

Exit Status of Probationers and Prison-Bound Offenders in an Electronic Monitoring Home Detention Program: A Comparative Study

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A VARIETY OF “intermediate sanctions” is used for accused and convicted offenders in the United States. “Intermediate sanctions” comprise a continuum of punishments between traditional/regular probation and imprisonment. Electronically-monitored home detention (EMHD) is one of those intermediate sanctions. “Electronic monitoring, which is used to enforce the conditions of release for criminal offenders, strengthens the ability of corrections officials and law enforcement authorities to supervise offenders in the community by keeping them under closer surveillance than they otherwise could” (Barry, 2009, p. 1). In the United States, the first EMHD program for adult offenders was established by the Palm Beach County, Florida, Sheriff’s Department as an in-house arrest work-release program in 1984 (Brown & Roy, 1995). EMHD programs are used to monitor varied types of defendants and offenders “who may be under the supervision of pretrial release, prison or jail release programs, probation, or parole” (Barry, 2009, p. 2). In several jurisdictions, convicted offenders are also placed in these programs in lieu of a jail sentence. As for offense types, these programs across the United States include varied types of defendants and offenders, e.g., those charged with as well as convicted for personal offenses, property offenses, and also drunk driving (Di Tella & Schargrodsky, 2009). These are non-residential programs. Hence, participants in these programs are allowed to stay at their own residences, continue their employment and/or education, avail themselves of treatment/counseling, and maintain their family ties (Ball, Huff, & Lilly, 1988). In the United States, numerous

research findings on the EMHD programs have been reported since the late 1980s. Individually, some of the studies “provide snapshots of the field implementation of electronic monitoring programs, delivered by a specific organization in a particular setting for a particular group of offenders” (Baumer, Maxfield, & Mendelsohn, 1993, p. 124). Also, some previous researchers included small samples of offenders (Lilly, Ball, & Wright, 1987; Charles, 1989). The majority of previous researchers focused on individual program completion percentages, factors related to the participants’ failure in completing their programs, and to some extent on post-program recidivism among the participants who had successfully completed their programs. Also, some previous researchers reviewed electronic monitoring from a crime-control perspective (e.g., Barry, 2009). Only a few authors have focused on the specific types of offenders (e.g., convicted drunk drivers) placed on EMHD programs (Barton & Roy, 2008; Roy & Barton, 2006; Minnesota Department of Corrections, 2002; Jones & Lacey, 2000). However, the fact remains that no comparative study has been conducted when different types (e.g., probationers and prison-bound offenders) are sentenced to these programs. Given that context, the purpose of the present study is to focus on probationers and prison-bound offenders sentenced to an EMHD program in a Midwestern county. In this Midwestern county, two types of convicted offenders are sentenced to the EMHD program. First, convicted offenders are sentenced to this program as an additional condition to their probation sentences. Second, convicted offenders who are sentenced to at least two years of prison

are placed in this program to save taxpayers’ money. This study included these two types of convicted offenders who were placed in this EMHD program and completed or failed to complete their sentences from the beginning of 2007 through the end of 2010 (four-year time period). Specifically, the objective of this study was to expand on the literature by focusing on the “exit status” of the probationers and prison-bound offenders sentenced to the EMHD program during the four-year study period.

Previous Research

A review of previous research indicates that the majority of these programs administered in the U.S. involve non-violent offenders and those with non-violent offense records (Barton & Roy, 2008; Finn & Muirhead-Steves, 2002; Roy, 1999, 1997; Zhang, Polakow, & Nidorf, 1995; Brown, & Roy, 1995; Baumer, Maxfield, & Mendelsohn, 1993; Coopridge, 1992; Lilly, Ball, Curry, & Smith, 1992; Vaughn, 1991, 1987; Clarkson & Weakland, 1991; Kuplinski, 1990; Charles, 1989; Blomberg, Waldo, & Burcroff, 1987; Lilly, Ball, & Wright, 1987). Also, some programs supervise only those offenders who are sentenced to jail or prison for a given number of days (Roy, 1999, 1997; Lilly, Ball, & Wright, 1987). On the other hand, some programs exclude offenders who have pending charges or have records of absconding (Kuplinski, 1990). Furthermore, some programs exclude offenders who have multiple felony convictions, require in-patient substance abuse treatment, or are serving intermittent sentences (Brown & Roy, 1995).

