An Examination of Electronic Monitoring and Re-offending

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Abstract

The purpose of this research is to examine electronic monitoring supervision and its impact on preventing re-offending among offenders. This research proposal intends to respond to the following research question. Do offenders with "zone constrained" probationary requirements have a lessened chance of proven re-offending with a global positioning satellite (GPS) tracking device, compared to that of offenders with traditional electronic monitoring (EM) devices such as radio frequency (RF) transmitters? Contained in this paper is a literature review which discusses three separate studies of EM, and how they were approached. Data will be obtained from the Florida Department of Corrections Offender Based Information (OBIS) System, providing a wide range of offender characteristics. These characteristics include offence, and supervision type, as well as offender race, age, gender, etc. This study expects to discover that EM has a beneficial influence in reducing proven re-offending among offenders. The implications of this study will help shape policy and procedure of the criminal justice system. Results from this study will provide answers to probationers in terms of the cost, and quality of supervision, therefore allowing probation agencies to focus resources.

Introduction

The purpose of this research is to examine electronic monitoring supervision and its impact on re-offending among offenders. This paper intends to respond to the following research question. Do offenders with "zone constrained" probationary requirements have a lessened chance of proven re-offending with a global positioning satellite (GPS) tracking device, compared to that of offenders with traditional electronic monitoring (EM) devices such as radio frequency (RF) transmitters?

A major concern for the criminal justice system is the growing cost of rehabilitation associated with prison incarceration. Electronic Monitoring may have the potential to reduce the financial burden of incarceration. Increasingly, offenders are being placed on EM probation in lieu of incarceration. Regrettably, research has not yet produced considerable qualitative or quantitative evidence substantiating the recent surge of EM within the U.S. criminal justice system; and additionally, this research has not fully proven which EM system has superior rehabilitative effects (Bales, et al., 2010, p. 13).

Community safety is a principal concern for criminal justice agencies across the United States. Electronic monitoring may have a beneficial outcome for the community when introduced with standard probation. With over 5.1 million offenders under some form of community supervision in the U.S., and the average annual growth rate at 1.4%, there is an urgent need for evidence-based monitoring strategies. Potential for the growth in the use of electronic surveillance is enormous (Bales, et al., 2010, p. 13). Increasing amounts of community

supervision also comes with a substantial price tag. A cost–benefit analysis is needed to ensure which type(s) of EM are practical in reducing re-offending rates as well as being cost effective. The implications of this study will help shape policy and procedure of the criminal justice system. Results from this study will provide answers to probationers in terms of the cost, and quality of supervision, therefore allowing probation agencies to focus resources.

Review of Literature

Theoretical approaches

In a case study measuring an offender's compliance in monitored curfew orders, Hucklesby (2009) conducted her study using a theoretical prospective based primarily on the deterrence theory (p. 13). The primary concern of the study is to measure the compliance of offenders, based on their subjective perceptions of legal penalties (Hucklesby, 2009). The study further defines two types of compliance. Formal compliance, defined as meeting the minimum requirements of orders, and substantive compliance, defined as active engagement and cooperation in a program (Hucklesby, 2009).

In an assessment of electronic monitoring conducted by Bales, et al., multiple theoretical approaches were examined. Deterrence theory is examined in a questionnaire completed by offenders aimed at measuring qualitative data on EM. According to Bales, et al. (2010), "the leading cause of compliance among offenders in a particular EM program was a fear of punishment" (p. 15). In Bales, et al. (2010), Labeling, as well as Re-integrative Shaming theories were approached in the assessment based on questionnaire sections touching on impacts of employment, family and friends, and housing issues. In an article by Gable, R., & Gable, R.S. (2005), researchers approached their study by way of learning theories. As stated by R. Gamble,

& R.S. (Gamble, 2005), "an essential tenant of learning theories is that punishment does not change behavior; instead it suppresses it" (p. 3). The researchers explain "that offenders may conform to rules associated with EM to avoid punishment, but once the immediate threat of punishment is removed the original behavior is likely to occur" (R. Gamble, & R.S. Gamble, 2005, p. 3).

