Utilizing behavioral interventions to improve supervision outcomes in community-based corrections — Source link ↗

Eric J. Wodahl, Brett Garland, Scott E. Culhane, William P. McCarty
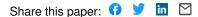
Institutions: University of Wyoming, Missouri State University, University of Illinois at Chicago

Related papers:

- An Intensive Supervision Program That Worked: Service Delivery, Professional Orientation, and Organizational Supportiveness:

- Does correctional program quality really matter? the impact of adhering to the principles of effective intervention*

- A comprehensive guide to the application of contingency management procedures in clinical settings

- Efficacy of frequent monitoring with swift, certain, and modest sanctions for violations: insights from South Dakota's 24/7 Sobriety Project

- Examining the Effects of Community-Based Sanctions on Offender Recidivism

Share this paper: 🅕 🐦 in ✉

View more about this paper here: https://typeset.io/papers/utilizing-behavioral-interventions-to-improve-supervision-3j2nfa23aj

Utilizing Behavioral Interventions to Improve Supervision

Outcomes in Community-Based Corrections

Eric J. Wodahl

University of Wyoming

Brett Garland

Missouri State University

Scott E. Culhane

University of Wyoming

William P. McCarty

University of Illinois-Chicago

Abstract

The number of offenders supervised in the community has grown tremendously over the past few decades.   During the same time period, successful completions of probation and parole terms have been declining. Behavioral strategies hold promise for improving offender outcomes, but empirical research on the efficacy of these interventions appears nonexistent in community corrections.   The current study examines the impact of rewards and sanctions on offenders in an intensive supervision program (ISP). Data were collected on a random sample of 283 offenders who participated in the Wyoming Department of Corrections' ISP between 2000 and 2003. Agency records, including supervision notes, violation reports, and other offender-related correspondence, were utilized to track offenders' sanction and reward histories during their participation in the program. Controlling for a number of variables, the study found that the use of both sanctions and rewards led to higher success rates. Administering rewards in proportionally higher numbers than sanctions produced the best results, especially when a ratio of four or more rewards for every sanction was achieved. Correctional administrators are encouraged to identify ideological obstacles that may impede the application of behavioral techniques and to carefully train and guide line staff in the use of sanctions and rewards. Recommendations for future research are also discussed.

   Keywords: community corrections, revocations, behavioral interventions, operant learning

Utilizing Behavioral Interventions to Improve Supervision

Outcomes in Community-Based Corrections

Increasing offender compliance with release conditions has emerged as one the most pressing

issues facing the American correctional system. Over the last three decades, the reliance on the

institutions of probation and parole for managing our relentlessly burgeoning correctional

population has grown substantially. In 1980, there were approximately 1.3 million offenders

under community supervision in the U.S. (http://www.albany.edu/sourcebook). Today, that

number stands at an estimated 5.1 million, which accounts for nearly 70 percent of the total

correctional population (Glaze & Bonczar, 2009).

While the growth of community-based corrections has been remarkable, perhaps even more

striking has been the decline in success rates for offenders placed on community supervision.

Since the 1980s, the proportion of offenders who successfully complete their term of supervision

has declined substantially. In 1985, approximately 80 percent of probationers successfully

completed their supervision (Bureau of Justice Statistics [BJS], 1990); by 2005 however this

number declined to an estimated 59 percent (Glaze & Bonczar, 2006). Similar trends have been

observed in the parole population (BJS, 1990; Glaze & Bonczar, 2008). Together, these statistics

reveal that during a period of time in which community-based corrections experienced

unprecedented growth, it also incurred considerable declines in completion rates, resulting in a

dramatic rise in offenders revoked from community supervision.

The impact of community corrections failures has been substantial and far reaching. There is

strong reason to conclude that revoked offenders have contributed to prison growth and

crowding. Travis and Lawrence (2002) report that parole violators accounted for roughly 17

percent of all new prison admissions in 1980; by 1999, that number more than doubled with an

estimated 35 percent of all new admissions consisting of parole violators. Not surprisingly, the

economic effects of declining success rates have been considerable. The Criminal Justice Policy

Council (2002), for instance, reports that revoked felony probationers cost taxpayers in Texas

over 550 million dollars in 2001. Similarly, the Little Hoover Commission (2003) estimates that

the State of California spends 900 million dollars annually to house parole violators.

Probably more important than the institutional and economic consequences of the mass

incarceration of community corrections failures are the impact these trends have on the

offenders, their families, and the communities in which they reside. In addition to forfeiting their

liberty, revoked offenders endure a variety of collateral consequences that follow them after their

release such as decreased employment opportunities, weakened family ties, and social exclusion

(Petersilia 2003; Rollo, 1988; Sabol & Lynch 2003; Travis, Solomon, & Waul, 2001). Families

are often left to cope, both emotionally and financially, with the removal of the offender from the

family unit (Travis, 2005). Furthermore, high revocation rates contribute to the problems many

disadvantaged communities face related to the large scale removal of residents to correctional

facilities (Clear & Rose, 2003). As articulated by Clear and Rose (2003), overreliance on

incarceration results in "a reduction in human and social capital and an increase in social

isolation," which "has led to the proliferation of communities without the tools necessary for

adequate informal social control" (p. 29).

The destructive effects of rising revocation rates are clear, and the need to take steps to

mitigate these effects is paramount. Many jurisdictions have responded by focusing on

increasing offender compliance with the conditions of their community supervision[1]. It is

evident that a large proportion of offenders under community supervision do not comply with all

conditions of their supervision at all times (Clear, Harris, & Baird, 1992; Langan & Cuniff,

1992; Taxman, 1995). One study completed by Gray, Fields, and Maxwell (2001) revealed that

approximately 76 percent of probationers in Michigan committed at least one violation during

the course of their supervision. Given that noncompliance is a necessary precursor to revocation,

it stands to reason that increasing offender compliance with release conditions has the potential

to improve supervision outcomes.

Increasing Offender Compliance with Release Conditions

Two types of strategies have emerged for increasing offender compliance with supervision

conditions. The first, and most commonly employed, are *deterrent-based strategies*. Deterrent-

based strategies can be considered one-dimensional in that they focus exclusively on the use of

punishment or threat of punishment to increase compliance. More specifically, they seek to

reduce offender misconduct by increasing the certainty and severity of punishment for

recalcitrant behavior. The proliferation of new programs and technologies in the supervision of

offenders, such as intensive supervision, electronic monitoring, and probation/police

partnerships, can be attributed, in part, to the belief that these tools of supervision have the

potential to enhance conformity by increasing the likelihood of detection (Gendreau, Cullen, &

Bonta, 1994). Other jurisdictions have focused on increasing the consequences of

noncompliance. For example, a policy adopted in California in the 1990s dictated that all

violations for certain high-risk offenders be referred to the Board of Parole Hearings for

disposition and possible recommitment (Grattet, Petersilia, & Lin, 2008).

