

One More for the Books: A Program Review of Delinquent Rehabilitation

Glassner SD^{1*} and Carey MT²

¹Department of Criminal Justice and Sociology, College of Letters and Sciences, Columbus State University, Columbus, Georgia

²School of Criminal Justice, Texas State University, 601 University Drive, San Marcos, TX 78666

Abstract

The current study analyzes the effectiveness of a treatment program aimed at reducing juvenile recidivism by offering various pro-social services. Results from this non-theoretical evaluation are consistent with the theoretically derived “risk” and “needs” principles. Findings from various logistic regression models showed that high-risk juveniles (parolees) exposed to the treatment demonstrated significantly lower levels of recidivism than did low-risk juveniles (probationers). Practical and real-world guidelines for future rehabilitative program evaluations are discussed so as to inform future research. Additionally, pragmatic policy implications concerning juvenile rehabilitation are described.

Keywords: Delinquency; Rehabilitation; Program evaluation; Treatment; Policy

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Proper intervention for delinquents is important because early criminal behavior is prone to continue into adulthood [1,2]. With research suggesting that incapacitation alone has little to no effect on delinquent reoffending [3,4], addressing the underlying causes of delinquency has remained a goal for both practitioners and theorists [5-15].

Studies have suggested that anywhere between 40 percent and 70 percent of juveniles who have been detained will recidivate within one year of release, depending on how recidivism is measured [16]. To combat juvenile recidivism, a number of programs have been developed over the years [10,12,17,18]. Programs that have come to fruition have demonstrated mixed results, and much of the variation has been explained by the differing methodologies used between program models [19,12]. Desirable results can be achieved in rehabilitative programs, and the results are often enhanced when programming is grounded in evidence-based practices [10,12,19,15]. As a result, it is imperative to utilize methods that are known to work when attempting to reduce the recidivism rates of juvenile offenders.

The current analysis contributes to the rehabilitation literature by evaluating the effectiveness of the Children’s Aftercare Re-Entry Experience (CARE). CARE was a rehabilitative program established to reduce the recidivism rates of delinquent juveniles. The CARE program operated in the southern United States and treated a large Hispanic/Latino population of delinquent juveniles via a “multiple services” platform [12]. The various services provided at CARE were administered to youth who were under some form of community supervision (i.e., probation or parole). CARE provided a number of pro-social services including case management, counseling, mentoring, restorative justice, tutoring, academic counseling, GED instruction, ESL classes, occupational training, substance abuse services, and health services. Findings from this analysis indicate that the CARE program produced results consistent with the risk principle developed by Andrews et al. [10]. Policy implications from this analysis are discussed at length in order to inform future rehabilitation program models and/or analyses pertaining to delinquent rehabilitation.

Literature Review

Robert Martinson’s early critique of rehabilitation services

encouraged the notion that “nothing works” in rehabilitative programming [20]. Following Martinson, hundreds of programs have been designed and implemented which demonstrate otherwise [12,21,22]. Extensive research directed towards delinquent rehabilitation has been conducted over the years as indicated by the various meta-analyses that have reviewed the literature on the matter [10,12,17,18,22-24]. Rehabilitation meta-analyses shed light on the potential benefits of rehabilitative programming, and they provide a comprehensive assessment as to which programs have demonstrated significant results in reducing recidivism.

For example, Lipsey’s [12] meta-analysis of 361 rehabilitation programming studies found that programs which relied on services such as counseling, multiple services, skill building, and restorative intervention techniques are all likely to exhibit significant effects in reducing recidivism [12]. Lipsey [12] also determined that rehabilitative counseling programs demonstrated the largest reduction of recidivism rates when they incorporated mentoring and group techniques. Individual counseling and peer-oriented group counseling demonstrated smaller overall effects [12]. Programs that utilized skill-building approaches through behavioral and cognitive-behavioral methods also appeared to be effective. However, programs that focused on deterrence and discipline were likely to produce no positive results when compared to their respective control groups. Lipsey [12] concluded his analysis by noting that effective programs which are “implemented with high quality” were likely to produce desirable effects, even if the program was “generic”.

The aforementioned findings support the earlier meta-analysis of Lipsey and colleagues [17], which disaggregated the treatment differences between institutional programs (i.e., programs administered while a delinquent was housed in a residential facility) and non-institutional programs (i.e., programs administered to delinquent youth who lived in the community). The 200 studies reviewed

***Corresponding author:** Glassner SD, Department of Criminal Justice and Sociology, College of Letters and Sciences, Columbus State University, Columbus, Georgia 31907, Tel: (706) 507-8726; E-mail: glassner_steven@columbusstate.edu

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demonstrated that program effectiveness between institutionalized and non-institutionalized juveniles can vary. Focusing on the 117 studies of non-institutional programs, the largest reductions in recidivism were achieved in programs that used individual counseling, interpersonal skills, and behavioral programs. Less impactful, but still demonstrating treatment effectiveness, were programs that incorporated multiple services and restitution [17]. Non-institutional programs with weak or no significant effects included wilderness/challenge programs, early release, probation/parole, deterrence, and vocational programs [17].

