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An Empirical Evaluation of Juvenile Awareness Programs in the United States: Can Juveniles be "Scared Straight"?

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Juvenile awareness programs like Scared Straight became popular crime prevention strategies during the 1970s. Juvenile offenders and at-risk youth who participate in these programs are taken to prisons where inmates use confrontational methods to recount stories about violence, sex, and abuse perpetrated by fellow inmates while living a life behind bars. These "get tough" policies have wide public and political appeal. Empirically speaking it is unclear whether juvenile awareness programs help to reduce recidivism or prevent criminal behavior. The purpose of this article is to use an evidence-based approach to determine if there is sufficient empirical evidence to suggest that these programs are effective crime prevention tools. This investigation includes a comprehensive review of the studies that have examined juvenile awareness programs. The studies are evaluated using the most widely accepted tool for assessing scholarly works in criminology, the Maryland Scientific Methods Scale. The results of this study indicate that juvenile awareness programs that use confrontational techniques do not work. However, their nonconfrontational counterparts may show some promise.

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INTRODUCTION

Juvenile awareness programs were established in the early 1960s but gained widespread popularity throughout the United States during the 1970s. These tertiary crime prevention strategies are based on the philosophy of deterrence that has been traditionally defined as a preventive effect that actual or threatened punishment has upon potential offenders (Ball, 1955). The basic premise behind deterrence theory is that if punishment is swift, severe, and certain it will deter criminal or delinquent behavior (Beccaria, [1764] 1963). Programs like Scared Straight tend to emphasize the "punitive nature of punishment" even though punitiveness has been shown to be the least effective component of deterrence for preventing crime (MacKenzie, 2002, p. 338; Paternoster, 1987; Paternoster & Simpson, 1996). Nonetheless, deterrence has been repeatedly cited as the specific rationale behind prison-based awareness programs (Brodsky, 1970; Buckner & Chesney-Lind, 1983; Cook & Spirrison, 1992; Finckenauer, 1979, 1982; Lewis, 1983; Orchowsky & Taylor, 1981; Vreeland, 1981; Yarborough, 1979).

Up until 1978, these programs were simply known as "juvenile awareness" programs. After the airing of a national TV documentary called *Scared Straight*, these programs took on a new meaning. This particular documentary depicted an awareness program that was conducted at Rahway State Prison in New Jersey. The juveniles who participated in this New Jersey program were taken into Rahway maximum security prison where the inmates would recount personal stories of violence, sex, and abuse perpetrated by fellow inmates while living a life behind bars (Finckenauer, 1979). The notion was to "scare" the juveniles "straight" and steer them away from a life of criminal behavior (Buckner & Chesney-Lind, 1983). Program creators and supporters touted an 80–90% success rate for deterring future incidents of crime (Finckenauer, 1982). However, later analyses of this program cited numerous methodological problems with the original evaluation that produced these unsubstantiated results (Finckenauer, 1979; Finckenauer & Storti, 1978).

Since that time a number of researchers have evaluated the effectiveness of juvenile awareness programs like Scared Straight. Generally speaking, programs that use intimidation, fear, and confrontation for dealing with juvenile offenders do not appear to work and, in some cases, exacerbate the situation by inspiring more criminal behavior (Lewis, 1983). Only those programs that utilize nonconfrontational methods such as discussions between prisoners and at-risk youth have been shown to be somewhat "promising" (Cook & Spirrison, 1992). Given the mixed results of these studies it seems that further investigation into the effectiveness of Scared Straight-type programs is necessary.

Sherman and his colleagues recommend that the implementation and continuation of any crime prevention program should be evidence-based (Sherman, Farrington, Welsh, & MacKenzie, 2002). That is, the effectiveness of crime prevention programs should be evaluated using rigorous scientific standards to determine which programs are in fact "working." The purpose of this study is to determine whether there is sufficient empirical evidence to suggest that juvenile awareness programs reduce recidivism or deter criminal behavior among at-risk youth.

JUVENILE AWARENESS PROGRAMS

Traditionally, the American juvenile justice system has made various attempts to avoid the actual infliction of punishment on youthful offenders (Cook & Spirrison, 1992). Two possible reasons can be cited for this rationale. First, there are numerous potential problems when the justice system intervenes in the lives of young offenders (Finckenauer, 1982). For example, if a youth is taken from his or her family and subsequently placed in a jail or prison, these youngsters may lose the only form of stability or consistency they have in their lives. Second, young offenders are seen as a population of individuals who have a higher anticipated probability of being deterred (Brodsky, 1970; Lewis, 1983). It is believed that if juvenile offenders can be reached and deterred early on before a criminal career is established, then maybe these juveniles will opt to cease and desist in further criminal behavior. It is with this latter idea of deterrence that inspired the creation of prison-based awareness programs for youthful offenders (Sherman et al., 2002).

