 1990);
3. Electronic searches of Criminal Justice Abstracts, Sociological Abstracts and Social Development and Planning Abstracts (Sociofile), Education Resource Information Clearinghouse (ERIC), and Psychological Abstracts (PsycInfo);
4. Electronic searches of 18 bibliographic databases, including the National Criminal Justice Reference Service (NCJRS), personally and with information specialists;
5. An extensive mail campaign with more than 200 researchers and 100 research centers;
6. Published solicitations in association newsletters;
7. Tracking of references in more than 50 relevant systematic reviews and literature syntheses;
8. Tracking of references in relevant bibliographies, books, articles, and other documents.

More details about these search methods can be found in Petrosino (1997).

The citations found in Petrosino (1997) cover literature published or available through 1993. We augmented this work with searches of recent literature made available from 1994 through 1999. These methods included the following:

1. Electronic search of the Social, Psychological, Educational & Criminological Trials Register being developed by the U.K. Cochrane Center and the Univer-

- sity of Pennsylvania (Petrosino, Boruch, Rounding, McDonald, & Chalmers, in press);
2. Check of citations from systematic or literature reviews with coverage of more recent studies (e.g., Sherman et al., 1997);
 3. Electronic searches of relevant bibliographic databases, including Criminal Justice Abstracts, NCJRS, Sociofile, PsycInfo, and ERIC.⁴

Many of these databases include unpublished literature such as dissertations and government reports. The first two authors screened relevant abstracts and agreed on 10 citations to investigate further. We rejected one, however, because the evaluation used a matched design and not randomization (Buckner & Chesney-Lind, 1983). We include, therefore, nine randomized experiments in our review.

Data Extraction and Analysis

We extracted information on variables of interest from the original study reports. We supplemented data from the original reports by contacting original investigators when critical data, such as those on outcomes, were missing. This occurred with two studies. Our initial plan was to extract data on outcome measures focusing on changes in educational performance, but only one experiment included information on educational measures (Cook & Spirrison, 1992). Though several did report data on attitude measures, the scales and analyses reported were so diverse, both within and across studies, as to make synthesis and interpretation inappropriate if not impossible. Given the weak relationship between attitude measures and subsequent criminal activity (e.g., Morris, 1974), we decided not to focus on that information and instead to look only at crime outcomes.⁵

Descriptive Results

As described in Appendix A, the nine experiments were conducted in eight different states, with Michigan the site for two studies (Michigan Department of Corrections, 1967; Yarborough, 1979). No research team conducted more than one experiment. The studies span the years 1967 through 1992. The first five studies located were unpublished and were disseminated in government documents or dissertations; the remaining four were found in academic journals or book. Our searches, therefore, were able to identify and retrieve some documents from the fugitive literature that are generally more difficult for reviewers to take account of (Chalmers & Altman, 1995). None of the prior syntheses of crime prevention programs included all nine Scared Straight-style experiments we review here. For example, the University of

Maryland report concludes that Scared Straight does not work based on negative results in three evaluations (Buckner & Chesney-Lind, 1983; Finckenauer, 1982; Lewis, 1983) and the comparative analysis of program effects reported earlier by Lipsey (1992).

The average age of the juvenile participants in each study ranged from 15 to 17. Only the New Jersey study included girls (Finckenauer, 1982). Racial composition across the nine experiments was diverse, ranging from 36% to 84% White. Most of the studies dealt with delinquent youths already in contact with the juvenile justice system.

The interventions were also diverse. The program components used in any one of these studies did not match any other study in the review. The closest in content were the three studies that implemented single program components: Illinois's realistic rap (Greater Egypt Regional Planning & Development Commission, 1979), New Jersey's confrontational rap (Finckenauer, 1982) and Mississippi's educative rap (Cook & Spirrisson, 1992). Nevertheless, these three differed in the intensity of confrontation and graphic depiction by the inmates. All of the experiments listed in Appendix A included a no-treatment control group and all but one were simple two-group experiments. Vreeland (1981) is the exception. He used a factorial design in which juveniles were randomly assigned to four conditions: (a) prison orientation and counseling, (b) prison orientation only, (c) counseling only, and (d) no-treatment control.