The collective work of Lipsey [12] and Lipsey et al. [17] is largely a theoretical evaluation of rehabilitative programs and have few theoretical implications. As a result, these analyses speak primarily to the characteristics and features of programs that can produce significant results in reducing recidivism. Beyond the descriptive nature of these analyses, others have developed and tested theoretical foundations to provide explanations for why some programs are more effective than others in reducing recidivism [10,13].

Risk, Needs, and Responsivity

Andrews et al. (1990) focused on identifying the principles that characterize effective interventions to reduce recidivism. The authors put forth the principles of risk, needs, and responsivity to highlight three domains that can increase the likelihood of reducing recidivism [10]. The risk principle contends that low-risk individuals are better served by minimal services, while high-risk offenders respond better to greater levels of intervention [10]. The needs principle refers to the criminogenic influences of offenders, and this principle suggests that programs which address criminogenic traits (i.e., antisocial attitudes, feelings, peer associations) are more likely to reduce the motivation for crime [10]. The responsivity principle speaks to the appropriateness of the treatment itself, and it is suggested that treatment models need to include interventions based on social learning principles, cognitive change, and behavioral approaches [10]. The baseline analysis provided by Andrews et al. found support for programs that adhere to these theoretical principles. Andrews et al. [10] concluded that programs which adhere to such principles have an overall positive impact on reducing recidivism, which is evident when compared to criminal sanctions that do not integrate rehabilitative services.

Lowenkamp and Latessa [13] have advanced the theoretical work of Andrews et al. [10] by focusing on programs that adhere to the risk principle. The authors analyzed the variation of recidivism across rehabilitative programs and found that large reductions (up to 30 percent) in recidivism can be achieved for high-risk offenders, while increases in recidivism can sometimes be found in low-risk offenders who are subjected to extra interventions [13]. The significant variation between high-risk and low-risk groups prompted the authors to conclude that low-risk offenders need to be excluded from restrictive programming because such efforts can be counter-productive [13].

Lowenkamp et al. [24] further advanced this notion in a review of 97 correctional programs wherein the authors concluded that interventions work in general, but intensive treatments need to be reserved for high-risk offenders (i.e., those who have a higher probability of recidivating). Additionally, the authors suggested that the disparity between effect sizes across studies is likely the result of a variety of factors including:

- Placing low-risk individuals in the same program as high-risk offenders encourages the establishment of new criminal associations and the learning of antisocial behaviors among the low-risk group,

- Restrictive treatments can inhibit the pro-social outlets associated with low-risk populations (i.e., family, school, and other social ties), and
- The increased supervision itself is likely to increase the probability of violations [24].

Overall, there is ample empirical evidence demonstrating that effective programming can reduce the likelihood of juvenile recidivism when the program is implemented soundly and when the criminogenic influences of juveniles are attended to appropriately [12,24]. The current evaluation relies on a sample of youth administered treatment at the CARE program. CARE targeted criminogenic influences of delinquent juveniles by offering various services similar to the multiple services noted by Lipsey [12].

CARE

CARE was established in 2010 with the goal of providing positive opportunities for delinquent youths after they were released from custody. The program operated in a large urbanized county in the southern United States with a population of close to 2 million people. The location where CARE provided services is comprised of a large Hispanic/Latino population, which is reflected in the large Hispanic/Latino sample treated at the facility (approximately 71.5 percent).

Juveniles treated at CARE included all youth released by the state's juvenile justice department and all youth placed on probation at the county's juvenile probation office between March 2010 and August 2012. Youth admitted to CARE were provided with various services over a six month period of time or until a caseworker determined that a juvenile had successfully completed the program.

The services provided by CARE extended well-beyond the standard conditions of probation/parole (i.e., report to a probation/parole officer, maintain enrollment in school, maintain employment, etc.). The treatment(s) delivered at CARE were consistent with the multi-service platform identified by Lipsey [12]. The services included a variety of domains such as:

- (a) Case management,
- (b) Counseling,
- (c) Mentoring,
- (d) Restorative justice,
- (e) Tutoring in high school courses,
- (f) Academic counseling,
- (g) GED instruction,
- (h) ESL classes,
- (i) Occupational training,
- (j) Substance abuse services, and
- (k) Health services.

The services were provided at the CARE facility which operated within the community. The services were selectively delivered to each youth, based on a caseworker's assessment, in order to address the criminogenic influences of each individual and to provide a positive avenue for each youth to pursue behavioral reform.