Prison-based awareness programs date back to the mid 1960s when the San Quentin Squires Program was established in 1964 at the maximum security prison in San Quentin, California (Lewis, 1983). In fact, during the late 1960s, a number of similar programs were established in more than 20 states across the United States (Buckner & Chesney-Lind, 1983). These early initiatives were developed by prisoners with the hope of deterring young people, especially at-risk youth, from continuing with a life of crime and deviance. Groups of inmates in these initial programs would share their experiences with various educational, religious and community-oriented youth groups about life as an inmate and the wrong choices that had ultimately resulted in their incarceration (Buckner & Chesney-Lind, 1983). However, these programs did not fully reach the apex of their popularity until the late 1970s and early 1980s (Cook & Spirrison, 1992). In fact, by 1980, over 37 states had instituted prison-based diversion programs as mandated crime prevention alternatives (Israel, 1980).

As previously noted, these prison-based awareness programs were established as tertiary crime prevention strategies with the ultimate goal of

deterring future criminal behavior of at-risk youth (MacKenzie, 2002). In other words, these juveniles had already had formal contact with their respective state criminal justice systems and were identified as possible persistent offenders. Many of these prison-based awareness programs looked to utilize increased levels of intimidation, fear, and hostility to scare these young offenders in the hopes of deterring them from future offending (Finckenauer, 1982). The purpose behind this confrontational approach was to allow the inmates to present, sometimes very explicitly, the deleterious and nefarious effects of living a life of crime. The accounts given by the inmates focused on the wrong choices each had made, how they subsequently ended up in prison, and essentially how awful and painful living in prison can be (Brodsky, 1970; Buckner & Chesney-Lind, 1983; Lewis, 1983). This crime prevention strategy is presumed to work because once juveniles are presented with the severity of the punishment (i.e., the negative effects of prison life), it would seem that the likelihood of future offending should be significantly reduced.

Although there have been numerous prison-based awareness programs that have been offered in the United States, it was the publicity of one particular New Jersey program initiated at Rahway State Prison which sparked a wave of both national and international political and public interest. The Rahway State Prison diversion program known initially as the Juvenile Awareness Project was founded on the idea that prisoners could be used as a means of deterrence for at-risk youthful offenders (Finckenauer, 1979, 1982). Young offenders would be taken to the prison and confronted by inmates who would use fear, intimidation, and hostility with the intent to scare the juveniles into leading a straight life without crime. This juvenile crime prevention strategy was presented by New Jersey state government and correctional officials as a panacea for juvenile delinquency (Finckenauer, 1982). Claims of success rates between 80% and 90% were offered as support for the effectiveness of the Juvenile Awareness Project (Cook & Spirrison, 1992; Finckenauer, 1982). Lewis, 1983).

This particular program inspired a 1979 Oscar-winning television documentary entitled *Scared Straight*, which offered an inside look at the confrontational techniques used by the prisoners at Rahway State prison to deter at-risk youth from continued criminal behavior (Golden West Broadcasters & Shapiro, 1978). By the time documentary made it to the air, over 14,000 New Jersey youth had gone through the program (Finckenauer, 1982). The publicity generated by this movie inspired dozens of other states to create their own versions of "scared straight" initiatives to deal with their juvenile crime problems. However, immediately following the documentary legislators, state correctional departments, juvenile justice agencies, and criminologists nationwide began to question the reliability and validity of the methods used to determine the so-called drastic reduction of recidivism rates which boasted an 80–90% success rate of the Rahway State Prison

program (Cook & Spirrison, 1992; Finckenauer, 1982). In particular, many observers wondered why the juvenile crime rate in the state of New Jersey had not shown any significant reductions when so many at-risk New Jersey youth had been allegedly scared straight (Cook & Spirrison, 1992). A closer empirical examination of the New Jersey program revealed that state officials had made several unsubstantiated claims including overstating the effective-ness of the program (Cavendar, 1981). Unfortunately, other states adopted New Jersey's model for dealing with at-risk juveniles, which was based on erroneous claims.

