An Outcome Evaluation of the South Carolina Residential Substance Abuse Treatment Program for State Prisoners

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Evaluations of the Residential Substance Abuse Treatment
For State Prisoners Program
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633 Indiana Avenue NW
Washington, DC 20531

By J. Mitchell Miller, Ph.D.
College of Criminal Justice
University of South Carolina
Columbia, SC 29208

And

Barbara Koons-Witt, Ph.D.
College of Criminal Justice
University of South Carolina
Columbia, SC 29208

FINAL REPORT

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GLOSSARY

BTU: Basic Training Unit, provides military style regimented boot camp training and intense education and life skills programming

CRA: Correctional Recovery Academy

Felony: a crime for which the maximum penalty is a year or more in a prison.

Misdemeanor: a crime for which the maximum allowable penalty is less than one year in a local jail.

Nonviolent substance abuser: inmate who was not convicted of a violent crime and who regularly used drugs and/or alcohol.

Parole: supervision required when a prison inmate is released to the community before serving the full sentence

probation: sentence imposed by a court that involves supervision in the community by a probation department

recidivism: rearrest, reconviction or reincarceration for a new offense or for a violation of parole or probation

RSAT: Residential Substance Abuse Treatment

S.A.S.S.I.: Substance Abuse Subtle Screening Inventory

SCDC: South Carolina Department of Corrections

SCDPPPS: South Carolina Department of Probation, Pardon and Parole Services

TC/Therapeutic Community: residential substance abuse treatment where inmates are housed in a separate unit within the prison/jail facility, featuring highly structured treatment involving resocialization, intensive counseling and increasing responsibilities as the inmate progresses through the program.

WRAT: Wide Range Achievement Test

YOA: Youthful Offender Act

YOIP: Youthful Offender Intensification Program

EXECUTIVE SUMMARY

The enormous growth in the prison population is largely a function of drug-crime recidivism and bolstered drug enforcement activities. The delivery of treatment services in a prison setting is a logical approach to the problem and feature certain advantages over outpatient and voluntary forms of treatment, including certainty of program enrollment and participation, program modalities specific to residential settings as treatment options, and ensured participation in post-release aftercare through the parole process.

The logic of drug treatment in correctional settings prompted Congressional endorsement of the Residential Substance Abuse Treatment (RSAT) for State Prisoners Formula Grant Program, part of the Violent Crime Control and Law Enforcement Act of 1994. Funding from this program established a RSAT program within the Turbeville Correctional Institute, a state prison located in Turbeville, SC and managed by the South Carolina Department of Corrections (SCDC). The South Carolina RSAT program is known as the Correctional Recovery Academy (CRA), a modified therapeutic community utilizing a cognitive behavioral approach with projected length of stay between 8 to 12 months based on inmate performance. The CRA treats 17 to 24 year old males convicted for the first time of a non-violent drug related crime and sentenced under the Youthful Offender Act (YOA).

The primary objective of this evaluation was to determine whether the CRA is an effective treatment option for male youthful offenders with chemical dependency problems. The conducted research constitutes an outcome evaluation utilizing a quasi-experimental design that specified and operationally defined traditional evaluation design components: 1) comparison groups (a treatment group of CRA participants/graduates and a control group of offenders drawn from the general SCDC population by a matched sampling selection strategy, 2) an independent

variable (the CRA curriculum), 3) criterion measures (failure as indicated by recidivism or relapse) and 4) a twelve-month follow-up period.

A total of 303 offenders comprised the overall sample (160 CRA participants and 143 control group participants). Several types of analytic techniques were used to assess program effectiveness. The analysis first summarized descriptive statistics, both as a whole and separately for the treatment and control groups. T-test, chi-square or gamma were used to determine effectiveness in reducing recidivism and relapse during the parole period. Logistic regression was used to assess whether independent variables (race, age, educational attainment, employment, CRA participation, criminal history, number of positive drug tests and total number of drug tests) were predictive of failure during the follow-up period.

Our analysis indicated that the South Carolina RSAT program did not effectively reduce the failure rate of the CRA participants and graduates. The CRA graduates recidivated and relapsed at a slightly higher rate than did control group subjects, but not to a degree of statistical significance. The observed failure rate thus indicates that the program was not effective in reducing either recidivism or in reducing drug use relapse during the follow-up period.

Findings specific to drug testing were unexpected in that he failure rate covaries with the total number of drug tests given. While it is expected that increasing the number of drug tests will likely result in a higher frequency of dirty urine and ultimately failure, the subjects in this study failed drug tests less when the tests were conducted more frequently. Whereas it is assumed that testing more often will result in an observed increase in dirty urine leading to possible revocation, the drug testing among our sample appeared to affect perceptual deterrence, the most salient finding of our variable analysis.

Consideration of the observed failure rate prompted consideration of the SC RSAT program and our evaluation effort to the conclusion that several barriers specific to program performance are also relevant to effectively conducting evaluation. Accordingly, we identified specific impediments to program assessment and typologized them into separate but interrelated domains. From this domain, the potential additive effects of various barriers to correctional program evaluation are illustrated and offer analytic utility specific to evaluation design.

I. THE DRUGS-CRIME NEXUS AND THE NATIONAL RSAT INITIATIVE

The complex relationship between drugs and crime has been extensively analyzed to the confirmation of the criminogenic effects of use (Menard et al., 2001; MacKenzie and Uchida, 1994; Tonry and Wilson, 1990; Walters, 1994; Inciardi, 1981). One of the most salient findings in the extant drug-related crime literature is that most inmates are seriously involved with drugs and alcohol. While reported levels of offender substance abuse varies across studies, findings illuminate a staggering and embedded problem. Over half of all jail and state prison inmates admitted to drug use in the month before their offense, and 33% of state prisoners committed their current offense while under the influence of drugs (Offender Substance Abuse Report, 2001), and 19% of state and 55% of federal inmates are convicted of a drug law violation (CASA, 1998).

The enormous prison growth in the United States, 1.9 million American adults in federal, state and local facilities (NIJ Journal, 2000), is largely a function of drug crime and related heightened drug enforcement campaigns that impose a heavy financial burden on the system. In short, one in every 144 American adults is incarcerated for a crime involving drugs or alcohol (CASA, 1998).

These and similar statistics can change for the better if inmates identified with substance abuse problems can be successfully treated. There is considerable logic to providing the treatment in correctional settings. The delivery of treatment services in prisons is a seemingly promising approach and has certain advantages relative to outpatient and voluntary treatment. These advantages include: 1) certainty of program enrollment and participation by individuals who would not likely seek treatment on their own (i.e. coerced participation/guaranteed delivery of treatment), 2) program modalities specific to residential settings as treatment options, and 3)

the parole process ensures participation in post-release aftercare services. The prison-based treatment of hardcore drug users that are high probability recidivists seems both a logical and efficient approach to impacting the general crime rate.

The National RSAT Initiative

The blatant need to reduce offender drug use and the logic of doing so through prison-based treatment resulted in Congressional endorsement of drug treatment for prisoners at the state level on a national scale. The Violent Crime Control and Law Enforcement Act of 1994 directed the Department of Justice to support states in the provision of treatment to offenders through the Residential Substance Abuse Treatment (RSAT) for State Prisoners Formula Grant Program. All of the states were eligible for participation upon meeting certain funding requirements: 1) offender participation must be from six to twelve months, 2) the residential treatment facility is physically distinct and set apart from the general correctional population, 3) the program is specialized so as to focus on the substance abuse problems of the inmate, 4) the program incorporates the development of the inmate's behavioral, cognitive, social and vocational skills, and 5) the program implements reliable drug testing, most commonly urinanalysis, for inmates participating in the RSAT program.

Forty-seven states, the five territories and the District of Columbia have each generated plans for at least one RSAT program. At the state level, numerous implementation and process evaluations have been conducted, followed by an outcome evaluation at most sites. A national evaluation of all the RSAT programs from onset to midpoint was also conducted (Lipton et al., 1999). The national evaluation found that the main RSAT treatment approaches were therapeutic communities, cognitive-behavioral and twelve-step, and that primary considerations

across RSAT programs included implementation delays, gender and age issues, the appropriate combination of treatment approaches and aftercare, as well as the continuity of treatment. In all, there were seventy separate RSAT programs that, at the midpoint evaluation, had 7,700 current clients and more than 3,600 graduates.

II. THE SOUTH CAROLINA RSAT PROGRAM: OVERVIEW AND HISTORY

The aforementioned Violent Crime Control and Law Enforcement Act of 1994 that established the Residential Substance Abuse Treatment for State Prisoners (RSAT) Formula Grant Program and administered by the US Office of Justice Programs, was the basis for the creation of an RSAT program in South Carolina. During Fiscal year 1996, the South Carolina Department of Corrections (SCDC) received $425,301 under this program to establish a residential substance abuse treatment program and selected the Turbeville Correctional Institute as the program setting.

During the winter of 1997, SCDC signed a contract with CiviGenics, a Massachusetts based, private for-profit provider of substance abuse programming, to design and operate a RSAT program for males 17 through 25 years of age who have been sentenced to SCDC under the South Carolina Youthful Offender Act (YOA) and who have been identified as having a history of substance abuse. This legislation, as amended in 1996, provides that youthful offenders (known as YOAs) must: 1) be 17 to 25 years of age; 2) not be convicted for a serious violent offense; 3) not be sentenced twice under this act; 4) receive an indeterminate sentence of 1 to 6 years; 5) receive appropriate treatment in minimum or medium security institutions, and, 6) be segregated from other offenders.

Most YOA sentences mandate a minimum of 10 months in a SCDC institution, though some mandate up to 25 months minimum incarceration. When YOA offenders are released on parole they remain under SCDC supervision in the community, for a minimum of one year, until they are unconditionally released sometime before the six-year anniversary of their conviction date. YOA minimum and medium security institutions are defined to include hospitals, farms, boot camps, forestry/wilderness camps, vocational training facilities, and other institutions that

provide appropriate treatment. YOA treatment can be characterized as corrective and preventive training designed to protect the public by correcting the antisocial tendencies of the youthful offenders.

The South Carolina RSAT program is known as the Correctional Recovery Academy (CRA) and the Turbeville Correctional Institution in which it is housed is a medium security institution. Built in 1994, this institution houses 1,138 offenders, 800 of whom are YOAs (the remaining 228 are non-YOA inmates who perform maintenance and support work). Turbeville provides a controlled movement environment and offers programming that includes GED preparation, plumbing and carpentry training, and employment in a cut and sew garment prison industry. Controlled movement of the inmate population provides a high degree of structure and inmate accountability.

The Correctional Recovery Academy (CRA)

The Correctional Recovery Academy is a modified therapeutic community, utilizing a cognitive behavioral approach with a projected length of stay between 6 to 12 months depending on inmate performance. Eligibility for participation in the program is based upon 1) a reasonable opportunity for parole eligibility upon completion of the program and 2) a minimum SASSI score indicating dependence (later changed to a minimum score on the TCU Drug Dependency Screen). The primary treatment methodologies employed by the CRA include cognitive re-structuring towards pro-social, pro-deliberative norms, cognitive-behavioral training towards relapse prevention and social reintegration, social learning mechanisms of therapeutic communities ('TC'), and the spiritual community of a Twelve Step fellowship.

At admission to the program, and again upon completion of the program, each inmate is administered the TCU Drug Dependency Screen or the S.A.S.S.I., the Criminal Sentiments Scale (CSS) and the Coping Behavior Inventory (CBI). The Criminal Sentiments Scale measures the degree to which participants exhibit thoughts and attitudes that are highly associated with illegal behavior. The Coping Behavior Inventory measures behaviors and thoughts that are used as coping mechanisms helpful in avoiding relapse. The CRA staff uses these instruments as two of the primary measures of treatment outcomes. That is, if effective, the CRA intervention should produce graduates who display an increased usage of coping skills to avoid relapse (as measured by the CBI) and a decreased level of attitudes correlated with recidivism (as measured by the CSS).

The addictions treatment unit occupies one dormitory that has 136 beds, office and meeting space. A separate building provides additional space for treatment activities. During addictions treatment, YOAs are separated from the general population. Their dormitory cannot be accessed by offenders not enrolled in the program and all treatment is provided in the dormitory or the program building. YOAs in the addictions treatment unit will share some facilities (e.g. the cafeteria) with the general population, but do so either at special times so as to prevent or minimize contact with other inmates.

The CRA is a variable length program with graduation based on completion of all program assignments and activities. The minimum length of stay is 6 months and many residents are expected to finish the complete program in that time, but some require up to 12 months to finish the program. The CRA is divided into three phases: 1) assessment and orientation (4 weeks); 2) main treatment (12 weeks); and 3) re-entry and transitional planning (8 weeks). Given the 136 bed limit, the total population that could be accommodated in one year

would vary from a minimum of 136 to a maximum of 272. CiviGenics estimates a probable annual capacity of approximately 250. Selection of YOAs for participation in the CRA was the contractual responsibility of SCDC. However, during the assessment and orientation phase CRA staff administered several instruments to assess resident functioning and help guide individual treatment plans.