There is little evidence to suggest that deterrent-based strategies have been successful in

increasing offender compliance with release conditions. In many instances these strategies have

contributed to growing revocation rates. Research has consistently revealed a positive

relationship between supervision intensity and the detection of technical violations, which has

resulted in an increase in offenders being returned to incarceration for violating the terms of their

supervision (Petersilia, 1998; Petersilia & Turner, 1993; Tonry & Lynch, 1996).   Similarly,

policies designed to enhance penalties for disobedient behavior have contributed to the mass

incarceration of community corrections failures (Grattet et al., 2008). In light of these findings,

correctional agencies have been criticized for their overreliance on deterrent-based strategies to

manage offender behavior (Andrews & Bonta, 1998; Gendreau et al., 1994; Petersilia, 2007).

Behavioral Strategies

Behavioral strategies represent a second approach for increasing offender compliance with

community supervision conditions. Behavioral strategies, unlike deterrent strategies, utilize a

more comprehensive approach to induce offender compliance based upon the principles of

operant-learning theory. Rather than focusing strictly on punishing nonconforming acts,

behavioral strategies seek to both sanction violation behavior and reinforce compliant or desired

behavior (Andrews & Bonta, 1998).

Operant learning theory represents a psychological approach to human behavior and is most

closely associated with the work of behavioral psychologists such as Thorndike and Skinner

(Lester, Braswell, & Van Voorhis, 2004). This theory is based on the axiom that behavior is

learned. More specifically, it is learned through the consequences that result from one's actions

(Skinner, 1966). Behavior produces changes, both intended and unintended, in one's

environment. Operant learning theory posits that behaviors which result in positive or

pleasurable changes will be continued, while those which produce negative or unpleasant

changes will be discontinued (Jeffrey, 1965).

The conceptualization of behavior as the byproduct of a learning process implies that

behavior is not beyond external control. Operant learning theory asserts that behavior can be

modified or conditioned through manipulation of the environmental changes which follow the

behavior (Jeffery, 1965; Lester et al., 2004). Two types of environmental manipulation can be

employed to bring about the desired change, *reinforcements* and *punishments*. Reinforcements

are meant to increase the likelihood or frequency of a desired behavior through the "judicious

use of rewards" (Lester et al., 2004, p. 67). Reinforcements can be characterized as either

positive or negative. Positive reinforcement refers to the application of a pleasurable stimulus

(i.e. praise or a monetary reward), while negative reinforcement involves the removal of an

aversive stimulus (i.e. removing a child from timeout) (Jeffrey, 1965; Lester et al., 2004). The

second type of environmental manipulation involves the use of punishments. Punishments can

be "defined as any consequence of a specific behavior that reduces the likelihood that the

behavior will be repeated, or repeated at the same rate, in the future" (Marlowe & Kirby, 1999, p.

4). As with reinforcements, punishments can be both positive – the presentation of an

undesirable stimulus (i.e. pain or verbal admonishment) – and negative – the elimination of a

desirable stimulus (i.e. taking away a child's favorite toy) (Jeffrey, 1965; Swenson, 1980).

   Applying operant learning theory to the management of offenders suggests that offender

compliance can be enhanced by manipulating the environmental consequences of their behavior.

This can be accomplished in two ways, as demonstrated through popular interventions such as

drug courts and therapeutic communities (TCs) (Burdon, Roll, Prendergast, & Rawson, 2001;

National Institute on Drug Abuse, 2002; Marlowe, 2007; Welsh, 2007). First, reinforcements

can be utilized to increase the likelihood that conforming behavior will be continued. In drug

courts, for example, frequently utilized rewards include praise from the drug court team,

promotion into a new program phase, and early release from drug court (Lindquist, Krebs, &

Lattimore, 2006).

A second way of applying operant learning theory for offenders is by using punishments as a response to misconduct to lessen the probability of reoccurrence. Noncompliant offenders who receive sanctions for their transgressions will be less inclined to continue the behavior because of the unpleasant changes in their environment resulting from their actions. Clients in Examples of punishments utilized in drug courts and TC settings include jail terms, enhanced treatment requirements, and program dismissal (Graham & Wexler, 1997; Lindquist, Krebs, & Lattimore, 2006).

Drug courts (see Shaffer, 2006; Wilson, Mitchell, & Mackenzie, 2006), and therapeutic communities (e.g., Inciardi, Martin, & Butzin, 2004; Prendergast, Hall, Wexler, Melnick, & Cao, 2004; Welsh, 2007), as well as other community-based programs using operant conditioning concepts (see, for example, Friedmann, Rhodes, & Taxman, 2009; Prendergast, 2009) have produced promising findings both in increasing abstinence and reducing recidivism. There have been few attempts however to examine the specific influence of rewards and sanctions on program outcomes. In other words, it is unknown how much operant conditioning techniques are contributing to the success of drug courts and therapeutic communities. Behavioral research suggests that programs which are able to incorporate sanctions in concert with the use of rewards to reinforce conforming behavior will be more effective than those that rely on sanctions alone (Marlowe & Kirby, 1999). More specifically, Gendreau (1996) advises that effective behavioral intervention strategies with offenders require reinforcements to outnumber punishments by at least a four-to-one ratio. Two recent studies have actually reported that the use of voucher incentives as a reinforcement has little or no benefit for drug court participants (Marlowe, Festinger, Dugosh, Arabia, & Kirby, 2008; Prendergast, Hall, Roll, & Warda, 2008). But vouchers are only one of several possible motivators that can be applied. More research is

needed to investigate how effectively rewards and sanctions are being used in criminal justice settings to generate prosocial outcomes.

The Current Study

The current study seeks to expand our knowledge in this field by examining one agency's attempt to incorporate behavioral strategies into the supervision of offenders in an Intensive Supervision Program (ISP) as a method to improve offender outcomes. ISP programs emerged onto the correctional landscape beginning in the early 1980s and quickly spread throughout the nation (Petersilia, 1998). Individuals under ISP supervision are subject to stringent conditions of release, which are strictly monitored through rigorous supervision practices. The ISP movement was fueled largely by prison and jail crowding, which reached epidemic proportions in many jurisdictions during the final decades of the 20th century (Petersilia, 1998). ISP was promoted as a means to reduce prison populations and burgeoning correctional costs by diverting prison-bound offenders into less expensive community-based programs.

Research on the efficacy of ISP has revealed that these programs have been largely ineffective at reducing correctional costs and prison crowding due to the high revocation rates often experienced by ISP participants (Petersilia, 1998; Tonry, 1996). ISP programs have traditionally relied exclusively on deterrent-based strategies to induce offender compliance with conditions of release. As noted by Lurigio and Petersilia (1992), "the increased monitoring and surveillance in [ISP] programs are designed to boost offenders' perceptions of the effectiveness of the system in detecting and punishing their criminal behavior" (p. 9). An unintended consequence of this rigorous surveillance however has been the increased detection of offender noncompliance, which has contributed to high revocation rates and mass imprisonment of ISP failures (Petersilia, 1998; Petersilia & Turner, 1993; Tonry & Lynch, 1996).

During the inception of the Wyoming Department of Corrections Intensive Supervision

Program (WDOC ISP), administrators recognized the potential for high failure rates due to the

structure of the program. In response to these concerns, behavioral tools were incorporated into

the design of the program. The goal of the current study is to gain a better understanding the

effects of sanctions and rewards as a tool to improve supervision outcomes. Three research

questions guided this inquiry:

1. Does the application of punishments for offenders who violate the terms of their
   community supervision influence the likelihood of program completion?
2. Does the application of rewards for compliant behavior influence the likelihood of
   program completion?
3. Does the ratio of rewards to punishments influence the likelihood of program
   completion?