METHODOLOGY

Maryland Scientific Methods Scale (SMS)

The SMS has become one of the most widely accepted tools for assessing scholarly works in the criminal justice field. In particular, this scale enables criminologists the opportunity to critically evaluate the effectiveness of various types of justice-related programs including those focusing on crime prevention strategies. The scale originates from the work of Cook and Campbell (1979) and allows for a rank method based on methodological criteria (Sherman et al., 2002). The primary purpose of the SMS is to give scholars, policymakers, and practitioners "a simple scale measuring the internal validity" of various types of studies (Sherman et al., 2002, p. 16). The SMS is a 5-point scale that uses specific criteria to evaluate (or score) the methodological rigor of a study based on its internal validity. The scale rates the methodological quality of the studies ranging from Level 1 (least rigorous) to Level 5 (most rigorous). Some of the criteria used to evaluate the quality of a particular study include the use of pretests and posttests, randomization of the experiments, the use of comparison and control groups, history, selection bias, causal order, evaluation of measurement error, statistical power, research design, and assessments of internal and external validity (Sherman, Gottfredson, MacKenzie, Eck, Reuter, & Bushway, 1998; Sherman et al., 2002; see Appendix). If the studies have sufficient methodological quality (i.e., Level 3 or higher), researchers can classify the effectiveness of a program into one of four categories: "what works, what does not work, what is promising, and what is unknown" (Sherman et al., 2002, p. 18).

According to Sherman et al. (2002), programs can be classified as "working" if there are at least two Level 3 to Level 5 evaluation studies that have statistically significant results in the theoretically expected direction, and the preponderance of evidence suggest the programs are effective. Programs may be classified as "not working" if there are at least two Level 3 to Level 5 evaluations that conclude the effectiveness of the programs are statistically insignificant, and the preponderance of the evidence indicates the programs are ineffective. Those programs that can be coded as

"promising" must have at least one Level 3 to Level 5 evaluation study that has found the effectiveness to be statistically significant, and the preponderance of the evidence suggests that the program is effective. Programs that cannot be classified into one of the three other categories is defined as having "unknown" effects.

Juvenile Awareness Program Studies

To date, there have been 12 evaluation studies of 10 juvenile awareness programs conducted in 10 states. For the current investigation, we examine these 12 evaluation studies using the Maryland Scientific Methods Scale (see e.g., Brodsky, 1970; Buckner & Chesney-Lind, 1983; Cook & Spirrison, 1992; Finckenauer, 1978; 1982; Finckenauer & Storti, 1978; Lewis, 1983; Locke, Johnson, Kirgin-Ramp, Atwater, & Gerrard, 1986; Orchowsky & Taylor, 1981; Serpas, Litton, & Ashcroft, 1979; Vreeland, 1981; Yarborough, 1979). For the current investigation, 8 of the 12 juvenile awareness studies evaluated are of sufficient scientific rigor (a SMS score of Level 4 or above) to determine whether they can be classified as working (Sherman et al., 2002).

The Scared Straight program in New Jersey was the only program that was evaluated on three separate occasions (Finckenauer, 1979, 1982; Finckenauer & Storti, 1978). The average age of the participants in each study ranged between 14 and 17 years old. With regard to gender, only Finckenauer (1982), Buckner and Chesney-Lind (1986), and Brodsky (1970) included young female offenders as part of their studies. The racial composition remained fairly consistent throughout all 12 studies, with more Whites than Blacks usually selected to participate. Over 1000 youth and young adults under the age of 21 participated in all 12 studies. The studies included in this review span the years 1979–1992.

Two studies evaluated used posttest designs with no control groups (Brodsky, 1979; Serpas et al., 1979) while two additional studies used posttest deigns with random assignment to control and treatment groups (Finckenauer, 1979; Finckenauer & Storti, 1978). Six studies used a posttest designs with random assignment to control and treatment groups (Cook & Spirrison, 1992; Finckenauer, 1982; Lewis, 1983; Orchowsky & Taylor, 1981; Vreeland, 1981; Yarborough, 1979). One study used a pretest-posttest design with random assignment to control and treatment groups (Locke et al., 1986) while one used a matched group design (Buckner & Chesney-Lind, 1983).

Of the 10 programs evaluated for this review, not all used the "fear-arousal approach" as the method to deter at-risk youth from criminal behavior. Hawaii's Stay Straight Program, Mississippi's Project Aware, and Illinois's Prison Profiles utilized a nonconfrontational (i.e., informal discussion, no heated or threatening speeches) prison-based awareness approach for their programs (Brodsky, 1970; Buckner & Chesney-Lind, 1983; Cook & Spirrison, 1992). Eleven studies dealt with youths or young