The CRA was initially populated in three 45 member waves of YOAs. Each wave was drawn from treatment eligible YOAs in the general population of SCDC. The first wave of 45 entered on September 1 , 1997 and the second and third waves entered on October 1st and November 1st, respectively. As CRA beds subsequently became available, either due to graduation or program attrition, new participants were selected from the 34 member YOA "platoons" that left the agricultural work program each week and were ready for institutional assignment.

The Therapeutic Community

There exists numerous treatment modalities available for the treatment of substance abuse, however, the therapeutic community approach is unique in that the community is used as the primary method for promoting social and psychological change in individuals. The TC unites and empowers people to learn about themselves and promote personal change. The TC provides learning opportunities as individuals engage in a variety of social roles. Individuals are active participants in the process of changing themselves and others.

Membership in the TC provides the primary source of instruction and support for individual change. Each participant shares responsibility for all TC members and strives to be a role model for change. Learning and healing take place in a social context and through social

discourse. Learning is achieved through specific skills training and the orderliness of the TC and its procedures.

The TC differs from other methods of drug treatment in that the primary therapist and teacher is the community itself. The TC views drug abuse as a disorder of the whole person. Individuals are distinguished not through drug-use patterns but by psychological dysfunction and social deficits. TCs emphasize a view of "right living" and require adherence to certain precepts and values. The primary psychological goal is to change negative patterns of thinking, feeling and behaving. The main social goal is to develop a responsible drug-free lifestyle (Wexler et al., 1999).

During the last decade, the TC concept has been implemented into correctional institutions, medical and mental hospitals and community and shelter setting. The basic social learning model has been modified to include family, educational, vocational, medical and mental health professionals. Today these programs provide service to an estimated 80,000 clients annually.

TCs incorporate certain common features which include: the use of ex-offenders and ex-addicts as staff; use of confrontation and support groups; a safe environment based upon clearly defined rules and sanctions; isolation of the community from the general prison population; and the development of pro-social attitudes. In the correctional setting, TCs operate the same way. The TCs focus is criminal behavior and substance abuse. The goal is for the members of the TC to be self-regulating and motivated to cooperate with the staff.

The CRA concept incorporates several major adaptations of traditional methods of treatment. The focus of the program is to treat recovery from both addiction and criminal behavior as equal issues. The cognitive behavioral competencies learned in the CRA are

designed to prevent relapse both to addiction and to criminality. The key to the treatment modality is that counselors adopt the role of authority figure. These authority figures model authority as the provider of both security and knowledge. The orientation of the program is toward life in the "free world" outside of prison. Though the coping skills taught in the CRA have use within the prison setting, the focus is toward life back on the streets.

The tools of the CRA are based upon the core belief that all of us have a "habit self" and an "inner self". For the inmate, the "habit self" is the main mechanism leading him or her back to criminality and addiction. To combat this problem, a new "inner self" must be trained to control the old "habit self". The learning process is based upon four principles of how people learn. First, they must have successful role models; this is part of the role of the counselor. Second, the inmate must have the social support of the community; the TC provides this support structure. Third, the inmate requires good practical guidance; the CRA program provides this structured training. Finally, the inmate requires approval and encouragement. Approval and encouragement must come from both program and security staff.

In the CRA model, recovery equals overcoming both crime and drug abuse. This recovery takes place in four dimensions. First the inmate must de-activate the old cravings and weaknesses of the "habit self". Second, the inmate must experience "re-joyment" in a new "inner self". The CRA model emphasizes that drugs do bring pleasure to the user. Not only is this pleasure real, but it is also intense and easy. The inmate must learn a new way of achieving joy through his or her actions. The third dimension of recovery is negotiation of a new reward system based upon "real" pro-social activity. Finally, this new "inner self" must replace the old "habit self" through a process of presentation.

Other therapeutic community concepts are also used by the CRA. A privilege system exists within the community. As inmates move through the program, they gain more freedom of action within the community. There is also a corresponding increase in responsibility. The senior members of the community are expected to be positive role models. They are expected to facilitate the group process for newer members of the community.

Role modeling is emphasized in the community meeting held within the CRA structure. Each day begins with a morning meeting that is ritualized and designed to motivate the community. Each evening there is another meeting that serves as a summation of the community and individual experiences of the day. In addition, the CRA conducts academy meetings, phase meetings, and twelve step fellowship meetings.

Program Staff

As of May 3, 1999 the expanded CRA had a staff of 24 (Ruefle and Miller, 1999). This represented an increase of 9 positions over the original CRA. Of the original 15 employees, only 5 still remained with the CRA and only three of the original cohort of 11 counselors remained. Of the 24 employees, 21% (5) were hired in 1997, 29% (7) were hired in the second half of 1998, and 21% (5) were hired in the first half of 1999. The fact that half of the current employees had been with the program for less than a year is attributable to both the expansion of the program and the high rate of staff turnover (Ruefle and Miller, 1999).

The staff of 24 identified in the process evaluation has a black majority and a female majority. More specifically, it was comprised of 33% (8) black males, 33% (8) white females, 21% (5) black females and 13% (3) white males. While this represented a significant level of diversity - an important feature for a program that serves an overwhelmingly black inmate

population - it is worth noting that all of the black employees were in the counselor positions, while all of the administrative positions were held by whites.

A noteworthy characteristic of the CRA staff was that five of them had previously served as correctional officers at the Turbeville Correctional Institution (two had SCDC security assignments at the CRA before being hired as counselors). All five of these former correctional officers had prior counseling experience. In addition to a change in responsibilities, the switch from SCDC correctional officer to CRA counselor also brought an increase in salary (a starting CRA counselor earns $23,000 per year while a starting SCDC correctional officer earns $18,000 per year).

Program Participants

Male inmates sentenced under the Youthful Offender Act represent a difficult and growing population. During Fiscal Year 1991, a total of 1,488 YOA males were admitted to SCDC (Ruefle and Miller, 1999). By Fiscal Year 1998, that figure had grown to 1,850, an increase of 24% in just seven years (Ruefle and Miller, 1999). In this span, the number of YOAs returning to SCDC due to revocation increased from 18% to 37% of the total YOA population. The most recent statistics available reveal that 25% of this population has a dangerous drug conviction as their most serious offense. Robbery and burglary, widely recognized in the criminal justice world as companion offenses for drug users, made up 11% and 16% of the most serious YOA offenses, respectively (Ruefle and Miller, 1999). In addition, 85% of YOA males report an alcohol and/or drug problem.

A typical YOA inmate has an average Wide Range Achievement Test (WRAT) reading score of 7.3 and an average educational grade level of 10.1; possesses minimum work experience

or skills; was reared by a single parent; grew up in a low income and high crime neighborhood; and, has weak social attachments. Approximately 50% of the YOAs have a prior criminal history.

Because of the combination of these factors, this population is more difficult to effectively rehabilitate in traditional programs, and therefore more likely to return to previous behavioral patterns when released into their prior environment. A study comparing FY 1992 YOA Releases and Straight Sentence Releases by Sentence Type and Age at Release, furnished by SCDC Resource and Information Management Services, showed that 45.3% of the YOA population are returned to SCDC within 36 months, versus 30.8% of the non-YOA population.

Upon entering SCDC, all YOAs spend two weeks at the Reception and Evaluation Center where they are screened and assessed to: 1) determine their classification level; 2) identify problems and/or health conditions that require special programming; and 3) determine the appropriate treatment option. For example, the S.A.S.S.I. (Substance Abuse Subtle Screening Inventory) is used to identify those YOAs in need of residential substance abuse treatment. After screening, YOAs spend four weeks at a Basic Training Unit (BTU) which provides military style regimented boot camp training and intense education and life skills programming. The BTU is intended to teach the inmate discipline, responsibility, self-respect, and the proper way to communicate with staff members.

Upon graduation from the BTU, YOAs spend four weeks in an agricultural program where they perform manual labor on a 3,500 acre row crop farm. Upon graduation from the agricultural program, YOAs are moved to one of three institutions where programming is available that will best meet their needs (the Wateree River, Trenton and Turbeville Correctional Institutions). Special needs YOAs (who require a regional medical center's care, or who are not

capable of functioning in the general population because of psychological problems or mental retardation) may be housed at either the Broad River or Lee Correctional Centers. All YOAs are provided educational programming, physical and mental health care, and access to religious services/instruction.

Currently, each week a cohort of approximately 34 YOAs enters into SCDC. Each cohort, known as a "platoon", will pass through reception and evaluation, the BTU, and the agricultural program as a group. Accordingly, each week a platoon of approximately 34 YOAs will graduate from the agricultural program. At that point the members of a platoon are sent as individuals to an appropriate treatment program.

Program Implementation

An implementation and process evaluation was conducted between 1997 and 1999. The purpose of that evaluation was to describe the CRA's implementation - that is, to describe the process by which the program operated. To that end, the following evaluation research question was posed: Does the combination of activities, facilities, personnel and administrative arrangements that constitute the CRA seem to lead to achievement of its treatment objectives? An answer to this question is a necessary first step towards an evaluation of program outcomes.

The evaluation of the 20 months of CRA operations involved qualitative documentation and monitoring of the program. To that end, two types of research activities were carried out: 1) field observations of program activities to determine if the program was being delivered as proposed, and 2) in-depth interviews with relevant stakeholders to determine program accomplishments and implementation problems and solutions.

The following stakeholders were interviewed: the SCDC administrator responsible for the program when it opened; the associate warden at the Turbeville Correctional Institution responsible for the program; the SCDC administrator at the Wateree Correctional Institution responsible for coordinating the random assignment procedures and for the transition of selected YOAs to the CRA; the original and current CRA director; the head of treatment at the CRA; CRA program counselors; SCDC security staff assigned to the program; ex-employees of the program; and, administrators in the agencies responsible for the aftercare portion of the program.

The findings of the implementation evaluation were presented to NIJ on May 11, 1999 in a final report titled "Evaluation of the South Carolina Residential Substance Abuse Treatment Program for State Prisoners" and established the context for the present study. The major findings, in short, are discussed below.

CRA Staff Training Program

Four weeks of pre-service training were provided to the CRA staff before the program began. The first week of pre-service training was spent at the South Carolina Criminal Justice Academy where the CRA staff underwent SCDC's new employee (non-guard) training curriculum. The next three weeks of training took place at the Turbeville Correctional Institution. The first week of Turbeville training was delivered by program experts from CiviGenics who provided a background on the cognitive behavioral side of the CRA and on the logic and operations of TCs. The second week of Turbeville training was spent on the standard Turbeville Correctional Institution new employee training curriculum. The final week of training was spent on CRA operations, procedures, roles and responsibilities.

Delivery of Treatment Programming

The field observations of program activities were scheduled to cover all days of the week and both morning and afternoon activities. During all field observations, program activities were delivered according to program schedule, the content of the activities corresponded to the type of activity scheduled and were delivered by the appropriate CRA staff members.

Development of a CRA Management Information System and In-House Evaluation Capacity

The CRA is operated by CiviGenics, Inc., an experienced provider of residential substance abuse treatment programs. The CRA is part of a corporate system that requires the maintenance of a computerized database containing pertinent information on program participants, program staff, and program activities. Consequently, the CRA has the ability to monitor the type of clients served and their progress within the program and to conduct self-evaluation studies.

Development of a New CRA Case Management/Inmate Evaluation System

In the summer of 1998 the CRA introduced a new case management system in which CRA YOAs must not only satisfy basic curriculum requirements, but must also accumulate a minimum of 10 'points' each week in order to advance, or "phase up", through each program level. Under this system points are assigned by CRA staff based on objective factors such as regular and punctual class attendance, cell upkeep, and the meeting of basic behavioral standards. Points can also be awarded to inmates who display extraordinary leadership within the therapeutic community.

Development of Open Communication and a Cooperative Relationship Between the CRA Staff and the Administration of the Turbeville Correctional Institution

Over time the CRA management team and the administration of the Turbeville Correctional Institution were able to establish good lines of communication and a cooperative relationship. The result was the ability to discuss issues and, when possible, reach compromises and make changes in rules and procedures of both SCDC and the CRA.

III. METHODOLOGY

Research Purpose

The principle objective of this evaluation was to determine if the Correctional Recovery Academy (CRA) is an effective treatment modality for male youthful offenders who have a problem with chemical dependency.

Research Design

The conducted research was an outcome evaluation of the CRA using a quasi-experimental design. A quasi-experimental design was utilized since true random assignment was not possible throughout the duration of the CRA program and follow-up period. During some selection waves, the number of treatment beds outnumbered eligible YOAs, consequently, all eligible subjects were assigned to the treatment group. The subjects selected for the treatment group were compared against a comparison group on program-relevant criterion measures.

Subjects in each of the groups met specific types of criteria related to their sentencing under South Carolina's Youthful Offenders Act. For example, all subjects sentenced under this law are within the same age range (17 to 25 years), have similar criminal histories, and received some form of intensive programming. In addition, all eligible subjects were determined to have a chemical dependency problem using the S.A.S.S.I. during intake and screening, and were required to meet certain medical and mental health qualifications as stipulated by the CRA program protocol.