To address these questions, data were collected on offenders supervised under WDOC ISP.

The WDOC ISP is an adult ($\geq$ 18 years of age) felony-level program providing high intensity

supervision to both probationers and parolees[2]. The program supervises both male and female

offenders. The WDOC ISP is designed to last approximately one year, during which time

offenders progress through a series of three levels varying in supervision intensity. Participants

are expected to abide by a broad array of supervision conditions, including abstinence from

drugs and alcohol, curfews, restrictions on visitors, and adherence to a weekly schedule.

Enforcement of these conditions is monitored through a variety of supervision practices such as

frequent home visits, random drug testing, and electronic monitoring.

As stated above, a unique feature of the WDOC ISP is the incorporation of behavioral

interventions into the supervision of offenders. More specifically, the program allows

supervision agents to impose sanctions as a punishment for recalcitrant behavior, as well as

rewards to encourage compliant behavior. A partial list of the available sanctions and rewards is

provided in Table 1.

The application of the behavioral interventions is determined by both departmental policy and officer/district supervisor discretion. Departmental policy, for example, requires agents to fully investigate and impose sanctions on all transgressions. However, the type and intensity of the sanction is left primarily to officer and district supervisor discretion. For instance, if an offender tests positive for marijuana or other illegal substance, department policy dictates that the offender must be sanctioned for the transgression, but the exact nature of the sanction (e.g., jail time, community service, or program regression) will be determine by the offender's supervising agent in consultation with the district supervisor.

The application of rewards is also dictated by a combination of department policy and officer discretion. Certain reinforcements are proscribed by program policy. For instance, it is required that offenders earn 10 days of good time for each violation free month on the program. Most applications of rewards however remain at the supervising officer's discretion. The program structure allows agents broad freedom in the evaluation of "good behavior" that is deserving of recognition, as well as the appropriate incentive to be awarded. For example, an agent may choose to verbally praise as often or infrequently as deemed appropriate given an offender's behavior under supervision.

Method

Study Sample

The study sample consisted of 283 offenders who were randomly selected from all offenders who participated in ISP between the years 2000 and 2003. These 283 offenders represent 20 percent of the 1382 eligible cases[3]. Descriptive statistics on the study sample are provided in Table 2. This table reveals that the average age of offenders in the study sample is 31 with actual

ages ranging from 18 to 78. Just over 68 percent of offenders are male, and the vast majority are

white (82.3%). Over 79 percent of offenders have obtained their high school diploma or GED.

Twenty-three percent of the study sample are married. Thus, the profile of the average offender

in the study sample is a single, high school educated, white male in his late 20s.

<center><Insert Table 2 about here></center>

Focusing on criminal history and substance abuse characteristics reveals that only 36 percent

of the sample had a prior felony conviction. Approximately half (49.1%) have been revoked

from community supervision in the past. The most common offense type is property, making up

over 35 percent of the study sample, followed by drug (30%), violent (14.8%), sex (14.5%), and

other (3.2%). The majority of offenders (68%) were under probation supervision, while the rest

were under the jurisdiction of the parole board. A large proportion (71.7%) of the sample was

considered to be drug-involved offenders, which agency policy defines as having used drugs

within 5 years of intake.

While under WDOC ISP supervision, over 80 percent of offenders experienced at least one

violation. However, only a small proportion (16.3%) was involved in the commission of a new

offense. Further information not reported in Table 2 reveals that the vast majority (83%) of

those who committed a new crime while under supervision were involved with relatively minor

misdemeanor or traffic-related offense. Approximately 10 percent of the offenders absconded

supervision, and over 63 percent of the sample successfully completed the WDOC ISP.

Materials and Procedures

This research employed a retrospective research design. More specifically, data were

collected on a random sample of offenders who participated in the WDOC ISP between 2000

and 2003. Agency records, including supervision notes, violation reports, and other offender-

related correspondence, were utilized to track offenders' sanction and reward histories during

their participation in the program. In addition, a variety of background information (i.e.

demographic, criminal history, and substance abuse history) was collected on study participants

from their supervision files. These data sources enabled the calculation of the total number of

sanctions and rewards and ratio of rewards to sanctions per offender as well as whether the ISP

program was completed, all of which was necessary to answer the three main research questions

driving the study. Access to the data was granted by the WDOC upon approval of the

institutional review board from the primary investigator's academic institution. As the data for

the study was compiled from existing WDOC data files and case records, no informed consent

was required. To help protect the privacy of the research subjects, no identifying information

was retained.

Dependent Variable

   The purpose of this research is to explore the influence of sanctions and rewards on ISP

completion. Thus, the dependent variable is a dichotomous measure of program completion.

Program completers were defined as individuals who satisfied the requirements of the WDOC

ISP (completers = 1), while failures were defined as offenders who either absconded supervision

or who had their probation/parole revoked (failures = 0).

Control Variables

    To address the research questions listed above, a series of logistic regression models were

employed. In each of these models, three categories (demographic, criminal history/substance

abuse history, and violation history) of control variables were included in order to more

accurately isolate the effects of sanctions and rewards on ISP completion.

Demographic variables. Prior research on the predictors of success under community

supervision has revealed a correlation between success under probation/parole supervision and

certain demographic characteristics (Benedict & Corzine, 1997; Gray et al., 2001; Jones, 1995;

Morgan, 1994; Olson & Lurgigio, 2000; Spohn & Holleran, 2002; Whitehead, 1991). Thus, to

control for the effects of demographic characteristics, the following variables were added as

statistical controls:

> *Age* (measured in years)
> *Sex* (male = 0, female = 1)
> *Race/ethnicity* (white = 0, nonwhite = 1)
> *Education status* ($\geq$high school diploma/GED = 0, < high school diploma/GED = 1)
> *Marital status* (married = 0, not married = 1)

Criminal history/substance abuse variables. Research has revealed that offenders with more

severe criminal histories (e.g., greater number of prior convictions) or those convicted of certain

types of crimes (e.g. drug offenses, property offenses, or violent offenses) are at greater risk for

community supervision failure (Gray, Fields, & Maxwell, 2001; Morgan, 1994; Jones, 1995;

Spohn & Holleran, 2002). Similarly, studies have shown that offenders who have more

extensive histories with drug and alcohol abuse are more likely to experience unsuccessful

probation and parole outcomes (Benedict & Corzine, 1997; Gray et al., 2001; Olson & Lurigio,

2000; and Whitehead, 1991). To account for the influence of criminal and substance abuse

history on violation reoccurrence, the following variables were included:

> *Prior felony* (no prior felony = 0, prior felony = 1)
> *Property offender* (no current property offense = 0, current property offense =1)[4]
> *Prior revocation* (no prior revocation = 0, prior revocation = 1)
> *Drug involved*[5] (not drug involved = 0, drug involved = 1)

Violation history. Violation history variables are measures of offender noncompliance while

under ISP supervision. WDOC ISP policy identifies three types of offender noncompliance:

low-risk violations, high-risk violations, and new-crime violations. Low-risk violations are

considered less serious transgressions and might include behaviors such as arriving home 10

minutes past curfew or having contact with an unapproved visitor. High-risk violations are

considered more serious transgressions and could include behaviors such as continued drug use

or failure to attend required treatment[6]. New-crime violations involve the commission of a new

criminal act while under supervision. Not surprisingly, high-risk and new-crime violations are

given more attention than low-risk violations and are the most likely to lead to revocation. Thus,

the following two violation history variables were included in the analysis:

> *High-risk violations* (number of high-risk violations committed)
> *New-crime* (no new-crime violations = 0, new-crime violation = 1)

Independent Variables

Three logistic regression models were utilized in this study. Below is a description of the

independent variables included in each of these models.