Program & State	Author(s)	Sample	SMS	Findings
Prison Profiles (IL) ^b	Brodsky (1970)	n = 85 college students & predelinquent young adults	2	Demonstrated attitudinal shifts; participants tended to be less retributive towards prisoners and more neostive towards prisons
Scared Straight (NJ)	Finckenauer & Storti (1978)	n = N/A 11–18 years old males with no prior contact with the CIS	1	No significant attitudinal differences were found between treatment and controls.
Scared Straight (NJ)	Finckenauer (1979)	Follow-up Finckenauer & Storti (1978)	1	No statistically significant impact on recidivism rates between treatment and controls; may increase deviant occurrences
Juvenile Awareness (LA)	Serpas et al. (1979)	n = 69 male juvenile offenders	7	52% decrease in the actual $\#$ of arrests from a one-year pretest to positiest period; no control around
Juvenile Offenders Yarborough Learn Truth (MI)	Yarborough (1979)	n = 227 youths one prior contact with CJS	Ś	Little significant difference between treatment and control group for various recidivism outcome measures
Insiders (VA)	Orchowsky & Taylor (1981)	n = 80 13–20 year old males w/two priors	4	Some statistical significance was found for treatment group on various crime outcome measures; however attrition rates were extremely high
Face to Face (TX) Vreeland (1981)	Vreeland (1981)	$n = 160 \ 15-17$ year old males on probation with two or more priors	Ś	Statistically insignificant results on self-report measures and court records, no conclusive evidence.

TABLE 1 Awareness Program SMS Evaluation^a

Recidivism rates measured indicate that treatment participants committed more offenses after completing the program.	Statistically significant results indicate that program participants had higher rates of recidivism.	No significant effect on female recidivism rates; however males who participated tended to be arrested at significantly higher rates compared to the treatment erroun.	Both treatment and controls improved from pre-to post test; however these results were statistically insignificant.	No significant deterrent effect for treatment group when recidivism rates were examined; however truancy and drop out rates were found to be substantially lower for the treatment group.
4	Ś	4	Ś	Ś
n = 82 males & females some had no priors	n = 108 14–18 years old w/priors	n = 300 male & female offenders	n = 32 14-19 year old males on probation	n = 176 12–16 year old at-risk males
Finckenauer (1982)	Lewis (1983)	Buckner & Chesney-Lind (1983)	Juvenile Education Locke et al. (1986) Program (KS)	Cooke & Spirrison (1992)
Scared Straight (NJ)	San Quentin Squires (CA)	Stay Straight (HI)	Juvenile Education Program (KS)	Project Aware (MS)

Note. SMS = Maryland Scientific Methods Scale.

"Initially, each author assigned their own SMS value for each program. When there was a discrepancy, the authors collectively discussed the program in question and ultimately came to a consensus of the SMS value to be assigned. After the initial coding, there was an 83.3% agreement between the authors. ^bThis is a nonconfrontational program and the remaining programs evaluated are considered confrontational. adults who had previous contact with the criminal justice system. Only Brodsky's (1970) study used youth and young adults who had no previous contact with the law.

Follow-up periods were varied and ranged from one hour to 24 months after the program was completed. Only Vreeland's (1981) study of the Texas Face-to-Face and Locke et al.'s (1986) evaluation of the Kansas Juvenile Education Program (JEP) program included measures of self-report data. Finally, only three studies did not report postintervention data (see e.g., & Brodsky, 1970; Cook & Spirrison, 1992, & Locke et al., 1986). The section that follows presents a more in-depth discussion of the studies conducted on juvenile awareness programs. The SMS ratings of the studies reviewed here are of good methodological quality (i.e., the majority of the studies achieve scores of four or above; see Table 1).

EVALUATING JUVENILE AWARENESS PROGRAMS

The earliest evaluation of a juvenile awareness program is attributed to Brodsky (1970). In his study, 85 college students and young adults who were identified as predelinquent took part in the Prisoner Profile awareness program at the maximum security Illinois State Penitentiary at Menard, Illinois (Brodsky, 1970). Those youth who listened to the nonconfrontational speeches by the panel of inmates were not remanded by the court but voluntarily participated in the program.

Brodsky (1970) was interested in whether the program had any appreciable effect on the participants' attitudes toward punishment of criminals or prisons. The study used a pretest-posttest design with no control groups. The findings indicated that most of the individuals who participated in the Prison Profiles program reported changes in their attitudes toward prisoners and prisons. Specifically, the participants tended to be less retributive toward prisoners and more negative towards prisons after the completion of the program. This finding was most notable with older students, especially those enrolled in college (Brodsky, 1970).

In 1978, Finckenauer and Storti evaluated the famous Scared Straight program at Rahway State Prison in New Jersey. As previously noted, Scared Straight was established by the state of New Jersey as a prison-based awareness program that looked to use actual prisoner testimonies as a deterrent for male juvenile offenders. This confrontational approach that focused on fear and intimidation was touted by some as a panacea for ending juvenile crime (Finckenauer, 1982). The age of the offenders who participated in the program ranged between 11 and 18 years of age. An official evaluation of the program was initiated to see whether Scared Straight actually had a significant deterrent effect.