Program effectiveness was then determined by comparing the treatment group (i.e., CRA graduates) with a comparison group (i.e., alternative intensive program graduates and CRA

removals) on important criterion measures, including subsequent criminal activity and drug relapse during a 12-month follow-up period.

Subject Selection to Treatment and Comparison Groups

Selection of subjects for the study was drawn from those males sentenced to the South Carolina Department of Correction (SCDC) under the Youthful Offenders Act (YOA) and sentenced to participate in a Youthful Offender Intensification Program (YOIP). YOIP consists of three phases, including an institutional component (Phase III), where programming focuses either on intensive education services or on intensive substance abuse treatment services (CRA). The study incorporated a quasi-experimental design with a sample that consists of two groups: 1) a treatment group and 2) a comparison group.

Offenders in the treatment group represent those male youthful offenders who successfully completed Phases I and II of the Youthful Offender Intensification Program (YOIP), and during intake and assessment were determined to be chemically dependent based on their Substance Abuse Subtle Screening Inventory (S.A.S.S.I.) score and/or by clinical diagnosis. For youthful offenders who had a chemical dependency and who graduated from Phase II, the availability of beds in the Addictions Treatment Unit determined whether or not they were assigned to the CRA program, or an alternative intensive program.

Assignment to the treatment program occurred in one of two ways: 1) by random assignment if the number of beds available is smaller than the number of eligible program participants, or 2) by automatic assignment if the number of beds surpasses the number of eligible program participants. Treatment subjects were also required to meet other program criteria based on criminal history, behavior during previous incarcerations, and medical/mental health qualifications. Those subjects assigned to the treatment group (CRA) in Phase III

attended the Correctional Recovery Academy program provided at the Addictions Treatment Unit at Turbeville Correctional Institution.

Offenders in the comparison group matched subjects in the treatment group on the criteria and requirements described above (e.g., male youthful offender, S.A.S.S.I. score and/or diagnosis, criminal history, medical and mental health restrictions). However, due to random assignment and the availability of beds in the Addictions Treatment Unit, they instead were assigned to alternative intensive programming until their release from Phase III.

Specification and Measurement of Program Outcomes

The principle aim of this outcome evaluation was to determine if the Correctional Recovery Academy (CRA) was an effective form of treatment for youthful offenders, and more specifically, if program participation had an effect on future behavior such as recidivism and drug relapse.

CRA participation constituted the predictor or independent variable. In other words, are CRA participants and graduates less likely to recidivate and/or relapse than those who participated and graduated from alternative intensive programming?

Definition of program effectiveness have relied on various measures, including relapse, attitudinal change, skill development and especially recidivism (MacKenzie and Hickman, 1998; Shover, 1979). The evaluation gathered data on several criterion measures to determine the effectiveness of the CRA program. We agree with MacKenzie and Hickman (1998:5), who recommend defining recidivism using multiple measures in order to capture "a more complete picture of program effectiveness...".

Individual difference among subjects can also affect program outcomes, or interact with program participation to affect outcomes. This evaluation collected data on variables believed to intervene in the relationship between CRA participation and the criterion measures. Data were also collected on demographic measures related to family characteristics, such as age, race/ethnic backgrounds, and residence (urban/rural).

IV. DATA ANALYSIS AND FINDINGS

The central purpose of this study was to determine the impact of the Correctional Recovery Academy (CRA) on youthful offenders with substance addictions in the state of South Carolina. Several research questions were the focus of the current analysis: (1) Was the Correctional Recovery Academy effective in reducing drug use relapse during the follow-up period in the community? and (2) Was the Correctional Recovery Academy effective in reducing recidivism during the follow-up period in the community? In addition, the analysis explored the issue of what factors, if any, were predictive of failure for youthful offenders while on parole supervision.

Data for this study were obtained from the South Carolina Department of Corrections (SCDC) and the South Carolina Department of Probation, Parole, and Pardons Services (SCDPPPS). Participants for the study were identified from the information system of SCDC based on the fact that they had graduated from Phase II programming by a predetermined date (March 1, 1997) and were eligible for the Correctional Recovery Academy (CRA) using a set of program criteria. In addition to graduating from Phase II programming, YOAs also had to have an identifiable chemical dependency (according to a S.A.S.S.I. Score, a TCU Score, and/or a clinical diagnosis), be a nonviolent offender, and have no concurrent or consecutive sentences. Information on convictions, offender movement, infractions, and programming was received from SCDC.

Once the initial list of study participants was obtained from SCDC, identifier information on each case was provided to SCDPPPS so that we could obtain data related to the community supervision of study participants during the follow-up period. SCDPPPS provided data for subjects on drug testing, employment, recidivism and revocation. In some instances YOAs were

determined not to be appropriate for the study and were dropped because they did not enter Phase III programming (CRA or comparison treatment) on or before June 1, 2000. This date was used as a cut-off for inclusion into the study because of the estimated length of the third phase and the necessity of having a 12-month follow-up period for each participant.

Several types of analytic statistical techniques were used to address the research questions. We began our analysis by summarizing the variables of interest using descriptive statistics. We summarized the data for the sample as a whole and then summarized the data for both treatment and control groups separately. Next, we explored the relationships between the specified variables, examining the degree, direction, form and significance, and statistical independence between each variable and group membership (Cuzzort & Vrettos, 1996). Where appropriate, a t-test, chi-square or gamma was used to determine the nature of the association between two variables. In order to determine whether or not the Correctional Recovery Academy was effective in reducing recidivism and relapse during the parole period, t-tests were used to compare the treatment and control group on the two dependent variables. Finally, logistic regression was used to examine what, if any, independent variables were predictive of failure during the follow-up period.

Findings

Sample Characteristics

A total of 303 offenders comprised the overall sample. Approximately 53% (n= 160) of offenders in the sample participated in the CRA program and the remaining 47% (n= 143) received other types of programming during Phase III. The entire sample was comprised of males. As indicated in Table 1, almost 72% (n= 218) of offenders in the overall sample were nonwhite, while 28% (n= 85) were white, and 94% of those in the sample were single (n= 252).

The highest level of education obtained by offenders ranged from 5th grade to some college. Approximately, 31% (n= 75) had at least a 9th grade-level education, followed by 24% (n= 59) who had a 10th grade-level education, and 23% (n= 56) who had at the minimum an 11th grade-level education. In addition, almost 41% of offenders received a GED. Also, the average age of offenders at the time of their release to parole was 21.08 years (s= 2.29; range= 17-29).

We next separated the sample into treatment vs. control group, and summarized the results for each demographic variable. The CRA group comprised 53% (n= 160) of the overall sample. As reported in Table 1, the CRA group was 77% nonwhite, 23% white, and was predominantly single (94%, n= 133). The distribution for the educational level of the CRA group, for the most part, mirrored that of the overall sample. Approximately, 32% (n= 42) of the CRA sample had a 9th grade-level education, followed by 28% who had a 10th grade-level education and 22% who had at least an 11th grade-level education. In addition, almost one-third (32% or n= 36) of the CRA sample received a GED. The average age of the participants in the treatment group was 20.64 years (s= 2.10, range= 17-27).

The Control group comprised 47% (n= 143) of the overall sample. A significantly larger percentage of the Control group as compared to the CRA group was white (x^2= 4.08, p< .05). Nearly 34% (n= 48) of the offenders in the comparison group were white and 66% (n= 95) were nonwhite. The Control group also has a slightly higher level of education. As reported in Table 2, 29% (n= 33) of offenders in this sample had a 9th grade-level education, followed by 20% (n= 23) who had a 10th grade-level education and 24% (n= 27) who had an 11th grade-level education. When a high school level of education was considered, fourteen percent (n= 16) of the Control group completed the 12th grade, whereas 5% (n= 7) of the CRA group completed this level of education. The comparison group was significantly more likely to have completed a

GED as well. Fifty-percent (n= 51) of the Control group reportedly completed a GED (x^2= 6.79, p< .05). The Control group, on average, was approximately one-year older when compared to the CRA group; they were an average of 21.60 years of age (t= 3.57, p< .001).

Table 1. Demographic Information for Overall Sample and Groups

Variable	Overall Sample	CRA Group (n= 160)	Control Group (n= 143)
Race			
White	28.1% (85)	23.1% (37)	33.6% (48)*
Nonwhite	71.9 (218)	76.9% (123)	66.4% (95)
Marital Status			
Common Law	1.5% (4)	1.4% (2)	1.6% (2)
Divorced	1.1% (3)	---- ----	2.4% (3)
Married	1.5% (4)	1.4% (2)	1.6% (2)
Separated	1.9% (5)	2.8% (4)	.8% (1)
Single	94.0% (252)	94.3% (133)	93.7% (119)
Education Level			
5th Grade	.4% (1)	.8% (1)	---- ----
6th Grade	.4% (1)	.8% (1)	---- ----
7th Grade	2.9% (7)	3.8% (5)	1.8% (2)
8th Grade	8.6% (21)	7.6% (10)	9.6% (11)
9th Grade	30.6% (75)	32.1% (42)	28.9% (33)
10th Grade	24.1% (59)	27.5% (36)	20.2% (23)
11th Grade	22.9% (56)	22.1% (29)	23.7% (27)
12th Grade	9.4% (23)	5.3% (7)	14.0% (16)
some college	.8% (2)	---- ----	1.8% (2)
GED			
No	59.2% (126)	67.6% (75)	50.0% (51)*
Yes	40.8% (87)	32.4% (36)	50.0% (51)
Age			
Mean	21.08	20.64	21.60**
SD	2.29	2.10	2.41
Range	17 – 29	17 - 27	18 - 29
Number of Convictions			
Mean	1.81	1.78	1.84
SD	1.18	1.06	1.30
Range	1 – 11	1 - 7	1 - 11

* p < .05
** p < .001

Phase III Programming

Phase III programming represents, for many youthful offenders, the final stage in the correctional institution process. As discussed earlier in the report, upon graduation from Phase II, YOA youthful offenders proceed to one of several Phase III programs and facilities. For subjects in the current study, there was an opportunity to be placed in the Correctional Recovery Academy (CRA) or one of three others: (1) Thinking for Change, (2) Structured Programming (e.g., cognitive restructuring, substance abuse education, criminal thinking, pre-release planning), or the (3) Accelerated Academic Program (AAP).

Table 2 provides summary information for each Phase III program and the number and percentage of offenders who received some level of services from each program. In some cases (10% or n= 29), youthful offenders had been placed in two different Phase III programs at some point in their incarceration. In order to see who received more than one type of programming during Phase III, we divided the overall sample into the two groups, CRA and Control, and examined summary information for each of the programs. As reported in Table 2, 53% (n= 160) of the overall sample was assigned to the CRA program, or a combination of CRA and one of the other programs. For example, 9% (n= 15) of CRA participants also received treatment from the Thinking for Change Program and 1% (n= 2) of CRA participants also obtained treatment through Structured Programs. The remaining 47% (n= 143) of YOAs were placed in one of the other three comparison group programs, or a combination of them. Approximately 8% (n= 12) offenders in the control group received treatment from multiple Phase III programs (excluding CRA). Fifty percent (n= 71) of the comparison group received treatment from the Thinking for Change Program, and another 43% (n= 62) obtained treatment through other Structured

Programs, and 15% (n= 21) of offenders in the comparison group received treatment through the Accelerated Academic Program.

Table 2. Descriptive Information for Phase 3 Programming

Types of Programming at Phase 3	Overall Sample	CRA Group (n= 160)	Control Group (n= 143)
Total Number of Phase 3 Programs			
1	274 (90.4%)	143 (89.4%)	131 (91.6%)
2	29 (9.6%)	17 (10.6%)	12 (8.4%)
Correctional Recovery Academy			
No	143 (47.2%)	---- -----	---- -----
Yes	160 (52.8%)		
Thinking for Change Program			
No	217 (71.6%)	145 (90.6%)	72 (50.3%)
Yes	86 (28.4%)	15 (9.4%)	71 (49.7%)
Structured Programs			
No	239 (78.9%)	158 (98.8%)	81 (56.6%)
Yes	64 (21.1%)	2 (1.3%)	62 (43.4%)
Accelerated Academic Program (AAP)			
No	282 (93.1%)	160 (100%)	122 (85.3%)
Yes	21 (6.9%)	0 (----)	21 (14.7%)

Program Outcomes During Phase III Programming

In addition to whether or not youthful offenders completed Phase III programming, we also considered other types of program outcomes including those of "reassignment," "setback", and "recycle." Summary information about program outcomes are reported Table 3. There were a sizeable number of cases with missing information on these measures. Offenders were "reassigned" to other places in the South Carolina Department of Corrections system if it was determined that they were inappropriate for the CRA. In a small number of CRA cases (n= 3) this occurred after they had already started the program. Offenders received "setbacks" as a

means of addressing disciplinary problems. Offenders who received this were usually setback either 15 or 30 days depending on the nature of the disciplinary problem. According to the results presented in Table 3, 35% of the offenders (n= 107) received at least one setback, while 30% of offenders (n= 92) did not. When the groups were considered separately, approximately 34% of the CRA group had at the minimum one setback and 14% did not. In the case of the comparison group, 36% of the offenders had a setback and 49% did not. A significant relationship was found between group membership and whether or not the offender received a "setback" during Phase III programming (x^2= 15.76, p< .001), with CRA's more likely to receive a "setback" than those in the comparison group. A recycle occurred less often with 4% (n = 12) of the larger sample receiving one, while 4% (n= 7) of CRA group offenders and 4% (n= 5) of Control group offenders receiving a "recycle."