Overall, previous researchers have focused on such aspects of these programs as viable

crime control strategies, the monitoring devices, cost analysis, percentages of offenders successfully exiting these programs, factors predicting offenders' successful exit, and post-program recidivism. Although the selection criteria vary from one jurisdiction to another, previous research reports indicate that between 57 percent and 92 percent of the offenders sentenced to these programs exited successfully.

- 97% in the West Palm Beach, Florida program (Lilly, Ball, Curry, & Smith, 1992)
- 94% in the Palm Beach County, Florida program (Friel & Vaughn, 1986)
- 93.5% across three programs in Indiana (Baumer, Maxfield, & Mendelsohn, 1993)
- 92% in the St. Paul, Minnesota program (Minnesota Dept. of Corrections, 2002)
- 91.4% in the Kenton County, Kentucky program (Lilly, Ball, & Wright, 1987)
- 91% in the Clackamas County, Oregon program (Rogers & Jolin, 1989)
- 90% across six programs in Virginia (Kuplinski, 1990)
- 90% in an evaluation of ten programs across the U.S. (Vaughn, 1987)
- 87% in the Harris County, Texas program (Enos, Black, Quinn, & Holman, 1992)
- 82% in the Oneida County, New York program (Brown & Roy, 1995)
- 81.6% in the Vigo County, Indiana program (Roy, 1994)
- 76% in the Vigo County, Indiana program (Barton and Roy, 2008)
- 75% in the Lake County, Indiana program (Roy, 1994)
- 75% in a national survey (Renzema & Skelton, 1990)
- 70% in the Palm Beach County, Florida Sheriff's Department In-house Arrest Program (Palm Beach County, Florida Sheriff's Department, 1987)
- 57% in the Dallas County, Texas program (Enos, Black, Quinn, & Holman, 1992).

Several previous researchers have focused on "exit status" of offenders placed in these programs. For instance, results from a national survey conducted by Renzema and Skelton (1990) revealed that an offender's age and sentence length were predictive of "exit status." They reported that offenders older than 35 years of age and offenders placed in these programs for more than six months were more likely to exit successfully than their younger cohorts and offenders placed in these programs for up to six months. Although the finding on an offender's age has been confirmed in the literature (Barton & Roy, 2008; Roy, 1999, 1997, 1994; Brown

& Roy, 1995; Lilly, Ball, Curry, & McMullen, 1993), the finding on an offender's sentence length from the national survey has not been supported by a number of previous studies (Roy, 1999, 1997; Brown & Roy, 1995). Several other factors have also been reported to be significantly related to "exit status," such as charge reduction (Barton & Roy, 2008), employment status (Roy, 1999; Lilly, Ball, Curry, & McMullen, 1993), gender, prior convictions (Roy, 1999; Lilly, Ball, Curry, & McMullen, 1993), income (Lilly, Ball, Curry, & McMullen, 1993), number of prior offenses, substance abuse history, prior institutional detention, and prior community corrections placement (Barton & Roy, 2008; Roy, 1997, 1994; Brown & Roy, 1995).

Furthermore, a cursory review of previous research indicates that offenders placed in these programs include varied types of offenders convicted for personal offenses, property offenses, traffic offenses (e.g., habitual traffic offenders, driving with suspended licenses, etc.), and also drunk driving. Barton and Roy (2008) reported that the following variables were significant predictors of successful exit from that program: age group, charge reduction, sentence length, prior drunk-driving record, prior drug/alcohol offense, and prior community corrections placement. They reported that (1) older-aged offenders (35 years and above), (2) offenders with no charge reduction, (3) offenders placed in the program for up to six months, (4) offenders with no prior drunk-driving record, (5) offenders with no prior drug/alcohol related offense, and (6) offenders with no prior community corrections placement had successfully exited the programs, compared to their cohorts.