The evaluation specifically focused on assessing the attitudinal changes among participants who received the treatment and a control group who did not. Participants were drawn from lists of youth provided by police departments, schools, counseling agencies, and employment and recreational organizations (Finckenauer & Storti, 1978). The subjects in the assessment were not randomly assigned to either a treatment or control group. Most of the youth selected for the program were males who had no previous contact with the criminal justice system. The results of the study indicated that the experimental group members showed a significant negative attitudinal shift towards crime compared to their non-treatment counterparts. However, no significant differences were found between the treatment and control groups on attitudes toward obeying the law, prisons, punishments, policemen, justice, or self-perception.

Finckenauer (1979) conducted a follow-up evaluation of New Jersey's Scared Straight program based on a behavioral outcome measure of subsequent criminal offenses of the sample used in the previous 1978 study. Official court records of the juvenile participants were analyzed for a minimum of six months following the treatment. Frequency and seriousness measures of delinquent behavior were gathered for each participant. The results indicated that a significantly higher proportion of the participants who did not receive the treatment faired better in terms of recidivism than the actual treatment group. This result was consistent across both frequency and seriousness measures. Taken together, these findings suggest that Scared Straight actually had harmful effects for some juveniles.

Serpas et al. (1979) conducted an empirical evaluation of the Juvenile Awareness Program operated in Orleans Parish, Louisiana. Ninety male juvenile offenders participated in the program from January to June of 1979. However, only 69 of these young offenders was involved in the evaluation of the program. Confrontational sessions provided by inmates were used as a means to attempt to deter at-risk youth from further offending. A pretest-posttest design with no equivalent control group was used for this assessment. The dependent variable was the number of actual arrests (i.e., both before and after treatment). The results found a 52% decrease in the actual number of arrests in the one-year posttest follow up period. However, the notable decrease in actual arrests for these participants can only be considered suggestive because of the lack of a control group and the possible maturation of offenders in the study (Serpas et al., 1979).

In the same year, Yarborough (1979) conducted an evaluation of the Juvenile Offenders Learn Truth (JOLT) program offered at Jackson Prison in Michigan. In the evaluation, 227 youth were randomly assigned to JOLT or to a nontreatment control group. The youth who participated in JOLT had previous contact with one of four Michigan county courts. The program consisted of one 5-hour confrontational session between inmates at Jackson and the youth who participated in the program. Once again, it was the intent of program coordinators to use JOLT as a deterrent for youthful offenders. Those who participated were compared on a variety of recidivism outcome

measures that were collected from all four county courts at both three and six month follow-up intervals. The evaluation of JOLT reported very little significant difference between the actual treatment and control group. This finding led Yarborough (1979) to conclude the JOLT program had "no discernible effect" on recidivism rates among program participants (p. 14).

In 1981, Orchowsky and Taylor evaluated the state of Virginia's Insiders Program. This program used two-hour confrontational sessions between inmates and participants where intimidation and graphic accounts of prison life were recounted. Juveniles were also locked in cells and enlightened about the daily routines of prisoners by an actual prison guard. Youthful offenders from three different court districts participated in the program. The researchers randomly assigned 80 juvenile male offenders who were between the ages of 13 and 20 and had two or more prior convictions to the either the Insiders Program or a nontreatment control group (Orchowsky & Taylor, 1981). Various crime outcome measures were recorded at 6, 9, and 12-month intervals. The results at the 6-month interval were found to be statistically insignificant; yet the results at the 9 and 12-month intervals indicated some success for the experimental group. Yet Orchowsky and Taylor (1981) admit that the results of the assessment cannot be considered conclusive since attrition rates during the 9 and 12-month intervals were extremely high (i.e., between 40 and 55%).

Later that year, Vreeland (1981) evaluated the Texas prison-based awareness program known as Face-to-Face. This particular program consisted of a 13-hour orientation session in which the youth actually lived as an inmate at the maximum security prison at Huntsville. Immediately following the orientation, group counseling was provided to the participants. Male juvenile offenders between the ages of 15 and 17 who were on probation with the Dallas County Juvenile Court and had at least two to three prior convictions were chosen for inclusion in the assessment (N=160).

The young male offenders were randomly assigned four conditions: prison orientation and counseling, counseling only, orientation only, or no treatment at all (Vreeland, 1981). Vreeland (1981) analyzed both self-report measures of delinquency and official court records at the six month period following treatment. With respect to the self-report measures, all three treatment groups tended to do better than the nontreatment group. Conversely, according to official court records, the opposite outcome was observed. The control participants faired much better than all three of the treatment groups but both sets of reported results were statistically insignificant. In other words, there was no conclusive evidence that suggested the Faceto-Face initiative was effective in reducing criminal behavior.