Study Variables

In the study by Huckleby (2009), the area being studied was the extent of an offender's personal compliance, so a proxy for this form of compliance is a survey which measures the offenders' respect for the criminal justice process and credibility of sentences, (p. 2). The dependent variable for the study was compliance, while the independent variables included type(s) of EM, and various offender attributes such as community and family ties (Hucklesby, 2009, p. 17). The control group in the study was the group of offenders with zero recorded EM compliance infractions (Hucklesby, 2009, p. 9). In the study conducted by Bales, et al. (2010), the unit of analysis was the offenders (p. 66). The study by Bales, et al. (2010) used several independent variables including type of EM device, and personal characteristics of the offender. The control group used in the study were the 266, 991 offenders who did not receive any electronic monitoring, and the dependent variables were the proven violation rates of the offenders, and the impacts of EM on the offenders personal relationships with family, employers, and community (p. 66-69). In the article by Gable, R., & Gable, R.S. (2005), the most common dependent variable in the studies discussed was recorded infractions. The study's independent variables were strong family support, employment, attending school, and the ability to pay an income based fee for EM participation (p. 1-2).

Methodologies

The methodology for the case study conducted by Huckleby (2009), consisted of data collected from a random sample of offenders who had been sentenced to curfew orders (p. 9). The data was collected from two electronic monitoring companies in north England, and was comprised of case files on 217 offenders (Hucklesby, 2009, p. 9). Of the 217 offenders examined, there were 118 individuals who did not breach their EM regulations, and 99 who had breached (Hucklesby, 2009, p. 9). Other data collected included demographics, living arrangements, violation data, as well as communication records between the monitoring company and the offenders (Hucklesby, 2009, p. 10).

The methodology for the assessment conducted by Bales, et al. (2010), was drawn from data provided by the Florida Department of Corrections (FDOC) (p. 66). It consisted of a sample that included 5,034 medium and high risk offenders placed on EM, and 266,991 offenders who were not placed on EM over a six year period (Bales, et al., 2010, p. 66). Researchers obtained qualitative data through face to face interviews with 105 offenders, 36 supervising officers, and 20 administrators from 14 counties in Florida (Bales, et al., 2010, p. 67). Propensity score matching was employed to test the experimental (EM) group and control (non EM group) to minimize selection bias (Bales, et al., 2010, p. 67). According to the researchers, his selection process is a limitation to the study because the price of bias reduction is an increase in variance in the sample (Bales, et al., 2010, p. 71).

In the article by Gable, R., & Gable, R.S. (2005), the punitive effect of EM was compared and contrasted by a number of separate studies on offenders under EM supervision (pg. 2). According to Gable, R., & Gable, R.S. (2005), "a study of 126 monitored drug offenders

in Los Angeles compared to a matched group of 200 drug offenders who were not monitored showed significantly fewer violations for the monitored group during monitoring as 90 days subsequent to monitoring" (pg. 2).

Prior Findings

Research conducted by Huckleby (2009), found that "offenders were more likely to comply with EM programs if they believed that the monitoring company was watching them, would find out about their non-compliance, and would deal with it with swift punishment" (p. 20). This finding provides sustenance for deterrence theories (Hucklesby, 2009, p. 20).

The quantitative analysis of the research conducted by Bales, et al. (2010), demonstrates that EM reduces the offenders' risk of failure by 31%, and that GPS monitoring results in 6% fewer EM program failures to that of radio frequency monitoring (p. 147). The researchers also found that all categories of offenders, regardless of the offense experienced fewer violations as a result of EM. Offenders of all ages and from different forms of community supervision also benefited from EM (Bales, et al., 2010, p. 152). Based on the qualitative evidence of the researchers, EM was found to have negative consequences on offender families, employment, and adjustment to the community (Bales, et al., 2010, p. 74).

According to Gable, R., & Gable, R.S. (2005), "research suggests that despite common fallacy that EM in primarily used with offenders who would otherwise be imprisoned, there is a "Net Widening" to include low-risk offenders who would not normally be incarcerated. Thus a low recidivism rate of some EM programs is not a result of the deterrence power of EM, but merely a reflection of the low risk profile of the participants" (p. 2). The researchers also found

that programs with a "sanctions only" approach to EM will result in short-term compliance, but

not long term (R. Gamble, & R.S. Gamble, 2005)