Methods

Sample

The sample of youth treated at CARE included all youth released by the state’s juvenile justice department (parolees) and/or youth placed on probation at the county’s juvenile probation office (probationers) between March 2010 and August 2012. The youth from CARE evaluated in the analysis include all youth who were enrolled into the CARE program within 90 days of release from a residential facility (either secure or non-secure) and/or all youth enrolled within three months of release from detention or assigned to residential placement.

A control group was provided by the state’s juvenile justice department and the county’s juvenile probation office. The control sample consisted of youth placed on parole or probation in the same county that CARE operated for the duration of roughly two years prior to CARE’s initiation. It is important to note that a time-lag exists between the treatment and control groups and, consequently, history effects are likely to exist. According to juvenile justice officials at the state and county levels, no programs existed beyond standard probation and/or parole with respect to juveniles completing community sanctions. We therefore conclude that youth in the control groups were not exposed to any unique programming models beyond standard community corrections that could influence the treatment effects observed in this analysis.

The control group was generated independently by the two abovementioned sources (i.e., the state’s juvenile justice department and the county’s juvenile probation office). First, the state’s juvenile justice department produced a group of juveniles (parolees) released from a residential facility into the same county that CARE operated between July 2007 and December 2009 (approximately 4 months prior to CARE’s opening). The control group for the probationers was provided by the county’s juvenile probation office. The probationer control group included a sample of youth released from detention or assigned to residential placement between July 2008 and December 2009.

Data sources

The data used in this evaluation came from four sources: CARE, the state’s Department of Public Safety (DPS), the state’s juvenile justice department, and the county’s juvenile probation office. Data generated by CARE included the enrollment files of each juvenile treated at the program. These files were used to determine the demographic characteristics of the youth enrolled in the program (i.e., race/ethnicity, gender, age) along with each juvenile’s official program start date to track recidivism.

The data generated by the state’s DPS included the criminal histories of all youth enrolled in the treatment program. Additionally, DPS data were the primary source for determining the number of prior arrests for each youth and for determining the recidivating event dates for both the CARE and control groups.

The state’s juvenile justice department and the county’s juvenile probation office provided the necessary data for the control group. The control group was developed by both agencies and matched based on the demographics of the youth treated at the CARE facility.

Dependent variable

Recidivism: A recidivist, for the purposes of this study, is defined as a delinquent who was charged with committing any type of delinquent/

criminal offense (with the exception of a class C misdemeanor) that resulted in a violation of probation or parole. Class C misdemeanors are consistent with simple traffic violations (i.e., a speeding ticket), and/or other minor violations of the law, and class C misdemeanors were excluded from the recidivism criterion due to the minor nature of these offenses. Probation and parole violators were also considered recidivists in this evaluation if they were never charged with a statutory infraction but had their community supervision terms revoked based on a probation/parole officer’s request. Offenders in both the experimental and control groups were tracked to see if they recidivated over the course of one year starting from the individual’s date of release from placement back into the community and then placed on either probation or parole.

Descriptive and control variables

Prior arrest: The offense dates documented in the DPS reports prior to the instant offense dates were used to calculate the number of prior arrests for each youth. If multiple offenses were documented for a youth on a single date, only one arrest was counted for that date.

Demographics: Age is a continuous measure that was calculated using data provided by CARE for the treatment group. Age for the control groups was calculated using records from the state’s juvenile justice department and the county’s juvenile probation department. Gender and race were determined in the same manner for this analysis.

Descriptive analysis

A total of 701 youth were enrolled into CARE within 90 days of release from a residential facility (secure or non-secure) and surpassed 365 days from enrollment in the program and/or date of release from a residential facility to formulate the treatment group. The state’s juvenile justice department (parolees) produced a sample of 433 youth to be used as a control group to test the treatment effects against youth referred to the program by the state. The control group provided by the county’s juvenile probation department resulted in a sample of 1,835 youth for the analysis.

Collectively, there were 2,935 youth included in the analysis which analyzed recidivism over the course of one year. Table 1 provides a descriptive overview of the youth included in the analysis, and it shows that 23.9 percent (701 of 2,935) of the youth in the analysis were from