Table 3. Program Outcomes During Phase III

Variable	Overall Sample (n= 303)	CRA Group (n= 160)	Control Group (n= 143)
Reassignment			
No	189 (62.4%)	74 (46.3%)	115 (80.4%)
Yes	10 (3.3%)	3 (1.9%)	7 (4.9%)
Missing	104 (34.3%)	83 (51.9%)	21 (14.7%)
Setback			
No	92 (30.4%)	22 (13.8%)	70 (49.0%)**
Yes	107 (35.3%)	55 (34.4%)	52 (36.4%)
Missing	104 (34.3%)	83 (51.9%)	21 (14.7%)
Recycle			
No	187 (61.7%)	70 (43.8%)	117 (81.8%)
Yes	12 (4.0%)	7 (4.4%)	5 (3.5%)
Missing	104 (34.3%)	83 (51.9%)	21 (14.7%)
Infractions			
Mean	1.14	.94	1.37
SD	3.06	2.74	3.38
Range	0 - 26	0 – 19	0 - 26

** significant at p< .001

We also considered the number of disciplinary infractions received by the offenders in our study and those results are presented in Table 3. Overall, offenders received on average 1.14 (s= 3.06, range= 0 to 26) infractions during the course of Phase III programming. Offenders in the CRA group received on average .94 (s= 2.74, range= 0-19) infractions during the phase while offenders in the Control group received 1.37 (s= 3.38, range= 0-26) infractions during this time. We compared both groups with regards to the number of infractions received during their Phase 3 programming and the results from the t-test analysis indicated no significant difference between the groups (t= 1.23, p= .220). Next, we examined the types and prevalence of infractions received and this information is summarized in Table 4. As reported in the table, there were a total of 341 infractions received by offenders during their time in Phase III programming. Sexual misconduct was the most frequently occurring infraction at 17% (n= 58), followed by the use of obscene, vulgar, or profane language, which was received by 12% (n= 42) of offenders. Ten percent (n= 34) of offenders received disciplinary infractions for damaging or destroying property (less than $50 in value), and another 9% (n= 31) of offenders received disciplinary infractions for refusing or failing to obey orders.

Table 4. Descriptive Information for Infractions Received During Phase III Programming

Type of Infraction	*f* (%)
Sexual Misconduct	58 (17.0%)
Use of Obscene, Vulgar, Profane Language and/or Gestures	42 (12.3%)
Damage, Destroy, Deface Property Less than $50.00	34 (10.0%)
Refusing or Failing to Obey Orders	31 (9.1%)
Use, Possession, Narc, Unauthorized Use of a Prescription	23 (6.7%)
Out of Place	21 (6.2%)
Threatening to inflict harm on employee	19 (5.6%)
Striking an Employee with/ without weapon	18 (5.3%)
Possession of contraband	16 (4.7%)
Striking an inmate with/ without a weapon	14 (4.1%)
Fighting without a Weapon	13 (3.8%)
Refusing to Attend Compulsory Program	12 (3.5%)
Damage, Destroy, Deface Property Greater than $50.00	8 (2.3%)
Use or Possession of any Intoxicating Inhalant	4 (1.8%)
Inciting / Creating a Disturbance	4 (1.8%)
Threatening to Inflict Harm on Inmate	3 (.9%)
Mutilation	3 (.9%)
Stealing	2 (.6%)
Riot	2 (.6%)
Use or Possession of Tattoo Paraphernalia	2 (.6%)
Creating Unnecessary Noise	2 (.6%)
Possession of a weapon	1 (.3%)
Refusing to Work	1 (.3%)
Failure to Work	1 (.3%)
Mutiny	1 (.3%)
Solicit Employee	1 (.3%)
Abuse of Privileges	1 (.3%)
Safety Regulations	1 (.3%)
Violations Write/Post Institutional Rules	1 (.3%)
Disrespect	1 (.3%)
Escape with/ without Force	1 (.3%)
TOTAL	**341***

* This total represents the number of infractions recorded by the South Carolina Department of Corrections for the study participants.

Community Supervision

Data for several measures concerning the offender during their parole supervision were also collected as part of the study. Most of the YOA offenders were released upon completion of their Phase III programming, however, almost 8% (n= 23, 11 of which are CRA group members and 12 are Control group members) of them remained incarcerated during the study period and were not released. As a result, no follow-up data were available for this group of YOA offenders.

Upon completion of Phase III programming and after review by appropriate officials in the South Carolina Department of Corrections, YOAs in the current study were released into the community under parole supervision in 41 counties in the state of South Carolina. Information on the counties and the number of offenders released to these jurisdictions is summarized in Table 5. As indicated in the table, Charleston County parole authorities, by far, supervised the most number of offenders from the study at 19% (n= 53). The counties of Greenville (6% or n= 16), Spartanburg (5% or n= 15), and York (5% or n= 15) supervised the next highest number of youthful offenders during the study's follow-up period.

A small number of the YOAs (12% or n= 33) who were released to parole were involved in several community-based corrections programs throughout the 12 month follow-up period. Table 6 presents summary information about the type of community program and the number of offenders participating in the program. As indicated in Table 6, many of the offenders who were involved in community programs were either in home detention (n= 16) or electronic monitoring (n= 11). The remaining offenders were assigned to a Restitution Center (n= 4) and a Community Control Center (n= 2). Finally, information was obtained about the employment status of offenders during the follow-up period. Approximately, 63% of the YOAs (n= 177) who were

released into the community were employed at some point during the follow-up period, and 37% (n= 103) were not. The distribution for the overall sample remained consistent when each offender group was considered. In both cases, 63% of the offenders in the treatment group and the control group had been employed at some point during the follow-up period.

Table 5. Descriptive Information for Counties Supervising YOA Parolees

COUNTY	*f*	(%)	COUNTY	*f*	(%)
Aiken	7	(2.5%)	Horry	10	(3.6%)
Anderson	6	(2.1%)	Jasper	1	(.4%)
Barnwell	3	(1.1%)	Kershaw	6	(2.1%)
Beaufort	6	(2.1%)	Lancaster	4	(1.4%)
Berkeley	12	(4.3%)	Laurens	4	(1.4%)
Charleston	53	(18.9%)	Lee	3	(1.1%)
Cherokee	4	(1.4%)	Lexington	5	(1.8%)
Chester	2	(.7%)	McCormick	1	(.4%)
Chesterfield	3	(1.1%)	Marion	5	(1.8%)
Clarendon	2	(.7%)	Marlboro	8	(2.9%)
Colleton	5	(1.8%)	Newberry	3	(1.1%)
Darlington	12	(4.3%)	Oconee	1	(.4%)
Dillon	4	(1.4%)	Orangeburg	7	(2.5%)
Dorchester	10	(3.6%)	Pickens	4	(1.4%)
Edgefield	2	(.7%)	Richland	7	(2.5%)
Fairfield	4	(1.4%)	Saluda	1	(.4%)
Florence	11	(3.9%)	Spartanburg	15	(5.4%)
Georgetown	2	(.7%)	Sumter	2	(.7%)
Greenville	16	(5.7%)	Union	3	(1.1%)
Greenwood	6	(2.1%)	Williamsburg	5	(1.8%)
			York	15	(5.4%)

n= 280

Table 6. Descriptive Information on Parolees and Community-based Corrections Programs and Parolees

Variable	Overall Sample (n= 280)	CRA Group (n= 149)	Control Group (n= 131)
Home Detention	16	9	7
Electronic Monitoring	11	6	5
Restitution Center	4	2	2
Community Control Center	2	1	1

Outcome Measures

The first research question addressed in the current study asked if the Correctional Recovery Academy was effective in reducing the drug use relapse during the follow-up period in the community. Data were obtained from the South Carolina Department of Probation, Parole, and Pardons for each offender released into the community concerning the prevalence and results of drug tests. Many of the offenders released onto parole were given drug tests as part of their community supervision. Only 5% (n= 14) of the offenders released on parole were not drug tested during their community supervision. Seven of the offenders who received no drug tests were in the CRA group and the remaining 7 offenders were in the Control group. The results of data collected on drug testing are summarized in Table 7. For the entire sample, offenders were drug tested just over five times (0 = 5.49, s= 4.08, range= 0-22) during the follow-up period. Data for drug tests were considered next for each group of subjects. Offenders in the CRA group had, on average, a slightly higher number of drug tests (0 = 5.62, s= 4.18) when compared with offenders in the Control group (0 = 5.32, s= 3.96). Results from a t-test analysis, however

indicated that there were no significant difference between the CRA group and the Control group as to the total number of drug tests provided to subjects (t= -.61, p= .546).

Table 7. Results for Drug Tests During Parole Supervision

Variable	Overall Sample (n= 280)	CRA Group (n= 149)	Control Group (n= 131)
Number of Drug Tests			
Mean	5.49	5.62	5.32
SD	4.08	4.18	3.96
Range	0 - 22	0 – 22	0 – 15
Positive Drug Tests			
No	108 (39%)	52 (35%)	56 (43%)
Yes	173 (61%)	97 (65%)	75 (57%)
Number of Positive Drug Tests			
Mean	1.62	1.79	1.42
SD	1.98	2.05	1.89
Range	0 – 13	0 – 13	0 - 11
Proportion of Drug Tests-Positive			
Mean	.35	.37	.33
SD	.35	.34	.35
Range	.00 to 1.00	.00 to 1.00	.00 to 1.00

We next examined the number of positive drug tests received by the subjects in the study. As reported in Table 7, the overall sample had an average of 1.62 (s= 1.98, range= 0-13) positive drug tests during the 12-month follow-up period. Subjects in the CRA group had an average of 1.79 (s= 2.05) positive tests, while subjects in the Control group had an average of 1.42 (s= 1.89) positive drug tests. A t-test was used to determine if the difference in the average number of positive drug tests for both groups was significant. The results indicate that there was no significant difference in the number of positive drug tests received by CRA and Control group subjects (t= -1.55, p= .122). This finding suggests that the CRA program did not have a

measurable impact on the subsequent use of drugs by offenders while under community supervision when compared to the control group.

The final way in which we explored the relationship between programming at Phase III and subsequent drug use during the follow-up period was to consider the differences in the proportion of drug tests given found to be positive by offender group. The proportion of total number of drug tests that were positive was calculated and is summarized in Table 8. For the overall sample, 35% of all drug tests given to offenders resulted in positive tests. When offender groups were considered separately, 37% of the drug tests for the CRA group were positive and 33% of drug tests for Control group were positive. Consistent with the prior results concerning drug tests for both groups, there was no significant difference between the groups in terms of the proportion of total drug tests that resulted in positive results (t= - .99, p= .326).

The second outcome measure considered in the current study involved failure, which was defined in terms of recidivism and/or revocation during the follow-up period. For offenders who were released on parole, we obtained information about changes in supervision status, including revocation and recidivism. Two strategies were used to analyze the issue of recidivism and revocation. First, offenders were identified as either failing or succeeding during the parole follow-up period. Approximately 17% (n= 48) of all the YOAs who were released onto parole failed within the first 12 months. Failure was then considered separately for offenders in each group. For the CRA group, 17% (n= 25) of the offenders failed within the year after their release, while 18% (n= 23) of the offenders in the Control group failed within the year after their release. Further analysis of the relationship between failure while on parole and involvement in treatment indicates no significant relationship between both of these measures (x^2= .053, p=

.817). The results suggest that offenders' involvement in the CRA program was not related to whether or not the YOA succeeded during the 12-month follow-up period.

The analysis also considered failure in a second way, the number of days until failure. For those YOAs who failed during the follow-up period, the number of days between the start date of parole and the closure date of parole was calculated. The average number of days until failure for the overall group was 253 days (s= 70.85, range= 95-364). We next wanted to compare both offender groups on this outcome measure. We found that for the CRA failures, it took an average of 281 days (s= 71.65, range= 101-355) to fail, and for the Control failures, it took an average of 223 days (s= 57.48, range= 101-355) to fail. Results from the t-test analysis indicated that the average number of days until failure for the CRA group is significantly longer than the average number of days for the Control group, thereby suggesting that the treatment significantly diminishes the onset time of failure for the CRA group when compared to the Control group (t= -3.066, p=.004).