Substantive Findings

Programs such as Scared Straight and their derivatives not only show little deterrent effect, but very likely cause more harm than good. They are each summarized below. Appendix B provides more detail on sample sizes and crime outcomes for each of the nine experiments.

The Michigan Department of Corrections reported the first of these experiments in 1967. Unfortunately, the report is remarkably brief and provides little more than the outcome data. Juveniles who attended two tours of a state reformatory were compared with a no-treatment control group. At 6 months, 43% of the experimental group had committed a new delinquent offense, compared to only 17% of the control group. Curiously, more attention is not given to this large negative result in the original document.

The Greater Egypt Regional Planning & Development Commission (1979) examined the effects of a Scared Straight program in Illinois with a no-treatment control group. They examined the percentage of boys in each group who were subsequently contacted by the police. Again, the results are negative in direction, with 17% of the experimental participants failing in

contrast to 12% of the control participants. The authors concluded that “based on all available findings one would be ill advised to recommend continuation or expansion of the juvenile prison tours. All empirical findings indicate little positive outcome, indeed, they may actually indicate negative effects” (Greater Egypt Regional Planning & Development Commission, 1979, p. 19).

Yarborough (1979) reported the second experimental study conducted in Michigan, this time of the Juvenile Offenders Learn Truth (JOLT) program. He compared JOLT participants on a variety of crime outcomes with a control group at 3- and 6-month follow-ups. Although the differences were small and varied across these outcomes, most results were again in the direction of favoring the control group. For example, at 6 months, Yarborough reported that 31% of the experimental group had committed new criminal offenses, compared with 29% of the controls. The average offense rate for program participants was .69, compared with .47 for the control group. Yarborough concluded that “there can be little doubt that the preponderance of the evidence reported here supports the conclusion that JOLT, unfortunately, is not an effective criminal deterrent” (1979, p. 14).

Orchowsky and Taylor (1981) presented the only positive results from the experiments. They compared a group of boys who attended the confrontational Insiders program with a no-treatment control group on a variety of crime outcome measures, at intervals of 6, 9, and 12 months. The percentage of juveniles in each group who failed favored the control group at 6 months (39% of controls had new court intakes vs. 41% of experimental participants). As Appendix B indicates, however, the results favored the experimental participants at 9 and 12 months. The investigators noted, however, that the attrition rates in their experiment were dramatic at both 9 months (42% of the original sample had dropped out) and at 12 months (55% had dropped out).

Vreeland (1981) conducted a factorial experiment to determine the effects of different components of the Texas Face-to-Face juvenile aversion program. He compared boys who had gone through a prison orientation and counseling program with those who attended the orientation only, had counseling only, or were assigned to a no-treatment control group. He examined official court records and self-reported delinquency at 6 months, finding that the control participants outperformed the three treatment groups on official delinquency (28% delinquent vs. 39% for the prison orientation plus counseling, 36% for the prison only, and 39% for the counseling only). The self-report measure, however, showed a reverse pattern. All three treatment groups had similar proportions of participants who self-reported offenses (59%), whereas 69% of the control group self-reported offenses. Vreeland found that there were discrepancies between the self-report and official data; some who were officially charged did not self-report the offense and vice-versa. He

seems to have more confidence that the official data captures more harmful offenses by participants in the study, stating that "official records have been shown to be reasonably accurate with respect to the more serious crimes of persistent delinquents" (Vreeland, 1981, p. 24). Viewing all the data, Vreeland concluded that there was no evidence that Face-to-Face was an effective delinquency prevention program.

Finckenaue (1982) conducted the most visible experiment on the Scared Straight program, comparing the performance of participants with that of a no-treatment control group for 6 months in the community. He reported that 41% of the children who attended Scared Straight committed new offenses, whereas only 11% of controls did. He also found that the program participants committed more serious offenses. Finckenaue (1982) noted that random assignment procedures were violated during the study; only 8 of the 11 participating agencies that referred troubled or delinquent boys to the program correctly assigned their cases. He conducted several additional analyses in an attempt to compensate for violation of randomization. Even when cases that were incorrectly assigned were removed, however, the failure rate for the Scared Straight attendees was 31%, compared with 17% for controls.