In another study, Courtright, Berg, and Mutchnick (2000) investigated the factors significantly related to successful exit of the participants in the Western County, Pennsylvania program. The authors reported that employment (employed offenders had higher percentages of success than unemployed offenders), marital status (married offenders were more successful than unmarried offenders), and prior offense records (offenders with no prior offense records had higher percentages of success than those with prior records) were significantly related to successful exit during their one-year study period. The authors had conducted an earlier study in 1997 on the same program; however, in this 1997 study, they focused on cost analysis exclusively.

Lilly, Ball, Curry, and McMullen (1993) conducted a seven-year study on convicted offenders sentenced to the EMHD program administered by Pride Incorporated in Palm Beach County, Florida. The authors reported that 97 percent of the participants successfully completed their sentences. They also reported that gender (female offenders were more successful than male offenders), age (offenders more than 40 years old had more success than younger offenders), employment (employed offenders were more successful than their unemployed cohorts), and income (offenders who had more than \$10,000 annual income had more success than those with less than \$10,000 annual income) were significantly related to successful exit from that program.

Also, in 1986, Tuthill examined post-program recidivism among 60 convicted drunk drivers who successfully exited the EMHD program in Lynn County, Oregon, during a one-year study period. Tuthill reported that only 3 participants recidivated after successfully exiting from the EMHD program; no further analysis was reported by the author.

A review of previous research on offenders convicted for various types of offenses and placed in EMHD programs indicated that the following factors related to successful exit of the offenders from EMHD programs: gender (Lilly, Ball, Curry, & McMullen, 1993), age (Barton & Roy, 2008; Lilly, Ball, Curry, & McMullen, 1993), income (Lilly, Ball, Curry, & McMullen, 1993), marital status (Courtright, Berg, & Mutchnick, 2000), employment (Courtright, Berg, & Mutchnick, 2000; Lilly, Ball, Curry, & McMullen, 1993), prior offense records (Courtright, Berg, & Mutchnick, 2000), charge reduction, sentence length, prior drunk-driving records, prior drug/alcohol offenses, and prior community corrections placement (Barton & Roy, 2008).

As mentioned earlier, the purpose of this study was to investigate the "exit status" of probationers and prison-bound offenders sentenced to the EMHD program (in the Midwestern county) during the four-year study period. Hence, the outcome measure used in this study was "exit status" of those two types of convicted offenders. The following research questions were investigated in this study: (a) Were there any significant differences between the probationers and prison-bound offenders in terms of "exit status"? and (b) If so, which factors statistically significantly differentiated the "exit status" of the successful participants of the two groups?

Method

Data Sources and Subjects

The data for this study were collected from the individual offender case files maintained by the County Community Corrections Office. The subjects included in this study were 246 convicted offenders (124 probationers and 122 prison-bound offenders) sentenced to the EMHD program and having completed (either successfully or unsuccessfully) their sentences from the beginning of 2007 through the end of 2010 (four-year time period). Detailed information regarding the subjects' prior offense history and prior sanctions/placements was gathered from the criminal history information system maintained by the County Superior Court.

The following independent variables were used in this study: race (whites, coded 1; non-whites, coded 0), sex (male, coded 1; female, coded 0), age (was initially recorded as a continuous variable), education (high school or less, coded 1; more than high school, coded 0), employment (full-time, coded 1; part-time, coded 2; unemployed, coded 0), marital status (married, coded 1; not married, coded 0), offense type (felony, coded 1; misdemeanor, coded 0), drug/alcohol related offenses (yes, coded 1; not noted, coded 0), type of sentence (probation, coded 1; prison-bound, coded 0), prior offense (yes, coded 1; not noted, coded 0), prior detention [in an institution] (yes, coded 1; not noted, coded 0), prior community corrections placement (yes, coded 1; not noted, coded 0). The last one was sentence length, i.e., the number of days spent by the subjects under EMHD supervision. The data on this variable was initially recorded as a continuous variable. The dependent variable "exit status" was coded dichotomously (successful exit, coded 0; unsuccessful exit, coded 1).