Table 8. Failure Under Parole Supervision

Variable	Overall Sample (n= 280)	CRA Group (n= 149)	Control Group (n= 131)
Failure			
No	230 (82.7%)	124 (83.2%)	106 (82.2%)
Yes	48 (17.3%)	25 (16.8%)	23 (17.8%)
Number of Days to Failure[a]			
Mean	253.02	280.72	222.91*
SD	70.85	71.65	57.48
Range	95- 364	101-355	101-355
N	48	25	23

[a] calculated for only those YOAs who failed
** significant at p< .001

Predictors of Failure while Under Supervision

Next we explored the relationship between several of the independent variables and failure during the follow-up period in the community. Logistic regression was used to determine if any of the independent variables were significant predictors of failure while on parole supervision. The independent variables of CRA involvement, race of the offender, total number of drug tests, highest education level obtained, age of the offender, employment, number of convictions, the occurrence of infractions during Phase III programming, and whether or not the offender tested positive for drugs while under community supervision were all specified in the logistic regression model. The results for the logistic regression analysis are presented in Table 9. Forty-five cases were dropped from this portion of the analysis due to missing information on at least one of the independent measures; therefore the results were based on 235 subjects.

The specified regression model had a –2 Log likelihood value of 167.76 and was statistically significant (chi-square model= 40.21, p= .000), with an R^2 value of 0.16. Therefore, the factors included in the model explained only 16% of the variation in the outcome measure. The use of logistic regression permits us to examine the individual influence of a factor on the likelihood of failing controlling for the other factors. As indicated in Table 9, involvement in the CRA program (b= .044, p= .913) was not a significant predictor of success or failure during the follow-up period. If involvement in the treatment program had a significant influence on recidivism and revocation, then one would expect to find that this measure would be a significant predictor of the outcome measure. Controlling for all other factors in the model, whether or not offenders received CRA treatment programming or alternative Phase III programming was not influential in their success under community supervision. Only two of the independent variables were significant predictors of whether or not the YOA failed while under community supervision

during the follow-up period, total number of drug tests and the number of positive drug tests obtained by the offender during the follow-up period.

Controlling for all other factors in the model, offenders who were subjected to more drug tests during their community supervision (b= -.435, p= .000), were significantly more likely to succeed during the follow-up period. This finding suggests that offenders who are tested more often for drugs during their community supervision were significantly more likely to be successful during the follow-up period. This result is surprising given the fact that many observers believe that the "closer" we watch (and control) offenders under community supervision using enforcement strategies such as drug testing, the more likely it is that we will catch them violating conditions, including using drugs, which in turn leads to higher revocations. Consistent with this view, we would expect to find in the current study that the more times offenders were tested for drugs, the more likely they would fail during community supervision. Our results do not support this expected relationship.

The number of positive drug tests was also a significant predictor of failure during the follow-up period. As expected, offenders who received a higher number of positive drug tests (b= .515, p= .001) were more likely to fail during the follow-up period. The remaining independent variables, race (b= .731, p= .158), age (b= .035, p= .696), education-level (b= -.306, p= .736), convictions (b= .195, p= .207), and infractions (b= .076, p= .860) were not significant predictors of whether or not offenders failed under community supervision.

Table 9. Logistic Regression Results for Failure Model (n= 235)

Variable	B	S. E.	Odds Ratio
Race	.731	.518	2.08
Age	.035	.089	1.04
Education Level	-.306	.161	.736
Employment	-.471	.413	.625
CRA Group	.013	.407	1.01
Number of Convictions	.195	.155	1.22
Infractions	.076	.429	1.08
Number of Positive Drug Tests	.515	.151	1.67**
Total Number of Drug Tests	-.435	.107	.647**
Constant	.901	2.32	2.46

* p< .05

** p< .001

V. CONCLUSIONS

Summary of the Findings

The Residential Substance Abuse Treatment program in South Carolina (i.e., the Correctional Recovery Academy), like correctional programs in general, was developed, implemented and carried out because of anticipated effectiveness. Clearly, effectiveness in the context of this study means observable change in offenders in terms of their drug use and related criminality. This study's primary objective was to render a determination of effectiveness, that is, whether the Correctional Recovery Academy achieved its intended goals as indicated by success.

In order to reach a determination of effectiveness, the study employed a quasi-experimental design utilizing the traditional conceptual components of evaluation design: comparison groups (a treatment group of CRA participants and a matched control group), an independent variable (the CRA experience), criterion measures contributing to program failure (most notably recidivism, relapse and revocation), and a follow-up period (post-release community supervision).

As indicated in the previous chapter, our analysis indicated that the South Carolina RSAT program did not effectively reduce the failure rate of the CRA participants and graduates. In comparative context, the CRA graduates actually reoffended and relapsed at a slightly higher rate (1%) than did those subjects in the comparison group identified by matched sampling from the general South Carolina Department of Corrections YOA population. This is not to say that the program is necessarily counterproductive, however, while it is important to note that differences between the two comparison groups were not statistically significant, findings do suggest that the CRA was not effective in terms of achieving its intended objectives.

The observed failure rate indicates that the program was not effective in reducing either recidivism or in revocation of the CRA participants during the follow-up period. In respect to relapse, the findings of this study are somewhat atypical - particularly concerning measured urinalysis. While it is expected that the higher frequency of "dirty" urine within a group, that that group will realize a higher failure rate (ultimately by revocation), it is both unexpected and a testament to the utility of perceptual deterrence that the failure rate covaries with the total number of drug tests given. The clear implication is that conducting drug tests is related to successful supervision under parole.

For programs that do "work", it is not always clear which program components are beneficial or their beneficial effect relative to other components. Nor is it clear why treatment works for some and not for others. Similarly, it is unclear exactly why programs fail to produce positive outcomes for clients. There are a number of suspect elements, but it is often difficult to specify which ones and to what extent they contribute to outcome. Many of the same elements that frustrate program success also impede evaluation efforts. Below, we identify and discuss some of the most relevant of these impediments as observed in the South Carolina RSAT evaluation study.

Barriers to Outcome Research

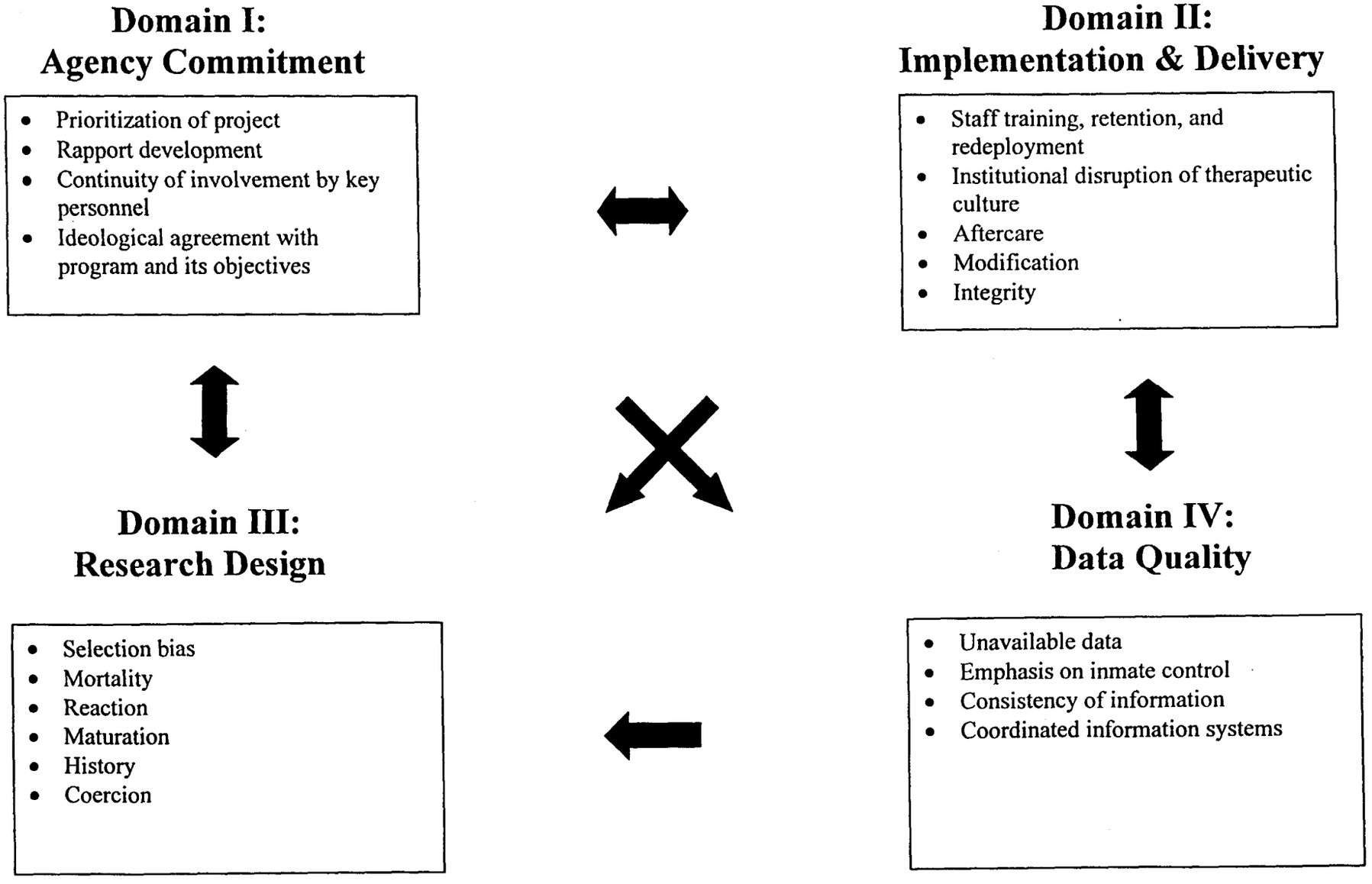
The principal purpose of outcome research is to assess the effectiveness of a program or intervention. Effectiveness is defined by the "extent to which a policy or program is achieving its goals and purposes" (Berk & Rossi, 1990, p. 15). While implementation, process and outcome measures are important to consider in determining program effectiveness, it is typically difficult to distinguish program effects from other major forces affecting the outcome. Also, it is often difficult to distinguish program effects from change variation, which, as "noise," may mask any program impact (Berk and Rossi, 1990, p. 54).

It is critical to demonstrate a direct link between the intervention in question and changes or differences in the dependent variable. For residential substance abuse programs such as the CRA, one would hope to find differences in subsequent drug use and revocations between those offenders participating in the CRA and those receiving comparable but different programming while incarcerated. The literature on evaluations of drug programs for offenders provides numerous discussions concerning the significance of appropriate research designs (Gregrich, 1992), implementation issues (Inciardi, Martin, Lockwood, Hooper, and Wald, 1992), and integrity of treatment interventions (Wexler et al., 1999).

Despite researcher attention and sensitivity to these matters, the nature and origin of many research problems are beyond the scope of evaluation research design and thus beyond the control of the evaluation team. In that evaluative research is a social and political process, certain recurrent obstacles, specific to correctional programs, can be expected to be encountered when coupled with additional extant or emergent barriers more closely related to treatment program assessment.

An explication of these obstacles is engaged below in a domain network model for illustrative purposes. The analytic utility of this conceptual framework is twofold. First, specification and placement of barriers into discreet yet interrelated domains permits distinction between barrier types and their elements. Second, the creation of domains facilitates consideration of developmental trajectories that can yield additive effects. Barriers to corrections-based drug treatment can be placed by type into four separate domains: agency commitment, implementation and therapeutic delivery, research design and data quality (see Figure 1). Specification of causal paths between the domains indicates interrelationships that enable anticipation of barrier issues based upon identification of separate underlying barriers in another feed domain.

An Additive Model of Barriers to Evaluating Drug Treatment Behind Bars



Barriers to Corrections-Based Drug Treatment Program Outcome Evaluation

Domain I: Agency Commitment

- Prioritization of project (duration of response to researcher inquiries and requests for data/information)
- Rapport development (willingness/reluctance to meet with research team; cooperative attitude)
- Continuity of involvement by administration/key personnel
- Ideological agreement with program and its objectives

Domain II: Implementation & Therapeutic Delivery

- Staff training (degree of variability in credentials and level of familiarity with treatment modality)
- Institutional disruption of therapeutic culture (imposition of correctional institution-based sanctions vs. social learning-based sanctions)
- Staff retention/redeployment
- Aftercare (presence/quality)
- Modification (changes to structure of program components, group assignment, consistency of component quality)
- Integrity (compliance with program design)

Domain III: Research Design

- Selection bias (comparison group nonequivalence)
- Mortality (infractions within program and administrative removals)
- Reaction (response to evaluation vs. treatment)
- Maturation (spontaneous growth in self-awareness, remorse, etc. attributable to normally occurring changes)
- History (events or occurrences external to comparison groups; dissimilar experiences across or within groups)
- Coercion (involuntary program participation)

Domain IV: Data Quality

- Unavailable data (missing key information theoretically effecting program effectiveness)
- Emphasis on inmate control (data gathered by the agency concerns inmate movement and other facility operations not conducive to planning or analysis)
- Consistency of information (collection and recording)
- Coordinated information systems (compatibility and transferability of data between correctional and probation and parole agencies)

Domain I : Agency Commitment

Sufficient administrative understanding and support for an evaluation of a program is absolutely crucial to an outcome study. Seemingly, evaluation studies stand to benefit all concerned stakeholders. Correctional administrators receive determinations about the effectiveness of specific programs, program components, and initiatives theoretically informing and improving planning and resource allocation. Researchers are afforded a social laboratory to practice their crafts. Societal benefit may be in terms of efficient public expenditures and, in the context of corrections, changed offenders less likely to recidivate. Despite the apparent appeal of program evaluation, a plethora of problems can emerge.