Sanction model. The sanction model investigates the effect of punishment frequency on ISP

completion. Thus, the following sanction variable was created:

> *Sanction total* (number of sanctions received while on the WDOC ISP)

Reward model. The reward model examines whether the frequency of rewards received while

on ISP is predictive of program completion. The following reward variable was included in the

analysis:

> *Reward total* (number of rewards received while on the WDOC ISP)

Ratio model. The ratio model examines whether the rewards to sanctions ratio is predictive of

program outcomes. Prior research suggests that sanctions and rewards are most effective when

used in concert (Gendreau, 1996; Marlowe & Kirby, 1999). The literature further reveals that

behavioral interventions are most successful when the rewards to punishments ratio is high.

More specifically, advocates often assert that correctional programs should strive to achieve a

four-to-one ratio of rewards to punishments when working with offender populations (Andrews

& Bonta, 1998; Gendreau, 1996). To explore the importance of the rewards to punishments

ratio, two variables were examined:

> *Behavioral total* (total number of behavioral interventions; sanctions + rewards)
> *Behavioral ratio* (proportion of rewards received in relation to total behavioral
> interventions; rewards ÷ [sanctions + rewards]*100)

Results

Descriptive analysis regarding the use of sanctions and rewards of WDOC ISP offenders is

available in Table 3. The vast majority (80.2%) of offenders experienced at least one sanction

while on the program, with the most common sanctions being program regression, removal of

good time, and jail. Approximately 82 percent of offenders received at least one reward during

their tenure.   The most common types of rewards included level advancement, verbal praise, and

approval of a special activity.

<Insert Table 3 about here>

Multivariate Findings

The results of the multivariate analyses are presented in Table 4.   Three logistic regression

models were employed to examine the effects of sanctions and rewards on ISP success[7].

<Insert Table 4 about here>

Sanction model. The sanction model explores the effect of punishments on ISP completion.

The model chi-square was significant and the Nagelkerke R^2 reveals the proportion of variation

explained by the independent variables was .27 (see Nagelkerke, 1991). Three significant

variables emerged including *prior revocation*, *high-risk violations*, and *sanction total*. More

specifically, individuals who had previously experienced a revocation while under community

supervision and those who committed a higher number of high-risk violations are less likely to

successfully complete the WDOC ISP than those who had not experienced a previous revocation

and those with fewer high-risk violations. Additionally, a positive relationship was observed between sanction total and ISP success, meaning that as the number of formal punishments received increases, so does the odds of successfully completing ISP. Finally, by focusing on the semi-standardized coefficients for the significant variables it is observed that high-risk violations were the most powerful predictor variable in the analysis followed by sanction total and prior revocation.

Reward model. The reward model examines the influence of incentives on ISP success. Model statistics show that the model is significant. Furthermore, the R^2 reveals that the proportion of variation explained was .46, which is substantially higher than the previous model. Only two variables achieved statistical significance, *high-risk violations* and *reward total*. Consistent with the previous model, a negative association between high-risk violations and program success is revealed. As the number of high-risk violations increases, the odds of ISP completion declines. A positive relationship between reward total and ISP success was observed. More specifically, a one unit increase in the number of reinforcements received corresponds with a 50 percent increase in the odds of program success.

Ratio model. The ratio model examines whether the rewards to sanctions ratio is predictive of program completion. The chi-square is significant, and a R^2 value reveals the largest proportion of explained variation (.66) of any of the models tested. Three variables, *high-risk violations*, *behavioral responses*, and *behavioral ratio*, achieved statistical significance. As observed in the previous models, a negative relationship between high-risk violations and program completion is observed. A positive relationship between behavioral responses and ISP success was revealed, meaning that as the combined number of sanctions and rewards increases the odds of program completion is enhanced.

The most powerful predictor variable in the analysis is the ratio variable. As the reinforcers to punishers proportion widens, the odds of program success improves. To better illustrate this finding, predicted probabilities of program completion were calculated utilizing the logistic regression results.[8] This has been a technique used by researchers to aid in the difficult process of interpreting logistic regression coefficients (Roncek, 1991). In the current analysis, the probabilities of program success were calculated at varying rewards to punishments ratios while holding the other two statistically significant variables, high-risk violations and total behavioral responses, constant at their respective sample means (1.46, 6.14). These probabilities are presented in Figure 1.

<center>*<Insert Figure 1 about here>*</center>

Figure 1 reveals that individuals who experience a greater amount of punishments in relationship to incentives have a low likelihood of completing the WDOC ISP. For instance, the probability of an offender completing ISP with a 1:4 reward to punishment ratio is approximately 11 percent. The probability of success however is substantially enhanced when the ratio of rewards to punishments increases. Individuals who experience a 4:1 reward to punishment ratio have over a 71 percent probability of completing the program.

The s-shaped curve observed in Figure 1 also indicates the most substantial increases in the probability of program completion occur as the ratio shifts from a majority of punishments approach to a majority of rewards approach. For example, those individuals with a 1:2 reward to punishment ratio have an approximate 19 percent predicted probability of successful program completion. This probability of success increases substantially to approximately 36 percent with a 1:1 ratio and shows another substantial increase to almost 57 percent when rewards outnumber punishments at a 2:1 ratio. Once the proportion of rewards to punishments reaches the 4:1 ratio,

the growth in the probability of success begins to stabilize.

Discussion

Three clear themes emerge from the study findings. These findings have important

implications for the supervision practices of community-based correctional organizations. The

first involves the use of sanctions to improve supervision outcomes. Multivariate findings

revealed a positive relationship between sanctions received and the likelihood of program

success, meaning that as the number of sanctions imposed increases so does the likelihood of

completing ISP.

From a supervision perspective, our findings support the need to consistently hold offenders

accountable for their transgressions. This finding is consistent with prior behavioral research

showing that punishments are most effective in controlling unwanted behavior when

administered for every infraction (Arzin & Holz, 1966; Lester et al., 2004; Marlowe & Kirby,

1999). It is imperative, therefore, that correctional agencies assess current policies and practices

to better ensure consistency in delivering sanctions. This may involve increasing the capacity of

line staff to impose sanctions on recalcitrant offenders. It may also require changes in policy to

limit the discretion of supervision personnel in making sanctioning decisions to limit variation

when handling violations. A number of jurisdictions have incorporated sanctioning guidelines to

structure responses to offender noncompliance (Burke, 1997; 2004).