Methodology

Methodological overview

Until now, research has only provided insight in the offender's fear of incarceration, but

not the offender's perception of their chance of being caught based on the capabilities of a

particular EM device. This research proposal will emphasize on the deterrence theory, using fear

of incarceration as the predominant mechanism in reducing re-offending rates of individuals

studied. Also, the impact of an offender's perception towards monitoring devices precision in

relaying location information to the authorities will be examined. The main innovation of this

proposal is the cohort being studied. Currently there are various groups of offenders in which

electronic monitoring is currently employed. These groups include an array of different offense

categories, and offender characteristics. The cohort for this study is the offenders who are placed

on probation with EM supervision, as an alternative to prison incarceration. This would include

any offense punishable by at least one year in prison. This group will exclude those offenders

who are under any form of court-ordered supervision related to a misdemeanor offense. The

central objective of this innovation is to narrow cohort size, thus avoiding sampling errors. Based

on the population characteristics chosen, a proportionate stratified sample will be employed to

guarantee the group which is pertinent to the study is analyzed (Hagan, 2012).

Study Variables

The dependent variable used in this study is proven re-offending, defined as any offense

committed in a one year follow-up period and receiving a court conviction, caution, reprimand or

warning in the one year follow up or a further six months waiting period (Ministry of Justice

Statistics, 2011). The dependent variable will be measured using all offenders in any one year

who received a caution, or a non-custodial conviction, or were discharged from custody.

The main independent variable for this study is the type of EM monitoring device, being

GPS or RF. Downing, (2006) defines GPS as "a tracking system using 24 U.S. government

satellites orbiting approximately 12,000 miles above earth, each satellite transmits its precise

time and position in space to receivers on earth that pick up the signals from multiple satellites

simultaneously pinpointing a location to a few feet" (p. 2). Hucklesby, (2009) explains "Radio

frequency devices use Personal Identification Devices (tags) which transmit signals to

monitoring boxes usually installed in an offender's residence. When tags go out of range, or

monitoring equipment is tampered with, authorities are alerted" (p. 4).

This independent variable is measured by the EM device type. When referring to EM

device issues "These technological difficulties results in understandable frustration on the part of

the offender and is a workload issue for the officer and, more recently, for the Call Center that

deals with these calls initially" (Bales, et al., 2010, p. 151). The relationship of this independent

variable to the dependent variable is theorized to be that as levels of EM surveillance are

increased, the amount of proven re-offending among individuals will decrease. According to

Hucklesby, (2009), "Nearly all interviewees made reference to knowing that they were being

watched or that they could not leave the house without the monitoring company being alerted. A

general assumption was made by nearly all interviewees that they would be caught if they did not

comply because the equipment was reliable and they were monitored closely" (p. 15).

Another independent variable is offender race. This independent variable is defined as the

race of the offender (e.g. White, Black, Hispanic, Asian). According to a study on EM conducted

by Bales, et al. (2010), "The racial composition consisted of 59% White, 35% Black, and 6% Hispanic" (p. 75). This independent variable is measured by the individuals who are involved in an EM program. The measurement is obtained through qualitative data collection through interviews with offenders on EM" (Bales, et al., 2010, p. 74).

Offender Gender is the next independent variable. This independent variable is defined as sex of the offender i.e. Male or Female. According to Bales, et al. (2010), "the sample of offenders was 96% male and 4% female" (p. 75).This independent variable is measured by the individuals who are involved in an EM program.

Offender age is also an independent variable. This independent variable is defined as the age of the offender at the time of their monitoring program. According to Bales, et al. (2010), "Twenty-five percent of the sample was 14 to 25 years of age, 35% was 25 to 37 years old, and 40% was 38 years or older. The average age was 36 years old" (p. 75). This independent variable is measured by the individuals who are involved in an EM program.

The next independent variable is the education level of offender. This independent variable is defined as the highest level of education the offender has completed. In Bales, et al. (2010), offenders were asked "What is the highest level of education you have completed?" (p. 76). Education levels are measured by the individuals who are involved in an EM program. According to Bales, et al., (2010), education levels were obtained through "the qualitative data collection through interviews with offenders on EM" (p. 74)

The type of EM supervision is the next variable. This independent variable is defined as the type of supervision the offender is being monitored for. (i.e. community control, sex offender probation, felony probation, and post-prison supervision). According to Bales, et al. (2010), "The type of supervision with the highest frequency of offenders serving under it was community

control. That was followed by sex offender probation, felony probation, and post-prison supervision in the form of conditional release. At the time the interviews were conducted, 97% of the offenders were on EM, while 3% reported being on EM during their current terms of supervision but had been removed from EM prior to the interview" (p. 77). This independent variable is measured by the individuals who are involved in an EM program.

