QUESTIONING MANDATORY SENTENCING EFFICIENCY: A Case Study of Persistent Felony Offender Rapists in Kentucky

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ABSTRACT: *This policy analysis explores the incapacitative efficiency of Kentucky's career criminal statute in averting the recidivism of offenders convicted of rape. The study utilizes a 1985 cohort of Kentucky persistent felony offenders with at least one rape conviction (n = 62) and tracks recidivism rates up to fifteen years later. The results question the efficiency of mandatory sentencing. In general, mandatory minimum sentences (where offenders are not eligible for statutory good time or parole) kept these offenders incarcerated beyond the time necessary to avert future crimes.*

INTRODUCTION

The persistent felony offender (PFO) statute that Kentucky originally adopted in 1974 is an example of a sentencing enhancement targeted at career criminals. The objective of this law is to punish offenders for repeated criminal activity by charging them with a separate count of persistent criminal behavior. A felony offender is eligible for a PFO sentence enhancement provided that at the time of the prior offense(s) he or she was over eighteen years of age and was sentenced to at least one year of imprisonment. The previous felony conviction must have been imposed within five years of the date of the present offense. Thus, Kentucky's PFO statute allows for enhanced sentencing for individuals reconvicted of a felony.

The purpose of this investigation is to determine whether the mandatory sentence lengths prescribed by the Kentucky PFO statute are efficient. There are many ways in which to evaluate efficiency. For

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example, one may look at the costs associated with the victimization experience, law enforcement investigations, or court time. The current study explores efficiency in terms of averting future recidivism through incapacitation. In other words, efficiency is framed in terms of whether these offenders are incarcerated longer than necessary to prevent a subsequent incarceration for a new offense.

Prior to this new statute taking effect, Kentucky required that violent offenders serve at least 20% of their sentence before becoming eligible for parole. This percentage was increased to 50% in 1991 and was reset at 85% for violent offenders in 1998. Unfortunately, no policy analyses were conducted before the state legislature adopted these provisions. Thus, there is an acute need to approach these statutory changes in terms of how well they are working.

The basic question posed here is whether these sentence lengths are optimal. For example, if offenders serve 20% of their sentences prior to being released on parole and do not recidivate, then taxpayers avoid unnecessary incarceration costs associated with prolonged imprisonment (e.g., security, bed space, food, medical care, etc.). Should the same offender fall under the 85% law and remain incarcerated for an extended period of time, then one could argue that the sentencing provisions are inefficient. That is, the offender was incarcerated beyond the period necessary to avert future recidivism. As a result, the 85% sentence was not efficient because the costs of incarceration were fruitless, prison space was not relinquished, and the offender did not contribute to the economy.

Some analysts suggest that "sizeable costs" might accompany incapacitation as a crime control policy (Blumstein, Cohen, Roth, & Visher, 1986). Other observers (DiIulio, 1996; DiIulio & Piehl, 1991) argue that any averted recidivism is worth locking up offenders for longer periods of time. However, since most mandatory sentencing legislation do not allow judges the leeway to consider special circumstances, the amount of time served for all convicted felons is increased. Such a nonselective incapacitation approach increases the number of offenders who are incarcerated, promotes overcrowding, limits exposure to programming, increases the need for security, and hikes the costs per bed while incarcerated. The current study analyzes whether PFO mandatory minimum sentence enhancements are efficient in terms of incapacitating persistent felony offenders with at least one rape conviction, arguably the most dangerous criminals, for optimal sentence lengths.

CAREER CRIMINAL RESEARCH

The research that fueled the creation of mandatory sentences targeted at specific offender types was the Philadelphia birth cohort studies undertaken by Wolfgang and his colleagues (Tracy, Wolfgang, & Figlio, 1984; Wolfgang, Figlio, & Sellin, 1972; Wolfgang, 1983; Wolfgang, Thornberry, & Figlio, 1987). Other research confirmed the existence of hard-core, chronic offenders who were responsible for an inordinate amount of the crime attributed to their cohorts (see Chaiken & Chaiken, 1982; Petersilia, Greenwood, & Lavin, 1977; Peterson, Braiker, & Polich, 1981; Shannon, 1982, 1983; Van Dine, Dinitz & Conrad, 1979; Visher, 1986; Wilson, 1975).