Finckenauer conducted a final evaluation of the New Jersey Scared Straight program in early 1982. Finckenauer utilized a posttest design in which he randomly assigned 82 juvenile males and females, some of which had no prior contact with the criminal justice system, to either treatment or control groups. Official court records of each participant's behavior were analyzed for a six-month follow-up period. The results indicated that over 40% of those who participated in the Scared Straight program had committed subsequent criminal offenses compared to roughly 10% of the control group. Furthermore, the results indicated that those who actually attended the program had committed more serious offenses and the program had no significant impact on eight of the nine attitudinal measures about crime (Finckenauer, 1982). In fact, the treatment group did substantially worse on the attitudinal measures. This means that the program may actually increase the likelihood of reoffending among juveniles and negative attitudes toward the criminal justice system.

Lewis (1983) conducted an evaluation of the nation's oldest juvenile awareness program known as the San Quentin Squires located at the San Quentin maximum security prison in California. The program used a feararousal approach as an attempt to dissuade at-risk juveniles from engaging in further criminal behavior. The actual intervention included guided tours of the prison by actual prisoners, a review of photos of the outcomes of violence in the prison, and a three hour presentation regarding prison life by a panel of inmates.

Lewis (1983) assessed the overall impact the San Quentin Squires program had on both the attitudes of those who participated and on their subsequent criminal behavior. This study used a sample of 108 juvenile males between the ages of 14 and 18 who resided in two California counties (i.e., Los Angeles and Contra Costa) and who had a prior criminal record. The participants were randomly assigned to a treatment or a control group. A comparison of seven varying crime outcome measures was conducted at a 12-month follow-up period. The statistically significant results indicated that program participants had higher rates of recidivism (81% vs. 67%) than the control group (Lewis, 1983). He also found that the treatment failed considerably when those youth with a lengthy prior criminal history participated in the program. Overall, the results indicated that the San Quentin Squires program was ineffective as a deterrent for male juvenile delinquents.

In 1983, Buckner and Chesney-Lind conducted a systematic assessment of the Stay Straight Youth Awareness Program facilitated by the state of Hawaii's largest prison, the Oahu Correctional Center. The Stay Straight program was created in 1979 and was patterned after the New Jersey Scared Straight initiative. It was similar to Scared Straight since it offered personal inmate testimony in the actual confines of the prison. However, the program differed from Scared Straight since it did not use the confrontational approach during the prisoner presentations. The Hawaii approach was rooted in "factual storytelling and advice-giving" rather than an "in-your-face" model that uses intimidation to deter youthful offenders (Buckner & Chesney-Lind, 1983, p. 230).

The evaluation included 300 juvenile offenders who resided on the island of Oahu. The first 100 males and 50 females who completed the

program were assigned as the treatment group and another 100 males and 50 females who never participated in the program were selected to form a matched comparison group. The matching characteristics included: comparable ethnicity, within the same 18 months of age, same sex, age at first arrest was within two years of the treatment group youth's age at first arrest, the frequency, severity, and type of arrest, a comparable time lapse for both youths between last recorded arrest and the date of participation for the treatment group, and not having attended a single session of the Stay Straight program.

After the matching procedure was conducted, committed offenses recorded by all youths subsequent to either their respective dates of attendance in the program (i.e., experimental group) or their respective cutoff dates (i.e., comparison group) were measured and further analyzed. Of significant importance to the evaluation, were arrests of youths in both groups that occurred after the treatment group's attendance at the Stay Straight program. Police arrest histories for each youth were compiled, highlighting both the arrests that resulted in formal charges and those arrests that were later dismissed. Before analysis took place, males and females for both groups were separated for within gender comparison purposes. The results of the study indicated that there was no significant effect on the delinquent behavior of females who attended the program. Males who participated, however, tended to be arrested at a significantly higher rate than the comparison group (Buckner & Chesney-Lind, 1983).

More recently, Locke et al. (1986) conducted an evaluation of the JEP at the Lansing State Penitentiary in Kansas. This awareness program was designed to be more educational and less confrontational than other prisonbased awareness programs, although some inmates did use intimidation during their interactions with the program participants. JEP was an attempt to match the juvenile with a prisoner in terms of lifestyle, personality type, and racial and ethnic background in the hope that the youth would be able to identify with and respond to that particular inmate's advice about avoiding a life of crime.