Lewis (1983) provided some more evidence of a possible harmful effect in his evaluation of the San Quentin Utilization of Inmate Resources, Experience and Studies (SQUIRES) program. He compared juveniles attending SQUIRES with a no-treatment control group on a variety of crime outcomes at 12 months. Though a number of different measures were used, Lewis reported that 81% of the program participants were arrested, compared with 67% of the controls. He also found that the program did worse with seriously delinquent youths, leading him to conclude that such children could not be "turned around by short-term programs such as SQUIRES . . . a pattern for higher risk youth suggested that the SQUIRES program may have been detrimental" (Lewis, 1983, p. 222).

Locke, Johnson, Kirigin-Ramp, Atwater, and Gerrard (1986) reported little effect of the Juvenile Education Program in Kansas, an intervention designed to be less confrontational and offensive than the New Jersey program. The investigators examined crime outcomes at 6 months for program attendees and a no-treatment control group. Group failure rates were not available, but the investigators concluded that there were no differences between experimental and control groups on any of the crime outcomes measured. Though direction of effect was not provided, the test statistic for the analysis of variance used ($F = .75$) not only indicates that it was not significant but would be very small regardless of direction.

Finally, Cook and Spurrison (1992) compared juveniles who attended Mississippi's Project Aware with a no-treatment control group on a variety of crime outcomes at 12 and 24 months. Most of the findings favored the control participants, but again the differences between the groups were small. For example, the mean offending rate for controls at 12 months was 1.25 versus 1.32 for Project Aware participants. The investigators concluded that "attending the treatment program had no significant effect on the frequency or severity of subsequent offenses" (Cook & Spurrison, 1992, p. 97).

Table 1 provides a summary of results based on the criterion of whether the program increased or decreased officially recorded offenses at first follow-up. Given that most studies report only one follow-up period, reviewers have used a "first effects" approach in summarizing crime and delinquency treatment studies (Lipsey, 1992; Petrosino, 1997). Important information reported in the studies, however, is ignored by this approach, such as if the program reduced the average number of offenses committed by the juveniles or reduced their severity (Orchowsky & Taylor, 1981). Self-report data are not presented in Table 1.

These results, though preliminary, should lead to sobering caution on the part of persons who wish to revive programs such as Scared Straight. Only seven studies reported group failure rates. Examining those data, we find that the program increases the percentage of the treatment group committing new offenses anywhere from 1% to 30%. This is in comparison with a randomly assigned no-treatment control group. If we assume the randomization breakdown in Finckenauer's (1982) experiment rendered that study invalid and exclude it, the remaining six studies increase new offenses in the treatment group anywhere from 1% to 26%. The experiments that did not provide such percentages provide no contradictory evidence of a positive effect for programs such as Scared Straight (Cook & Spurrison, 1992; Locke et al., 1986), and one indeed suggests a slight negative impact (Cook & Spurrison, 1992).

These findings are remarkable in the context of other systematic reviews. Lipsey (1992) reviewed nearly 400 evaluations of juvenile delinquency programs. When looking only at the direction of the first effect reported (the difference between the experimental and the control group), 64% reported a difference in favor of treatment. Thirty percent were negative in direction; that is, they favored the control group. Petrosino (1997) reported that 63% of the first effects in the 150 experiments in his meta-analysis differed between experimental and control groups in favor of treatment. Only 14% of his sample reported effects in a negative direction, favoring the control group (surprisingly, the remaining 23% showed an absolute zero difference). In con-

TABLE 1: Effects of Scared Straight Programs on Participants (official data only, direction of first effect reported, *N* = 7)

<i>Year, Author</i>	<i>Type of Data</i>	<i>Time Interval</i>	<i>Percentage Change</i>
1967, Michigan Department of Corrections	Percent delinquent	6 months	+ 26% increase in failure
1979, Greater Egypt Regional Planning & Development Commission	Percent contacted by police	5 to 15 months	+ 5% increase in failure
1979, Yarborough	Percent committing new offenses	3 months	+ 1% increase in failure
1981, Orchowsky and Taylor	Percent with new juvenile court intakes	6 months	+ 2% increase in failure
1981, Vreeland	Percent with officially recorded delinquency	6 months	+ 11% increase in failure
1982, Finckenauer	Percent with new offenses	6 months	+ 30% increase in failure
1983, Lewis	Percent with new arrests	12 months	+ 14% increase in failure

trast, all seven of the experiments shown in Table 1 reported first effects in a negative direction.