The second important finding stems from the effect of rewards on program outcomes. The

positive correlation observed between the frequency of reinforcements and the odds of program

success supports the need for community corrections professionals to reward offender

compliance. Furthermore, the greater proportion of explained variation between the sanction

model (Nagelkerke R^2 - .27) and reward model (Nagelkerke R^2 - .46) suggests that the

application of rewards holds more promise for improving program success than the use of

sanctions. Thus, it is essential that correctional agencies explore ways to encompass the use of

reinforcements into their supervision strategy. The Wyoming Department of Corrections, for

example, is experimenting with a reinforcement guideline system to improve consistency in the

reinforcement of prosocial behavior.

Incorporating the use of reinforcements into the management of offenders in the community

in a meaningful way will likely require more than simple policy changes but will necessitate a

paradigmatic shift in supervision philosophy. Contemporary supervision practices emphasize

surveillance and control over more traditional objectives of assisting offenders in their

rehabilitation (Feeley & Simon, 1992; Garland, 2001). Within this surveillance oriented

paradigm, attention is focused on detecting and punishing offender misconduct rather than

recognizing and rewarding prosocial accomplishments. Thus, organizational efforts to integrate

rewards into community supervision without first addressing ideological impediments will be

superficial at best.

The final theme emerging from this research involves the importance of utilizing rewards and

punishment in concert. The ratio model was the most robust of the three models (Nagelkerke R^2

- .66), which is consistent with previous behavioral research showing that punishments and

rewards are most effective when used in tandem (Arzin & Holz, 1966; Marlowe & Kirby, 1999).

This suggests that offender management strategies that incorporate both sanctions for

noncompliant behavior and rewards for conforming behavior will be most effective in improving

supervision outcomes.

The study's findings further support the need to utilize a proportionally higher number of

rewards to sanctions in the supervision of ISP offenders. As noted in Figure 1, the probability of

completing ISP increases substantially as the rewards to punishments ratio grows until a 4:1 ratio is achieved. At this point, increases in the probability of completion sharply diminish. Achieving a 4:1 ratio is widely promoted in the offender program literature as a way to maximize desired outcomes (e.g., Andrews & Bonta, 1998; Gendreau, 1996; Lester et al., 2004). The salience of maintaining a high reinforcements to punishments ratio has also been supported in behavioral research on classroom management and child rearing (Cavell, 2001). Probation and parole supervisors are therefore encouraged to closely train, monitor, and guide officers so that rewards are distributed in proportionally higher number than punishments.

Limitations and Directions for Future Research

The current study supports the efficacy of sanctions and rewards in improving offender supervision outcomes. These findings reinforce calls by prominent academics for correctional agencies to incorporate operant learning based interventions into the management of offenders in the community (Andrews & Bonta, 1998; Gendreau, 1996; Petersilia, 2007).   It is important to recognize however that the current study possess certain limitations that should be addressed in future research in order to provide on-going guidance to policymakers and practitioners in their efforts to incorporate behavioral strategies into supervision practices.

First, caution should be taken when generalizing the results of this study to other community corrections populations. It is important to recognize that the offender population from which the sample is drawn may not be representative of the national community corrections population. This specific sample, for example, is made up of mainly white offenders (78.5%). National statistics by contrast show that minority offenders make up a substantial proportion of offenders under community supervision (Glaze & Bonzcar, 2009). Additionally, it should be noted that the study was compose of offenders residing in a very rural state lacking the urban environment

found in other jurisdictions. There is also reason to believe that the study sample is composed of

a higher concentration of offenders who are more likely to experience successful community

corrections outcomes.   When compared to national statistics on the community corrections

population, offenders in the study sample were more highly educated and had less severe

criminal histories (Bonczar, 1997; Harlow, 2003). Prior research on predictors of community

corrections success has shown that offenders who exhibit these characteristics are more likely to

successfully complete their supervision (Morgan, 1994). While the affect of these differences on

study outcomes is unclear, efforts should be made to undertake behavioral research with more

varied offender populations.

   A second limitation of the current study is the inability to control for certain contextual

factors that might influence supervision outcomes. The decision of a supervising agent to pursue

revocation is often highly discretionary and can be influenced by a variety factors (Clear et al.,

1992; Kerbs, Jones, & Jolley, 2009; McCleary, 1975). Studies have revealed that officer-level

characteristics such as gender, race, and supervision philosophy may influence decisions to

pursue revocation in certain situations (Kerbs et al., 2009; McCleary, 1975). Research has also

shown a relationship between decisions to purse revocation and organizational factors such as

agency size, supervisor expectations, and organizational norms (Clear, Harris, & Baird, 1992;

Kerbs, et al., 2009; McCleary, 1975). Additionally, it should be noted that revocation decisions

can be shaped by outside political forces that influence both individual and organizational

responses to offender noncompliance (Grattet et al., 2008). A brutal crime committed by an

offender under community supervision for example may result in political pressure that causes

individual officers to be less tolerant of offender transgressions. This same political pressure

may also bring about agency-level policy changes that dictate more rapid termination of

noncompliant probationers and parolees. Thus, it is imperative for future studies to incorporate these contextual variables into the research design in order to explore the potential ways in which the effectiveness of sanctions and rewards may be influenced by these factors.

The present study is also limited by its inability to explore the capacity of specific types of rewards and sanctions to bring about desired outcomes. Behavioral interventions are subjective in nature, meaning that what might be rewarding to one might be punishing to another (Marlowe & Kirby, 1999). There is a need, therefore, to continue research to better understand how offenders perceive various types of reinforcements and punishments to assist line staff in administering these interventions in an effective manner (Wodahl, Ogle, Kadleck, & Gerow, in press).

Finally, correctional interventions often produce unintended or collateral consequences that limit or undermine their effectiveness (Morris & Tonry, 1990). Behavioral research has shown that punishments utilized in an extreme or haphazard manner often create undesirable results such as the learning of aggression or the triggering of escape behavior (Marlowe & Kirby, 1999; Meyers, 2001). It is therefore foreseeable that behavioral interventions if implemented in a reckless manner can have detrimental effects on supervision outcomes. Future research should explore these unintended consequences in order to assist correctional agencies in anticipating these challenges and developing strategies to overcome them.

References

Andrews, D. A., & Bonta, J. (1998). *The psychology of criminal conduct*. Cincinnati, OH:

Anderson Publishing Co.

Arzin, N. H., & Holz, W. C. (1966). Punishment. In W. K. Honig (Ed.), *Operant behavior:*

Areas of research and application, (pp. 380-447). New York: Appleton-Century-Crofts.

Benedict, W. R., & Huff-Corzine, L. (1997). Return to the scene of the punishment: Recidivism

of adult male property offenders on felony probation, 1986-1989. *Journal of Research in*

Crime and Delinquency, 34, 237-252.

Bonczar, T. P. (1997). Characteristics of adults on probation, 1995. Washington, D.C.: U.S.

Department of Justice.

Burdon, W. M., Prendergast, M. L., Eisen, V., & Messina, N. P. (2003). Sanctions and rewards

in prison-based therapeutic community treatment. *Federal Probation*, *67*(2), 47-52.

Burdon, W., Roll, J. M., Prendergast, M., & Rawson, R. (2001). Drug courts and contingency

management. *Journal of Drug Issues, 31*, 73-90.