The majority of the subjects were whites ($n = 212$; 86.2 percent), and male ($n = 211$; 85.8 percent). As for age, the range was 18 to 65 years, with a mean of 34.09 years. Regarding marital status, the distribution was: 131 single (53.2 percent); 54 married (22 percent); 56 divorced (22.8 percent), and 5 widowed (2 percent). The data on education revealed that 198 participants (80.5 percent) had high school or less than high school education, and the remaining 48 participants (19.5 percent) had more than high school education. Data were also collected on employment status. The distribution was: 177 employed full-time (72 percent); 45 employed part-time (18 percent), and 24 unemployed (10 percent). As

for offense type, 216 subjects (88 percent) were felons, while the remaining 30 subjects (12 percent) were misdemeanants. Regarding type of sentence, 124 subjects (50.4 percent) were probationers, while the remaining 122 subjects (49.6 percent) were prison-bound. Regarding other prior drug/alcohol offenses, the majority of the subjects ($n = 135$, or 54.9 percent) had no such records. The data on prior offenses revealed that 142 subjects (57.7 percent) had no record of prior offenses, while the remaining 104 subjects (42.3 percent) had records of prior offenses. Among the 246 subjects, 86 individuals (35 percent) had records of prior institutional detention, and 47 subjects (19.1 percent) had records of prior placements in community corrections. As for sentence length, the range was from 30 days to 739 days, with a mean of 200.84 days.

Recoding of Independent Variables

Two continuous independent variables—age and sentence length—were recoded for the purpose of data analyses. Age was categorized as: (a) Age-group I (18 to 35 years, coded 1) and (b) Age-group II (36 to 65 years, coded 0). Age-group I included 150 subjects (61 percent), while Age-group II consisted of 96 subjects (39 percent). The data on sentence length were dichotomized as: (a) Sentence length group I (up to 180 days, coded 0), and (b) Sentence length group II (181 to 739 days, coded 1). After recoding, the majority of the subjects ($n=166$ or 67.5 percent) were included in Sentence length group I; the remaining 80 subjects (32.5 percent) were in Sentence length group II.

Empirical Specifications

Correlation coefficients were calculated to test for multicollinearity among the independent variables. The coefficients were uniformly small; therefore, all the independent variables were retained for inclusion in discriminant analysis.

Given the dichotomous coding of the outcome measure "exit status" (successful/unsuccessful exit), and to find out the answers to the research questions, discriminant analysis was computed. Discriminant analysis creates a linear combination of the predictor variables that provides the best discrimination between the groups of subjects (Leech, Barrett, & Morgan, 2008). The discriminant analysis calculates the effects of the collection of predictor or independent variables on successful exit of the two groups of subjects included in this study.

Findings

As mentioned earlier, this study included 246 subjects (124 probationers and 122 prison-bound offenders). Among all the subjects, 161 individuals (65.4 percent) successfully exited the home detention program; the remaining 85 subjects (34.6 percent) failed to complete the program successfully.

To find the answers to the research questions, discriminant analysis was computed. All 13 independent variables were used in the analysis. Only 4 (see table 1) were found to be statistically significant predictors of successful exit for the subjects: age-groups ($p<.05$), prior offense ($p=.005$), prior detention ($p<.005$), and prior placement in community corrections ($p<.0005$). All 4 of the significant independent variables in the discriminant analysis identified a statistically significant difference between the two groups of subjects in successfully exiting the program.

The F-value ($F = 6.643$) was obtained from the significance test of the Mahalanobis' distance between groups. The computed significant difference between the two groups of subjects was 0.000. In other words, the significance of difference between the two groups of subjects was less than 0.0005 ($p<.0005$). The significant F value demonstrated that there was a significant difference between probationers and prison-bound offenders in successfully completing their court-ordered home detention sentences.

Overall, the discriminant analysis provided answers to the two research questions. First, there was a statistically significant difference between the two groups of subjects in successfully exiting the home detention program. Second, age-groups, prior offense, prior detention, and prior placement in community corrections—these four significant independent variables made the difference between the two groups of subjects.

Since the discriminant analysis demonstrated statistically significant difference between probationers and prison-bound offenders in successfully exiting the home detention programs, further analyses were computed for each group individually. These analyses revealed several noteworthy findings.

Regarding exit status, among the 124 probationers, 100 subjects (80.6 percent) successfully exited the program, while 24 subjects (19.4 percent) failed. In contrast, among the 122 prison-bound subjects, 61 individuals (50 percent) successfully exited; the remaining 61 subjects (50 percent) in this group failed.

TABLE 1.