The ability to identify these hard-core offenders and earmark them for incarceration is referred to as selective incapacitation. The premise of selective incapacitation suggests that crime can be controlled more effectively by identifying and incarcerating these persistent offenders (Greenwood & Abrahmse, 1982; Wilson & Vito, 1986). Although a number of cohort studies suggest that a subgroup of chronic offenders is responsible for the majority of crime, others have difficulty predicting which offenders will exhibit such chronic criminal behavior (see Gottfredson & Gottfredson, 1994; Gottfredson & Hirschi, 1986, 1988; Shannon, 1988).

Some career criminal researchers claim that the nature of the data makes it difficult to demonstrate the effects of incapacitation. For example, while Gottfredson and Gottfredson (1994) contend that it is possible to create prediction models to assess the number of arrests committed by active offenders, inadequacies surrounding official crime data leave practitioners with models that do not work very well. Furthermore, official data are sensitive to policy shifts and new legislative mandates (Maltz, 1984). The appropriateness of self-report data as a remedy has also come under question (see Horney & Marshall, 1991; Miranne & Geerken, 1991; Schmidt & Witte, 1988). Consequently, Gottfredson and Gottfredson (1994) conclude that the utility of incapacitation strategies is constrained by the limits of predictive validity.

Gottfredson and Hirschi (1986, p. 217) issue the strongest criticism of mandatory sentencing legislation when they suggest that the idea of incapacitating career criminals has "little merit." They, along with other researchers (Shover, 1985) also suggest most chronic offenders age out of crime. Aging out of crime means offenders are more likely to end their criminal careers as they get older. This observation suggests that offenders incarcerated for lengthy prison terms are more likely to end their criminal career, thus "wasting" the additional time served after his career has ended (Blumstein, 1995). Gottfredson and

Hirschi (1986) state that the fundamental concern is identifying the factors affecting crime by analyzing separately the aspects associated with the career criminal (e.g., participation, frequency, and termination).

MANDATORY SENTENCING POLICY

Career criminal studies have provided much of the basis for analyzing mandatory sentencing and criminal career policies (see Gottfredson & Gottfredson, 1994; Greenwood & Abrahmse, 1982; Langan & Greenfield, 1983; Shannon, 1982, 1983; Wilson & Vito, 1985, 1986, 1990; Wolfgang, 1983). Such studies typically examine the frequency and seriousness of crimes, as well as the persistence or length of the criminal career. Career criminal policy is grounded in incapacitation theory and focuses on incarcerating offenders via mandatory minimums, sentence enhancements, and three-strikes legislation. These sentencing options take offenders out of circulation through lengthy prison sentences so they cannot prey upon the community while in confinement. Thus, policy questions focus on avertable recidivism or crimes that might be prevented while the offender is incarcerated (Farrington & Tarling, 1985).

The efficiency of mandatory sentencing policies is questionable. One must begin by estimating the number of crimes an offender might commit if not incarcerated. Maltz (1984, p. 12) suggests that "estimating what would have happened had the offenders been free is a crucial component of an incapacitation evaluation." An unknown factor in incapacitation theory research is how offenders will act after release from imprisonment. Suppose an offender would have committed 30 additional crimes during the time he was incarcerated. One might view this offender's incarceration as efficient. However, if the offender ordinarily would have refrained from further criminal activity shortly after being incarcerated, one might view a long-term incarceration as inefficient. The offender might be institutionalized for a mandatory ten-year sentence even though the remaining criminal offending span is only 2 years. Such a person would remain incarcerated for at least 6½ additional years under truth-in-sentencing, maybe for life under three-strikes legislation, or simply for ten years under mandatory minimum laws.

SEX OFFENDER LITERATURE

Sex offender legislation has moved to the forefront of criminal justice and public policy in the last decade. During this time, a number of states have implemented sexual predator laws that authorize post-prison civil commitments of indeterminate length, mandatory registration and community notification of sex offenders, treatment alternatives

to incarceration, and mandatory sentences for convicted sex offenders. Passage of the federal crime bill in 1994 set the precedent for states to create sex offender registries. By the end of the 1990s, every state had adopted some form of sex offender registration and community notification (Sullivan, 1999). Additionally, the U.S. Supreme Court has ruled on the constitutionality of sex offender legislation in some states (see *Allen v. Illinois*, 1986; *Kansas v. Hendricks*, 1997; *Murphy v. Hunt*, 1982; *Seling v. Young*, 2001; *Simmons v. South Carolina*, 1994). By 2000, 16 states had legislated sexual predator laws that provided for post-prison civil commitments of indeterminate length ("Supreme Court," 2001). Post-prison civil commitment means that offenders found to be sexual predators or potential repeat sex offenders could be subjected to indeterminate civil commitments after they had served their criminal sentences. Key issues of sexual predator legislation, in addition to comparing and contrasting individual state statutes and the specific standards of sexual predator legislation, have been the focus of much current research (Brooks, 1994; Lea, Auburn, & Kibblewhite, 1999; Lieb, 1996; Lieb & Matson, 1998; Matson & Lieb, 1997; Scott, Banister, & Copeland, 1998).