	CARE (%)	Control (%)	Number of Cases (%)
Sample size	701 (23.9)	2,234 (76.1)	2,935 (100.0)
Referral source			
Parole	177 (25.2)	399 (17.9)	576 (19.6)
Probation	524 (74.8)	1,835 (82.1)	2,359 (80.4)
Total	701 (100.0)	2,234 (100.0)	2,935 (100.0)
Gender			
Male	524 (74.8)	1,745 (78.1)	2,269 (77.3)
Female	177 (25.2)	489 (21.9)	666 (22.7)
Total	701 (100.0)	2,234 (100.0)	2,935 (100.0)
Race/Ethnicity			
Hispanic/Latino	501 (71.5)	1,631 (73.0)	2,132 (72.6)
African American	106 (15.1)	348 (15.6)	454 (15.5)
Caucasian	74 (10.6)	248 (11.1)	322 (11.0)
Other	20 (2.9)	7 (0.3)	27 (0.9)
Total	701 (100.1)	2,234 (100.0)	2,935 (100.0)
Age (mean)	16.6	16	

Table 1: Demographics of CARE and control youth.

the CARE treatment group, while 76.1 percent (2,234 of 2,935) were from the combined control groups.

The CARE group had 524 males (74.8 percent) and 177 females (25.2 percent), while the control group had 1,745 males (78.1 percent) and 489 females (21.9 percent). The CARE group had 501 Hispanics (71.5 percent), 106 African Americans (15.1 percent), 74 Caucasians (10.6 percent), and 20 youth (2.9 percent) in the “other” category. The control group was comprised of 1,631 Hispanics (73.0 percent), 348 African Americans (15.6 percent), 248 Caucasians (11.1 percent), and 7 “other” youth (0.3 percent). The mean age for the CARE youth was 16.6 years, and the mean age for the combined control group was 16.0 years. The age range for the combined full sample of youth ranges from 10.32 years to 20.92 years.

Given the significant predictive value of prior arrest on reoffending [12], Table 2 provides the disaggregated details for the number of prior arrests of youth in the CARE group, youth in the control group, youth on parole, and youth on probation. The CARE group has a lower percentage of zero or one-time offenders (40.8 percent) than the control group (64.8 percent). The CARE group has a larger portion of two and three-time previous offenders (37.7 percent) versus the control (26.3 percent), and four and five-time offenders (16.4 percent versus 7.1 percent). A relatively small proportion of youth in the CARE and control groups had six or more prior arrests. The probationers in both samples had a greater portion of zero or one-time offenders (67.5 percent) when compared to parolees (24.5 percent). Over two-thirds of the parolees had 2 or more prior arrest compared to less than one-third of probationers.

Logistic regression analysis

Taking into account the demographic composition of the CARE and control groups, as well as the criminal histories, a series of multiple logistic regression models were estimated to compare the differences in the odds of recidivism between the two groups of youth. The outcome measure of recidivism is dichotomous (0=no recidivism and 1=recidivism). The primary predictor variable is also dichotomous (0=control youth and 1=CARE youth). Other relevant predictor variables that were included in the logistic regression analysis include gender, age, and prior arrest [12,17]. Gender was dummy coded where females=0 and males=1. Age is a continuous variable with its calculation based on the date that a youth was released and tracked for recidivism. The number of prior arrests is also a continuous variable and ranges from 0 to 10.

Results from the full model in Table 3 indicate that there is a greater likelihood of recidivism for youth in the control group than for youth in the CARE group, but the value achieved does not significantly differ from zero (OR=.897, p=.247). The odds ratio in Table 3 for male of 1.822 suggests that males have an 82.2 percent greater chance of recidivating than females. Prior arrest has an odds ratio of 1.263, which suggests that for each additional prior arrest, the odds of recidivating increase by a factor of 1.263 (or roughly 26.3 percent; p<.001). Age in this model does not achieve statistical significance, and as a result, appears to have little effect on the odds of recidivism.

As a next step, the differences in the odds of reoffending for youth enrolled in CARE by the state’s juvenile justice department (parolees) and by the county’s juvenile probation department (probationers) were examined. The decision to conduct a disaggregated analysis was based on the fact that prior research has suggested that more serious offenders may experience larger effects from rehabilitation treatment than less serious or minor offenders [12]. Accordingly, given the potential differences in the seriousness of offenders (i.e., probationers versus parolees), and the corresponding variance in prior arrests, the two referral sources were disaggregated and analyzed independently.

Table 4 provides the results from a logistic regression model which estimated the odds of recidivism between the parolees treated at CARE (n=177) and the matched control youth from the state’s juvenile justice department (n=399). The odds ratio value for the CARE variable (OR=.602, p=.010) suggests that the control group of parolees is approximately 39.8 percent more likely to reoffend than the parolees treated at CARE. The age variable is not significant in this model, which is consistent with the results provided in the full model. Gender is significant, suggesting that males on parole are 2.504 times more likely than females to reoffend. Prior arrest is also significant, and for each additional prior arrest, the odds for recidivism is expected to increase by roughly 26.9 percent.