DISCUSSION

Galvin (1979) noted that one of the negative consequences of Scared Straight is that it would divert attention and resources from good projects. Our preliminary data show that the consequences are possibly worse. The program likely had harmful effects, leading to increased crime and delinquency in our communities (see Table 1). Why would the program have harmful effects? The reasons have not been explicitly tested, but some rationale is provided by some of the original investigators. For example, one investigation team suggested that some youngsters might find prison attractive, stating, "Many delinquent youths feel alienated . . . delinquents view prison as a place where they can have friends and a community now lacking in their lives. Four walls and bars may, in some way, offer security and a sense of belonging" (Greater Egypt Regional Planning & Development Commission, 1979, p. 19).

Finckenauer also provides some material for why the program had negative results. In the New Jersey study, the program seemed to do worse with those youths not yet officially in contact with the juvenile justice system. Finckenauer suggests that

The controversial possibility also exists that the project actually sets in motion a "delinquency fulfilling prophecy" in which it increases rather than decreases the chances of juvenile delinquency The project may romanticize the Lifers—and by extension other prison inmates—in young, impressionable minds. Or, the belittling, demeaning, intimidating, and scaring of particular youth may be seen as a challenge; a challenge to go out and prove to themselves, their peers and others that they were not scared. (1982, p. 169)

Still, Old Programs Never Seem to Die

Despite negative or harmful effects, the Scared Straight program continued to be run in a number of jurisdictions (Finckenauer & Gavin, 1999), and many similar programs are in operation today (Hall, 1999). Attempts to dismantle programs such as Scared Straight have met resistance. In Michigan, the JOLT program was terminated following the results of the randomized experiment conducted by Yarborough (1979). Yet, despite the results of the experiment, proponents of JOLT argued against termination. They relied on the following themes: (a) The evaluation was flawed, (b) people love the program, (c) it helps the inmates, and (d) it is cost free for the state (Homant, 1981; Homant & Osowsky, 1981). Even Homant (1981) concluded that the program might better have been retooled and modified rather than terminated. Advocates for JOLT also argued that the program had no "statistically significant" harmful effect on juveniles. Finckenauer (1982) noted that after he reported the results of his experiment in New Jersey, the criteria for success changed among some from reducing recidivism to "it's worth it if it only helps one child."

Another reaction was for program supporters to argue that programs such as Scared Straight provided other benefits that were not the target of the experiments. For example, Wormser (1991) talks about its positive impact on the prisoners at East Jersey State Prison (formerly known as Rahway State Prison), who had spoken to more than 35,000 juveniles in an attempt to keep them out of jail. Israel (1980) more vehemently argued his support for the Scared Straight program despite the early results from the Finckenauer (1982) experiment:

The relevant policy question is whether this is an intrinsically valuable experience. There are times when the academic community must take some leader-

ship to encourage a climate of opinion that is willing to take some risks. To see it [the program] ruined by a control group of 35 juveniles . . . is a violation of the sacred values of our discipline, and the social responsibility that should accompany our influence. (Israel, 1980, pp. 16-18)

Cook (1990) speculated that the program could have improved the image of the state's department of corrections. Even the Michigan Department of Corrections report, issued more than 30 years ago, speculated that visits to a reformatory might have inspired more juveniles to formally seek counseling (Michigan Department of Corrections, 1967). Whether these benefits outweigh the apparent harmful effects of programs such as Scared Straight is debatable. Programs such as Scared Straight, as other social interventions, likely have a number of latent goals (Finckenauer & Gavin, 1999). These must be weighed against the manifest aim of the program—to reduce crime and delinquency.

Why the Paradox?