The proliferation of sexual offender laws presents a unique opportunity to study the efficiency of such sentencing structures. Hanson and Bussiere (1998) completed a meta-analysis of sex offender recidivism. The average sexual recidivism rate in an adult sample (n = 23,393) was 13.4% during a follow-up period averaging four to five years. However, for rapists the average recidivism rate was slightly higher at 14.5% and the average recidivism rate was 37% for all criminal offenses including non-sex crimes. Reported recidivism rates for just rape are conflicting. While Furby, Weinrott, and Blackshaw (1989) suggest rapists are at high-risk for recidivating, Hall (1990) disagrees. These differences in recidivism rates across type of criminal offender or offense category further demonstrate the need to study a cohort of persistent felony sex offenders.

As highlighted in the majority of career criminal literature, the concern with legislating laws such as post-prison civil commitments is that one must consider the problem of identification and risk assessment of each offender. The strongest predictors of sex-offense recidivism are related to treatment (Hanson & Bussiere, 1998; Harris, Rice, & Cormier, 1991; Studer & Reddon, 1998) and prior sexual offenses or criminality (Hanson & Bussiere, 1996; Hanson, Scott, & Steffy, 1995). Barbaree and Marshall (1988) studied the post-release behavior of 170 male sex offenders for a period of 1 to 9 years. The recidivism rate over the time of the study was 20.7%. However, offenders receiving treatment during the time of the study recidivated at a 13% rate. In a simi-

lar study by Marques, Nelson, West, and Day (1994), a group of offenders undergoing treatment recidivated at a slightly lower rate than a non-treatment group (7.9% v. 10%) during the study period. A treatment effect on sex-offense recidivism was also found in a study of rapists conducted by Clelland, Studer, and Reddon (1998). Specifically, the recidivism rate for rapists completing treatment was 16.6% compared to 28.9% for those who did not complete the treatment program (Clelland et al., 1998).

Although the above studies outline significant factors in predicting sexual re-offending Hanson and Bussiere (1996) suggest the level of prediction of sexual offender recidivism is not useful in either the clinical or criminal justice fields. This position aligns with selective incapacitation research which suggests that the accuracy for predicting future criminality is questionable (see Chaiken & Chaiken, 1982; Gottfredson & Gottfredson, 1994; Schmidt & Witte, 1988). This state of affairs might lead one to question the efficiency of mandatory sentencing or post-civil commitment legislation when there are not predictive measures for offender identification.

The policy implications of this research relate to all facets of the criminal justice system. According to Hagan and Gust-Brey, these concerns are vital when considering the implications of newly established sexual predator laws:

> An understanding of how many individuals reoffend sexually is crucial to meaningful presentation of evidence in involuntary commitment proceedings under the Wisconsin Sexually Violent Person's Act (1996). One can better understand the risk of a sexual offender if one has an understanding of the minimum number of sexual offenses such offenders perpetrate after release, and also, one can thereby learn more about the length of time that the risk for sexual reoffending continues (Hagan & Gust-Brey, 1999, p. 451).

Similarly, the efficiency of mandatory sentencing policies depends on the "residual length" of the offender's criminal career compared to the remaining time the offender is incarcerated (Blumstein et al., 1986). For example, if a sex offender is incarcerated at the time when his criminal career expires, then that person has been incarcerated too long and the sentencing policy might be viewed as inefficient. This is the central research question of this study.

METHODOLOGY

The Kentucky PFO statute is an example of a sentence enhancement targeted at career criminals or persistent felons. To be eligible for

a PFO sentence enhancement in Kentucky, offenders must have at least two prior felony convictions. There were 1,978 persistent felony offenders under supervision in Kentucky during 1985. This population contained 138 PFOs who were convicted of at least one sex offense. This group contained 79 rapists, defined as offenders who had been convicted of at least one rape offense. Seventeen rapists were not included in this research. These offenders include escapees (n = 3), deceased offenders (n = 4), and offenders who were not released during the research period (n = 10).