Table 5 provides the results from the logistic regression model that analyzed the disaggregated probationer groups (n=2,359). Overall, the insignificant odds ratio for the CARE group of 1.020 (p=.854) suggests that the probationers treated at CARE did not achieve any significant treatment effects. Age of probationers has no effect on the odds of reoffending, and gender and prior arrest have a significant effect on the overall odds for recidivism within this group.

Source	0-1 (%)	2-3 (%)	4-5 (%)	6-7 (%)	8 or More (%)	Total
CARE	286 (40.8)	264 (37.7)	115 (16.4)	25 (3.5)	11 (1.6)	701
Control	1,448 (64.8)	588 (26.3)	159 (7.1)	29 (1.3)	10 (0.5)	2,234
Parole	141 (24.5)	251 (43.6)	139 (24.1)	29 (5.0)	16 (2.8)	576
Probation	1,593 (67.5)	601 (25.5)	135 (5.7)	25 (1.1)	5 (0.2)	2,359

Table 2: Prior arrests.

Predictor	β (log odds)	SE	z	p	Odds Ratio
CARE	-0.108	0.094	-1.16	0.247	0.897
Age	0.029	0.03	0.95	0.343	1.029
Male	0.6	0.096	6.22	<.001	1.822
Prior Arrests	0.233	0.027	8.67	<.001	1.263
Intercept	-1.536	0.477	-3.22	0.001	0.215
χ ² (d.f.=4)	160.79*				Pseudo R ² 0.04

* p<.001

Table 3: Full Treatment/Control Logistic Regression Model (N=2,935).

Predictor	β (log odds)	SE	z	p	Odds Ratio
CARE	-0.508	0.197	-2.58	0.01	0.602
Age	-0.064	0.09	-0.71	0.476	0.938
Male	0.918	0.286	3.21	0.001	2.504
Prior Arrest	0.238	0.053	4.49	<.001	1.269
Intercept	-0.058	1.56	-0.04	0.97	0.943
χ ² (d.f.=4)	38.82*				Pseudo R ² 0.049

*p<.001

Table 4: Parolees Logistic Regression (N=576).

Predictor	β (log odds)	SE	z	p	Odds Ratio
CARE	0.02	0.106	-2.58	0.854	1.02
Age	0.026	0.035	-0.71	0.457	1.026
Male	0.549	0.103	3.21	<.001	1.732
Prior Arrest	0.23	0.033	4.49	<.001	1.259
Intercept	-1.489	0.55	-0.04	0.007	0.226
$\chi^2_{(d.f.=4)}$	100.56*		Pseudo R ²		0.032

*p<.001

Table 5: Probationers Logistic Regression (N=2,359).

Discussion

Evaluating the effectiveness of juvenile treatment programs is necessary for policymakers [25]. Although no theoretically derived variables (i.e., risk, needs, responsivity) were modeled in this analysis, the results identified here are consistent with the risk principles established by Andrews et al. [10] and advocated by others within the academic domain [13,24]. The significant reduction in recidivism observed by the juveniles in the parole group treated at the CARE facility is consistent with the notion that high-risk offenders are more likely to experience benefits from additional treatment than low-risk offenders. When looking at the raw figures, approximately 47.5 percent of the parolees treated at CARE recidivated, and this value is compared to roughly 54.9 percent of the respective control group of parolees (an overall decrease of 7.4 percentage points for parolees). In addition, roughly 43.9 percent of the CARE probationers recidivated compared to 39.6 percent of the control group (an increase of 4.3 percentage points for probationers). The decrease of recidivism for parolees was found to be significant in the logistic regression models, though the increase for the probationers was not. These findings are of interest for at least two reasons.

The significant reduction in the odds of recidivism for the parolees demonstrates the treatment effectiveness of the multiple services provided by the CARE program. The results from the disaggregated models estimating the differences of treatment effects based on referral source (i.e., the state’s juvenile justice department [parolees] and the county’s juvenile probation office [probationers]) suggest that parole can be used as a proxy measure for determining the risk level of offenders in future program evaluations. This assumption is based on the fact that the juveniles on parole were admitted to a state institution and subsequently released back into the community where they were treated by CARE. This is a different path than juveniles who were simply handled at the county level and placed on probation. When accounting for the differences between referral sources, future analyses that do not have access to risk assessment instruments should take note of this finding.

The finding of no significance for the probationers in the model is also important. In future program evaluations where evaluators conclude that there are no - or perhaps negative - treatment effects, evaluators should be wary of the referral source and the likelihood that this factor alone can inhibit assumptions pertaining to program effectiveness. Future evaluations should consider disaggregating samples to account for the moderating effects of referral source. This notion is exemplified in the current analysis where the full model (Table 4) did not show significant treatment effects, but the disaggregated model with youth referred to the program by the state (parolees) demonstrated a significant reduction in recidivism. The fact that the full model did not show similar results is likely associated with the large number of probationers treated at CARE, who likely correspond

to a lower risk population, reducing the overall magnitude of the treatment effects in the full model. Consequently, the probationer/parolee dichotomy should be accounted for in future evaluations, with probationers being viewed as lower risk than parolees.