Interestingly, the dubious attitude toward evaluation that is held by some policy makers extends beyond any up-front belief that rigorous evaluation is unnecessary. In those instances when evaluations are carried out, findings are often ignored or rejected by those same policy makers (Finckenauer & Gavin, 1999). Finckenauer and Gavin (1999, pp. 216-217) describe this as a paradox in which programs that have been evaluated and deemed to be ineffective nevertheless continue. Their endurance is seemingly untouched by any credible, empirical evidence of their success or failure.

For example, despite negative findings from the SQUIRES experiment (Lewis, 1983), the program continued. Today, its effectiveness is judged by letters from participating youths (and others), who describe how the program influenced them (Finckenauer & Gavin, 1999). This was the same method that was used to demonstrate the effectiveness of the New Jersey Lifers Program before the randomized experiment was conducted (Finckenauer, 1982). The SQUIRES program has not undergone another rigorous evaluation since the Lewis study (Finckenauer & Gavin, 1999).

These authors point to a number of factors that seem to account for this paradox. The first is a political climate that demands action; in the case of crime and delinquency, often "get tough" action (e.g., Zimring, 1999). Also, in the case of crime control policy, there is a perception that any alternatives to getting tough, such as treating offenders, do not work. With respect to programs more generally, there is an inertia factor among policy makers to account for why programs or policies, once created, take on lives of their own. It is

easier to continue such programs and avoid angering constituents than it is to stop them. There may also be a media factor with visual appeal, compelling stories, and sound bites that help perpetuate certain programs.⁶

Another factor, according to Finckenauer and Gavin (1999), that may account for the lack of impact of evaluations is the information gap that often exists between researchers and policy makers. Practitioners may often be ignorant of research findings because the evaluators have been mostly interested in communication with their peers in the research community. Policy makers may also reject research results because of their suspicion of social science, with its complicated analyses, hedged conclusions, and conflicting findings. Finally, there are administrators and officials who do not try nor care to find information that may be available to them. They know what they want to do and do not wish to be dissuaded. A long history of research on how findings are used by policy makers underscores these and other barriers to the use of knowledge in decision making (Weiss, 1998).

We Need Randomized Experiments and Better Outcome Studies

Some policy makers, practitioners, and researchers, as well as many in the general public, believe that programs are good things that can do no harm. When surveys are undertaken to determine the satisfaction of groups with particular programs, the results are almost always positive, persuading even more that the intervention is a good idea. Even with Scared Straight, whether the original investigators talked with inmates, juvenile participants, parents, corrections personnel, teachers, or the general public, everyone was positive about it (e.g., Greater Egypt Regional Planning & Development Commission, 1979). Almost everyone believed the program was doing good (Finckenauer, 1982). Compounding this was a number of single group before-and-after designs that seemed to indicate the program had dramatic crime reduction effects.

Carefully done evaluation is needed to rule out alternative explanations for changes in outcome measures before we can make causal inferences about a program's impact on crime with much confidence. The literature on the Scared Straight program contains some examples that underscore the need for such careful evaluation. For example, Serpas, Littleton, and Ashcroft (1979) conducted a study of a program similar to Scared Straight in New Orleans. They found a 52% decrease in the absolute number of arrests from pretest to the 1-year follow-up period. How could such a dramatic effect be the result of anything other than the program? There are many who would claim that randomized experiments or quasi-experiments (i.e., comparison

group designs) are not needed with such dramatic effects. Unfortunately, we have no other evaluation data from the Orleans Parish study to understand if the program was responsible for the observed decrease in crime.

Fortunately, two of the Scared Straight experiments suggest that the data from before-and-after studies with a single group must be viewed with extreme caution. In the first experiment, Cook and Spurrison (1992) report substantial decreases for program participants in mean offense rates from the baseline measure at the beginning of the program to the posttest measure at 12 and then 24 months. In the second experiment, Locke and his colleagues (1986) report a comparable finding in their evaluation of the Kansas Juvenile Education Program. Without a control group, the only conclusion, given such large and positive results, would be that the program was successful.