This analysis explores the post-release behavior of the remaining rapist population (n = 62) over the 1985–1999 period. The population is comprised of two sub-groups: sex-only rapists or rapists who have only been convicted for sex offenses (n = 11) and mixed rapists (n = 51) or rapists who have been convicted of other sex, violent, property, or drug crimes. The small sample size precludes a comparison of these groups in this paper. However, one should recognize that sex offender recidivism rates differ by sex-only and non-sex offenders (Hanson & Bussiere, 1998) and that previous offense type might be a useful predictor (Hanson et al., 1995).

Avertable recidivism was operationalized along the lines suggested by Van Dine, Dinitz, and Conrad (1977, 1979). The current study measured differences in recidivism depending upon what percentage of their sentences rapists served. Percentage of time served was operationalized using a 20% and a 50% cutoff for time served. These thresholds were chosen because they track the mandatory time Kentucky prisoners must serve before becoming eligible for parole. The new 85% cutoff could not be used because none of the offenders in the study group had served at least 85% of their sentences prior to release. However, in an attempt to determine whether the 85% legislation would be more efficient than the 20% and 50% cutoffs in averting future recidivism, each offender's post-release behavior was compared to what would have been the 85% cutoff for his sentence. The time each inmate served plus the amount of time the offender was at risk of recidivating after release was compared to what would have been 85% of the offender's sentence. This procedure allows one to see whether keeping an offender incarcerated for least 85% of his sentence would avert recidivism. The purpose of this analysis is to determine the appropriate sentence length that would ensure offenders remain trouble-free after release.

The nature of the data required operationalizing recidivism as an additional incarceration. Reincarceration reflects a return to prison due to either a new offense or a parole violation. New criminal commitments include both sex and non-sex crimes. Arguably, it might be

helpful to categorize the type of reincarceration as either a technical violation or a new violation. While such a procedure would allow one to maintain more conservative estimates of avertable recidivism, the effects on prison populations are lost. In other words, it makes no difference whether a parolee commits a new crime or a technical violation; he will still return to prison.

This study also employs survival analysis to analyze the time to recidivism per individual rapist. A simple nonparametric survival model is used because the emphasis is on determining the time until recidivism rather than identifying covariates that might influence survival (see Kruttschnitt, Uggen, & Shelton, 2000). Survival analysis measures the length of time until some "failure" or "success" materializes. For example, one might be interested in how long it takes for a cut to heal, a light bulb to burn out, or an individual to flunk out of college. The survival function measures the probability that individual cases will survive beyond a time (t), with time being a continuous dependent variable.

Survival analysis provides an opportunity to gain insights into sentencing, rehabilitation, and programming procedures. One of the most important tasks of criminal justice research is the ability to track offenders and offending patterns over time (Fox & Tracy, 1980). Tracking offenders allows one to map "time until reoffending" and uncover patterns that could assist sentencing practices. For example, more informed decisions might be made concerning the optimum length of sentence per offense, as well as the minimum percentage of sentence to be served before an offender is released. Similarly, survival analysis might be utilized to predict future inmate populations or to evaluate rehabilitative programs. In the present study, the application of survival analysis to measure the length of time between release from prison and reincarceration provides useful guidelines with which to assess the efficiency of mandatory sentencing legislation.

One benefit of using survival analysis in post-release recidivism studies is that the nature of the analysis allows for differences in time of release (t_{i0}) among the offenders. For example, survival analysis controls for one offender being released on July 1, 1985 and another being released on February 2, 1988, as well as differing release times among all offenders. In each case, the offender's time of release is represented by $t_{i0} = 0$. Survival is measured in years ($t_{i[1-n]}$) from t_{i0} until recidivism, where "t_{i0}" represents the time of release per individual offender and "[1-n]" is time until recidivism in years. A second benefit is that survival analysis allows recidivism to be measured in a more meaningful way. Specifically, instead of reducing recidivism to a dichotomous dependent variable, it can be measured as a continuous dependent variable, giving use of "time until recidivism" additional meaning.

RESULTS

The median sentence length imposed for the initial incarceration is 29 years, with life being the most common sentence. Eleven offenders received a life sentence. However, the median time served is 3.66 years and the mean time served is 4.76 years. It is important to remember that ten of the original 79 rapists are not included in this study because they were never released from prison during the observation period. Inclusion of these offenders would increase both sentence length and time served.