Policy implications

There are several important policy implications to take away from this analysis. First, the CARE program operated for the duration of two years and provided services to all youth released into the county on parole and/or probation. The program closed at the end of 2012 for a number of reasons. Most importantly, the grant used to establish and fund this program was discontinued. The decision to terminate the grant occurred before an objective outside evaluation was conducted to determine the effectiveness of the treatment. The grant cancellation is troubling, given the impact that it may have on the lives of the youth who could have benefited from the program, the administrators who worked at the CARE program, and to the taxpayers who shoulder the financial burdens of juvenile rehabilitation.

Next, the grant that funded CARE was written to provide services to all youth within the county released from a residential facility (secure or non-secure), detention, and/or residential placement. Previous program evaluation literature has noted that forcing low-risk juveniles to participate in extra treatment or imposing extra sanctions on low-risk youth can have an adverse effect on the likelihood of reoffending [13,24]. Thus, such practices can result in deleterious outcomes even though it is perhaps “common sense” that these practices should work [25,26]. Propagating what is known within the criminological and criminal justice literature is important, given the harms that can arise through ill-informed rehabilitation efforts.

There is a substantial amount of empirical evidence addressing the harmful effects that can result when attempting to apply extended programming to individuals who are likely to receive little to no benefit [13,24,26]. Based on the millions of dollars recently directed toward the CARE program - which provided services to all youth serving a sanction in the operating county - it must be assumed that sometimes evidence-based treatment programs are not being implemented for delinquent juveniles. An important question worth pursuing concerns why practices that can result in more harm than good continue to be employed in the juvenile justice system. One side of the equation that owns a portion of responsibility for the continuance of such practices falls within the academic domain.

Given the aforementioned nuance, there have been calls to bridge the gap in knowledge between academia and governmental agencies by establishing separate branches of criminology to ameliorate these issues [27-30]. The idea of a “public criminology” has recently been brought to the forefront [27-31]. A public criminology calls for the establishment of a field within criminology that focuses on engaging and disseminating research related to crime, deviance, and law to the public [30]. Through this process, it is believed that a public criminologist would have the tools necessary to provide credible evidence, which would help influence the public’s image of crime, criminals, and the legal system through a sustained dialogue with the community [30]. The implications for such an endeavor suggest that this branch of criminology would provide a real-world and timely option for policy makers in helping to solve any number of social problems [30]. The basis for a public criminology appears to entail a number of positive aspects, including encouraging scholars to be less cloistered and more willing to engage with those outside of their fields of expertise [32].

Nonetheless, undertaking such an endeavor may be rather difficult, and possibly impractical [27,28,31].

There are problems with bridging gaps in knowledge between the field of criminology and the general public [32]. Despite the underlying difficulties, efforts to bring the knowledge within criminology and criminal justice to the public should be made, and it should be an ongoing goal to make the general public and policy makers more aware of fundamental issues where there is a collective social and financial interest involved. The continued neglect of this issue, coupled by the notion that “common sense” practices work [26], is likely to result in future ill-informed treatments that can result in wasteful spending as well as harmful programming.

Limitations

This analysis is subject to some limitations that need to be noted. First, the authors did not have access to risk assessment scores of the probationers and parolees in the samples. As a result, we are unable to determine a quantifiable level of risk for the parolees and probationers. The level of risk would be a desirable indicator as a control variable. However, the crux of the argument for this article is reliant on the notion that determining risk may not always be possible in program evaluations. Consequently, other indicators such should be investigated as proxy measures for levels of risk. Future evaluations that lack quantifiable risk scores and are thus unable to propagate the findings of a thorough program evaluation should consider using probation/parole status as an indicator of risk. Such efforts will provide a greater body of empirical evidence as to what works in delinquent rehabilitation.

Second, the insignificant effects of CARE on the probationers could simply be an effect of probation itself. The finding of no significance could be an indication that probation is functioning at a constant level and the treatment provided by CARE could be viewed as irrelevant to probationers. The fact that probationers did not benefit from the extended treatment services provided by CARE is consistent with the argument that probationers are intrinsically low risk (i.e., they have a greater level of pro-social outlets than high risk individuals). Consistent with previous rehabilitation evaluations [13], perhaps it is good practice to not subject relatively low risk populations to extended treatments. Such practices are likely to have no, or even adverse, effects [13].