Bureau of Justice Statistics. (1990). *National corrections reporting program, 1985* (NCJ

Publication No. 123522). Washington, DC: U.S. Government Printing Office.

Burke, P. B. (1997). *Policy-driven responses to probation and parole violations*. Washington,

D.C.: National Institute of Corrections.

Burke, P. B. (2004). *Parole violations revisited: A handbook on strengthening parole*

practices for public safety and successful transition to the community.

Retrieved October 15, 2006 from www.nicic.org.

Cavell, T. A. (2001). Updating our approach to parent training: The case against targeting

noncompliance. *Clinical Psychology: Science and Practice, 8*, 299-318.

Clear, T. R., Harris, P. M., & Baird, S. C. (1992). Probationer violations and officer response.

Journal of Criminal Justice, 20, 1-12.

Clear, T. R., & Rose, D. R. (2003). Individual sentencing practices and aggregate social

problems. In D.F. Hawkins, S.L. Myers, Jr. & R.N. Stone (eds.), *Crime control and*

social justice: The delicate balance. Westport, CT: Greenwood Press.

Criminal Justice Policy Council (2002). *Trends, profile and policy issues related to felony*

probation revocations in Texas. Retrieved November 12, 2005, from

http://www.nicic.org/Library/017748.

Feeley, M. M., & Simon, J. (1992). New penology: Notes on the emerging strategy of

corrections and its implication. *Criminology*, *30*, 449-474.

Friedmann, P. D., Rhodes, A. G., & Taxman, F. S. (2009). Collaborative behavioral

management: Integration and intensification of parole and outpatient addiction treatment

services in the Step'n Out study. *Journal of Experimental Criminology, 5,* 227-243.

Garland, D. (2001). *The culture of control: Crime and social order in contemporary*

society. Chicago, IL: University of Chicago Press.

Gendreau, P. (1996). The principles of effective intervention with offenders. In A. Harland

(Ed.), *Choosing correctional options that work*, (pp. 117-130). Thousand Oaks, CA: Sage

Publications, Inc.

Gendreau, P., Cullen, F. T., & Bonta, J. (1994). Intensive rehabilitation supervision: The next

generation of community corrections programs? *Federal Probation, 58*(1), 72-78.

Glaze, L. E., & Bonzcar, T. P. (2006). *Probation and parole in the United States, 2005*.

Washington, D.C.: U.S. Department of Justice.

Glaze, L. E., & Bonczar, T. P. (2009). *Probation and parole in the United States, 2008,*

Statistical Tables. Washington, D.C.: U.S. Department of Justice.

Graham, W. F., & Wexler, H. K. (1997). The Amity Therapeutic Community Program

    at Donovan Prison: Program description and approach. In G. De Leon (Ed.),

    Community as method: Therapeutic communities for special populations and

    special settings (pp. 69-86). Westport, CT: Praeger.

Grattet, R., Petersilia, J., & Lin, J. (2008). *Parole violations and revocations in California.*

    Retrieved May 17, 2009, from http://www.ncjrs.gov/pdffiles1/nij/grants/224521.pdf.

Gray, M. K., Fields, M., & Maxwell, S. R. (2001). Examining probation violations: Who,

    what, and when. *Crime & Delinquency, 47*, 537-557.

Harlow, C. W. (2003). Education and correctional populations. Washington, D.C.: U.S.

    Department of Justice.

Inciardi, J. A., Martin, S. S., & Butzin, C. A. (2004). Five-year outcomes of therapeutic

    community treatment of drug-involved offenders after release from prison.

    Crime and Delinquency, *50*, 88-107.

Jeffrey, C. R. (1965). Criminal behavior and learning theory. *The Journal of Criminal Law,*

    Criminology, and Police Science, 56, 294-300.

Jones, M. (1995). Predictors of success and failure on intensive probation supervision.

    American Journal of Criminal Justice, 19, 239-254.

Kerbs, J. J., Jones, M., & Jolley, J. M. (2009). Discretionary decision making by probation and

    parole officers: The role of extralegal variables as predictors of responses to technical

    violations. *Journal of Contemporary Criminal Justice, 25*, 424-441.

Kim, D. Y., Joo, H. J., & McCarty, W. P. (2008). Risk assessment and classification of day

reporting center clients: An actuarial approach. *Criminal Justice and Behavior, 35,* 792-

812.

Langan, P. A. & Cunniff, M.A. (1992). *Recidivism of felons on probation*. Washington DC:

Bureau of Justice Statistics.

Lester, D., Braswell, M., & Van Voorhis, P. (2004). Radical behavioral interventions. In P. Van

Voorhis, M. Braswell, & D. Lester (Eds.), *Correctional counseling & rehabilitation* (5th

ed.), (pp. 61-82). New York: Matthew Bender & Company, Inc.

Lindquist, C. H., Krebs, C. P., & Lattimore, P. K. (2006). Sanctions and rewards in drug court

programs: Implementation, perceived efficacy, and decision making. *The Journal of

Drug Issues, 36*, 119-146.

Little Hoover Commission (2003). *Back to the community: Safe and sound parole

policies*. Sacramento, CA: Little Hoover Commission.

Lurigio, A. J., & Petersilia, J. (1992). The emergence of intensive probation supervision

programs in the United States. In J. M. Byrne, A. J. Lurigio, & J. Petersilia (Eds.), *Smart

Sentencing: The Emergence of Intermediate Sanctions*, (pp. 3-17). Newburry Park, CA:

SAGE Publications.

Marlowe, D. B. (2007). Strategies for administering rewards and sanctions. In J. Lessenger &

G. Roper (Eds.), *Drug courts: A new approach to treatment and rehabilitation*, (pp.

317-336). New York: Springer.

Marlowe, D. B., Festinger, D. S., Dugosh, K. L., Arabia, P. L., & Kirby, K. C. (2008). An

effectiveness trial of contingency management in a felony preadjudication drug court

Journal of Applied Behavioral Analysis, 41, 565-577.

Marlowe, D. B., & Kirby, K. C. (1999). Effective use of sanctions in drug courts: Lessons from

behavioral research. *National Drug Court Institute Review*, *2*, 1-32.

McCleary, R. (1975). How structural variables constrain the parole officer's use of discretionary

powers. *Social Problems, 23*, 209-225.

Mertler, C. A., & Vannatta, R. A. (2005). *Advanced and multivariate statistical methods:*

Practical application and interpretation. Los Angeles: Pyrczak.

Morgan, K.D. (1994). Factors associated with probation outcome. *Journal of Criminal*

Justice, 22, 341-353.

Myers, D. G. (2001). *Psychology* (6th ed.). New York: Worth Publishers.

Nagelkerke, N.J.D. (1991). A note on a general definition of the coefficient of determination.

Biometrika, 78, 691-692.

National Institute on Drug Abuse. (2002). *Therapeutic community*. National Institute on Drug

Abuse Research Report Series. Washington, DC: U.S. Department of Health and Human

Services.

Olson, D. E., & Lurigio, A. J. (2000). Predicting outcomes: Factors associated with

probation rearrest, revocations, and technical violations during supervision. *Justice*

Research and Policy, 2(1), 73-86.