The first type of barrier identified here, agency commitment, concerns cooperation between the research team and the agency. The "agency" can mean many things to evaluation projects and it is important, if not vital, to reach points of mutual understanding and agreement concerning a variety of factors from the project's onset. Do the top administrators of the correctional agency endorse the program being assessed? Does the endorsement extend to the middle-level administrators of the agency overseeing the program's implementation? The answers to these questions largely determine the quality of the evaluation and the degree of difficulty likely to be encountered. A lack of agency commitment, as indicated by the feed directions in Figure 1, will likely give rise to problems in other domains and must therefore be addressed if at all possible at onset so that correctional agencies may formally posture cooperation with outside evaluators. Without a highly specified mutual understanding, there may be an increased chance of (in)tolerance that generates a lack of support paralyzing evaluation activities.

The continuity of involvement by key agency personnel and contacts are important to the agency-research team relationship and changes may require the reestablishment of rapport. In some situations a positive and cooperative rapport may be lost in the middle of an evaluation and manifest as an outcome barrier in modality delivery and data quality domains.

Domain II : Implementation and Therapeutic Delivery

The implementation and therapeutic delivery of any given program rests heavily on a number of issues related to the structure of the program itself. Farabee et al. (1999) identified several critical issues that can affect corrections based drug treatment effectiveness. These types of problems include matters of inmate identification, assessment and referral, recruitment and training of treatment staff and high rates of staff turnover. In order for a program to be implemented effectively, staff training as well as staff retention must be a top priority of the operating agency. Corrections is historically a profession with a considerable amount of staff turnover; this above average turnover rate is due to a number of factors, ranging from low base pay, limited salary potential and less than ideal working environment. Additionally, many prison based drug treatment programs are located in rural areas, making it difficult to find quality staff, especially advanced degree positions, relative to metropolitan areas (Ruefle and Miller, 1999).

Staff training is a central issue in the implementation and therapeutic delivery of a corrections based drug treatment program. More specifically, the degree of variability in the credentials among the staff and the level of familiarity with the treatment modality can impact the ability of researchers to evaluate these programs. Staff training and staff retention are closely related issues in prison based drug treatment programs as the inability to retain employees factors directly into impediments in training practices.

Institutional disruption of the therapeutic culture also has the potential to affect outcome evaluations. Because the therapeutic community is the cornerstone of many corrections based drug treatment programs, many of the realities of institutional life are non-conducive to the principle of social learning based sanctions. Inmates are consistently subject to the punitive and frequently administered disciplinary infractions which at times renders it impossible for inmates to successfully progress through the program in a timely manner. This reality can affect program outcome evaluation in that it threatens the internal validity of the findings. Originally designated treatment and control group composition is altered and initial base groups are considerably smaller at the point of analysis by the researcher.

Closely associated with institutional disruption is the modification element of Domain II, that is, changes to the structure of program components, group assignments and the consistency of component quality. As aforementioned, infractions may instigate the administrative removal of an inmate, thereby altering group assignments. Additionally, modification of program components are particularly disruptive to enrolled inmates whose treatment and rehabilitation can be compromised by these changes. This also lends itself to program integrity, as the delivery of the program is made problematic.

Domain III: Research Design

The quality of any outcome evaluation can be compromised by threats to the study's research design. In the instance of the South Carolina RSAT program, several issues, such as selection bias and coercion, were present at the start of the CRA program, while others, such as mortality and maturation, developed naturally over the course of the study. The critical nature of

a program's research design necessitates the careful development and execution of the design, and the thoughtful consideration of any factors which may compromise the experiment.

Selection bias is an issue to the extent that randomization proves itself to be impossible in the RSAT program. The South Carolina RSAT program has fairly stringent criteria for its inmates, as program participation is predicated on qualification under the South Carolina Youthful Offender Act (YOA) in which inmates must meet the six requirements of YOA status. Although the treatment and control groups were roughly matched up by SCDC statisticians, program evaluators found indications of comparison group nonequivalence.

The original base group (n=781) was reduced to a sample size of 303 at the point of analysis. Many cases in both the treatment and control groups had not completed programming and some had not even been released from SCDC custody at the time of data acquisition, thus the incidence of re-arrest could not be determined when an inmate has not yet been released. Mortality in the program was due to a number of reasons such as self removal, disciplinary infractions and max-out time issues. In many cases, the eventual reduced sample size was closely associated with issues pertinent to Domain IV, Data Quality.

Maturation refers to a change within subjects, and is based on the reality that over the course of an experiment, these subjects are constantly growing and aging (Maxfield and Babbie, 2001). It is feasible in the case of the SC RSAT program that inmates' success and progress may in fact be a spontaneous growth in self-awareness, remorse or a more general aging-out of crime and substance abuse. Inmates' outcomes may be attributable to normally occurring changes rather than program effectiveness.

Additionally, historical events may occur during the course of the evaluation that will confound the experimental results (Maxfield and Babbie, 2001). These types of events are

outside the scope of the study, and outside of the control of the evaluator, thereby making it difficult, if not impossible, to determine the level of influence exerted on the evaluation results.

Coercion, more specifically, forced program participation, can also factor into the relative success of an outcome evaluation. Although coercion is recognized as necessary and beneficial for chronic drug offenders, as they would most likely not seek out drug treatment on their own, mandated substance abuse treatment may not prove the best avenue for rehabilitation. Coercion may in fact provoke animosity and resentment within an offender, thereby lending to the creation of a tense, adversarial relationship between the inmate, prison administration and treatment staff. Recovery from an addiction is often believed to be contingent upon an individual's sincere effort to abstain from the problem substance or behavior. Coerced treatment is therefore at odds with this concept, and it is feasible that coercion may negate the effects of the treatment. Again, this impacts the evaluation of RSAT and similar programs to the extent that inmates predisposed to indifference or resistance to drug treatment are less likely to successfully complete a substance abuse program and further, more likely to relapse.

Domain IV: Data Quality

Data quality is an issue central to the successful evaluation of virtually any program. Without accurate, manageable data, the ability to draw any meaningful conclusions is severely hindered, and even the best research design is at times unable to overcome missing, incomplete or inconsistent data. Many of the problems we encountered during evaluation of the South Carolina RSAT program were attributable to poor data quality, thereby lending to data management issues which in turn affected timely analysis of the treatment program.

One issue of particular importance was that of unavailable data, some of which was critical in discerning real program effectiveness. For example, although all participants in the

CRA program had been determined to have a substance abuse problem, there exists no information concerning the substance to which the inmate is addicted. Relatedly, drug test results were reported by SCDPPPS as a pass/fail; no particular substance is implicated in a test failure. Consequently, we were unable to determine if an inmate's failure of a drug test corresponded to his initial substance addiction, or if relapse was related to an entirely different drug, or if relapse related to specific drugs and not others.

Additionally, some areas of the post-release data were also lacking in that much information was incomplete and often missing altogether. Data concerning employment falls into this category, as we were informed by SCDPPPS that most information contained within their database was provided by parole officers, who possess a fairly large amount of discretion when writing and submitting reports. As a result, employment information was scarce, at times providing the name of the employer, while at other times a simple 'yes' or 'no' was recorded. This reality makes it difficult to include an employment variable as a predictor of post-release survival. This is particularly unfortunate given the link between employment and recidivism (Harer, 1995; Piehl, 1994 cited in Finn, 1998).

Another problem encountered with the data was SCDC's emphasis on inmate control, more specifically, the data gathered by the agency concerns inmate movement within the system and other facility operations not necessarily conducive to planning or analysis. Consequently, we were provided with much information that was not useful for our study objectives. Information such as inmate movements prior to participation in the YOIP (i.e. data related to previous convictions) is an example of this type of irrelevant information which can convolute data management.

The consistency of the information provided to us by the participating agencies also created some challenges. Information obtained was inconsistent in that data were complete for some cases in the sample, while other information was simply missing. The inconsistency of both SCDC and SCDPPPS data proved to be an obstacle in the management and analysis of the program. Further, some information that was claimed to be available to the researchers at the onset of the evaluation, was either recorded in a non-uniform manner or simply missing.

Another issue within the realm of data quality was the lack of a coordinated information system between SCDC and SCDPPPS. As expected, both agencies' databases contained some of the same information, however, it was recorded differently and thereby difficult to discern which information in one database corresponded to similar information within the other. Also, the lack of a coordinated system added to the lengthy process of conducting the analysis.

The Correctional Recovery Academy was unfortunately unable to reduce offender relapse or recidivism, as compared to the control group. Although CRA graduates relapsed at a slightly higher rate than did the offenders in the control group, the difference was not statistically significant. Despite the inherent difficulty in identifying which of the program components is responsible for the CRA's lack of success, it can be hypothesized that the ineffectiveness of the program may be due, in part, to the lack of post-release aftercare.

As was discussed in the findings, a small number of the sample (n=33, or 12%) who were released on parole were involved in community-based corrections programs throughout the 12 month follow-up period. Of these 33, 18 were members of the CRA group. It is not difficult to consider the possibility that the lack of success was due to the fact that close to 90% of the offenders in the CRA group had no form of follow-up care or supervision beyond the limit of the traditional parole officer. This is of special concern, given the link between community-based

aftercare and prison based drug treatment (Knight et al., 1999) in the context of relapse and recidivism reduction. Failure to provide adequate treatment after releasing offenders can undermine any positive changes that occurred during treatment (Knight et al., 1999). Future RSAT programs should consider the incorporation of a mandatory aftercare element in the rehabilitation process, as this may render more positive evaluation results. The results of this study should not lead to politicized interpretations that correctional drug treatment does not work, rather the results should be utilized as an opportunity to improve on prison-based substance abuse programs.

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Barriers to Evaluating the Effectiveness of Drug Treatment Behind Bars: A Research Note*

J. Mitchell Miller, Ph.D.

Barbara A. Koons-Witt, Ph.D.

Holly Ventura, M.C.J.

The delivery of substance abuse treatment within correctional settings marks one of the criminal justice system's primary opportunities to disrupt the drugs-crime nexus. Federally funded residential substance abuse treatment programs have been rapidly introduced across the nation, although implementation problems have increased their operational variability. This paper examines how implementation barriers interrelate with other types of obstacles and multiply to hinder determinations of program effectiveness. Specific barriers were identified from a case study of process and outcome evaluations of the South Carolina Residential Substance Abuse Treatment (RSAT) program. A conceptual framework groups barriers by type into four interrelated domains wherein additive effects and reciprocal consequences that can undermine effective program assessment are illustrated.

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The effect of the ongoing war on drugs is perhaps nowhere more apparent than in the criminal justice system's correctional branch. The corrections population experienced a 68 percent increase in the federal prisons and a 30 percent increase of state prisoners between 1980 and 1995, nearly two-thirds of which are incarcerated for drug related crime (Murray, 1996; Department of Justice, Federal Bureau of Prisons, 1997). These sizeable increases have prompted several federal and state efforts to deliver substance abuse treatment within correctional settings, most notably the 1994 Violent Crime Control and Law Enforcement Act which appropriated $135 million between 1998 and 2000 for correction-based drug treatment to be implemented at the state level.

Residential substance abuse treatment (RSAT) programs for state prisoners, now established nationally, are based on the logic of providing intense rehabilitation to offenders deemed most likely to recidivate. Matching offenders with the "appropriate" program for treatment purposes (i.e., individualized treatment) has been a fundamental element within the American criminal justice system since the nineteenth century and is the hallmark of the rehabilitation movement. Offenders who successfully complete a treatment program are theoretical good risks to re-enter society. The extant knowledge base suggests that prison-based programs, vested in the ideas of classification and prediction, significantly reduce both recidivism and relapse rates (Anglin, Longshore, Turner, McBride, Inciardi & Prendergast, 1996; Farabee, Prendergast & Anglin, 1998; Field, 1989; Gendreau, 1996; Inciardi, Martin, Butzin, Hooper & Harrison, 1997; Knight, Simpson, Chatham & Camancho, 1997; Leukefeld & Tims, 1988). The efficiency of the modified prison therapeutic community (TC) approach to the treatment of substance abusing inmates has been touted as particularly successful in reducing

reincarceration rates by more than 40% at 12 months and 50% at 24 months after release (Wexler, DeLeon, Thomas, Kressler & Peters, 1999).