Discriminant Analysis Comparing Probationers and Prison-bound Offenders for Successful Exit

Variables	Wilk's Lambda	F statistic	Significance
Age groups	.974	4.214	.04
Prior offense	.949	4.256	.005
Prior detention	.958	6.930	.003
Prior placement in community corrections	.977	3.703	.000
Difference between two groups of subjects	.469	6.643	.000

Percent correctly classified: 87%

As for age groups, a significant relationship did exist between age groups and exit status (Cramer's $V = .455$, $p < .005$). Among the 124 probationers, 85 subjects were up to 35 years of age (age-group 1) and 39 subjects older than 35, thus belonging to age-group II. In age-group I, 70 individuals (82 percent) were successful, and 15 (18 percent) failed. In age-group II, 30 individuals (77 percent) successfully exited the program, while 9 (23 percent) failed. On the other side, among the 122 prison-bound offenders, 65 subjects belonged to age group I and 57 subjects belonged to age-group II. Age group I of the prison-bound had 33 subjects (51 percent) successfully exit the program, and age group II had 28 subjects (49 percent) successful; in contrast; 32 subjects (49 percent) in age-group I and 29 subjects (51 percent) in age-group II failed.

Regarding prior offense, among the probationers, 33 subjects had prior offense records; 24 subjects (73 percent) failed to complete the program, while 9 subjects (27 percent) were successful. Compared to these 33 subjects, 91 probationers had no prior offense records; all these 91 subjects (100 percent) successfully exited from the program. Among the prison-bound offenders, 71 subjects had prior offense records; 61 (86 percent) of them failed and only 10 (14 percent) of the subjects were successful. Also, among the prison-bound offenders, 51 subjects had no such records, and all of them (100%) successfully exited from the program (Cramer's $V = .395$, $p < .005$).

Prior detention (in institutions) was the third independent variable that contributed to the significant difference between probationers and prison-bound offenders in successfully exiting the program. Twenty-three probationers had records of prior detention; all of them (100 percent) failed to complete the program. Conversely, 101

probationers had no records of prior detention; among them 100 subjects (99 percent) were successful, while only 1 subject (1 percent) failed. Among the prison-bound offenders, 63 subjects had prior detention records; 59 (94 percent) of them failed, and only 4 (6 percent) of them were successful. In contrast, 59 prison-bound offenders had no prior detention records; 57 (97 percent) of them were successful, and only 2 subjects (3 percent) failed (Cramer's $V = .298$, $p < .0005$).

As for prior placement in community corrections, 12 subjects in the probation group and 35 subjects in the prison-bound group had records of such placement. Among these subjects, 8 (67 percent) individuals in the probation group and 7 (20 percent) subjects in the other group successfully exited. Conversely, 4 (33 percent) subjects in the probation group and 28 (80 percent) subjects in the prison-bound group failed to complete the program. Compared to these subjects, 112 individuals in the probation group and 87 subjects in the prison-bound group had no records of such placement. Among these subjects, 92 (82 percent) individuals in the probation group and 60 (68 percent) individuals in the other group had successful exit from the program (Cramer's $V = .286$, $p < .0005$).

In sum, the data analyses for this study unveiled a number of noteworthy findings for the probationers and prison-bound offenders placed in the home detention program. What follows next are a discussion and conclusion on the significance of these findings.

Discussion and Conclusion

The purpose of this study was to focus on the exit status of probationers and prison-bound offenders in an electronically-monitored home-detention program administered in a Midwestern county. The present study included these two groups of adult offenders

who were convicted and sentenced to the program, and completed or failed to complete their sentences from the beginning of 2007 through the end of 2010 (a four-year study period). To be more specific, the objective of the present study was to examine whether there was significant difference between the two groups of offenders in successfully exiting the program, and if so, which factors were significant to that difference.

To answer both the research questions presented on p. 9, discriminant analysis was computed. This analysis demonstrated that there was a significant difference between the probation group and the prison-bound group in successfully completing the program. A review of previous research indicated that a number of previous studies (Roy & Barton, 2006; Roy, 1999, 1997; Brown & Roy, 1995) examined the relationship between type of referral (probation and non-probation, e.g., pretrial) and exit status. Like this one, all these studies reported that probationers were more likely to successfully complete their sentences than non-probationers.