Next, the analyses in this article contain no quantifiable measure of treatment distribution. The authors have access to the numbers of treatment services provided to each youth by caseworkers at the CARE facility. However, the treatment values provided by CARE administrators appeared to be inconsistent on their face and unreliably documented. For example, some caseworkers consistently reported as many as 30 different services provided to each youth on their workload. Other caseworkers consistently reported that only 2 or 3 services were provided to every youth on their workload. Based on the excessive variation within the data provided from CARE administrators, the authors decided not include information pertaining to treatment distribution in the analyses. In the future, program administrators need to take note of this issue. Strategies need to be employed to keep sound and reliable data pertaining to treatment application/fidelity.

The final limitation pertains to the control variables – or lack of control variables – in the logistic regression models. Only four variables were included in the logistic regression analyses in order to achieve a parsimonious model. Race was modeled in separate analyses that are not displayed here. However, race did not have a significant effect on recidivism in any of the models assessed. The fact that race

was not a significant predictor of reoffending in the CARE evaluation is consistent with previous research indicating that race/ethnicity is not an efficient predictor of delinquent recidivism [12]. Also, single parent households, socioeconomic status, and any number of other factors that may or may not be relevant to recidivism were not included in this article due to a lack of information.

Conclusion

Reducing juvenile recidivism is perhaps the most important goal of the juvenile justice [33]. One of the most effective ways a program geared toward reducing juvenile delinquency can succeed comes from understanding the overall risks associated with the offenders admitted to the program [34]. There are no conclusive risk factors associated with juvenile offenders based on age, gender, or ethnicity [12], and the underlying cause of delinquency is a complex issue that calls for a multifaceted approach [11]. Proper assessment of juveniles' risk and needs is imperative, then, if we are to design and implement effective treatments to reduce juvenile reoffending [35-37].

The findings from this analysis show that program evaluators should remain cognizant of the juvenile's referral source as being a significant predictor of success within a program when other methods of determining risk are unavailable. Even the most well-intentioned attempts to implement evidence-based treatments will be hampered if the necessary resources are not allocated with reference to individual risk factors, and referral source appears to be a viable means of determining such risk. Further, intermingling high- and low-risk youth in treatment facilities may aggravate the criminogenic tendencies of lower risk juveniles, elevating their risks for recidivism [13,26].

Finally, it is crucial that scholars within criminology and criminal justice remain committed to disseminating our knowledge to practitioners and policymakers [38]. Failure to do so can and does proliferate wastefulness within the juvenile justice system as well as treatment facilities and programs geared to benefit delinquents [39]. Scholars, practitioners, and policymakers need to focus on collaborative efforts in order to reduce the continued wastefulness within the juvenile justice system and promote sound practices in rehabilitation.

References

1. Mulder E, Brand E, Bullens R, Van Marle H (2010) A classification of risk factors in serious juvenile offenders and the relation between patterns of risk factors and recidivism. *Criminal Behavior and Mental Health* 20: 23-38.
2. Robertson AA, Grimes PW, Roger KE (2001) A short-run cost-benefit analysis of community-based interventions for juvenile offenders. *Crime & Delinquency* 47(2): 265-284.
3. Lambie I, Randell I (2013) The impact of incarceration on juvenile offenders. *Clinical Psychology Review*, 33(3): 448-459.
4. Winokur KP, Smith A, Bontrager SR, Blankenship JL (2008) Juvenile recidivism and length of stay. *Journal of Criminal Justice* 36: 126-137.
5. Akers RL (1985) *Deviant behavior: A social learning approach* (3rd edn.), Belmont CA: Wadsworth.
6. Akers RL (1998) *Social learning and social structure: A general theory of crime and deviance*. Boston, MA: Northeastern University Press.
7. Akers RL, Jennings WG (2009) Social learning theory. In: Miller JM editor. *21st Century criminology: A reference handbook*. Thousand Oaks: Sage, pp: 323-331.
8. Akers RL, Jensen GF (2008) The empirical status of social learning theory of crime and deviance: The past, present, and future. In: Cullen FT, Wright JP, Blevins KR editors. *Taking stock: The status of criminological theory*. New Brunswick, NJ: Transaction Publishers.
9. Akers RL, Sellers CS (2009) *Criminological theories: Introduction, evaluation, and application*. Oxford, NY: Oxford University Press.