Petersilia, J. (1998). A decade of experimenting with intermediate sanctions: What have we

learned? *Federal Probation, 62*(2), 3-10.

Petersilia, J. (2003). *When prisoners come home: Parole and prisoner reentry*. New York:

Oxford University Press.

Petersilia, J. (2007). Employ behavioral contracting for "earned discharge" parole.

Criminology & Public Policy, 6(4), 807-814.

Petersilia, J., & Turner, S. (1993). *Evaluating intensive supervision probation/parole: Results*

of a nationwide experiment. Washington, D.C.: National Institute of Justice.

Prendergast, M. (2009). Interventions to promote successful re-entry among drug abusing

parolees. *Addiction Science and Clinical Practice, 5*, 4-12.

Prendergast, M., Hall, E. A., Roll, J., Warda, U. (2008). Use of vouchers to reinforce

abstinence and positive behaviors among clients in a drug court treatment

program. *Journal of Substance Abuse Treatment, 35*, 125-136.

Prendergast, M., Hall, E., Wexler, H., Melnick, G., & Cao, Y. (2004). Amity prison-based

therapeutic community: Five-year outcomes. *Prison Journal, 84*, 36-60.

Prendergast, M., Podus, D., Finney, J., Greenwell, L., & Roll, J. (2006).

Contingency management for treatment of substance use disorders: A meta-

analysis. *Addiction*, *101*, 1546-1560.

Rollo, V.N. Jr. (1988). 99 *days and a get up*. Dallas, TX: Open, Inc.

Roncek, D.W. (1991). Using logit coefficients to obtain the effects of independent

variables on changes in probabilities. *Social Forces, 70,* 509-518.

Sabol, W.J. & Lynch, J.P. (2003). Assessing the longer-run consequences of incarceration:

Effects on families and employment. In D.F. Hawkins, S.L. Myers, Jr. & R.N. Stone

(eds.), *Crime control and social justice: The delicate balance*. Westport, CT:

Greenwood Press.

Shaffer, D. K. (2006). *Reconsidering drug court effectivenss: A meta-analytic review*

 (TechnicalReport). Las Vegas, NV: University of Nevada.

Skinner, B. F. (1966). Operant behavior. In W. K. Honig (Ed.), *Operant behavior: Areas of

research and application*, (pp. 12-32). New York: Appleton-Century-Crofts.

Spohn, C., & Holleran, D. (2002). The effect of imprisonment on recidivism rates of felony

offenders: A focus on drug offenders. *Criminology, 40*, 329-357.

Swenson, L. C. (1980). *Theories of learning: Traditional perspectives/contemporary development*. Belmont, CA: Wadsworth Publishing Co.

Taxman, F. S. (1995). Intermediate sanctions: dealing with technical violators. *Corrections Today, 57*, 46-57.

Tonry, M. (1996). Stated and latent functions of ISP. In T. Ellsworth (Ed.), *Contemporary Community Corrections*, (pp. 185-202). Prospect Heights, IL: Waveland Press, Inc.

Tonry, M., & Lynch, M. (1996). Intermediate sanctions. In M. Tonry (Ed.) *Crime and justice: A review of research*, (pp. 99-144). Chicago, IL: Chicago University.

Travis, J. (2005). Families and children. *Federal Probation, 69* (1), 31-42.

Travis, J., & Lawrence, S. (2002) *Beyond the prison gates: The state of parole in America*. Washington, D.C.: The Urban Institute.

Travis, J., Solomon, A. L., & Waul, M. (2001). *From prison to home: The dimensions and consequences of prisoner reentry*. Washington, D.C.: The Urban Institute.

Welsh, W. N. (2007). A multisite evaluation of prison-based therapeutic community drug treatment. *Criminal Justice and Behavior, 34*, 1481-1498.

Whitehead, J. T. (1991). The effectiveness of felony probation: Results from an eastern state. *Justice Quarterly, 8*, 525-543.

Wilson, D. B., Mitchel, O., & MacKenzie, D. L. (2006). A systematic review of drug Court effects on recidivism. *Journal of Experimental Criminology*, *2*, 459–487.

Wodahl, E. J., Ogle, R., Kadleck, C., & Gerow, K. (in press). Offender perceptions of graduated sanctions, *Crime & Delinquency*.

Footnotes

[1] It is important to note that increasing offender compliance is only one available method to mitigate the effects of high revocation rates. Some jurisdictions have attempted to lessen the effects of declining success rates by limiting the consequences offenders' are eligible to receive when their supervision is terminated (Little Hoover Commission, 2003).

[2] WDOC ISP Agents supervise a mixed caseload of both probationers and parolees. Thus, both groups of offenders receive the same level of supervision and are subject to the same conditions and restrictions regardless of the nature of their release granting authority.

[3] The original target sample size for this project was 300 ISP offenders. However, due to missing data, 17 cases had to be dropped from the analyses, leaving a total sample size of 283. The target sample size of 300 offenders was identified primarily for pragmatic reasons. While it would have been ideal to include all 1382 offenders in the analysis, time and resource limitations made this impossible as much of the data had to be manually extracted from offender supervision files.

[4] The inclusion of this variable was based largely on preliminary bivariate findings, which revealed that property offenders were the type most prone to experiencing program failure.

[5] Department policy defines a drug involved offender as any offender who has used illicit drugs within 5 years of intake to supervision.

[6] The determination of whether the violation is considered high or low risk is ultimately made by the supervising agent based on a variety of factors including the seriousness of the transgression, the risk level of the offender, and the frequency of previous violations. An alcohol violation, for example, might be considered a low-risk violation for an offender with no history of alcohol related offenses and no previous violations while on ISP. For another offender however the same behavior might be considered high risk if that offender has a history of violence while under the influence and has had previous sanctions for consuming alcohol.

[7] More sophisticated models were explored such as those which incorporated interaction terms; however, the explanatory power of these more complicated models was no greater than the models presented in this article.

[8] The effects of the statistically significant independent variables on the change in probability of the dependent variable can be calculated using a two step approach (Roncek, 1991; see also Mertler & Vannatta, 2005; Kim, Joo, & McCarty, 2008). The first step involves using the natural logarithm of the predicted value of the odds (Equation 1). The second step entails transforming the odds to a probability by exponentiating the equation in the first step (Equation 2). In this case, the probability of ISP success for someone with a 4:1 ratio of rewards to punishments (or a behavioral ratio of 80), 1.46 high-risk violations (the sample average), and 6.14 behavioral responses (the sample average) can be calculated as follows:

Step 1.

$$\ln\left(\frac{\hat{p}}{1-P}\right) = a + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 + \cdots \qquad (1)$$
$$= \text{-}3.381 + .050 * (80) \text{ -}.766 * (1.46) + .231 * (6.14)$$
$$= 0.919$$

Step 2.

$$P = \frac{e^{\sum b_i x_i}}{1 + e^{\sum b_i x_i}} \qquad (2)$$
$$P = \frac{e^{.919}}{1 + e^{.919}}$$
$$P = .715 * 100 = 71.5\%$$