Hypothesis:

It is hypothesized that there will be no change in the reoffending rates of zone-constrained probationers when electronic monitoring is administered.

Sample

The population selected to be studied is divided into two offender groups. Group one is comprised of offenders on EM supervision in lieu of prison incarceration in Florida. Group two will consist of offenders who are on non-EM supervision in Florida. Non-EM supervision is defined as those offenders who are on probationary supervision with no EM applied. For example, in Bales, et al. (2010), "Probation officers were asked about their caseloads and the types of cases that constituted their daily workloads. The officers reported that they "primarily supervised offenders under various types of non EM supervision" (p. 82) According to the FDOC's Offender Based Information System (OBIS) which is a comprehensive offender data management system for all offenders and the detail, breadth, and quality of FDOC's data on offenders under its jurisdiction "The number of offenders on supervision is significant as reflected in a population of 143,191 offenders and 2,392 on EM on June 30, 2009" (Bales, et al., 2010, p.13).

Unfortunately, the entire population cannot be studied. Based on population characteristics, a proportionate stratified sample will be employed to guarantee the group which is pertinent to the study is analyzed. According to Hagan, (2012), "Stratified samples rely on the

knowledge and distribution of population characteristics, and assure representativeness of these characteristics. These characteristics are usually demographic in nature, such as age, sex, and race, or are of importance to the study, such as the nature and type of criminal record (p. 127). The proportionate stratified sample is chosen to assure that sample subjects are chosen in a proportionate manner to the entire population (Hagan, 2012, p. 127).

Data

   To obtain quantitative data measuring proven re-offending, official data from Florida Department of Corrections and local probationary agencies will be used to measure criminal record information. FDOC's Offender Based Information System (OBIS) is a comprehensive offender data management system for all offenders and the detail, breadth, and quality of FDOC's data on offenders under its jurisdiction are optimal for conducting empirical evaluation research of correctional strategies (Bales, et al., 2010).

   To obtain qualitative data measuring independent variables, face to face interviews will be conducted with offenders. For example, "interpretation of accuracy" of each EM device will be obtained through hand response surveys distributed to offenders on EM supervision. In Bales, et al. (2010), offenders are asked "Will electronic monitoring prevent you from absconding or fleeing while you are on electronic monitoring because you are more afraid of getting caught?" They may then respond "strongly agree", "agree", "disagree", or "strongly disagree" (p. 168). This question could feasibly be adapted to incorporate the type of EM device by asking "Will GPS electronic monitoring prevent you from absconding or fleeing while you are on electronic monitoring because you are more afraid of getting caught?". The survey may then ask "Will Radio-Frequency electronic monitoring prevent you from absconding or fleeing while you are on electronic monitoring because you are more afraid of getting caught?" To obtain quantitative

data measuring independent variables, official data from Florida Department of Corrections and local probationary agencies will be used to measure criminal record information.

Upon obtaining population characteristics from the FDOC, as well as local probationary agencies, proportionate stratified samples will be employed to measure the groups intended for this study. This sampling technique will assure that the offenders on non-EM community supervision, as well as offenders on EM supervision will each be measured as different groups. This sample will exclude all other classifications of offenders, and in theory, avoid possible biases. Once the population being studied is established, interviews will gather qualitative information from offenders, such as race, age, and gender.

For the purpose of analytical comparison, offenders under non-EM supervision will be observed, and then compared with the EM supervision group. Quantitative information from the FDOC will be analyzed, describing the amount of proven re-offending among the offenders on different forms of EM. Other information from the FDOC, such as proven re-offending rates among offenders on various forms of non EM supervision will be used to determine program impacts. After all data is recorded and analyzed, possible characteristics and trends will be observed, therefore testing the hypothesis.