Both randomized experiments, however, underscore the importance of ruling out other threats to internal validity; that is, rival explanations for the observed impact. In both cases, the randomly assigned control group also experiences a sizable and statistically significant decrease in criminality from pretest to posttest! In fact, the postprogram performance of the control group is similar (and in one study, slightly better) to that of the experimental participants. Because of random assignment, we are confident that the groups were comparable and differ only in regard to their participation in the program. The reason for the improvement of both treatment and control groups is speculative at best because they were not implicitly tested in the studies. The authors indicate, across the literature, that the maturation process for juveniles is dramatic during the teen years (when Scared Straight normally selects eligible youths) and naturally leads to a reduction in delinquent activities. The reduction is sometimes mistakenly interpreted as a positive impact for juvenile programs (Langer, 1980). Other researchers have pointed out that juveniles are selected for such programs because they commit offenses at a high rate, but the natural statistical regression back to the mean (i.e., their average offending rate) is wrongly interpreted as a program effect (Finckenaue, 1982).

By including a randomized control group, positive changes in the treatment group's performance were not incorrectly attributed to Scared Straight. We have to ask ourselves whether alternatives to randomization could compensate for the problems of internal validity that particularly hamper before-and-after evaluation designs. There is a long history in evaluation of developing and implementing methods to rule out threats to internal validity when randomization is impossible (Weiss, 1998). Many are underutilized in actual practice. Such alternatives, however, often result in equivocal findings, and leave us wondering whether uncontrolled variables or selection biases were responsible for the observed outcome (Boruch et al., 1999).

CONCLUSION

Although rigorous evaluation is often resisted, the agencies and institutions that facilitated the Scared Straight experiments described here should be credited. It would be difficult to find another justice-related program that has been subjected to nine randomized experiments. On the other hand, only nine experiments were conducted over the 33-year history of a widely disseminated and internationally implemented program. Some may interpret this as even more discouraging evidence that rigorous evaluations are rare and the use of results from sound research rarer still (Finckenauer & Gavin 1999).

The findings reported here are sobering. They do indicate that despite our best intentions, programs can not only fail to reach objectives but can backfire, leading to more harm than good. Few programs were as popular or well intentioned as Scared Straight. Yet, despite such popularity and benevolence, there is little evidence to suggest that the program is a deterrent to subsequent juvenile crime and delinquency. In contrast, the evidence strongly suggests that it leads to more crime by program participants. Given the possibility of harmful effects of interventions, government has an ethical responsibility to rigorously evaluate, on a continual basis, the policies, practices, and programs it implements (Sherman, 1984).

APPENDIX A: Scared Straight Randomized Experiments (control in each study was no-treatment group)

<i>Year, Author</i>	<i>Setting</i>	<i>Document</i>	<i>Program Components</i>	<i>Eligibility Criteria</i>	<i>M Age</i>	<i>% Male</i>	<i>% White</i>	<i>Prior History</i>
1967, Michigan Department of Corrections	Michigan	Unpublished	Two tours of reformatory	Unk.	Unk.	Unk.	Unk.	Unk.
1979, Greater Egypt Regional Planning & Development Commission	Illinois	Unpublished	Realistic rap sessions	Unk.	15	100	84	67% prior court/police contact
1979, Yarborough	Michigan	Unpublished	Prison tour Taken to cell Confrontational rap sessions	Male At least one offense	16	100	43	$\bar{X} = 3$ offenses
1981, Orchowsky and Taylor	Virginia	Unpublished	Locked in cell Confrontational rap sessions Processed out of prison	Male 13 to 20 years old At least two offenses No apparent mental/emotional illness		100		
1981, Vreeland	Texas	Unpublished	1-day orientation with haircut and work detail Group counseling (nine sessions with specially trained probation officers)	On probation	16	100	40	$\bar{X} = 2.4$ offenses

1982, Finckenauer	New Jersey	Published	Confrontational rap	Delinquent or at-risk children	15	80	40	50% had prior offenses
1983, Lewis	California	Published	Guided tour Confrontational rap	16 to 17 years old Early phase of camp or treatment Record of delinquency	16	100	Unk.	$\bar{X} = 7$ arrests
1986, Locke, Johnson, Kirigin-Ramp, Atwater, and Gerrard	Kansas	Published	Educational rap Tried to match juvenile with inmate	On probation 14 to 19 years old	17	100	65	$\bar{X} = 1.5$
1992, Cook and Spurrison	Mississippi	Published	Educational rap	12 to 16 years old Under youth court jurisdiction	15	100	36	All had at least one offense

NOTE: Unk. = unknown.