Although the previous researchers did not compare probationers with prison-bound offenders in EMHD programs, this conclusion was supported by the finding from the present study. An examination of the two groups of subjects revealed that 100 probationers (about 81 percent) successfully completed the program compared to 61 prison-bound offenders (50 percent). Given this fact, it may be conjectured that placement of the prison-bound offenders in the EMHD program is riskier than placement of probationers, and perhaps more rigorous selection criteria for this group should be considered.

As mentioned earlier, based on the findings from the discriminant analysis, further analyses were conducted on each group of subjects individually. A discussion on all the findings is presented below.

As evident from Table 1, four independent variables—age groups, prior offense, prior detention (in institutions), and prior placement in community corrections—contributed to the significant difference between probationers and prison-bound offenders in successfully completing the home detention program. Regarding age groups, several previous researchers (Roy & Barton, 2006; Roy, 1999, 1997, 1994; Brown & Roy, 1995; Lilly et al., 1993) reported that subjects belonging to the older age group (36 and above) were more likely to complete their sentences successfully compared to their younger cohorts.

The findings from this study did not support the conclusion made by previous researchers. In both groups, younger subjects (age group I) were more successful than their older cohorts (age group II) in completing the program. A large majority of these younger subjects were employed full-time (n=115 or 76 percent), with an additional 18 percent (n= 27) employed part-time; in contrast, the age-group II, although showing a similar percentage employed part-time (n=18, or 19 percent), had only 52 subjects (54 percent) employed full-time. Given this breakdown, it may be surmised that the younger subjects had higher stakes in completing their program. However, this finding warrants further exploration.

As for prior offense records, 33 subjects in the probation group and 71 subjects in the prison-bound group had such records. This study revealed that 24 subjects (73 percent) in the probation group with prior offense records and 61 subjects (86 percent) in the prison-bound group with prior offenses failed to complete the program. This finding supports previous studies' findings that subjects with records of prior offenses were less likely to complete their program than their cohorts with no such records (Barton & Roy, 2008; Roy & Barton, 2006; Roy, 1999, 1997; Brown & Roy, 1995; Lilly et al., 1993; Kuplinski, 1990). Based on the findings from the previous research as well as the present study, placement of offenders with prior offense records in a community-based correctional program like EMHD may not be appropriate. However, the significant findings about the relationship between prior offense records of the EMHD participants and their exit status are worthy of further examination.

Previous researchers reported that offenders who had records of prior detention (in institutions) were more likely to fail out of the home detention program than their cohorts with no such records (Barton & Roy, 2008; Courtright, Berg, & Mutchnick, 2000; Brown & Roy, 1995; Roy, 1994). This previous research report was supported by the findings from the present study. In the probation group, 23 subjects had records of prior detention; all of them failed to complete the program. In the prison-bound group, 63 subjects had such records; of these, 59 (94 percent) failed. There are many possible explanations for this difference. What is clear, however, is that there is some cause for concern for successful outcome of subjects with records of prior institutionalization. This is especially disconcerting given the fact that

unsuccessful exit from the EMHD program usually results in incarceration of the subjects. As prisons become further overcrowded in the United States, the finding on prior detention is noteworthy.

Previous research findings indicated that offenders with a history of prior community corrections placement were more likely to unsuccessfully exit EMHD programs compared to their cohorts who had no such history (Roy & Barton, 2006; Brown & Roy, 1995; Roy, 1999, 1994). This previous research finding was supported by the findings on prison-bound offenders, especially. Among the 35 subjects in the prison-bound group who had histories of prior community corrections placement, 27 (80 percent) failed to complete the program.

All the findings from the present study suggest that the court might be more circumspect in sentencing prison-bound offenders to a community-based correctional program like EMHD. In particular, the court might be more discreet in sentencing to the EMHD program offenders who have records of prior offenses and prior detention (in institutions), and offenders who were previously placed in community-based correctional programs. The findings from the present study revealed that when those offenders were sentenced to the EMHD program, they were less likely to successfully complete their sentences, regardless of the type of referral (probation and prison-bound). However, each of the identified significant predictors or independent variables is worthy of further exploration.

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