Expected Findings

The analysis of research associated with electronic monitoring should demonstrate that EM has a preventative effect on proven re-offending. The quantitative analysis of EM should produce results substantiating the proposed beneficial impact of EM supervision. This expected result is that GPS systems provide a more effective form of electronic supervision compared to RF due to its greater deterrent effect. Similar results have been established by previous research

on the subject. According to Bales, et al. (2010), "Quantitative analysis demonstrates that EM reduces offenders' risk of failure by 31 percent and that global positioning system (GPS) monitoring results in 6 percent fewer supervision failures compared to radio frequency (RF)" (p. 4). Also stated by Bales, et al. (2010) was that "Although not all of the comparisons between GPS and control parolees showed statistically significant differences, all results were in the same direction - GPS parolees better on measures of compliance" (p. 10). Also, all categories of offenders may benefit from EM supervision, including serious offenders on EM supervision in lieu of prison incarceration. Bales, et al. (2010), concluded that "All categories of offenders, regardless of offense type, experienced fewer supervision violations as a result of EM" (p. 4). EM supervision accompanied with treatment programs and counseling should have a substantial influence in reducing proven re-offending among individuals. According to Elzinga, H., & Nijboer, J. A. (2006), "Research has proven that offenders tend to experience supervision by means of electronic tools as less personal, so that a relationship based on trust runs less risk. Moreover, it turned out that programs consisting of a combination of supervision and treatment/counseling lead to better results than programs lacking one of these elements." (p. 16)

The analysis of qualitative data should solidify the theoretical approach of deterrence as proposed in the study. As stated by Huckleby (2009), 'Instrumental compliance, in terms of both severity and certainty of punishment, was widely cited as the most influential factor in interviewees' accounts. Offenders were concerned about the probable consequences of non-compliance and the threat of going to prison was proven to be a particularly significant motivator to comply." (p. 18).

Implications

The research in this study is of major significance to the criminal justice system, and its policies and practice. By gaining knowledge of electronic supervision and its impact on preventing re-offending, the criminal justice system could adapt its supervision strategies, thus improving probationary practices. Community safety is a principal concern for criminal justice agencies across the United States. Electronic monitoring may have beneficial outcome for the community when introduced with standard probation. With over 5.1 million offenders under some form of community supervision in the U.S., and the average annual growth rate at 1.4%, there is an urgent need for evidence-based monitoring strategies. Potential for the growth in the use of electronic surveillance is enormous (Bales, et al., 2010, p. 13).

Potential financial benefits arise from expanding our knowledge of EM supervision. Radio-frequency devices are less expensive to operate than GPS devices. In fact, in a 2008 FDOC legislative budget request, the FDOC indicated that GPS cost $8.94 per day; $1 of that daily cost is allocated toward the cost of the monitoring center. Therefore, the annual cost of the active GPS equipment and services provided by ProTech is $3,263 per year (Bales, et al., 2010). In comparison, according to the Florida Department of Corrections (FDOC), In Fiscal Year 2009-10, it cost $19,469 a year or $53.34 a day to feed, clothe, house, educate and provide medical services for an inmate at any state facility (Bales, et al., 2010) . The price difference in rehabilitation methods is substantial; therefore the criminal justice system needs to weigh the possible benefits of EM supervision and financial burden associated with prison incarceration.

Limitations

A number of limitations to the study are accounted for in terms of sampling, and variables. The sample chosen for this study are those generally serious offenders that are on EM

supervision instead of prison incarceration. This sample is sufficient in explaining the impact of

EM on those offenders, but it lacks scope. For instance, EM is used supervision for misdemeanor

offenders, as well as juveniles. Because Offenders that are on EM supervision in lieu of prison

incarceration do not have identical characteristics to that of other offenders, the results from this

sample may not be applied to all groups in the population.

The study also has limitations in variables. For example, a major variable not included in

this study is geographic location. By not including this variable, two factors are not assessed.

The first factor is demographic information of the individuals, (i.e.: socio-economic status). The

second factor would be the technical problems of EM devices that are not taken into

consideration. For instance, "a major concern among offenders and monitoring agencies alike is

the malfunctioning of GPS devices due to physical objects such as trees, buildings, and tunnels"

(Bales, et al., 2010 p. 137). When location is taken into consideration in terms of terrain, this

variable is substantial in measuring the effectiveness of the GPS device. Other qualitative

variables are not accounted for are family, and community ties of offenders.

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