APPENDIX B: Crime Outcome Data for the Scared Straight Experiments (N = 9)

<i>Year, Author</i>	<i>Number in Experimental Group</i>	<i>Number in Control Group</i>	<i>Outcome Measures</i>	<i>Result</i>
1967, Michigan Department of Corrections	30	28	Percent delinquent at 6 months	43% experimental, 17% control
1979, Greater Egypt Regional Planning & Development Commission	94	67	Percent contacted by police during 5- to 15-month follow-up	17% experimental, 12% control
1979, Yarborough	137	90	Percent with new petitions, percent committing new offenses, mean offense rate, mean weeks to new offense, mean days in detention, type of offense committed at 3 months and at 6 months	Diverse findings, none are sta- tistically significant but most slightly in favor of control group
1981, Orchowsky and Taylor	39	41	Percent with new court intakes, mean intake rate, delinquency involvement score at 6, 9, and 12 months	Diverse findings, most favor ex- perimental group at 9 and 12 months
1981, Vreeland	36 (PC)	40	Official court recorded delinquency and	Official court records in favor of self-report delinquency at 6
months 36 (C)	controls (e.g., 28% failure vs.	39 (P) 39% for prison orientation and counseling group), but self-report indicates controls did worse (69% self-reporting offenses vs. 59% for three treatment groups)		

46	35		Percent failure, offense severity at 6 months	1982, Finckenauer 41% of experimental group failed vs. 17% of controls; controls also committed less serious offenses ($t = 2.67$, $p = .01$)
1983, Lewis	53	55	Percent arrested, mean arrest rate, percent charged, mean charge rate, length to first arrest, seriousness of offense at 12 months	Diverse findings, most are similar, except percentage arrested favors controls (67% vs. 81% of experimentals). Time to first arrest significantly favors experimentals (4 months to 3.3 months)
1986, Locke, Johnson, Kirigin-Ramp, Atwater, and Gerrard	18	18	Self-report delinquency, official delinquency at 6 months	No effect, but no indication provided of direction of effect
1992, Cook and Spirrison	97	79	Frequency of offenses, most severe offense, composite severity, mean severity at 12 and 24 months	Diverse findings, most favor control group but actual differences very small

NOTE: PC = prison orientation and counseling. P = prison orientation only. C = counseling only.

NOTES

1. Carol Fitz-Gibbon (1999) noted that teaching represents about 15,000 hours of uncontrolled experimentation into the lives of schoolchildren.

2. At the time of press, this e-mail was received from Correx, the listserv of the National Institute of Corrections (February 7, 2000):

I am an correctional officer for a small detention center. I would like to present a program to my Captain about a program called Scared Straight. I remember it when I was growing up in N.J. I would like to try to start one like it in my detention center. We house state, county, and pre-trial inmates. I would like to use our state inmates in this program to talk to our pre-trials and also to schools. Any info would be much appreciated.

3. For example, we excluded the following studies: Brodsky (1970); Buckner and Chesney-Lind (1983); Chesney-Lind (1981); Langer (1980); Nygard (1980); O'Malley, Coventry, and Walters (1993); Serpas, Littleton, and Ashcroft (1979); Syzmanski and Fleming (1971); and Trotti (1980).

4. The exact search terms used can be obtained from the first author.

5. Our future plans include a check of interrater reliability to insure that data extraction was uniform between us. One of us will also enter the data into Review Manager, a software program designed specifically for the production of systematic reviews (Review Manager 4.0, 1999). Though we have yet to conduct more sophisticated meta-analytic procedures on these data, the findings from this preliminary analysis should be sobering to those seeking to revive programs such Scared Straight.

6. This last reason may partially account for why legislation is propelled so quickly by high-profile murders (Petrosino, Hanci, & Turpin-Petrosino, 2000).

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