Table 1 displays the reincarceration status of the 62 PFO rapists with respect to whether they served at least 20% of their sentences. The upper panel of the table examines this group in terms of whether or not they returned prior to 50% of their sentences expiring. The bottom portion of the table changes the criterion to 85% of the sentence length. The PFOs who served at least 20% of their sentence are less likely to recidivate prior to 50% of their sentence expiring than the offenders were released prior to the 20% mark ($\chi^2 = 15.957, p < .000, df = 1$). A significant difference also emerges when attention turns to the 85% cut-off ($\chi^2 = 7.453, p < .004, df = 1$). In other words, as time from release increases, offenders who had served at least 20% of their sentence are more likely to remain free than offenders who had served less than 20% of their sentence prior to release.

TABLE 1
Survival Time to Reincarceration by Time Served for Rapists Regarded as Persistent Felony Offenders (*n* = 62)

Survival Time	Amount of Sentence Served	
	At Least 20%	Less Than 20%
Prior to 50% Expiration		
Number Returned	11	31
Number Not Returned	16[a]	4
Prior to 85% Expiration		
Number Returned	17	32
Number Not Returned	10[b]	3

[a] Includes one censored case that had not recidivated by the end of the research period (42% of sentence expired).

[b] Includes four censored cases that had not recidivated by the end of the research period (42%, 63%, 73%, and 80% of sentences expired).

Table 2 presents the distribution of offenders who survived past 85% of their sentence expiring with respect to whether they served less than 20% of their sentences, between 20% and 50% of their sentences, and between 50% and 85% of their sentences. Only 21% (n = 13) of the rapists did not return prior to 85% of their sentence expiring. Nine out of these 13 rapists who did not recidivate prior to 85% of their sentence expiring served less than 50% of their sentences prior to being released.

TABLE 2
Persistent Felony Offender Rapists Who Did Not Return by Percentage of Sentence Served (n = 62)

Time Served	n	f	Within %	% PFO Rapists
Under 20%	36	3	8.3	4.8
Between 20% and 50%	20	5[a]	25.0	8.1
Over 50%	6	5[b]	83.3	8.1

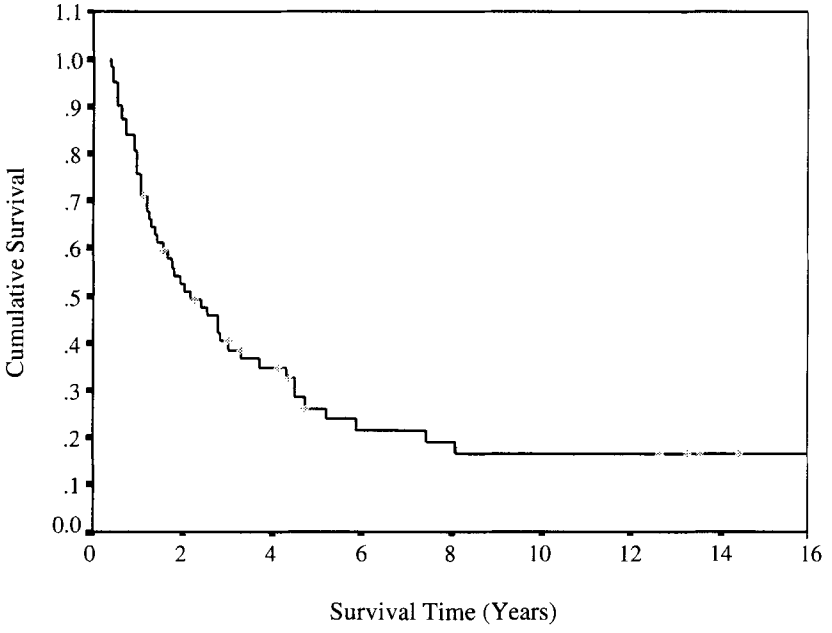
[a] Includes one censored case that had not recidivated by the end of the research period.
[b] Includes two censored cases that had not recidivated by the end of the research period.

While cells based on small frequencies demand caution, Table 2 has some implications for sentencing efficiency. In other words, what is the optimal sentence length that increases the probability of not recidivating, but avoids incarcerating offenders beyond the time necessary to prevent future crimes? Nine offenders served less than half their sentences and survived past 85% of their sentences expiring. Three of the four offenders who served between 50% and 85% of their sentences and had not recidivated by the 85% mark had been imprisoned for at most 66% of their sentences prior to being released. This might lead one to claim, therefore, that having offenders serve at least 66% of their sentence prior to release is at least as successful, and certainly more efficient, than lengthier mandates.