The National Institute of Justice (NIJ) has funded implementation and then outcome evaluations of selected RSAT programs across the country. The rapid expansion of these programs, however, lead to various implementation problems ranging from client (e.g., identification, assessment, and referral) and staff (e.g., recruitment, training and retention) issues to institutional interference in the treatment culture and high variability in both rates of aftercare attendance and retention (Farabee, Prendergast, Cartier, Wexler, Knight, & Anglin, 1999). The presence of these common implementation problems could "lead to pessimistic, and erroneous assumptions about effectiveness" (Farabee, 1999, p.150).

We consider here how the known barriers to successful program implementation progress and interrelate with other evaluation process elements to frustrate outcome research design and execution. Based on experiences from our process and outcome evaluations of the South Carolina RSAT program, we offer a conceptual framework for the specification of factors problematic to technocratic program evaluations in correctional settings. After briefly describing the illustrated program, we identify and discuss four primary types of domains and consider the nature of their potential additive effect on outcome findings.

The South Carolina Residential Substance Abuse Program

During 1998 the South Carolina Department of Corrections (SCDC) decided to use existing RSAT funding to increase the capacity of its substance abuse program for young offenders sentenced under South Carolina's "Youthful Offender Act" (YOA). This legislation requires that offenders, known as YOA's, must: 1) be 17 to 25 years of age, 2) not be convicted for a serious violent offense, 3) not be sentenced twice under this act, 4) receive an indeterminate

sentence of one to six years, 5) receive appropriate treatment in a minimum or medium security institution, and 6) be segregated from other offenders. Pursuant to a selection of a private treatment delivery contractor , a 272 bed program was implemented at the Turbeville Correctional Institute in 1998 (Ruefle and Miller, 1999). Inmates sentenced under South Carolina's YOA participate in the Youthful Offender Intensification Program (YOIP), comprised of three phases lasting a minimum of nine months (see Appendix A).

The South Carolina CRA program employs a cognitive behavioral approach and represents a modified therapeutic community. The primary treatment methodologies employed by the CRA include, cognitive re-structuring towards pro-social, pro-deliberate norms, cognitive-behavioral training towards relapse prevention and social reintegration, social learning mechanisms of the therapeutic community, and the spiritual environment of a Twelve Steps fellowship. The program utilizes a variety of techniques that motivate the offender to examine their thought processes, past decisions, addiction, anger management and life skills. The primary objective of the program is to assist offenders in recognizing potential risk factors to further drug use and to provide ways of understanding behavior and the consequences of decision-making.

Researchers created two reasonably matched study groups, wherein subjects had similar histories, were within the same age range (17 to 25 yrs.) and received some form of intensive programming at Phase III in the YOIP program. Additional specific criteria used to determine CRA eligibility included a reasonable opportunity for parole eligibility upon completion of the program, chemical dependency based on either a SASSI or TCUDDS score, nonviolent offender status, no concurrent straight time sentence and no consecutive YOA sentence. At admission to the program and again upon completion, each inmate is administered the TCU Drug Dependency Screen, the Criminal Sentiments Scale (CSS) and the Coping Behavior Inventory (CBI),

instruments measuring attitudes exhibited thoughts that are highly associated with illegal behavior. If effective, the CRA intervention should produce graduates who display an increased usage of coping skills to avoid relapse (as measured by the CBI) and a decreased level of attitudes correlated with recidivism (as measured by the CSS).

Therapeutic Communities in Prison

The CRA program we evaluated is a therapeutic community (TC) environment - a treatment approach that is unique in that the community is used as the primary method for promoting social and psychological change in individuals (Inciardi, 1996; Simpson et al., 1997). The TC unites and empowers people to learn about themselves through active participation in a variety of social roles (e.g., neighbor, group leader, client, student) and each participant theoretically shares the responsibility for other TC members and strives to be a role model for positive change. Learning and healing are intended to occur in a social context and social discourse process stressing specific skills training and the orderliness of the TC and its procedures. The goal is for members of the TC to be self-regulating and motivated to cooperate with staff. The TC differs from other methods of drug treatment, then, in that the primary therapist and teacher is the community itself.

During the last decade, the TC concept has been widely implemented in correctional institutions, medical and mental hospital, and community and shelter settings (Inciardi, 1996; Simpson et al., 1997; Wexler et al., 1999). The approach incorporates common treatment program features which include the use of ex-offenders and ex-addicts as staff, use of confrontation and support groups, a safe environment based upon clearly defined rules and sanctions, isolation of the community from the general prison population, and the development

of pro-social attitudes. In the prison setting, TCs similarly specify criminal behavior and substance abuse as focal concerns.

Barriers to Outcome Research

The principal purpose of outcome research is to assess the effectiveness of a program or intervention. Effectiveness is defined by the "extent to which a policy or program is achieving its goals and purposes" (Berk & Rossi, 1990, p. 15). While implementation, process and outcome measures are important to consider in determining program effectiveness, it is typically difficult to distinguish program effects from other major forces affecting the outcome. Also, it is often difficult to distinguish program effects from change variation, which, as "noise," may mask any program impact and frustrate demonstration of a direct link between the intervention in question and changes or differences in the dependent variable (Shover, 1979). For residential substance abuse programs such as the CRA, one would hope to find differences in subsequent drug use and revocations between those offenders participating in the CRA and those receiving comparable but different programming while incarcerated.

The literature on evaluations of drug programs for offenders provides numerous discussions concerning the significance of appropriate research designs (Gregrich, 1992), implementation issues (Inciardi, Martin, Lockwood, Hooper, and Wald, 1992), and integrity of treatment interventions (Wexler et al., 1999). Despite researcher attention and sensitivity to these issues, the nature and origin of many research problems are beyond the scope of research design and the control of the evaluation team. In that evaluative research is a social and political process, certain recurrent obstacles specific to correctional programs can be expected to be encountered when coupled with additional extant or emergent barriers more closely related to

treatment program assessment. The cumulative effect on outcome decision-making can become particularly troublesome.

An explication of these obstacles is engaged below in a domain network model for illustrative purposes. The analytic utility of this conceptual framework is twofold. First, specification and placement of barriers into discreet yet interrelated domains permits distinction between domain types and their barrier elements. Second, the creation of domains facilitates consideration of developmental trajectories that can yield additive effects. Barriers to corrections-based drug treatment can be placed by type into four separate domains: 1) agency commitment, 2) implementation and therapeutic delivery, 3) research design and 4) data quality (see Appendix B). Specification of causal paths between the domains indicates interrelationships that enable anticipation of barrier issues based upon identification of separate underlying barriers in another feed domain (see Figure 1).

INSERT FIGURE 1 HERE

Agency Commitment

Sufficient administrative understanding and support for an evaluation of a program is crucial to an outcome study. Theoretically, evaluation studies stand to benefit all concerned stakeholders. Correctional administrators receive determinations about the effectiveness of specific programs, program components, and initiatives informing and improving planning and resource allocation. Researchers, in turn, are afforded a social laboratory to practice their crafts. Societal benefit may be in terms of efficient public expenditures and, in the context of corrections, changed offenders less likely to recidivate. Despite the apparent appeal of program evaluation, a plethora of problems can and often do emerge.

The first type of barrier concerns cooperation between the research team and the agency. The "agency" can mean many things to evaluation projects and it is important, if not vital, to reach points of mutual understanding and agreement concerning a variety of factors from the project's onset. Do the top administrators of the correctional agency endorse the program being assessed? Does the endorsement extend to the middle-level administrators of the agency overseeing the program's implementation? The answers to these questions largely determine the quality of the evaluation and the degree of difficulty to be expected. A lack of agency commitment will likely give rise to problems in other domains and should be addressed if at all possible while political realities may leverage correctional agencies into formal "cooperations" with outside evaluators. While such language puts to rest idyllic textbook portrayals of rapport, failure to formalize an initial understanding may generate an attitude of intolerance that results in a lack of support paralyzing evaluation activities.

The continuity of involvement by key agency personnel and contacts are important to the agency-research team relationship and changes will require the reestablishment of rapport. In some situations a positive and cooperative rapport may be lost in the middle of an evaluation and manifest as an outcome barrier in modality delivery and data quality domains. Specific examples of Domain I problems experienced in the South Carolina RSAT evaluation include: 1) deprioritization of the evaluation as indicated by numerous delays in data provision and responses to clarification queries, 2) change in directorship of the South Carolina Department of Corrections (SCDC), and 3) turnover and retention within SCDC's research division. Numerous delays in meeting previously and mutually agreed upon dates for data acquisition (i.e., "stalling") and disinterest in rectifying data management and quality issues postponed data analysis for

almost six months in our case. These problems, in turn, generate a domino effect wherein subsequent evaluation tasks can not be completed according to the project timeframe.

Correctional personnel understandably are concerned with the prospects of evaluation; it seems there is much to lose and little to gain, at least for the short-term. Often, evaluation limits the level of autonomy staff may exercise. For evaluators, it becomes essential to find the acceptable balance, in terms of not generating validity threats, between retaining program identity and maintaining program operations within well-defined structural boundaries (Posavac and Carey, 1980).

Attempts to "micro-manage" a program's staff can result in a negative rapport that manifests in a belief that the clinician viewpoint is either humored or ignored, that information obtained will be detrimental for staff (e.g., merit reviews and promotion), and even fear that he program will be terminated. The short address of these matters comes down to remembering that variability naturally occurs in all programs so there is no need for alarm with every change and the vitality of establishing trust.

Implementation and Therapeutic Delivery

The implementation and therapeutic delivery of any given program rests heavily on a number of issues related to the structure of the program itself (Farabee et al. 1999). Some of the most serious include inmate identification, assessment and referral, recruitment and training of treatment staff and high rates of staff turnover. In order for a program to be implemented effectively, staff retention must be a top priority of the operating agency. Corrections is historically a profession with an above average turnover rate due to a number of factors ranging from low base pay and limited salary potential to less a than ideal working environment.

Additionally, many prison based drug treatment programs are located in rural areas, making it difficult to find credentialed staff relative to metropolitan areas (Ruefle and Miller, 1999).

Staff training is another issue central to the establishment and therapeutic delivery of a corrections based drug treatment program. More specifically, the degree of variability in the credentials among the staff and the level of familiarity with the treatment modality can impact the ability of researchers to evaluate these programs. Staff training and retention are such closely related issues in prison based drug treatment programs since the inability to retain employees factors directly into impediments in training practices.

Institutional disruption of the therapeutic culture has the potential to affect outcome evaluations. Because the TC is the cornerstone of many corrections based drug treatment programs, many of the realities of institutional life are non-conducive to the principle of social learning based sanctions. Inmates are consistently subject to punitive and frequently administered disciplinary infractions which at times renders it impossible for them to successfully progress through the program in a timely manner. This reality can affect program outcome evaluation in that it threatens the internal validity of the findings, as originally designated treatment and control group composition is altered and initial base groups are considerably smaller at the point of analysis.

Closely associated with institutional disruption is the modification element of Domain II, that is, changes to the structure of program components, group assignments and the consistency of component quality. As aforementioned, infractions may instigate the administrative removal of an inmate thereby altering group assignments. Additionally, modification of program components integral to program integrity are particularly disruptive to enrolled inmates whose treatment and rehabilitation can be compromised by these changes.

Research Design

The quality of any outcome evaluation can be compromised by threats to the study's research design. Internal threats essentially are challenges to the causal relationship between treatment and outcome. In the instance of the South Carolina RSAT program, several issues, such as selection bias and coercion, were present at the start of the CRA program, while others, such as mortality and maturation, developed naturally over the course of the study.

Selection bias is an issue to the extent that randomization proves to be impossible. Stringent program participation criteria is predicated on legal or bureaucratic requirements. Such was the case in our evaluation due to the South Carolina Youthful Offender Act (YOA) which required that inmates meet the six requirements of YOA status. Although the treatment and control groups were roughly matched up by agency statisticians, we found indications of comparison group nonequivalence. Participants were chosen, for example, on the principle of lowest risk, that is, those inmates least likely to fail. This concept of "creaming" or "cherry-picking" constitutes a well-known validity threat because the low-risk persons selected for substance abuse treatment may be the most likely to succeed, yet they necessarily represent neither the corrections population as a whole nor those inmates most in need of substance abuse treatment.

Participant mortality was relevant in our study as it is in many evaluations. Some subjects in both the treatment and control groups had not completed programming and some were still in custody at the time of data acquisition. This inconsistency renders it impossible to make conclusive statements about the effects of substance abuse treatment on recidivism, as the incidence of re-arrest can not be determined when an inmate has not yet been released. Mortality in the program was due to a number of reasons such as self removal, disciplinary infractions and

max-out time issues. In many cases, the eventual reduced sample size was closely associated with issues pertinent to Domain IV, Data Quality.

Maturation indicates change within subjects and is based on observation that they are constantly growing and aging over the course of an experiment (Maxfield and Babbie, 2001). It is feasible in the case of the SC RSAT program that inmates' success and progress may in fact be a spontaneous growth in self-awareness, a matter partly definitive of the logic of the YOA Act. Remorse or a more general aging-out of crime and substance abuse may also come into play, particularly for the sample in our study per the extant crime and lifecourse literature (Hirschi & Gottfredson, 1983; Farrington, 1986; Sampson & Laub, 1992). Inmates' outcomes, then, may be attributable to normally occurring changes rather than program effectiveness.