Table 1

List of WDOC ISP Sanctions and Rewards

Sanctions	Rewards
Verbal reprimand	Verbal praise/reinforcement
Written assignment	Good time
Modify curfew hours	Remove from electronic monitoring
Community service hours	Level advancement
Restrict visitation	Increased personal maintenance time
Program extension/regression	Approve special activity
Electronic monitoring	ISP fees reduced
Inpatient/Outpatient treatment	Approve/Extend special visitation
County Jail time	

Table 2

Description of Survey Sample

Demographic Characteristics			
Age	Mean: 31	Median: 28	Range: 18 - 78
Gender	**N**		**%**
Male	194		68.6
Female	89		31.4
Race/Ethnicity			
White	233		82.3
Non-white	50		17.7
Marital Status			
Married	64		22.6
Not Married	219		77.4
Education			
< H.S. Grad	59		20.8
≥H.S. Grad/GED	224		79.2
Criminal History/Substance Abuse Characteristics			
Prior Felony Conviction			
Yes	102		36.0
No	181		64.0
Prior Revocation			
Yes	139		49.1
No	144		50.9
Current Offense Type			
Property	106		37.5
Drug	85		30.0
Violent	42		14.8
Sex	41		14.5
Other	9		3.2
Release Type			
Probation	192		67.8
Parole	91		32.2
Drug Problem			
Yes	203		71.7
No	80		28.3
WDOC ISP Behavior Characteristics			
ISP Violation			
Yes	230		81.3
No	53		18.7
New Crime			
Yes	46		16.3
No	237		83.7
Absconded Supervision			
Yes	28		9.9
No	255		90.1
Type of Discharge			
Successful	180		63.6
Failure	103		36.4
Total Sample Size	283		

Table 3

WDOC ISP Sanctions and Rewards Descriptive Analysis

Sanction Experiences					
Number of Sanctions	Mean: 2.7		Median: 2	Range: 0 - 10	
Experienced ISP Sanction	**N**			**%**	
Yes	227			80.2	
No	56			19.8	
Sanction Type Received					
Program regression	105			37.1	
Take good time	97			34.3	
Jail sanction	97			34.3	
Verbal reprimand	70			24.7	
Electronic monitoring	55			19.4	
Community service	60			17.7	
Outpatient treatment	41			14.5	
Written assignment	18			6.4	
Reduce PMT	16			5.7	
Inpatient treatment	15			5.3	
Community Corrections	14			4.9	
Reward Experiences					
Number of Rewards	Mean: 3.5		Median: 3.0	Range: 0 - 11	
Experienced ISP Reward	**N**			**%**	
Yes	233			82.3	
No	50			17.7	
Reward Type Received					
Level advancement	206			72.8	
Verbal praise	124			43.8	
Special activity	98			34.6	
Remove EM	78			27.6	
Increase PMT	37			13.1	
Good time	22			7.8	
Reduce ISP fees	6			2.1	
Special visitation	4			1.4	

Table 4

Logistic Regression Models Predicting ISP Success

Sanction Model					Reward Model					Ratio Model				
Variables	b	SE	Exp(b)	Std. b[a]	Variables	b	SE	Exp(b)	Std. b	Variables	b	SE	Exp(b)	Std. b
Age	.001	.017	1.001	.011	Age	.040	.025	1.041	.424	Age	.028	.023	1.028	.297
Sex (male)[b]	.090	.343	1.094	.042	Sex (male)	.271	.459	1.311	.126	Sex (male)	.042	.436	1.043	.020
Race (white)	-.203	.395	.816	-.078	Race (white)	.256	.537	1.292	.098	Race (white)	.356	.495	1.428	.136
Education (>Diploma/GED)	-.266	.372	.766	-.108	Education (>Diploma/GED)	.269	.516	1.308	.109	Education (>Diploma/GED)	.097	.473	1.102	.039
Marital (married)	.361	.379	1.435	.151	Marital (married)	.719	.502	2.052	.301	Marital (married)	.738	.481	2.091	.309
Prior Felony (no prior felony)	.084	.338	1.088	.040	Prior Felony (no prior felony)	.366	.469	1.441	.176	Prior Felony (no prior felony)	.139	.431	1.149	.067
Offense Type (non-property)	-.518	.320	.596	-.251	Offense Type (non-property)	-.377	.439	.686	-.183	Offense Type (non-property)	-.080	.409	.923	-.039
Prior Revocation (no revocation)	-.735*	.327	.480	-.368	Prior Revocation (no revocation)	-.409	.441	.664	-.205	Prior Revocation (no revocation)	-.104	.423	.901	-.052
Drug Use (no drug use)	-.157	.365	.855	-.071	Drug Use (no drug use)	-.385	.483	.680	-.174	Drug Use (no drug use)	-.561	.457	.570	-.253
High Risk Violations	-.938*	.209	.391	-1.210	High Risk Violations	-.950*	.189	.387	-1.226	High Risk Violations	-.766*	.220	.465	-.988
New Crime Violations	-.656	.400	.519	-.242	New Crime Violations	-.484	.513	.616	-.179	New Crime Violations	-.343	.469	.710	-.127
Sanction Total	.382*	.115	1.465	.898	Reward Total	.410*	.107	1.506	1.087	Behavioral Responses	.231*	.076	1.260	.848
										Behavioral Ratio	.050*	.008	1.051	1.726
Constant	.601	.824	1.824		Constant	-.579	1.142	.560		Constant	-3.381	1.167	.034	
N = 227[c]					N = 233[c]					N = 283				
Model x^2 – 50.27*					Model x^2 – 86.39*					Model x^2 - 184.51*				
Nagelkerke R^2 - .27					Nagelkerke R^2 - .46					Nagelkerke R^2 - .66				

Note. [a] Semi-standardized coefficients are calculated by multiplying the *b* coefficient times the standard deviation of the corresponding independent variable. [b]Label in parentheses reflects reference category for dichotomous variables. [c]As the purpose of these analyses was to isolate the effects of the sanctions and rewards on offenders who experienced them first-hand, offenders who received no sanctions on ISP were excluded from the sanction model and those who experienced no rewards were excluded from the reward model. *p < .05

Figure 1. Ratio of rewards to sanctions and the predicted probability of ISP success.

Biographical Sketch

Eric J. Wodahl is an assistant professor of criminal justice at the University of Wyoming. He received his Ph.D. in criminal justice from the University of Nebraska at Omaha in 2008. His research interests include alternatives to revocation for noncompliant offenders, prisoner reentry, and rural issues in the criminal justice field.

Brett Garland is an assistant professor in the Department of Sociology, Anthropology, and Criminology at Missouri State University. He has worked as a reentry coordinator with the Indiana Department of Correction and as a caseworker in a juvenile group home. His current research interests include prisoner reentry, correctional management and staff, and juvenile justice policies and programs.

Scott E. Culhane is an Assistant Professor in the Department of Criminal Justice at the University of Wyoming. His research program focuses on jury decision making with a particular interest in the presentation of alibi witnesses, the formation of alibi statements, and the ability to detect lying in such statements. Other interests include psychometric evaluations of psychological scales in minority samples.

William P. McCarty is an Assistant Professor in the Department of Criminology, Law and Justice at the University of Illinois-Chicago. He received his Ph.D. in criminal justice from the University of Nebraska at Omaha in 2008. His research interests include neighborhoods and crime, correctional staff and management, policing, and quantitative research methods.