10. Andrews DA, Zinger I, Hoge RD, Bonta J, Gendreau P, et al. (1990) Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology* 28(3): 369-404.
11. Carney MM, Buttell F (2003) Reducing juvenile recidivism: Evaluating the wraparound services model. *Research on Social Work Practice* 13(5): 551-568.
12. Lipsey MW (2009) The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victim and Offenders* 4: 124-147.
13. Lowenkamp CT, Latessa EJ (2004) Understanding the risk principle: How and why correctional interventions can harm low-risk offenders [Technical report]. Topics in community corrections. Washington, DC: U.S. Department of Justice, National Institute of Corrections Lowenkamp CT.
14. Latessa EJ (2005) Increasing the effectiveness of correctional programming through the risk principle: Identifying offenders for residential placement. *Criminology and Public Policy* 4(2): 263-290.
15. Walker SC, Bumbarger BK, Phillippi SW (2015) Achieving successful evidence-based practice implementation in juvenile justice: The importance of diagnostic and evaluative capacity. *Evaluation and Program Planning* 52: 189-197.
16. Aalsma MC, White LM, Lau KL, Perkins A, Monahan P, et al. (2015) Behavioral Health Care Needs, Detention-Based Care, and Criminal Recidivism at Community Reentry From Juvenile Detention: A Multisite Survival Curve Analysis. *American Journal of Public Health* 105(7): 1372-1378.
17. Lipsey MW, Wilson DB, Cothorn L (2000) Effective intervention for serious juvenile offenders (NCJ 181201). Washington, DC: U.S. Department of Justice (OJJDP Juvenile Justice Bulletin).
18. Wilson HA, Hoge RD (2013) The effect of youth diversion programs on recidivism: A meta-analytic review. *Criminal Justice and Behavior* 40(5): 497-518.
19. Howell JC, Lipsey MW (2012) Research-based guidelines for juvenile justice programs. *Justice Research and Policy* 14(1): 17-34.
20. Martinson R (1974) What works? Questions and answers about prison reform. *Public Interest* 35: 22-54.
21. Lipsey MW, Cullen FT (2007) The effectiveness of correctional rehabilitation: A review of systematic reviews. *Annual Review of Law and Social Science* 3: 297-320.
22. Schwalbe CS, Gearing RE, Mac Kenzie MJ, Brewer KB, Ibrahim R (2012) A meta-analysis of experimental studies of diversion programs for juvenile offenders. *Clinical Psychology Review* 32: 26-33.
23. Evans-Chase M, Zhou H (2014) A systematic review of the juvenile justice intervention literature: What it can (and cannot) tell us about what works with delinquent youth. *Crime and Delinquency* 60(3): 451-470.
24. Lowenkamp CT, Latessa EJ, Holsinger AM (2006) The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime and Delinquency* 52(1): 77-93.
25. Williams RG, Smalls EW (2015) Exploring a Relationship between Parental Supervision and Recidivism among Juvenile Offenders at a Juvenile Detention Facility. *International Social Science Review* 90(2): 1-22.
26. Cullen FT, Blevins KR, Trager JS, Gendreau P (2005) The rise and fall of boot camps: A case study in common-sense corrections. *Rehabilitation Issues, Problems, and Prospects in Boot Camp* 40: 53-70.
27. Land K (2010) Who will be the public criminologists? How will they be supported? *Criminology & Public Policy* 9(4): 769-770.
28. Rock P (2010) Comment on "public criminologies." *Criminology & Public Policy* 9(4): 751-767.
29. Tonry M (2010) "Public criminology" and evidence-based policy. *Criminology & Public Policy* 9(4): 783-805.
30. Uggen C, Inderbitzin M (2010) Public criminologies. *Criminology & Public Policy* 9(4):725-749.
31. Loader I, Sparks R (2010) What is to be done with public criminology? *Criminology & Public Policy* 9(4): 771-781.
32. Piché J (2015) Playing the "Treasury Card" to Contest Prison Expansion: Lessons from a Public Criminology Campaign. *Social Justice* 41(3): 145-167.
33. Lockwood B, Harris PW (2015) Kicked Out or Dropped Out? Disaggregating the Effects of Community-based Treatment Attrition on Juvenile Recidivism. *Justice Quarterly* 32(4): 705-728.
34. Pearl N, Ashcraft RGP, Geis KA (2009) Predicting juvenile recidivism using the San Diego regional resiliency check-up. *Federal Probation* 73(3): 46-49.
35. Benda BB, Tollett CL (1999) A study of recidivism of serious and persistent offenders among adolescents. *Journal of Criminal Justice* 27(2): 111-126.
36. Borum R (2003) Managing at-risk juvenile offenders in the community. *Journal of Contemporary Criminal Justice* 19(1): 114-137.
37. Lipton FS, Cleland DS, Yee DS (2002) The effects of behavioral/cognitive-behavioral programs on recidivism. *Crime & Delinquency* 48(3): 476-496.
38. Rock P (2014) The public faces of public criminology. *Criminology & Criminal Justice: An International Journal* 14(4): 412-433.
39. Ryan JP, Abrams LS, Huang H (2014) First-Time Violent Juvenile Offenders: Probation, Placement, and Recidivism. *Social Work Research* 38(1): 7-18.