Additionally, historical events may occur during the course of the evaluation that will confound the experimental results (Maxfield and Babbie, 2001). These types of events are outside the scope of a study, and outside of the control of the evaluators, thereby making it difficult, if not impossible, to determine the level of influence exerted on the evaluation results.

Coercion, more specifically, forced program participation, can also factor into the relative success of an outcome evaluation. Although coercion is recognized as necessary and beneficial for chronic drug offenders that would likely not otherwise seek treatment, mandated participation may not prove the best avenue for rehabilitation (Young and Belenko, 2002; Hiller, Knight, Leukefeld & Simpson, 2002). Rather, forced participation may provoke animosity and resentment within offenders (i.e., a reaction formation), thereby lending to the creation of a tense, adversarial relationship between the inmate, prison administration and treatment staff. Recovery from an addiction is often believed to be contingent upon an individual's sincere effort to abstain from the problem substance or behavior. Coerced treatment, however is at odds with

this basic belief. Predisposition, indifference or resistance to treatment are factors in successful completion and likely bolster relapse thereby constituting serious threats to assessing real effectiveness.

Data Quality

Without accurate and manageable data, the ability to draw any meaningful conclusions is severely hindered, and even the best research design is at times unable to overcome missing, incomplete or inconsistent data. Although social scientists have devised strategies to remedy missing data situations (Brame, 2000; King, 1989; Little, 1992; and Kandane, 1985), little can be done to address clerical errors and changes in data-collection procedures or changes in the operational definitions of key indicators by the agency. Such changes may be unknown to evaluators who naturally assume that particular indicators collected in data series over time are consistent. Longitudinal studies, such as the RSAT case exampled here, are particularly susceptible for various reasons specific to the previously discussed agency and implementation domains. Disruption of key personnel, for example, may lead to hasty and inadequate training of replacement staff that can impact agency records through discretionary variability in the collection process (i.e., the social production of data, see Baumer, Maxfield and Mendelsohn, 1993 and McCleary, 1992). Many of the problems encountered in this case study were directly attributable to poor data quality, thereby lending to data management issues which in turn affected timely analysis of the treatment program.

One issue of particular importance was that of unavailable data, some of which was critical in discerning real program effectiveness. For example, although all participants in the CRA program had been determined to have a substance abuse problem, there exists no information concerning the substance to which the inmate is addicted. Relatedly, drug test

results were reported by the South Carolina Department of Probation, Parole and Pardon Services (SCDPPPS) as a pass/fail; no particular substance is implicated in a test failure. Consequently, we were unable to determine if an inmate's failure of a drug test corresponded to his initial substance addiction, or if relapse was related to an entirely different drug, or if relapse related to specific drugs and not others.

Some areas of the post-release data were also lacking in that much of the information was incomplete and often missing altogether. Data concerning employment falls into this category, as we were informed by SCDPPPS that most information contained within their database was provided by parole officers, who possess a fairly large amount of discretion when writing and submitting reports. As a result, employment information was scarce, at times providing the name of the employer, while at other times a simple 'yes' or 'no' was recorded. This reality makes it difficult to include an employment variable as a predictor of post-release survival. This is particularly unfortunate given the link between employment and recidivism (Harer, 1995; Piehl, 1994 cited in Finn, 1998).

Another problem encountered with the data was SCDC's emphasis on inmate control, more specifically, the data gathered by the agency concerns inmate movement within the system and other facility operations not necessarily conducive to planning or analysis. Consequently, we were provided with much information that was not useful for our study objectives, such as inmate movements prior to participation in the YOIP (i.e. data related to previous convictions) that was both irrelevant information and convoluted data management.

The consistency of the information provided to us by the participating agencies also created some challenges. Information obtained was inconsistent in that data were complete for some cases in the sample, while other information was simply missing. The inconsistency of

both SCDC and SCDPPPS data proved to be an obstacle in the management and analysis of the program. Further, some information that was claimed to be available to the researchers at the onset of the evaluation, was either recorded in a non-uniform manner or simply missing.

Another issue within the realm of data quality was the lack of a coordinated information system between SCDC and SCDPPPS. As expected, both agencies' databases contained some of the same information, however, it was recorded differently and thereby difficult to discern which information in one database corresponded to similar information within the other. Also, the lack of a coordinated system added to the lengthy process of conducting the analysis.

Conclusion

Fueled by our legal system's war on drugs, prisons around the country over the last decade implemented substance abuse treatment in order to address the addiction problems of their burgeoning population. Many of the programs being implemented were those funded under the 1994 Violent Crime Control and Law Enforcement Act, most notably the RSAT program. Evaluating the efficacy of such substance abuse programs has been a requisite component of this initiative. Process and outcome evaluations, such as the South Carolina CRA program that was illustrated here for demonstrative purposes, have been conducted at various sites across the nation to determine the effectiveness of substance abuse treatment behind bars.

Our experiences from the evaluation process suggest an additive model of barriers to evaluating drug treatment within the prison setting. We identified four specific barrier domains: (1) Agency Commitment, (2) Implementation and Delivery, (3) Research Design, and (4) Data Quality. Our model indicates both one-way and reciprocal relationships between the domains; as such, a domain might either directly influence or compound the problems subsumed under other domains. The model is valuable to researchers because it assists in identifying barriers that

might arise during the evaluation of prison-based drug treatment programs. Thus, research staff can anticipate that certain barriers are likely to occur when other barriers are experienced during a step-wise evaluation process.

The barriers model also renders implications for researchers in prison settings. Consideration of agency commitment issues accentuates the importance of trusting relationships between members of the research team and key agency personnel. In some research settings this might involve establishing relationships with agency representatives at different levels such as the state department of corrections or local program administrators and service providers. This is absolutely essential since agency staff may be apprehensive about possible negative scrutiny that research may induce. Cuts in funding, the elimination of programs and services, and critical attention by media and "outsiders" are just a few of several possible reservations that agency representatives might have in forging a partnership with outside researchers. Therefore, it is in the interest of research staff and the success of the evaluation to establish a trust-based rapport as early in the evaluation process as possible.

Additionally, research conducted outside laboratory settings such as correctional facilities will undoubtedly entail day-to-day variability throughout the evaluation process. It is simply more probable than not that unforeseen events will transpire that fall outside the parameters of research design. These occurrences are inherent in any evaluation, however, as observed by Berk and Rossi (1999, p. 5): "an evaluation attains practical perfection when it provides the best information possible on the key policy questions within the given set of real-world constraints." Researchers should be careful not react to barriers in a "knee-jerk" fashion, but to frame evaluations that control for anticipated and other possible validity threats. In many cases evaluators will need to convince agency administrators and program staff that they must control

certain factors within the experimental setting, particularly in the delivery of program services. When events occur that were not anticipated in the research design or stand to disrupt the timeframe or context of the evaluation process, researchers should document those incidents and attempt to understand how they impact findings, rather than interpret every identified barrier as a fatal flaw to outcome assessment.

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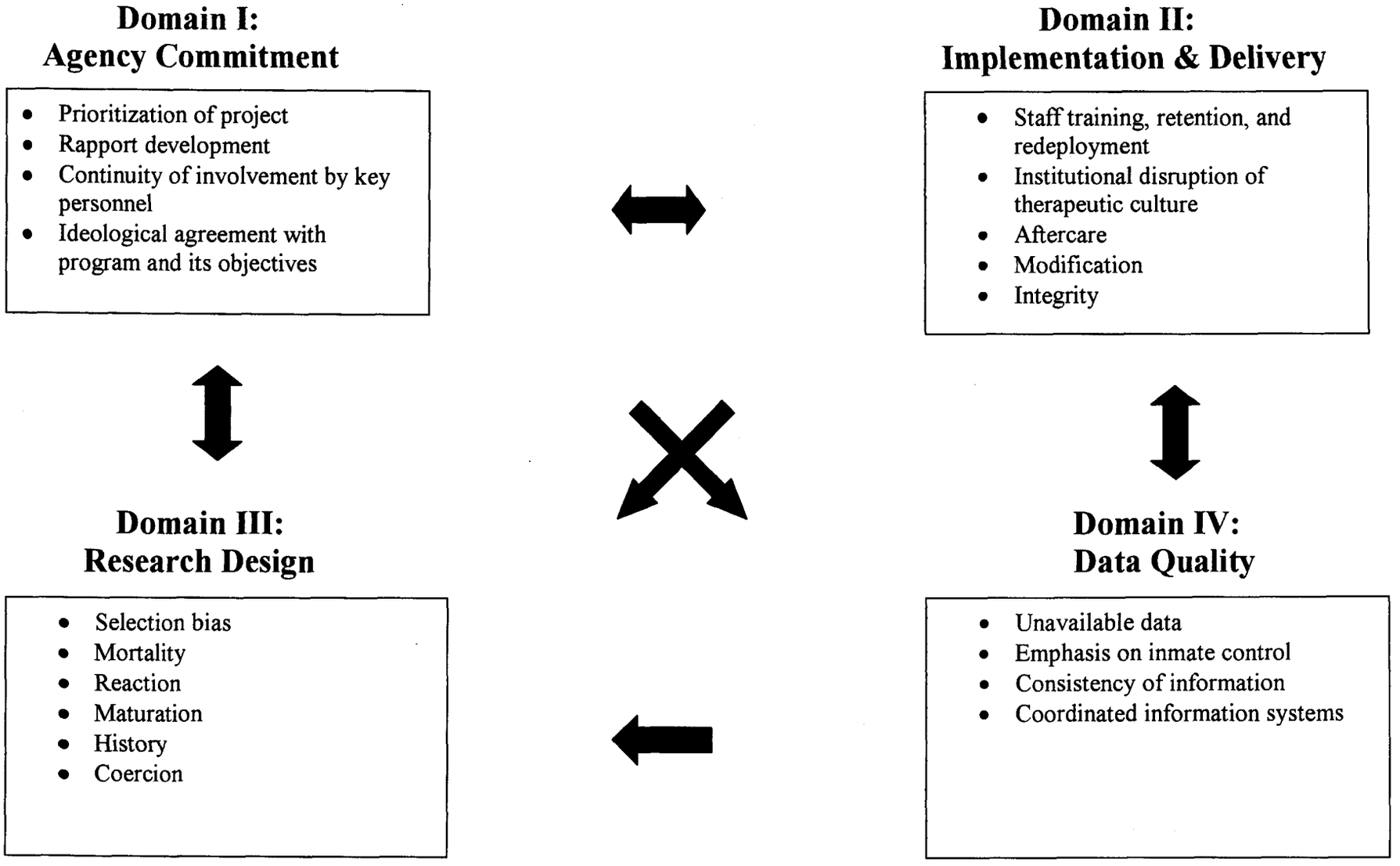
Figure 1. An Additive Model of Barriers to Evaluating Drug Treatment Behind Bars



Appendix A

Table 1. Youthful Offender Intensification Program (YOIP)

Phase I	Phase II	Phase III
• *Orientation to the program* • *Structured environment characterized by instruction in coping skills, education, physical conditioning* • *Boot camp experience*	• *Work* • *Group sessions addressing anger, peer influences and social groups* • *Alcohol and drug education*	• *Correctional Recovery Academy (CRA) for program subjects/ Alternative cognitive and behavioral programming for non-subjects* • *Therapeutic community participation* • *Release preparation*

Appendix B

Barriers to Corrections-Based Drug Treatment Program Outcome Evaluation

Domain I: Agency Commitment

- Prioritization of project (duration of response to researcher inquiries and requests for data/information)
- Rapport development (willingness/reluctance to meet with research team; cooperative attitude)
- Continuity of involvement by administration/key personnel
- Ideological agreement with program and its objectives

Domain II: Implementation & Therapeutic Delivery

- Staff training (degree of variability in credentials and level of familiarity with treatment modality)
- Institutional disruption of therapeutic culture (imposition of correctional institution-based sanctions vs. social learning-based sanctions)
- Staff retention/redeployment
- Aftercare (presence/quality)
- Modification (changes to structure of program components, group assignment, consistency of component quality)
- Integrity (compliance with program design)

Domain III: Research Design

- Selection bias (comparison group nonequivalence)
- Mortality (infractions within program and administrative removals)
- Reaction (response to evaluation vs. treatment)
- Maturation (spontaneous growth in self-awareness, remorse, etc. attributable to normally occurring changes)
- History (events or occurrences external to comparison groups; dissimilar experiences across or within groups)
- Coercion (involuntary program participation)

Domain IV: Data Quality

- Unavailable data (missing key information theoretically effecting program effectiveness)
- Emphasis on inmate control (data gathered by the agency concerns inmate movement and other facility operations not conducive to planning or analysis)
- Consistency of information (collection and recording)
- Coordinated information systems (compatibility and transferability of data between correctional and probation and parole agencies)