Beginning in June and continuing through October 1980, all juvenile offenders from three Kansas counties who were on probation and scheduled to attend the JEP at Lansing State Prison were referred into the program evaluation. Thirty-two male juvenile offenders ages 14–19 were randomly assigned while on probation to either a treatment group who received JEP or a wait-list control group who would eventually receive the treatment. Locke et al. (1986) examined official arrest data, juvenile court records, and self-report delinquency data. A pretest–posttest design was used to analyze the true impact of the JEP program. Although both groups improved from pretest to posttest, the final analysis indicated that there was no statistically significant difference between the treatment and control groups for the mean number of self-reported delinquent offenses committed during the premeasure period, nor were the mean number of offenses officially recorded

by police and the juvenile courts different. Locke et al. (1986) concluded that the Kansas JEP program could not be considered a significant deterrent for young male offenders.

In the most recent evaluation of a prison-based awareness program, Cook and Spirrison (1992) assessed the impact of a nonconfrontational juvenile awareness program in the state of Mississippi. This program, known as Project Aware, offered at-risk juvenile male offenders between the ages of 12 and 16 the opportunity to take part in a five-hour prisoner-run nonconfrontational juvenile awareness program at the Mississippi State Penitentiary. For the evaluations, 176 juvenile male offenders under the jurisdiction of the juvenile county court system were randomly assigned to either the treatment or control group. Various crime outcome measures along with school drop-out and attendance measures were examined for both groups at 12 and 24-month follow-up periods. With respect to the results regarding the various crime measurements, both groups seemed to improve from 12 to 24 months; however, the control mean offending rate was still noticeably lower than the treatment group. Cook and Spirrison (1992) concluded that Mississippi's Project Aware had no significant deterrent effect. However, the program was effective in increasing school attendance and reducing drop-rates among program participants (Cook & Spirrison, 1992, p. 96).

CONCLUSIONS AND RECOMMENDATIONS

Based on this comprehensive review of the relatively strong empirical research (i.e., 8 of the 12 studies reviewed an SMS score of four or above) of the juvenile awareness programs, we conclude that these programs are not working. That is, these programs do not appear to have the intended deterrent effect that proponents claim. Most of the evaluations reviewed found that juvenile awareness programs have no statistically significant impact on at-risk juvenile offender attitudes towards crime or their propensity to commit further criminal acts. Furthermore, some of these programs suggest that participation in these programs may actually increase the likelihood of future offending (Buckner & Chesney-Lind, 1983; Finckenauer, 1979; 1982; Lewis, 1983).

An explanation that accounts for the ineffectiveness of these types of programs can be directed back to the criminological literature on deterrence. Past research indicates that overall, the certainty of punishment serves as more of a deterrent than does the perceived severity of the punishment, which in most cases has no deterrent effect at all (Anderson, Chiricos, & Waldo, 1977; Buckner & Chesney-Lind, 1983; Gibbs, 1975; Tittle & Logan, 1973). In addition, prisoners can only guarantee the severity of punishment youths will receive if sent to prison and not the certainty that future criminal behavior will result in being imprisoned.

In 1997, roughly 60% of adjudicated juveniles were given probation, twenty-eight percent placed outside the home, and the remaining juveniles given intermediate sanctions such as boot camps. Those numbers have risen to 67% in 2005 for all delinquency cases (Livsey, 2009). This increase in probationary punishment is visible only in formal probation and is not present with informal types of punishments which may include programs such as Scared Straight. A decrease in these informal programs of roughly 20% is evident during the same time frame (Livsey, 2009).

Although the creation and implementation of programs such as Scared Straight has decreased over the last two decades, these programs continue to reappear in one form or another. For example, Illinois requires juvenile drivers convicted of driving under the influence of drugs or alcohol to participate in a Youthful Intoxicated Driver's Visitation Program (625 ILCS 5/11-501.7). This program consists of supervised visitation at a variety of facilities including a state or private rehabilitation facility that cares for motor vehicle accident victims injured by drunk drivers, a facility that cares for chronic alcoholics so that juveniles can observe persons in terminal stages of alcoholism, and a county morgue so that juveniles can observe victims of drunk drivers. There is little doubt this program attempts to deter juveniles from drunk driving by presenting them with the serious adverse effects of alcohol use and abuse, which is designed to scare them into compliance with drunk driving laws. Unfortunately, the preponderance of empirical evidence indicates that there is limited support for the effectiveness of juvenile awareness programs such as Scared Straight, and, in fact, the programs may lead to increased offending and recidivism among youth (see e.g., Buckner & Chesney-Lind, 1983; Finkenauer, 1979, 1982; Petrosino, Turpin-Petrosino, & Buehler, 2002). These findings coincide with the comparison results of the SMS and Scared Straight and juvenile awareness programs used for this study.