Figure 1 displays the survival curve or time to recidlvism for this group of PFO rapists. Recidivism patterns might be useful in evaluating sentencing efficiency. The median survival time for the PFO rapists was 2.14 years. What this means is that one-half of the rapists returned within 2.14 years of being released, while the other half "survived" past this time. Twenty-two offenders (35.5%) recidivated within the median time, with one offender returning within four months of release. The

average survival time is 6.5 years. Eleven offenders (17.7%) were not reconvicted during the 15-year observation period and are represented at the final point in the survival curve.

FIGURE 1
Survival Probability for Persistent Felony Offender Rapists (*n* = 62) in Years



DISCUSSION

In 1998, Kentucky legislated tougher sentencing for violent offenders, mandating that they serve 85%, instead of 50%, of their sentences prior to being eligible for parole. Additional statutory requirements also instituted other parole eligibility modifications. Offenders incarcerated after 1980 had to serve at least 20% of their sentences prior to receiving a parole hearing. Under the new legislation, these offenders must remain incarcerated for at least 50% of their sentence prior to being eligible for parole. Ideally, under the guise of incapacitation theory, increasing the amount of time an offender serves should benefit the community as the offender is restrained from committing further crimes.

This case study explored one aspect of incapacitation theory. Using a cohort of persistent felony offenders in Kentucky who were rap-

ists, it sought to determine whether there were differences in time until recidivism for separate offender categories based upon the percentage of time served. The findings suggest a higher probability of not recidivating if the PFO rapists serve at least 20% of their sentence. However, no difference is found by 20% time served when the post-release time period is extended out to 85% of the sentence. In other words, lengthening the sentence of PFO rapists fails to prevent future offending. In fact, the amount of time served that has the greatest benefit in terms of crime prevention is 20% of the sentence length. Extending the period of incarceration to 85% of sentence length fails to produce a substantial reduction in future crimes committed by this group. Thus, the 85% limit prescribed as policy serves retributive aims only and falls short of producing a substantial incapacitation effect.

The present findings are consistent with sex offender recidivism studies that find less difference in reoffending as the length of the post-release period increases (see Lund, 2000; Studer & Reddon, 1998). Only 9 out of 62 (14.5%) of the PFO rapists did not recidivate prior to 85% of their sentence expiring. This result is consistent with the rapist recidivism rate reported in the by Hanson and Bussiere (1998) meta-analysis. The nine Kentucky offenders who survived the longest after release were incarcerated for, at most, 66% of their sentences. This observation might lead one to wonder what is the most appropriate sentence length that increases the probability of surviving without incarcerating the offender beyond the time required to prevent future recidivism. More simply, it questions the efficiency of legislative mandates that increase the percentage of time served to 85% for some offenders.

These results question the efficiency of such legislation when there are not means of alternative sentencing based on crime/offender circumstances. For example, if a sex offender receives a lengthy mandatory sentence and is incarcerated at the time when his criminal career is coming to a close, then that inmate will be incarcerated "too long" in terms of preventing future crime. Unfortunately, the present study was not able to account for offender age or other prominent covariates and leaves that task to future researchers.

The major policy concern of mandatory sentencing laws is to prevent crime and protect citizens. This orientation takes on greater emphasis dealing with dangerous criminals and deciding whether to add a sentence enhancement. In terms of its ability to prevent reoffending in the future, this policy is not justified. The true aim of such policies is to punish the offender at increased costs to the public. Although this study is restricted to convicted rapists, it serves as a blueprint for analyzing recidivism by time served for any group of specialized criminals.

This is especially helpful when one considers the implications of determining optimal sentence length in light of the fact that specialized or "extreme offenders" commit the majority of serious crime in the United States (DeLisi, 2001; Shannon, 1991; Wolfgang, Figlio, & Sellin, 1972).

CONCLUSION

This case study of arguably more dangerous criminals, persistent felons with at least one rape conviction, questions the necessity of the continued push for mandatory minimum sentencing or truth-in-sentencing legislation that increases the length of time offenders must serve prior to being eligible for parole. Mandatory minimum sentences may be inefficient if they keep offenders incarcerated beyond the time necessary to avert future crimes. Additional research is needed to determine the efficiency of "catch-all" policies that mandate a determinate sentence based on such predictive measures as criminal specialization, prior offenses, or career criminality. Although this case study provides some insight into length of sentence served and recidivism, the idea of efficiency with regard to an "ideal" sentence length to avert recidivism needs further examination. Determining the most efficient length for mandatory sentences is imperative in this time of "get tough" policy making, especially when considering the expansive implications on the entire criminal justice system.

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