One possible explanation for the failure of these programs may be attributed to the confrontational nature of most of these programs. Most researchers found that the fear-arousal educational approach did not have a significant impact on the at-risk offender, and in some instances, actually fueled subsequent criminal behavior. Researchers who evaluated these programs overwhelming agreed that trepidation, vulgarity, and threat of violence are not meaningful or effective factors for deterring young offenders from committing further crimes. Additionally, it was noted that these tactics may enhance or further entice a young offender to continue a life of crime (Finckenauer, 1979, 1982; Cook & Spirrison, 1992; Lewis, 1983).

Another possible explanation for the failure of juvenile awareness programs may have to do with the actual dosage or amount of treatment received by the juvenile offender. That is, it is unreasonable to expect that any single experience, regardless of its profound effect, would have a significant and long-term impact on an issue as arduous and complex as juvenile criminal behavior. These awareness programs offer a one-time meeting between inmates and groups of young offenders and, as the above mentioned research indicates, it is unrealistic to contend that awareness programs that offer a mere one-time dosage alone apparently have no deterrent impact on juvenile recidivism rates.

These programs may fail in reducing recidivism because of the lack of a rehabilitative component. As MacKenzie (2002) argues, Scared Straight programs, much like shock incarceration programs, are quick, cost efficient, and often include no rehabilitative component. Instead, the aim of these types of programs are more grounded in deterrence for an age group in which future offending may or may not be carried on into adulthood (MacKenzie, 2002). Thus, in order for programs like Scared Straight to positively impact juvenile offenders, changes grounded in more rehabilitative principles may be beneficial for reducing incidents of juvenile crime and deviance. In fact, Lipsey (1995) acknowledged three components associated with effective juvenile programs: (a) meaningful contact over longer periods of time, including the duration of the program itself; (b) the need of a sound scientific research component for evaluation purposes; and (c) meaningful behavioral and basic life-skills training for the juvenile clients.

It should be noted that certain characteristics of some juvenile awareness programs may show promise. For example, those programs that utilized a nonconfrontational approach seem to offer the greatest impact on juvenile recidivism rates. Although the empirical findings are not statistically significant, the three studies that examined these types of programs indicate that the results are approaching significance and should not be discarded since various methodological limitations and measurement error may have caused the insignificant findings (Brodsky, 1970; Cook & Spirrison, 1992; Locke et al., 1986).

Still of the studies reviewed for this analysis, we conclude that juvenile awareness programs are not working. In other words, these programs do not appear to have a significant impact on deterring juvenile crime. However, as previously mentioned, certain aspects of this crime prevention strategy should not be prematurely discarded. In particular, nonconfrontational programs could be used in coordination with other crime prevention strategies that have been empirically validated as either working or promising (Cook & Spirrison, 1992; Sherman et al., 2002). One possible strategy to reduce recidivism might be to combine nonconfrontational programs with aftercare programs. The results if two meta-analyses indicate that juvenile aftercare programs are effective in reducing recidivism (see e.g., Andrews et al., 1990; Lipsey, 1992). In addition, intensive residential programs such as Job Corps that are designed to help juveniles gain both academic and vocational qualifications have been shown to be effective in reducing recidivism (Sherman et al., 2002). Researchers should continue to evaluate various juvenile crime prevention programs using rigorous methodology to determine which programs show promise or work to reduce recidivism.

Although many versions of juvenile awareness programs still exist or are currently being implemented (e.g., Illinois' Youthful Intoxicated Driver's Visitation Program), it is important to note that premature statements touting a program's effectiveness often lead criminal justice professionals and practitioners to duplicate programs like Scared Straight. The implementation and continuation of ineffective programs utilizes limited resources that could otherwise be used for programs that have been shown to be effective in reducing criminal behavior. As Sherman et al. (2002) suggest, program decisions ought to be based on evidence-based research and not the anecdotal claims made by some program administrators.

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APPENDIX

	Before-after	Control	Multiple units	Randomization
Research desig	zns			
Methods score				
Level 1	О	Ο	Х	О
Level 2	Х	Ο	О	О
Level 3	Х	Х	О	О
Level 4	Х	Х	Х	О
Level 5	Х	Х	Х	Х
	Causal direction	History	Chance factors	Selection bias
Threats to inte	ernal validity			
	<u> </u>			
Methods score	ں ب			
Methods score Level 1	X	Х	Х	Х
		X X	X X	X X
Level 1	Х			
Level 1 Level 2	X O	X	Х	Х

The Maryland	Scientific	Methods	Scale

Source. Sherman, Gottfredson, MacKenzie, Eck, Reuter, and Bushway (1998).

Note. X = present; O = absent.

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